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Rethinking Sport and Social Issues

Edited by
Jesper Andreasson and April Henning

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Editors

Jesper Andreasson
Department of Sport Science
Linnaeus University
Kalmar
Sweden

April Henning
Management Department,
Edinburgh Business School
Heriot-Watt University
Edinburgh
Scotland
United Kingdom

Editorial Office
MDPI
St. Alban-Anlage 66
4052 Basel, Switzerland

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About the Editors

Jesper Andreasson

Jesper Andreasson holds a PhD in Sociology and is a Professor (full) of Sport Science at the Department of Sport Science, Linnaeus University, Sweden. Andreasson has extensive experience of working with ethnography and different internet methods. His research can mainly be positioned within health, gender studies, and cultural sociology, and he has published extensively within the area of doping, gym/fitness culture, embodiment, family life, and more. Recent books of his include *Extreme Sports, Extreme Bodies: Gender, Identities and Bodies in Motion* (2019), *Fitness Doping: Trajectories, Gender, Bodies and Health* (2020) (published with Palgrave MacMillan and co-authored with Thomas Johansson), and *Performance Cultures and Doped Bodies: Challenging Categories, Gender Norms, and Policy Responses* (Published with Common Ground, and co-authored with April Henning). Andreasson is in charge of a Linnaeus university PhD programme in sport science and teaches at graduate and postgraduate levels, mainly in the areas of research methods, sport science, and social theory.

April Henning

April Henning holds a PhD in Sociology and is an Assistant Professor in International Sport Management and Director of Research for Management within the Edinburgh Business School at Heriot-Watt University. Henning has published widely on image- and performance-enhancing drugs in relation to sport and fitness, policy, and gender. She is joint Director of the International Network of Doping Research. Some of her recent books include *Doping: A Sporting History* (with Dimeo), *Performance Cultures and Doped Bodies* (with Andreasson), and *Online Doping* (with Andreasson).

Preface

This anthology was initiated to bring together interdisciplinary discussions and analyses on contemporary sport, its transformational nature, and the social issues connected to our ways of understanding both sport and broader social life. With "rethinking sport", we aimed to emphasize the ever-changing nature of sport. In doing so, we necessarily moved away from the traditional routes of organized and elite sport. This allows us to consider sport and other physical activities that are often backgrounded in mainstream discourses and daily life. Rethinking sport means that historical and contemporary sport cannot be seen as a fixed phenomenon. Instead, quite the contrary is true; it develops in relation to cultural and social changes that, in turn, become part of future sport and physical activities. New sports are also constantly evolving, as sportification processes in society may challenge our understanding of what constitutes sport and what does not. In this collection, we have included contributions that stem from the idea of "rethinking sport" that address the notion of training as part of cancer treatment, the development of informal and lifestyle sports, parkour activities in James Bond movies, and the phenomenon of Timbersports.

Rethinking sport means embracing perspectives through which we can see social and cultural change. Such changes may be particularly relevant when we consider the relationship of broader social issues with sport. We understand the term "social issues" in a broad sense; in this collection, we wanted to emphasize how sport may counter or create inequalities. Sport and physical activity can indeed be fun and games, but it is also an area prone to creating, maintaining, and exacerbating social injustice. This anthology includes chapters engaging in analyses of several of these topics, including sexual abuse, drug abuse, health promotion programs, trauma-informed coaching, inclusion and exclusion mechanisms in gym culture, the long-term social impact of sport gentrification, and human rights and racialization in sport.

This anthology is based on the work of established and emerging scholars from a variety of disciplines including sociology, sport science, social work, cultural studies, gender studies, and more. It is relevant for academics, researchers, and undergraduate and postgraduate students enrolled in programs that deal with the sociology of sport, gender studies, cultural studies, and social sciences generally.

Jesper Andreasson and April Henning
Editors

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Article

Sovereign Surfing in the Society of Control: The Parkour Chase in *Casino Royale* as a Staging of Social Change

Kalle Jonasson * and Jonnie Eriksson

School of Education, Humanities and Social Sciences, Halmstad University, SE-301 18 Halmstad, Sweden
* Correspondence: kalle.jonasson@hh.se

Abstract: In "Postscript on Societies of Control", French philosopher Gilles Deleuze proclaimed that "Everywhere surfing has replaced the older sports". By this, he alluded to Foucault's thoughts on older societal regimes and power diagrams of sovereignty and discipline, and that now such models have been supplemented with governance through control and allegations of increased freedom. This article has as its point of departure the potential of sports to reflect social change. Contemporaneously to the coining of Deleuze's surfing sentence, a new sport emerges: parkour, in which practitioners "surf" the urban realm. This practice gained attention globally when it was featured in the 2006 James Bond film *Casino Royale*. The analysis in this article revolves around the different ways of moving in and through the environment in the renowned parkour chase in the beginning of the movie. How do different kinds of displacement in the parkour chase of *Casino Royale* relate to the transition between the societies described by Deleuze, and what new adaptations emerge and what old logics and models return? It is concluded that the older forms of power prevail and that the ideal of the society of control cannot be realised.

Keywords: James Bond; parkour; surfing; Gilles Deleuze; Michel Foucault; control; discipline; sovereignty; movement; social change

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1. Introduction

"Partout le *surf* a déjà remplacé les vieux *sports*."

—Gilles Deleuze

In a late, brief text which updates Foucault's ([1975] 2002) account of the transition from a society of sovereignty to a society of discipline by presenting "the societies of control", Deleuze ([1990] 2003) cryptically claimed that "Everywhere surfing has already replaced the older sports". By this, Deleuze obviously did not mean that the older sports—called modern sport by some (cf. Guttmann 2004)—are no longer practised, but rather that in post-war times they have ceased to act as a model for power, governance, production, and competition, in both culture and economy. The increasingly connected societies of "control" demand individuals and institutions of a transgressive variety. Perhaps emblematic of continental philosophy, ostentatious sentences such as Deleuze's are primarily to be conceived as pedagogical and rhetorical, i.e., meant to suggest where and how to look at larger chains of events, and not to be empirically tested. (However, it is noteworthy that ever since Deleuze made his claim, surfing (the internet) is precisely what happens exactly everywhere on a scale arguably unfathomable even by him at the time; the very phrase "surfing the Internet" was coined in 1992, two years posterior to Deleuze's quip.).

Cultural studies scholars (cf. Wheaton 2004, 2013; Kusz 2007) have highlighted how extreme sports are conspicuous practices in which cultural and social values are contested and negotiated, often reinforcing hegemony of masculinity and whiteness through media such as television and film. Actually, Deleuze's (1982) first mention of surfing is found in a lecture on movement in film, based on the philosophies of Henri Bergson and Charles Sanders Peirce. Movies such as *Point Break* (1991; for all citations of film titles, see Appendix A),

starring Keanu Reeves and Patrick Swayze, is a canon of a Californian catching-the-wave kind of gospel, which have elicited elaborate cultural commentary on Deleuze and surfing as a model of knowledge that stays clear of both spiritualism and hedonism (Palmås 2009). In this article, we will turn to another intriguing example in films of how surfing replaced the older sports: the British secret service agent James Bond, whose phenomenal somatic splendour always seems to follow, and perhaps drive, any given zeitgeist he happens to figure in.

In line with the cultural studies rendition of extreme sports, Pegram (2018) pinpoints the heroic masculinity on display in Bond's extreme athleticism. Judging from Pegram's demonstrations, there is no lacuna of traces of surfing culture in Bond films, and likewise, in them, there are certainly lagoons traversed by boards. Pierce Brosnan's mounting of waves in *Die Another Day* (2002), in particular, takes us from the clandestine night operation on North Korean waters to the full-out global warming-inflicted arctic tsunami surfing in the North Atlantic Ocean. Roger Moore's descent in the alps in *A View to a Kill* (1985)—arguably the first ever snowboarding instance on the silver screen—is aurally augmented by surfer culture anthem "California Girls" by the 1960s pop group The Beach Boys.

So far, the affinity between extreme sports such as surfing and James Bond is evident, but what about regular sport? Curiously, as Eriksson and Jonasson (2020) remark, James Bond, while showcasing many spectacular stunts of the extreme variety throughout the films, aside from a game of golf in *Goldfinger* (1964) "seems to avoid traditional sports tout court". Instead, Eriksson and Jonasson (2020) contend that *glissade*, i.e., the sliding motion typical for surfing, has left traces throughout the Bond films leading up to Brosnan's final outing. The franchise, apparently, already attests to Deleuze's claim that "everywhere surfing has already replaced the older sports".

As for Pegram's (2018) account of extreme sport in Bond, the latest of actors impersonating the spy, Daniel Craig, is not part of the analysis (save for a remark on his swimming trunks and a judgement of an elite footballer, Steven Gerrard, whom Craig saw suitable to succeed him as Bond). Not that Craig lacks any of the necessary grit and decisiveness for extreme sport acumen, as Bond, he just does not mount boards, only motorised vehicles. Notwithstanding, there is one extravagant expression of extreme sport in his inaugural Bond movie *Casino Royale* (2006): the epitomising chase in the beginning of the movie, starring alongside (or rather ahead of) Craig, Sébastien Foucan—one of parkour's founding fathers. The connection between extreme sport development, its practitioners, and the James Bond action scene bravado has always been intricate (Pegram 2018); the parkour scene, though, presents special challenges as a trial for the recast, rebooted, distinctly new Bond (cf. Lindner 2009).

Parkour is a sport that emerged in a time and place where, according to Deleuze's dictum, surfing has replaced the older sports, and indeed its ideals are close to the transgressive imperative of the informational, late modernity (Angel 2011, 2016; Raymen 2018). However, there is something lacking in parkour that characterises surfing and its ilk, and which is significant for Deleuze: the inserting of your body into an existing force such as wave and wind (Deleuze 1982, [1990] 2003; cf. Rinehart and Sydnor 2003; Žižek 2004; Palmås 2009). Instead, the traceurs—the parkour practitioners, with their smooth wave-like movement pattern in cityscapes, who could be taken for exemplary, "undulatory" (Deleuze [1990] 2003) individuals in the so-called societies of control—are actually themselves the origin of the exerted power. The problem raised by parkour marks a shift in the logic of extreme sport: it takes place in a built environment as if it were a natural environment, exerting internal force as if it were an external force. Deleuze actualises a similar paradox when he points out surfing as the typical model for, and corporation (Fr. *entreprise*) as the typical space in societies of control. This opposition appears to have been conflated in the practice of parkour.

Regardless of Deleuze, theorists of parkour sometimes slip into his discourse. Aside from camaraderie and dignity, Thibault (2020, pp. 29–31) identifies force and control as common ideals for "the art of displacement" (his preferred term for parkour), which

he defines as a "culture of attention"—being attentive to your surroundings, textures, movements, etc.—through the practice of which one transforms brute force to control and mastery. Accordingly, Thibault's very first philosophical lesson is drawn from Epictetus, the Stoic: there are some things that are in our control and others that are not (Thibault 2020, p. 37); parkour has to do with affirming one's capacity to overcome obstacles, in effect exercising one's control (of your attitudes and habits) upon that which one does not in fact control (the material world). It is no surprise, then, that Thibault frames this ethics of control with an optimistic attitude of growth and self-improvement: you can always perform better; you can learn to overcome all obstacles. Raymen (2018) connects the individualised ethos of parkour to contemporary capitalism, one that takes place in both off-limit cityscapes and the gig economy, the latter of which is relevant to discuss in relation to the dispersal of parkour as a considerable cultural expression in social media through moving images, and even in cinema (Angel 2011). All this seems to indicate that parkour represents a paradox in the development of sport which reflects complex circumstances of contemporary social change; the wholesale exchange of a disciplinary model for one of "control", as older sports give way to hegemonic surfing, is not the full picture. If transitions are taking place, they appear more complex and more conflictual.

We aim to investigate what happens in the struggle over what form society takes and how this can be reflected and prefigured by sports, specifically in their cultural representations. We will do this by analysing a scene in a film where a parkour/freerun is staged as part of the plot: the chase scene set in Madagascar in the James Bond film *Casino Royale*, where Bond is pitted against a traceur antagonist. For this purpose, we ask the following questions: *How do different kinds of displacement in the parkour chase of Casino Royale relate to the transition between the disciplinary society and that of control?* And: *What other kinds of social change can be traced from looking at those transitory displacements, especially with regards to what new adaptations emerge and what old logics and models return?*

The rest of the text is disposed as follows: First, we delve into the forms of social change that we address and on what scale they operate. This is achieved through an explication of Foucault's historicising of power through sovereign rule and disciplinary regimes, as well as Deleuze's supplementing notion of societies of control, and by presenting the concept of diagrams as a tool of analysis. Further, the term diachronicity is suggested as a theoretical asset capable of harbouring the hybrid sports and social logic reigning today. Given the cultural prominence of narrative film, this medium is deemed an apt object of study for attaining a diachronic view of the diagrams at play in a dramatic context. The main part of the text thus consists of a close analysis of the scene in question—the parkour chase in the beginning of *Casino Royale*. The movement of the combatants is related to the different surroundings and discussed in relation to the diagrams of power as furnished by Foucault and Deleuze. We conclude by discussing what this kind of analysis of sport and high-performance movement in film can reveal about the temporality, historicity, and future of power distribution and social change.

2. Diagrams and the Emergence of Societies

Michel Foucault, in *Surveiller et punir* (1975), famously presents a general argument about changes in the penal system which reflects changes in societal models. In the classical age, crimes were perceived as an attack on the sovereign. Punishment therefore meant that the sovereign would avenge himself on the criminal, conceived as his enemy; the idea would hold that punishment is a war by other means and that the sovereign must show his force by means of violence. Consequently, it mainly consisted in physical punishment as public spectacle, in which the sovereign reasserts his power by inflicting sensational forms and levels of pain and violence upon the convict, up to the infinitesimal destruction of the criminal's body. In the modern age, as more "humanitarian" forms of punishment begin to be propagated, crimes are instead perceived as an attack on society, a break with the social contract. This means that society must deal with a traitor in their midst and that it must correct the anomaly in the system. Typical for the change in attitude is that

punishment is directed at the soul, not the body, so it aims to avoid or minimise pain and introduces new methods of punishment, mainly incarceration and the establishment of correction facilities. The opposite of a spectacle, punishment is ideally invisible but deals in strategies of visibility, the chief of which is surveillance in enclosed spaces. These are disciplining techniques that can be dispersed as a model for social organisation, as with Jeremy Bentham's famous panopticon: a piece of architecture that functions as a monitoring and disciplining machine in schools, hospitals, factories, etc. For Foucault, this means that power instead of being destructive is now productive: it produces utility.

The disciplinary society already operated with control as one of its main functions, as Foucault often points out. One theoretical line follows from Foucault to an idea of how political practice, under the influence of economic and technological development, and driven by conservative reactions to the welfare state in late modernity, creates a policing form of "culture of control" in contemporary society, which all but repeats events of the early 19th century (Garland 2001). Deleuze, too, insists that Foucault already saw the importance of control, but he views late modernity not as a reactionary reinforcement of the disciplinary society; rather, there are new forces at work that produce a different kind of society. These associations with technological development and new controlling techniques in surveillance, crime prevention, etc., have been taken up with influence from Deleuze in a context close to Foucault's original theme (Jones 2000; Haggerty and Ericson 2003; Wise 2004; Muir 2012; Nail 2016; Robinson 2016).

Taking hold of Foucault's off-hand use of the term "diagram" to describe how the military camp and the panopticon are formal models for the disciplinary society (Foucault [1975] 2002, pp. 202, 239), Deleuze develops a theoretical framework to describe social change in the virtual dimension of "diagrams", distinct from the actual dimension of social and historical "strata" (cf. Dupuis 2012; Zdebik 2012). Societies can then be understood not only as historically and geographically located concrete formations, but also as a map of how a society could take shape, a sort of tracing of its state of becoming (Deleuze 2003, pp. 226–38; Deleuze [1986] 2004, pp. 55–99). Therefore, Deleuze speaks of the sovereign and the disciplinary diagrams, alongside many others that could be discerned through the course of history. We can identify particular societies as actualities in the time and place where relations of power have been determined (assemblages), but also as actualisations of an idea of what society could or should be at the level of relations between forces in internal struggle (an abstract machine) (cf. Deleuze and Guattari 1980, pp. 174–84). A diagrammatic thinking of social change would seek to reach this more abstract level of what precedes a specific society, and since the virtual diagram is a "becoming" of the actual social form, it has to do with understanding how new forms come into being. This allows for thinking in terms of "transhistorical becomings" rather than imagining utopias (Mengue 2009).

In *Foucault*, Deleuze does not speculate on any specific future societal diagram to supersede those of sovereignty and discipline, though he remarks that a diagram is "profoundly unstable and fluid", always giving rise to mutations and intermediary forms; for example, a "Napoleonic diagram" combines the sovereign and disciplinary functions (Deleuze [1986] 2004, p. 43). He also notes in parentheses that "the disciplinary diagram is surely not the last word" (Deleuze [1986] 2004, p. 91). However, he suggests no further word. Yet, the book closes with speculation on a future development of another kind of diagram: changes in mankind's relation to external forces pertaining to the "folds" of being and the human form. Here, the classical age (the era of sovereignty) is characterised by the idea that everything can be elevated to infinity, that things can unfold infinitely, for which reason it is represented by the God-form. The modern age (the era of discipline) is instead marked by the idea of finitude and the Man-form, an era of setting limits, making dispersions, divergences, and all manner of organisations: "Everywhere the comparative replaces the general" (Deleuze [1986] 2004, p. 136; "Partout le comparé remplace le général"). The next step (without a proper term) is that of the Superman-form (in the Nietzschean sense, not that of comic books, Deleuze wryly clarifies). In this future world, everything

is superfolded, folded over onto the outside: finitude gives way to the finite-unlimited, the endless possible combinations of a limited set of bits, as in the genetic code or the codes of cybernetics and informatics. Here, mankind enters into new relations with forces and matter (with silicon rather than carbon); humans are "charged" with the animal and mineral world.

One of the authors that Deleuze names to exemplify how this superfolded world affects language will actually provide him with the term for its corresponding societal diagram: it is from William S. Burroughs that Deleuze borrows the concept of a "control society". While the prospect of a superhuman future had an explicitly hopeful ring to it at the end of *Foucault*, only four years later, in the "Postscript on the Societies of Control" which rounds up *Pourparlers* (Deleuze [1990] 2003, pp. 240–47), the tone is more ominous. The control function has mutated out of the disciplinary diagram to become a new diagram in itself, and it is forming a society which has more of "capitalist overproduction" of merchandise than an overcoming of human finitude. Still, it is clearly marked by the advent of computers and communication technology, contrary to the "energetic" machinery of the industrial age (and, in turn, the much simpler mechanics of pulleys and levers in classical society). This society is operated by codes: you move through it with passwords that give you access to information, but you are yourself transformed into a sort of code, a packet of information, a data "dividual". While the disciplinary model functioned through enclosures, this is a new form of governance which exerts power through openness, which makes it simultaneously seem like freedom and be at work everywhere, always. The central distinction is that things no longer take form by being stamped in pre-existing moulds but are rather ceaselessly adapted and transformed by processes of modulation. Incessant control makes you never come to a close. You are never finished with school, because education has become life-long learning. Work has become like a game show, where competition and rivalry are staged to stimulate performance, career climbing, and pay rises. Everything is on the market, and marketing is "an instrument of social control", as the manic buying of overproduced merchandise leaves people in debt rather than in jail. Everywhere, technology tracks you and potentially traps you, even (perhaps especially) out in the open.

Nevertheless, in all this there may well be a sense of being superhuman, as you are flowing along with information and capital, pursuing your dreams in a world of endless possibilities, free to move wherever you wish, driven to always better yourself and seek out enjoyment at every turn, jacked into a technological infrastructure that does the hard work for you. When Deleuze quips that everywhere surfing has replaced the old sports, it catches some of this sense: you enter into an external motion that takes you up and lets you ride along, so that you can surf the waves of information and capital with a minimum of effort, instead of toiling in the factories of old in rigid systems of hierarchy. In the disciplinary society, the individual is a producer of discontinuous energy, but in the society of control the energy is already there in the world—it is a continuous band of energy that sets you off. This is roughly equivalent to the notion in *Foucault* that mankind enters into new relations with external forces and is "charged" with the animal and the mineral world. In an earlier text in *Pourparlers*, Deleuze has laid the ground for the sport metaphor: what has changed is that earlier sports depended upon the human body as the source of movement, which meant effort and resistance, while the newer sports (surfing, windsurfing, hang-gliding are mentioned) relate to how you become "accepted" into the movement of a great wave or a column of rising air (Deleuze [1990] 2003, p. 165).

The society of control is yet emerging as Deleuze publishes this in 1990, with remnants of the disciplinary society still waiting to collapse, and he foresees that in order for it to install itself as a new model might include some methods borrowed from the older societies of sovereignty—that these "return on stage, but with the necessary adaptations" (Deleuze [1990] 2003, p. 246: "reviennent sur scène, mais avec les adaptations nécessaires"). It is up to the people, not least the young, to find means of resistance in a new reality taking form: not to hope or fear, he says, but to "look for new weapons". We will take up Deleuze's sport metaphor to continue the argument that changes in sports somehow

prefigure changes in society, so that sports could help us sketch the diagram of power relations, their permutations, and what those new weapons are.

3. The Diachronicity of Sport, Parkour, and Bond

Parkour was a relatively new form of extreme sport when it was integrated into the narrative of *Casino Royale* in 2006, in a dramatic manner similar to the use of extreme sports in previous incarnations, but this time in a reboot that reintroduces Bond from scratch. It is both a continuation and a new beginning: this is already a curious case of the odd chronology which the Bond series provides. It is then doubly curious that there are no extreme sports in Craig's following Bond films. What is so pivotal, so critical, in Bond's foray into parkour, that extreme sports are abandoned? An analysis of how the diagrams of sovereignty, discipline, and control are evoked in the parkour chase of *Casino Royale* could reveal both what has happened since surfing replaced the older sports, and what the future holds. If the era of extreme sports is at an end in the "Bondiverse", that is a mark of change in the "societies of control", with which Deleuze associated surfing as a model of production and competition. Even if Deleuze did not explicitly address the history of sport with his poignant sentence, what if his statement could be reforged as a method? The generalised steps would then be to identify the state and logic of a society through its pastimes. At least, anthropologists claim this. However, if Geertz (1972) elaborated with cockfighting as a Rosetta stone for decoding the Balinese culture he studied, the kind of perspective sought here is closer to Caillois's (1958) temperature taking of a civilisation judged on its games. Connor (2011) identifies *sports de glissade* as contemporary physical cultural practices able to pull the brakes on the environmentally hostile civilisation in order to develop more sustainable ways of living in and alongside the natural world. The utopian ideal of surfing has, however, been contested (Eriksson and Jonasson 2020).

For Deleuze, "surfing" takes centre stage as the main exemplar of new sports and an emblem for the society of control; they all belong to the same diagram. However, we should remember that diagrams are historically scrambled, that they are unstable, and generate intermediary stages and internal conflict. This is exactly what has happened with "surfing": it has morphed into various hybrid forms, adapting to the conditions for going on living in the built environments of the remnants of a society of discipline, in the absence of the utopian great outdoors. Skateboarding was an early instance, managing to "surf" the empty swimming pools of California (cf. Borden 2001). Parkour is particularly significant since it demonstrates an incorporation or interiorisation of the external forces. The body itself being the means of sliding, partly by emulating the motions of animals, what once was an entering into the dynamics of the natural elements is now a manner of imitating nature in varying sets of strange transformations: leaping, grabbing, and hanging like a cat, climbing like a monkey, jumping like an ape, rolling like a wave. Historically speaking, parkour is inspired by *la méthode naturelle*, a French military regimen, which in turn was inspired by the "natural movement of savages" perceived by colonialists.

In summary, parkour's hybridity combines the before-mentioned diagrammatic models of discipline and control. It is a sport of "control" in that the ideal is an adaptation to the environment for "surfing" on matter, but it is in fact not dependent upon an external force as source of movement. Instead, movement in parkour has an internal, organic origin in a body which exerts itself, and it is developing an array of techniques for regulating performance; in this sense it is a sport of "discipline". However, it also connects to a primordial past before and outside the diagrams for Western classical, modern, and late modern societies. It is as if they link up: the primitive becomes disciplined in order to perform "control".

Connor (2011) presents an interesting approach to the history of sports by an analysis of its shifting meanings since the coining of the term in Mediaeval France. While denoting pastime, sport's connotations have gone from evoking impersonal forces such as the whims of nature and the devil, via the blood sports (hunting and animal baiting) of early modernity, to formalised ball games and Olympic sports. This latter representational definition now

shares the space with more hybrid forms, such as extreme sports, motor sports, and electronic sports. Connor's (2011) loose fixating of the meaning of sport permits change, which is in line with what the present study sets out to do. Another one of Connor's fruitful approaches, that also admits change, is one that posits sport as an "anagram of society". Thus, he steers clear of the worn-out phrase of sport as a mirror of society. He also let the parts be rearranged in order to offer, if not a reflection, then a mirage of the laughing mirror variety. Even so, what if sport also, in its skewed fata morganas, could predict the coming society? Instead of anagram, which implies merely rearranging existing parts (and is therefore too static for permuting sequences), and in line with Deleuze's elaboration of Foucault's legacy, we talk instead of sets of sports as "diagrams" of and for social change.

We could take this to mean that sport is more properly a diagram than the actual society, since a diagram for Deleuze is the map of a reality that is yet to come, not the representation of what actually is. The diagram, being virtual, provides a visualisation of how things can change. This lends a special significance to the word "diachronicity": you see things as crossing through the passage of time, not being out of step with the order of time. While the diagrams themselves seem like ideal types, static blocks of social forms in a structuralist conception, they are really shot through with dynamic forces of powers vying for dominance, resulting in a view of how the diagrams collide, cross each other, overlap, and mutate as they are being actualised. In short, diachronicity is the temporal view of the ontological hybridity of realised diagrams. In line with viewing Deleuze's sentence on surfing as a "diagram" of social change, we approach them "diachronically", highlighting shards, remnants, and debris of the past, recording the clamour of the contemporary, and by tracing the fickle flickering of the future. A change in sports prefigures social change, so what then when sports now have been changing further, mutating within the diagram of surfing—what figurations of social change are we seeing today? Note that in the original phrasing surfing has already replaced the older sports, while the transition into the society of control is still under way. This implies that sports not only "mirror" society but prefigure it.

Complementing Foucault and Deleuze with the understanding of the shifts of sport in Connor's ideational historicising of the term, Table A1 summarises the diagrams at play in the coming analysis.

Deleuze's referral to these diagrams as entering "stages" (Fr: *scènes*) directs the analysis below to discerning the different regimes of power enfolding throughout the cinematography of the parkour chase in *Casino Royale*. As for Deleuze, stage and scene can be both the actual part of the movie and the more ontological "staging" of the logic of an era. Thus, different zeitgeists surface through images of both material surroundings and movement patterns within, upon, and across them. This is how diagram and diachronicity connect, i.e., through both the drama of the developing story arc and the corresponding sets of logic they are theoretically associated with. The diachronic methodology gives access to the ideational level: to figures of thought rather than actual athletes. However, even this the model permits. Mollaka, played by Foucan, the antagonist in the clip to be analysed below, is indeed an example of an actual athlete, as one half of the original crew from the early 1990s parkour jams in suburban Paris. The other founder of parkour, and perhaps the foremost of them, David Belle, forged his art diachronically by combining martial arts, the hero imagery of Spiderman, and the military gymnastics taught to him by his father. Such miniscule details are passageways in the historicising taking place when approaching the moving images diachronically.

The ambiguous nature of parkour—making it doubly apt for the present discussion in relation to both diagram and diachronicity—is further underlined by what is sometimes referred to as its "paradox" (Angel 2011; Raymen 2018). While there is a social or political coding of parkour as transgression, resistance, deviance, etc., in reference to its subcultural connections with youths in multi-ethnic suburbs, it has developed into a marketable and highly mediatised enterprise, and its practitioners (and spectators) seem to have more hedonistic than political motivations. This adds yet another dimension to its status as a

sport for the society of control: not only is it symbolically a variant of the surfer model, it is also actually caught up in "the joy of marketing" (Deleuze [1990] 2003, p. 247). The very fact that the once alternative practice, whose rebellious connotations and utopian potentials are still thematised in a film like *Yamakasi* (2001), is taken up by mainstream media and appropriated for action spectacle in films like *Banlieu 13* (2004), its Hollywood remake *Brick Mansions* (2014), and of course *Casino Royale*, is testament to the history of this paradox. However, we might remind ourselves that in the process, parkour in some sense returns to its origins; its teenage pioneers in Lisses and Sarcelles were inspired by the exploits of Jackie Chan, Jean-Claude Van Damme, and the Japanese animé series *Dragon Ball* (Angel 2016, p. 41).

It has been noted that Bond's movements through space have wide-ranging political implications (Funnell and Dodds 2017), but they also imply temporal shifts depending upon how they simultaneously reflect a contemporary situation and prefigure something to come. As a character who is continuously rebooted, Bond keeps having to restart for a new tenure, setting the stage for what he is to be "this time". Not least does this apply to the object of study in the present article: *Casino Royale*. Written by Ian Fleming, this story appeared in 1953 as the very first James Bond novel (Fleming 2012). Just a year later it was adapted to television, and a decade and a half later to a satirical movie in 1967, starring David Niven (amongst others) as James Bond. So, when Daniel Craig begins his Bond tenure with the title in 2006, it truly is a reboot, going back to the origins while still taking place in the ambiguous aftermath to 9/11, but prior to the financial crisis of the Lehman Brothers crash in 2008, and the start of a tenure that ended in 2021. It is thus contemporaneous with both the beginning of Deleuze's historicising (" . . . new forces that were gradually instituted and which accelerated after World War II: a disciplinary society was what we already no longer were, what we had ceased to be."), and the ending of it.

4. The Parkour Chase in Casino Royale

Tracing their movements through the roughly nine-minutes-long scene, we can plot a course, so to speak, for the freerunning Mollaka and his ardent pursuer Bond through three spatial sets, each representing stages in the outlining of societal diagrams.

4.1. The Pool Pit, Jungle, and Fence

Just as when skateboarding branched off from surfing in the 1960s, our scene begins in an emptied swimming pool, but here we find ourselves in a derelict shanty town in Madagascar. A raucous crowd of people are gathered in and around the pool, in which a mongoose and a cobra are pitted against each other in a game of animal baiting. The animals about to gut each other at the centre of the stage connects the scene with classic colonialist imagery, such as Rudyard Kipling's short story "Rikki-Tikki-Tavi" from *The Jungle Book* (Kipling 2013), in which a brave young mongoose defeats a treacherous cobra. The fact that the final battle in that story is left undescribed by Kipling opens for a conclusion in *Casino Royale*; the coming clash between Bond and Mollaka will be laid out in detail.

Bond stands leaning nonchalantly up in the makeshift arena, while watching down; we quickly gather that he is spying on a bombmaker (Mollaka) hiding in the crowd below, as he is clandestinely communicating with a partner through an earpiece. The scene at the outset sets the stage for the essential clash between the principle of sovereignty, represented by the public blood sport of animal baiting, and the elements of control, represented by contemporary communications technology. These are two main power relations that will be examined throughout the scene. Initially, Bond and Mollaka are linked by this very clash as two apparent spectators of the sport while really both engaged in the use of technology: the earpiece for Bond, a mobile phone for Mollaka. On the screen of that phone, a message of a single word appears: "Ellipsis". The message signifies something that is missing, a lack of information (it is a password needed for a terrorist assignment), which is exactly what Bond must retrieve. This is why he says to his partner about Mollaka: "I need him alive." In a scene with very few words, these constitute a statement of sovereignty on Bond's

part—that he, who has newly acquired his thanatopolitical licence to kill, at this moment decides on life. The mere placing of the combatants is also informative of the sovereign setting, with Bond high above the pool surveying the spectacle below and Mollaka as the subject (in the scholastic meaning of "thrown under") in the throng of people. When Bond's partner botches the surveillance by bringing attention to his earpiece, Mollaka starts running from the arena and Bond sets off in pursuit through a marketplace and beyond. This marks the failure of the surveillance operation and the beginning of the chase.

The scene thus shifts to stage two: a jungle. In a few brief shots, Mollaka runs through the foliage with Bond in tow; brought back to basics in a natural environment, they are on equal footing, playing out some primitive mode of predation, as if the blood sport they had witnessed was now enacted by them. However, this might also be the preparation for the coming parkour sequence, true to its origins in *la méthode naturelle*. At a point in the scene, they reach an obstacle, a wrecked car, which provides them both with a first test of how they overcome obstacles. What we immediately see here, as will follow throughout the scene, is that they make dissimilar decisions. While Bond follows Mollaka and to some extent mimics him—as if the whole scene was a game of "follow-the-leader"—he always improvises a variation on the theme set by Mollaka. In this case, we can perhaps even receive an intimation of a logical template for this difference: Mollaka neither stops nor swerves for the car but passes through it, leaping skilfully in through one missing backdoor and out the other side, while Bond changes his trajectory and runs around the car altogether. From this, we obtain a sense of Mollaka's agility, a first glimpse of his parkour prowess, but also that he stands for a principle of interiority: his method is to pass through things, looking for the passages to slip through, without disturbing matter around him. We also acquire a sense of Bond's shortcomings as to the parkour expertise, which he will have to compensate for by sheer force and determination, at the cost either of harming himself or damaging his material surroundings.

Next, they reach another obstacle, a fence, leading into a construction site. Leaving the jungle behind, they are at the threshold of modernity—an urban world emerging from the dust. The fence is yet another test for their methods of movement. Mollaka leaps up on the metal fence and sits for a second (a move known in parkour as a "cat leap") before jumping down. Bond, on the other hand, labours to heave himself up and then rotate, flipping down in a heap of gravel. In this case, we glean another sense of their differences: Mollaka uses the natural method, imitating an animal, while Bond's displacement resembles a pendulum pivoting around the top bar of the fence, corresponding with the crude mechanics of a sovereign machinery. Mollaka's pace is sustained, while Bond's stops.

4.2. The Construction Site

Once they are both over the fence, we are introduced to the main arena for the freerun to have its course: a construction site. That it is a construction site seems to symbolise a society in its emergent state; it is, almost precisely, a diagram—a mapping of the potentials of a reality to come. Considering the heavy machinery and the industrial trappings of the project of building a high-rise, everything would point to a disciplinary society at work, but it is not entirely certain what is taking form. What makes it more complicated is that it is also functioning as virtual space where Mollaka and Bond in their respective ways think "diagrammatically", as it were, in their battle of physical wit. It is a question of moving through space by either getting away or catching up, of course, but they must each find their ways of understanding what kind of space it is and how to get through it. As they are moving, they are negotiating the material infrastructure of the society to come, thereby sketching their own diagrams of it as they go along. In spatial terms, the chase drives them upwards from the dusty, messy ground level, through the scaffolding and beams involved in the construction, up high on top of a giant crane, and then down through the interior of the building taking form, reaching ground level again. It is mostly in the ascent and the descent that we see demonstrations of Mollaka's use of parkour skills and Bond's attempts to keep up with them, while the ground level shows more use of vehicles and weapons.

This underscores the notion that the ground level represents a disciplinary level which Mollaka and Bond "escape" by moving up into the emerging structure, still a set of abstract lines and points to connect in a semi-virtual space, where their attempts to slide or "surf" appear as experiments in performing according to the model of control.

Throughout the scene, we see the variations of routes and methods of movement that we had begun to see in the jungle and at the fence. For instance, as Mollaka scrambles up the metal scaffold in a monkey-style climb, Bond runs diagonally up a crane to intersect him. Later, Mollaka leaps, with some difficulty, onto a load hanging on a cradle suspended from a crane and then begins climbing the hoist ropes up to the crane. Bond makes the decision that he needs a better approach run in order to reach the load, so he first shifts along the beam in the opposite direction to gain speed and consequently lands more steadily on the load. However, he only begins climbing, reaching a load leveller at midpoint, when he makes the assessment that he can use the machinery to his advantage: he kicks a lever, releasing the load of metal pipes and positions himself on the leveller, almost as if it was a surfboard, soaring upwards at quick pace.

Upon reaching the beam, Mollaka opts for the inside of it, crawling through it as if it were a burrow, while Bond stays on the outside, climbing along the metal bars. This gives Bond better speed and he starts catching up. Mollaka's principle of looking for the opening in things and going through it has served him well thus far but, in this instance, the hole becomes a hindrance to his movement, relative to Bond's principle of going round. As Mollaka looks back at his pursuer, he realises his mistake and enters the beam on the other side and climbs up on top of it. However, here he makes a second mistake: instead of running free on the new path, Mollaka turns again and awaits Bond as he reaches the top of the beam; he points his gun and pulls the trigger—but he is out of bullets (the methods of combat used on the ground do not work at the top). In frustration, he throws the gun at Bond, who simply catches it mid-air and promptly throws it back. Mollaka is hit and falls off the top of the beam. This demonstrates Mollaka's failure to "do Bond", in the midst of Bond's attempt to "do Mollaka"; trying to imitate one another, they begin to realise their mutual differences. A physical struggle ensues where they are trading blows and kicks almost as if mirroring one another; at the highest point, they are again, as in the jungle, on equal footing. At this point, a cinematic remark may be in order: since their "surfing" now has been interrupted by going back to a primitive stage of violence, in a soaring helicopter shot, the camera movement replaces the smooth displacements of the combatants.

Leaving the higher crane for a slightly lower one, and then by proceeding with a veritable leap of faith down to a sand-covered stairwell roof six metres below, and further down to the roof of the building, Mollaka again establishes an advantage and triumphantly gains momentum in a display of parkour bravado. Bond scarcely succeeds to copy the routine, crashing violently into the lower beam and toppling off the stairwell roof. Mollaka's fluid moves become increasingly superior as they descend, while Bond takes physical punishment trying to emulate him. However, it also becomes increasingly apparent that while Mollaka moves incessantly and smoothly point by point in space, looking for the best way to slide ahead, Bond keeps stopping and starting, as if surveying the land and taking in the topography, and then analyses how a variant trajectory might take him across space in a quicker manner. Here, Bond scans the barren roof to decide how to shortcut Mollaka, who disappears with a set of jumps down a spiral staircase with a broad well, over which he leaps diagonally. Instead of taking the stairs, Bond kicks in a locked door near his landing place. Once inside, our runners encounter obstacles on their own before meeting up again. In Mollaka's way, a working bench appears around which a couple of drone-like workers are positioned. They do not seem to pay attention to the fact that an intruder leaps like a panther over the whole table. First, with his arms in front and legs behind, Mollaka, when reaching the far side of the bench, again uses his arms as a stabilising pivot to not lose momentum. Receiving a glimpse of Bond in an adjacent room, Mollaka thrusts himself down an elevator shaft. Jumping in a zig-zag pattern from side to side, he is able to swiftly descend. Bond finds another holey passage in the floor

to which he slides lying down before dropping down through the ceiling of the storey beneath. Visual contact is made as they encounter a wall.

The wall is the last obstacle before exiting the building. It is made of plaster. A ventilation or window opening is placed above the wall, which lies in a dead-end corridor. In front of the wall, near the roof and the opening, hangs a horizontal metal pipe. Mollaka jumps up to grab the pipe and then leads his legs and body in an arc from the floor through the opening and down on the other side of the wall. The camera stays on the wall after Mollaka disappears out of the screen on the left. Just a second later, Bond enters the room—but not through the opening near the roof. Instead, he rushes right through the wall, dispersing paper and plaster all over, including the film of white powder that forms a top layer on his body. Mollaka again looks for a passage through the built environment by seeking an existing hole in the wall. Bond is confronted by a new choice in the same conditions: previously, he had gone around the car, on the outside of the crane beam, by a smoother slide through the hole in the floor; now, he forces himself through the wall, busting a man-sized hole in the plaster.

Out of the building, Mollaka travels down the building one storey for each jump. The only mobile object used for these hastily assembled stairs is the roof of a metal elevator hanging outside the building. Bond enters a precipice where the future building probably will be equipped with a window. Again, he decides where to go after establishing the position of Mollaka. Below him, there is a scissor lift to which he jumps. Mollaka is seen finally leaving the building while Bond grabs a monkey wrench lying on the floor of the lift and jams the steering mechanism with a stark blow. This allows for a quick folding together of the scissors holding the lift up, and Bond soon hits the ground as well.

To sum up thus far, it is evident that Mollaka dominates by using parkour moves; he performs a set of sliding and rolling motions, sometimes bouncing in a zig-zag pattern upon material support, going forward with a continuing force that seems to require much skill but not too much exertion. In short, it seems easy and smooth, even graceful. The ideal of these movements are that of "surfing" on the materiality of the built environment, using what would be obstacles as if they rather gave force to the movement; in other words, performing a modulating function that transforms the disciplinary society into a utopia of control. It is as if Mollaka is seizing upon the chance to sketch the prospect of a society of control as a kind of surfer's paradise, indeed mapping out the potentials for freedom in the control diagram, while that society is still in the process of taking form. However, what allows him to do this is, in reality, his skill at parkour—namely, the support given him by the sport "disciplining" his capability to move. He is capable precisely because he is not a "pure" surfer, but that strange hybrid of control and discipline which is typical of parkour.

Bond, on the other hand, has very little in the way of discipline. True to his character, he is usually the best at everything, including all the sports that he has engaged in throughout all his incarnations. Why then does he not outperform Mollaka, as he does everyone else? It is because he refuses discipline that he cannot do parkour. Bond has previously been sliding on ice, water, and air in most of the sports mentioned by Deleuze as emblematic of the society of control, until he was finally able to surf properly in the film that preceded *Casino Royale*: *Die Another Day* (2002). Bond is already the true surfer, the true agent of control, its principle of reality. It is when he meets this contender to a utopian ideal that needs to build upon the disciplinary model that he refuses to engage on its terms, and so he needs to experiment with alternatives. This is why one might claim that Bond is critiquing or deconstructing the utopian ideal that "control" might hold, demonstrating that it is dependent upon methods of discipline that he is set on avoiding or, indeed, destroying. The physical violence with which he drives home his point, even in the use of simple machinery to manipulate space, is evidence that he is rather drawing from another source than discipline, namely the diagram of sovereignty.

4.3. The Streets and the Embassy

As they exit the construction site, they enter the penultimate stage: the streets. Now, for the first time, they are in a fully formed society, and it is a bustling modern town representing discipline. Mollaka is still on foot, running down the sidewalk, but in opposition to his previous elegance and skill, he is exhausted and clumsy; this signals that the ease with which he practised parkour as he slipped and slid through the construction site is now gone. He has literally been brought down to the ground, back down to reality, and there his powers have left him. Instead, he seeks safety in the halls of discipline: he is running to hide in the embassy of the fictional country Nambutu. So, we see Mollaka running on foot among traffic towards the embassy; Bond is still in pursuit but hitches a ride on the back of a van and easily glides along, watching Mollaka pant and struggle to move forward. When they finally reach the embassy building, Mollaka heads in through security. Bond leaps off the roof of the van, over a wall, landing with a somersault into a classic "hero pose". The camera dwells for a moment on his determined face.

By entering the embassy over a wall, it signals that he is breaching a closed environment, and we would assume that he is violating diplomatic rules and putting himself in enemy territory. The embassy is an institution representing a modern nation state with rules of diplomacy, framed by a very different form of "sovereignty", namely that of the sovereign state. By all accounts, Mollaka should be safe from the British agent in such a place. However, that assumption is his fatal error, for Bond has sovereignty of an altogether different kind; he sets himself above all that jurisprudence in his determination to execute his task—to gain the code, that missing piece which gives control. His devotion to the task in hand is "absolute" in a sense fitting with the classical ideal of the sovereign monarch, and the bastions of discipline that would set limits on that infinite power really offers no resistance to his aim.

The shot turns to a surveillance camera on the wall, facing Bond, and pulls in on that camera to emphasise how it registers Bond and his encroachment. However, in a twist, the shot turns back to see Bond walking confidently (with a swaggering "gorilla gait") through a loggia in the embassy, turning with ease into an office where he catches up with Mollaka. It is as if the surveillance camera turned from a threat to an admiring observer, half-identified with the film camera's point of view. In a series of swift moves, Bond kicks Mollaka in the chest and with little effort, fights off a clerk trying to reach for a gun. Mollaka crawls on the floor, coughing in anguish. Bond grabs him by the shirt, lifts him up, and drags him out of the room. The clerk pushes an alarm button, the alarm sounds, followed by blinking lights and shots of a surveillance video. Guards in military uniform gear up and set off after Bond: now Bond is the one who is pursued. Amongst massive gunfire and collateral damage, Bond uses Mollaka as a human shield, leading him to be shot in the leg. Bond then tosses Mollaka into the body of one guard and engages in a *melée* fight with two guards. Bond again grabs Mollaka and now uses him as a battering ram to smash through a door into another office, only to throw Mollaka out through a window, his body bouncing down a roof onto the ground below. It is like a vengeful caricature of Mollaka's earlier elegant descent. To add further insult to injury, Bond immediately jumps after him and lands on top of Mollaka's body.

In all this, Bond's moves have an incessant forward motion and an unphased smoothness which is equivalent to Mollaka's parkour prowess at the construction site. This is how he has found his surfer mode. So, when Bond grabs Mollaka and uses him as a battering ram to smash through a door and throws him out through a window, this is a symbolic counterpart to grabbing the board and hitting the waves. With Mollaka's body falling onto the ground below, and with Bond immediately jumping after, landing on top of him, we see the triumphant emergence of the image of the "sovereign surfer" using the subjugated pretender as his board.

Once they are out in the courtyard, the guards gather in a skirmishing formation in a new enclosed space for a final face-off with Bond. Still using Mollaka as a shield, Bond stares them down but makes a gesture of surrender and drops his gun, pushing

Mollaka free. Instantly, however, in a swift move, he draws out another, hidden, gun and unceremoniously shoots Mollaka dead, then turns his weapon on a set of gas containers so that they explode behind the guards, who are thereby decimated in the flames. The shot lingers, as if in schadenfreude, as the roof of the embassy falls down. In this last stand of the society of discipline, there is a seeming victory on its part, but Bond feigns defeat only to fulfil his domination, this time by destruction. The code retrieved, he no longer needs Mollaka alive; having taken possession of the elliptical message, life is insignificant. This is the synthesis whereby the sovereign comes into control. Deciding on death, he kills Mollaka. However, he goes one step further, taking his vengeance upon the very form of disciplinary power: by exploding the enclosed space, he orchestrates an excessive spectacle of violence to create a way out. The society of discipline crumbles, and sovereignty rules in the open.

5. Discussion and Conclusions

Eriksson and Jonasson (2020) point to *Casino Royale* and Daniel Craig's debut as the secret agent as the end of the extreme sporting Bond as displayed by, for instance, Pierce Brosnan. Indeed, Bond falls short regarding parkour in comparison with Mollaka, played by Sebastian Foucan; but only in selected places, though, such as when they enter the construction site. Mollaka's performance of parkour constitutes a discipline–control hybridity. On the one hand, Mollaka holds the code of information, as he seems to hold the code to surfing by mastering parkour. However, on the other hand, he puts into practice a set of moves that he masters; he expends energy and becomes tired; he looks for enclosures and their passageways, ultimately hideouts as he seeks security in institutions of discipline. Correspondingly, we have seen that Bond's performance constitutes a sovereignty–control hybridity: in not mastering parkour, Bond uses modulation to adapt to changing surroundings rather than adapting to moulds. However, he makes momentary decisions with radical solutions; he manoeuvres space and matter (simple machinery) rather than mastering moves; he shows force while taking physical punishment himself; he puts himself over institutions and explodes enclosed environments in vengeful spectacles of violence.

A detailed analysis of how hunter and prey move through the stages, actualising the corresponding logics and models of different societal regimes, puts Bond's extreme sport failure in perspective. Bond is not an extreme sport athlete, and yet he prevails during an era when surfing is the model. Craig, as Bond, incorporates this spirit rather than clinging to the extreme sport routines. He slides on the muddy concrete and surfs the back of his opponent. When compared to Brosnan as Bond and his excessive references to the practising of the actual extreme sport, it is noteworthy that Kusz (2007) tracks a return of white athleticism in extreme sport during the turn of the millennium—the same period that Brosnan was active as Bond. No wonder then that Pegram (2018) pays more attention to Brosnan's extreme sport display, while Craig receives attention for his wear.

According to Deleuze's theory, the society of discipline is governed by moulds, while that of control is governed by modulation. For Bond, control allows a modulation of sovereignty, while for Mollaka, a mould is beginning to take form which disciplines the element of control. Ultimately, he takes refuge in the enclosed space of discipline, which signals his downfall; almost literally, the retreat to discipline is a dead end. Sovereignty triumphs because it has learnt to break through obstacles and crack open the enclosed spaces. We could also gloss this as saying that these are utopian and critical approaches, respectively. Mollaka represents the utopia of the control society in his freerunning—heading forward, expressing freedom while leaving the material world intact. Bond, for his part, is at the heels of this ideal, producing clamour and debris (from collateral damage to conspicuous destruction), in a manifestation of the reality principle with regards to control: we need to understand that there is an external force to relate to in some way.

Wheaton (2013) is wary of the symbolical interpretation of extreme sports, or what she refers to as lifestyle sports. Because the matter concerns physical cultural expressions and the lifestyles they imply and foster, practitioners and their voices must be heard. Thus,

without a doubt, Deleuze's use of surfing as a model for the logic of post-war societies, those of control, falls under that umbrella. However, ultimately the present text is not about people; it is about the zeitgeist logic making certain movements possible. Notwithstanding, the movements of any given zeitgeist sooner or later is mediated by and materialised in people. Using sport as a diagram to study social change through the analysis of movement in film enables us to draw out both the historical features and the prefigurations of the future. We have elaborated this as an idea of diachronicity, by selecting examples with enduring and sometimes ambiguous features, such as Deleuze's surfing demonstrations, parkour, and James Bond, in order to see how diagrams of yore are actualised anew.

We should note regarding "the stage" that space is temporalized and that in neither case is society fixed and stable: it is either in ruins, being built, or being laid to waste. The scene shows us remnants of the old and an emergence of the new, leading up to the blowing apart of the claim to established order. These are the conditions of the instability of diagrams: always in a critical state. Further, we should note that as we traverse this stage through the course of the scene, we witness the intermingling of forms of societies by diagrammatisation. This means that while there may be an idea of a pure form of a society as its utopia, what we in reality have are hybrids of such ideas that push forward into a future to come, even while pulling back into a past to provide us with methods for going forward. In terms of sports, such hybrid forms of sport imply that something of a previous model remains. These hybrids in this case negate the ideal of pure surfing (sliding effortlessly, peacefully on an external source of movement) by retaining either *the effort and physical exertion of discipline or the violence and physical pain of sovereignty*. The hybrids now constitute reality whereas the ideal forms remain utopian. The model may still be surfing, but in reality—*partout parkour*.

Rather than being something totally new, parkour shows strategies of coping with the alleged freedom and constraints of contemporary corporate competitiveness in societies of control. We are still in the societies of control and this is what parkour testifies to. However, the society of control, with surfing as a diagram, has brought with it an increased hybridisation in all the dimensions discernible in the present analysis. Because societies of control are such that in them modulation, short-term thinking, and informational displacement are *legio*, an array of hybrid diagrams can emerge continuously. Mollaka moves forward point by point, reaching out into the open and tracing smooth lines of free movements (Mould 2009), it seems; but, in fact, this is short-term thinking, as if going ahead day by day or quarter by quarter assuming that the motion traces a line of endless progress. Raymen (2018) confirms precisely this image by deeming parkour hyper-conform in relation to its time and logic that it operates in. Parkour's space is perhaps another question, since it conspicuously transgresses the limits set by urban environments (Angel 2011, 2016).

Paraphrasing Connor's (2011) suggestion that sport is an anagram of society, we played with the thought that smaller sets of sports analysed alongside and through each other (diachronically) then could be seen as diagrams of and for social change. So, if parkour does not symbolise that next paradigmatic societal shift, but rather a diagrammatic confrontation, what can be said of the epistemological model here laid out? We must always go to movement itself, not to the sport as an institution, if we are to understand the thoughts inherent in sports. Sport changes, as indicated by Connor, and the phase of modern sport—the human phase, as it were—has been supplemented by more hybrid forms, both technologically and norm-wise. The practice of sports shows us how bodies through movement develop processes or procedures of relating to the surrounding world. Rethinking sport as reflective of society and social change therefore means pinpointing motions rather than emotions, physical movement rather than social movement; at least, analytically. Hence, the analysis of high-performance movement in film (motion pictures) is suitable to these ends. Deleuze was right to point out the sliding motion of the surf as a paradigmatic motion for its time; what we have shown here are just nuances, factions, and new hybrids made possible by the age of surfing (the time when things slip and slide), the forms of which are still emerging.

Instead of subjectification in the disciplinary society, being moulded into normalcy for the purpose of utility, we see here a process of *sovereignisation*: procedures to potentially make oneself a "sovereign", to stand outside of normal subjectivity. We can detect several examples of such sovereignisation in our time, for good or bad, in people who do not follow set rules, who seem to enter from the outside and draw their power from something that is not "interior" to the system. They transgress and disrupt the current order, take drastic measures, take a radical stand, appeal to urgency, and incite swift action. Therefore, to the extent that they operate in a society of control, they usually happen to "rule" through social media. All the infamous "strongmen" of our time perhaps do not fit the bill, but someone like Donald Trump has surely tried to surf the waves of discontent and slide through the system with a Twitter-happy finger.

Speaking of which, let us take another example in our time. Let us say that social media such as Twitter represents the ideal of surfing, in that it is a symbol of the potentials of free communication which lets us move across the globe, creating social networks, exchanging messages, spreading memes and what not—even while it functions as an ever-expanding archive of personal surveillance of our "dividual" data selves. We control and are controlled in equal measure. Now, at one point, reality takes hold and due to changing circumstances, the politicisation in free messaging causes a counter reaction of setting limits on free communication, wherefore the platform is monitored in order to control behaviour by regulating use and restricting certain messages. In short, the medium of control needs to be disciplined. Then in steps a somewhat idiosyncratic multi-billionaire declaring that he will buy the company in order to safeguard its commitment to free speech: this is the sovereign making a mediatised spectacle of how he will decide on the life or death of the company of control, with the intent of releasing its all-too-disciplined powers to surf/control and let them run free.

However, perhaps such a parable is a caricature. Maybe a more apt example of sovereignisation is Greta Thunberg, the radically anti-utopian climate activist. Thunberg is Bond in our time by virtue of being committed to a task that needs urgent action, and she pursues a way forward which considers the "machinery" (or the machinations) that will need to be "manipulated" rather than to be allowed to keep on working of its own accord. First, one must gauge the abstract machine, then one can work out the actual outcomes of a given assemblage. This is a kind of "hypercritical" approach, an intervening form of de(con)structive attitude to change, far removed from any hypocritical utopianism which looks forward without seeing the trajectory. Or we might call it a realism of the virtual, since it has to do with understanding the real conditions implied by a diagram even before the change in society has become actualised.

All this is certainly not without risks. Why is a return of sovereignty not a move to fascism? For some it is: it depends on what form is actualised from the relations of forces in the diagram. However, the sovereign model as such is precisely not fascist; it lacks the "discipline". If the Napoleonic Empire was a transition between the sovereign and the disciplinary model, according to Deleuze, perhaps fascism is one of the expressions of a return of the sovereign model in a disciplinary society, operating within its machinery to destroy rather than correct anomalies. (This might be a way to diagrammatically formalise Agamben's (1998) notion of sovereignty in the modern society.)

The other hybrid variant, as we saw represented by Mollaka, is the return to the disciplinary model in the society of control, where the free operation in an open space comes to draw from the regulatory moulds of discipline in order to improve performance. However, one is thereby being pulled back into the enclosing spaces of institutional interiority, where one is no longer in touch with external forces, and thus ends up retreating into passivity.

The third variant, represented by Bond, is the return of the sovereign model within the society of control. This implies a sidestepping of the disciplinary model altogether, a sign of refusing to be normalised by the fixed moulds of social order and instead drawing from the modulating schema of control in order to adapt as is necessary in the ever-changing surroundings. The sovereign principle exerts its power by acting upon the external relations

of force, "working them out" in order to "make them work". This implies a method of opening up space in ways that break through barriers and break open enclosures by disrupting fixed structures. At the same time, there is a clash between the necessity of the material conditions and the need for action and movement, as two relations of force come into contact: the sovereign cannot exert his power or enact his measure of violence without taking a beating of his own.

Maybe it needs emphasising that it is not a case of *returning to* the society of sovereignty but a *return of* a diagram of sovereignty, modulated in the society of control and transformed into something new. It is always adapted to the changing external circumstances rather than fixed by a form interior to the system. It brings with it a logic of drastic decisions and finalising actions, facing a decision of life or death, rather than projecting utopias of endless growth and progress at the horizon of the smooth sailing of business as usual. In reality, "surfing" is about something else, a challenging confrontation with the elements, and surfers know full well that waves can be unpredictable, violent bodies. The sovereign surfer is the one who understands the reality of this external force and confronts it with a certain kind of recognition, because there is a form of correspondence between them. We might say that it is some form of forceful thought, tapped into the force of the outside, ultimately stemming from the oldest sports, the combat or the hunt—simply cutting to the chase.

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Appendix A

Banlieu 13, Pierre Morel, 2004; *Brick Mansions*, Camille Delamarre, 2014; *Casino Royale*, Val Guest/Ken Hughes/John Huston, 1967; *Casino Royale*, Martin Campbell, 2006; *Die Another Day*, Lee Tamahori, 2002; *Goldfinger*, Guy Hamilton, 1964; *Point Break*, Kathryn Bigelow, 1991; *A View to a Kill*, John Glen, 1985; *Yamakasi*, Ariel Zeitoun, 2001.

Appendix B

Table A1. The diachronicity of diagrams after Foucault and Deleuze.

Sovereignty	Discipline	Control
Physical punishment as public spectacle	Surveillance in enclosed spaces	Tracking in the open
Deciding on life or death	Managing life by imposing a normative form (moulding)	Continuing modulation to adapt to changing circumstances
Elevation to the infinite	Organisation of the finite	Recombinations of the finite-unlimited
Divine form	Human form	Superhuman form
Simple, dynamic machines	Complex, energetic machines	Cybernetics, computers, communication technology
Blood sports (hunting, animal baiting, combat sports)	Modern sports (regulated types of competitive sports)	New sports (adventure or extreme sports)

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Article

In the Absence of Testosterone: Hormonal Treatment, Masculinity, and Health among Prostate Cancer Patients Engaging in an Exercise Programme

Cecilia Rindhagen [1,*], Jesper Andreasson [1] and Thomas Johansson [2]

[1] Department of Sport Science, Linnaeus University, 351 95 Växjö, Sweden; jesper.andreasson@lnu.se
[2] Department of Education, Communication and Learning, University of Gothenburg, 405 30 Gothenburg, Sweden; thomas.johansson@ped.gu.se
* Correspondence: cecilia.rindhagen@lnu.se

Abstract: This study focuses on men undergoing androgen deprivation therapy (ADT) treatment for prostate cancer who also participated in an exercise programme as part of their rehabilitation. Our aim was twofold. First, we aimed to describe and analyse how the participants talk about their treatment and its side-effects in relation to the body and masculinity. Second, we aimed to describe the participants' understanding of and motivation to participate in a physical activity programme designed by healthcare professionals to deal with anticipated and unwanted bodily changes following treatment. Focus group interviews and individual interviews were conducted. Theoretically, the study leans on phenomenological theories of embodiment combined with a sociologically informed framework found in critical studies on men and masculinity. The results showed that the medical suspension of testosterone impacted not only the men's understanding of themselves as men but also how they approached their own bodies. Testosterone was discussed as a source of masculinity and masculine traits. Consequently, the absence of testosterone following treatment led to ongoing reflections on how to understand the (ageing) body and its relationship to masculinity. The ageing ADT body, with growing breasts and a lack of libido, became a site of emasculation and bodily detachment. The men addressed this by displaying stoic masculinity; instead of addressing the problem emotionally they turned their attention and aspirations to having a capable body and being able to carry out physical work. However, participation in the exercise programme depended on recruitment by their physicians and was motivated by the opportunity to socialise with other men in the same situation.

Keywords: prostate cancer; physical activity; exercise programme; masculinity; body

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1. Introduction

The prevalence of prostate cancer increases with age. The average age at the time of diagnosis is 66 years; moreover, men over 65 years old account for 60 percent of all cases globally (Rawla 2019). In this sense, prostate cancer can be understood as "the old man's disease" (Buote et al. 2020). The development of modern medicine and efficient treatment methods in recent decades have contributed to high survival rates (NICE, NG131 2019). Common treatment methods are radical prostatectomy (operation) or radiation therapy. This is sometimes combined with androgen deprivation therapy (ADT), usually when the cancer has spread or when other methods have proven insufficient (Morgia et al. 2016). The intent with ADT treatment is to stop patients' production of testosterone and/or block hormone receptors, to prevent or slow down the tumour growth rate (Desai et al. 2021).

In social science research on prostate cancer and its treatment, scholarly debate has mainly focused on the narratives of men who had been operated on or those undergoing radiation therapy, and on how these treatment methods impact the patients' sex life and their understanding of themselves and their masculinity (Muermann and Wassersug 2022).

Though ADT-treated patients may experience side-effects similar to those that other patients experience (that is, incontinence, a lack of libido, impotence, etc.), there are some side-effects that are considered particular to ADT treatment—for example, changes in body composition involving increased abdominal fat, reduced penis size and the growth of breast tissue (Gentili et al. 2022). Treatment may thus not only challenge men's ability to live up to cultural norms of masculinity, but also threaten the gendering of the ageing male body (Bowie et al. 2022; Buote et al. 2020; Harrington et al. 2009; Johnson 2021; Larkin et al. 2022; Oliffe 2005). The impact of ADT treatment could be described as an emasculated body, one that is associated with femininity and a female body composition (Matheson et al. 2021).

Testosterone levels concern not only physiological realities, but also, as van Anders (2013) argues, affect how masculinity is understood in culture and society. In the cultural history of masculinity, traits such as aggressivity, sexual ability and control have been discursively connected to ideas of testosterone (Herbert 2017; Hoberman 2005; Mosse 1999). At the same time, there is evidence concerning prostate cancer treatment in general, and men undergoing ADT in particular, of the negative impact on men's self-esteem (Gentili et al. 2022). Research has shown that men undergoing ADT have a 41 percent increased risk of depression, which is often linked to the expected side-effects of the treatment and its impact on masculinity (Nead et al. 2017).

One way to deal with the expected side-effects following ADT treatment is through physical activity (Campbell et al. 2019; Gentili et al. 2019; Neil-Sztramko et al. 2019; Tian et al. 2022; Gao et al. 2017). In general, there is growing evidence showing physiological and mental benefits from physical activity during cancer treatment; however, up to 70 percent of men who have received ADT treatment tend not to meet physical activity recommendations (Ashton et al. 2019). Sattar et al. (2021) highlight some barriers or facilitators when considering men's propensity to participate in training activities as part of their treatment as a way to address expected ADT side-effects and their impact on men's sense of self. They suggest that side-effects such as fatigue or decreased physical fitness were reported as significant barriers to participation, and that side-effects that conflicted with their gender identity could increase their motivation. Another reported barrier to participating in exercise was reported communication problems between patients and healthcare professionals (Sutton et al. 2017). Patients displayed an apparent inability to express their own needs and relied on healthcare professionals to recruit and motivate them to engage in physical activity as part of their treatment and rehabilitation plan (see also, Mróz et al. 2013).

To address the explicit situation of living with hormonal treatment, that may prove to be long-term, we need to address patients' experiences and find ways to facilitate physical activity innovations. The present article builds on a qualitative interview study. We conducted both focus group interviews and individual interviews with men undergoing ADT treatment, and who participated in a training intervention as part of their treatment and rehabilitation. The aim of the study was twofold. First, we aimed to describe and analyse how men undergoing ADT treatment talk about their treatment and its side-effects in relation to the body and masculinity. Second, we aimed to describe the participants' understanding of and motivation to participate in a physical activity programme designed by healthcare professionals to deal with anticipated and unwanted bodily changes following treatment.

2. Survey of the Field

Prostate cancer is one of the most common forms of cancer among men, in Sweden and globally (Sung et al. 2021). Due to this, much attention has been paid to how to detect and treat the disease. Since the 1990s, men have been increasingly screened through so-called PSA tests (prostate-specific antigen tests, detecting changing levels in the blood). As more methods of detecting and grading tumours have been developed, the methods of treatment have also become increasingly refined (PDQ Adult Treatment Editorial Board 2023; NICE, NG131 2019).

ADT is often prescribed in combination with other treatments for localized and metastatic tumours (Morgia et al. 2016). In contrast to radiation therapy and radical

prostatectomy, ADT treatment tends to entail long-term medical therapy (Desai et al. 2021). It usually has significant side-effects, for example, fatigue, erectile dysfunction, breast enlargement, and a loss of the sex drive (Gentili et al. 2022). Indeed, expected side-effects can be both physically and psychologically stigmatizing in relation to dominant norms of masculinity (Larkin et al. 2022; Oliffe 2006).

In the social sciences, interest in prostate cancer, particularly in men undergoing ADT treatment, is relatively new. There is, however, increased interest in how side-effects following treatment are experienced by men and in how these affect their health, self-image, family life, sex life, etc. (Andreasson et al. 2023a; Bowie et al. 2022; Brüggemann 2021; Gentili et al. 2022; Hamilton et al. 2015; Harrington et al. 2009).

ADT treatment and its side-effects have been discussed largely in relation to men's experience of bodily changes and how bodily dysfunctions are understood and dealt with in relation to notions of masculinity and masculine norms and ideals (Hamilton et al. 2015; Matheson et al. 2021; Oliffe 2006). The imagery of ageing—men and masculinities with soft and emasculated bodies—is often set in motion in relation to traditional and hegemonic male norms that elevate young, healthy and muscular male bodies (Bowie et al. 2022; Brüggemann 2021; Connell 2020). Research has also illustrated that men experience emotional difficulties and challenges as a result of prostate cancer treatment (Andreasson et al. 2023b), and as Hedestig (2006) argues, may not express their need for support. Instead, they behave stoically, displaying indifference to pain or suffering. As suggested by Scandurra et al. (2022), men's inability to live up to masculine norms and ideals can also be experienced as demoralizing (which is often linked to a suicide risk) and thus affects men's levels of depression. At the same time, studies have emphasized outcomes of the disease and its treatment that are considered rewarding and positive, such as personal growth and development. Matheson et al. (2021), for example, argue that men who are treated with ADT can develop more meaningful and deeper relationships, finding new perspectives on life and masculinity.

One recommendation, as a treatment to counter side-effects in prostate cancer treatment generally, but also as an ADT treatment particularly, is physical activity (Campbell et al. 2019; Tian et al. 2022; Gao et al. 2017). Several studies have emphasized the physical and mental health benefits that result from exercise in conjunction with prostate cancer treatment, such as increased body mass and reduced fatigue (Neil-Sztramko et al. 2019; Newton et al. 2018). Gentili et al. (2019), for example, found that men undergoing ADT were dissatisfied with their body, and engaging in exercise helped them find a sense of control. Indeed, engaging in an exercise regime can be understood as a way to counter a sense of emasculation (Hamilton et al. 2015; Langelier et al. 2019). Still, as mentioned, the failure to adhere to prescribed physical activity following prostate cancer is common, which means that the potential health benefits of training are lost, and the lack of physical activity could also lead to cardiac problems or osteoporosis (Ashton et al. 2019).

To summarize this section, research shows that side-effects following prostate cancer treatment can have a significant impact on men's sex lives and how they embody masculinity. ADT treatment and how its adverse effects on the body are experienced, however, has received less attention. The present study aims to contribute to this underdeveloped field of research by focusing on men participating in an exercise programme as part of their ADT treatment.

3. Analytical Framework

In this article, the process of undergoing ADT treatment, in which physical changes impact patients' self-perception, is understood as an embodied experience, in which the meaning of the treatment and the perception of the body develop in relation to social norms and ideals, inscribed in and on the body. Merleau-Ponty ([1962] 2002) explains phenomenological embodiment as the lived experience of our bodies, elaborating on how this evolves into and affects our knowledge about the world. This is also known as the habituated body. An example of how to approach and discuss embodied experiences is

the analysis of the phantom limb, in which the experience of a "normal" body lingers on and brings sensations of still having, and feeling, the missing limb (Chouraqui 2021; Merleau-Ponty [1962] 2002). In our case, dealing with ADT and the removal of testosterone has an impact on men's experience of physicality and the "masculine" body, manifesting in lost muscle mass and potency. Consequently, lost abilities, such as the ability to have an erection, in combination with fantasies of still being able to perform penetrative sex, can be analysed in terms of "phantomality", and a phantom limb.

Thoughts about an emasculated body or a body unable to live up to certain gendered norms can lead to shame and stigmatization (Gentili et al. 2022; Nead et al. 2017; Oliffe 2006). Schwab et al. (2016) argue that men dealing with stressful life events sometimes have problems expressing themselves and often deal with ambivalent feelings directed towards the body and their emotions. Normative masculine ideals—acting stoically, and being brave and disciplined—prevent them from being vulnerable and seeking support. This type of masculinity, valuing emotional control, and invulnerability, also excludes "feminine" characteristics, such as emotionality (McAllister et al. 2019). This is similarly discussed by Mróz et al. (2013). In their research, they showed how prostate cancer patients experienced communication problems with their physicians, and that patients' feeling of being unheard and unseen by professionals led to their healthcare avoidance. Behaving stoically can thus have a negative impact on help-seeking behaviour and on how men deal with feelings of embodied emasculation.

In the article, we will use the notion of behaving stoically as a way to analyse how men handle and cope with long-term illness, ADT side-effects, and a changing body. Through this, we will also take into consideration changes in normative and hegemonic masculinity, and explore the softening of masculinity, in which affect and emotions are not merely rejected as feminine, but rather seen as a challenge, and as an indicator of a changing masculinity (Anderson 2010; Connell 2020). Using a hybridization perspective, emotional speech will not be seen as a fundamental shift in normative masculinity, but as another opportunity to develop new masculine strategies for handling disease and threats to the masculine body, analogous to those of physical activity, for example (de Boise and Hearn 2017).

4. Method

This study is part of a larger umbrella project in which different aspects of prostate cancer, masculinity, and health have been analysed using a qualitative research approach. In the overarching project, we conducted individual interviews with healthcare professionals (urologists, sexual counsellors, nurses, etc.), men who have undergone treatment for prostate cancer and their partners (Andreasson et al. 2023a, 2023b). However, the present article employs a case study involving an in-depth exploration (Thomas and Myers 2015) that zooms in on men undergoing ADT treatment who engage in an exercise programme as part of their rehabilitation (see the aims described above). The training programme was implemented through an initiative from the urology department of a hospital in the south of Sweden. Leading urologists at the hospital recruited three physiotherapists connected to a local rehabilitation gym. These physiotherapists then designed an exercise programme focusing on resistance training with the help of weight machines. The programme also included some cardio and balance training. The aim of the programme was to promote physical benefits such as increased muscle mass and reduced fatigue among patients. It also involved interventions dealing with issues of physical ageing, such as balance or pain. Before starting the programme, each patient underwent a full physical assessment carried out by a physiotherapist to permit individual recommendations regarding, for example, weights and the number of repetitions. A minimum of two physiotherapists assisted in every session to support patients during their training. The training programme lasted for 12 weeks and included two sessions a week.

Recruitment took place in two steps. First, through our collaboration with the urology department (in the umbrella project) we were able to establish contact with the lead phys-

iotherapist of the training programme. We explained the rationale of our study—that we wanted to investigate how patients experienced the programme and how the training was understood in relation to the bodily changes occurring due to treatment. The lead physiotherapist then informed the patients of our interest. Second, the lead author (Rindhagen) met the participating men during a training session in which she explained the project in detail. The participants were also given the opportunity to ask questions about the project. As the participating men were amenable to being part of the research, two sets of groups could be recruited. The first group participated in the programme in fall 2022, and the second participated in spring 2023. Each group of men consisted of seven participants. All in all, 10 men between 65 and 79 years old were recruited. Four men declined to participate due to their being unavailable or not having the time. The recruited participants were all undergoing ADT treatment at the time of the interviews, although earlier treatment may have included radiation therapy or radical prostatectomy. The timeframe for being diagnosed varied from about 6 months to 18 years back. Most of the participants had a middle-class background. All identified as heterosexual and white, two were singles, one was a widower, and seven were married. A majority of the participants expressed that participation in the exercise programme felt "natural" due to previous experiences of training (recreational sports; working in the army).

As the number of participants in the training programme was limited, a case study-based approach, including both focus group interviews and individual interviews, was used. This allowed us to become acquainted with the group and listen to how they experienced their situation and the training programme, as well as talk to them individually about things that they might for whatever reason have considered sensitive (Yin 2014). In total, 12 interviews were conducted, two focus group interviews, one with each training group, and ten individual interviews. All interviews, which were 50–75 min in length, were audio-recorded and transcribed verbatim. The first focus group interview was conducted at the gym in a private group exercise room. The participants had just finished their 12-week programme (n = 5). The second focus group interview was conducted in the middle of the programme in a nearby conference room (n = 4, with one participant being unable to participate on this occasion and therefore interviewed only individually). Though research suggests that men may find it challenging to talk to other men about sensitive topics such as masculinity and the body (Chapple and Ziebland 2002), we did not experience such conversation barriers in the focus group interviews. Quite the contrary, the focus group interviews made it possible for the men to engage in group discussions (Tausch and Menold 2016); perhaps due to the fact that the participants already knew each other and had had similar treatment experiences, they could engage in conversations openly.

Individual interviews were conducted 1–2 weeks after the focus group interviews. All of the individual interviews were conducted in a private setting, in a secluded room at the university. Individual interviews made it possible for us to continue and expand on topics from the focus group interviews (Gubrium and Holstein 2001). All of the individual interviews were conducted by the first author.

In the data analysis, we initially read the transcriptions several times to familiarize ourselves with the data, which were then sorted and coded. The analyses were conducted in a dialectical process whereby we moved between data, previous research, and central theoretical concepts; based on this process, the data were then sorted into themes. Particular attention was given to how patients who had been treated with ADT described that their experience created a sense of masculinity, how this was embodied, and how the exercise programme was understood. In line with Braun and Clarke (2022), our analysis could be described as a theoretically informed reflexive thematic analysis. This means that themes related to our theoretical interest in the area were generated early on in the process. The analysis was thus theoretically informed and driven, rather than approached completely inductively. Themes were gradually refined through the dialectical process of moving between reading and writing up the data and applying the theoretical tools.

All names, places, or other potentially identifying personal details were pseudonymized in the data analysis process. Formal ethical approval to carry out the study was granted by the Swedish Ethical Review Authority (ref. no. 2021-01955).

5. Result

5.1. Disembodied Masculinity and the Absence of Testosterone

In the interviews, several of the participants talked about how they experienced bodily changes due to ADT, leading to their being concerned about their masculinity. One of the participants, Owen, described his experience as follows:

> Owen: Yeah, compared with other forms of treatment, this is called chemical castration. It's supposed to stop testosterone production completely and remove the cancer cells from the body. But because of this I cannot have an erection. It's impossible. Actually, I also think my penis is getting smaller.
>
> Interviewer: What is your experience of this?
>
> Owen: I think this is sad, really. It's no fun. And now, I mean, I can look at beautiful women, and I can think that they are attractive. That hasn't changed, but I feel no sexual attraction any longer. That's also a bit sad. Even with my wife, we don't have sex. We don't make love and maybe we didn't have that much before either. It has just been a bit now and then the last couple of years. Still, I think there is a missing piece here, but we have a good life anyways. But it's without sex. (71 years old, former CFO)

Similar to Owen, a majority of the participants explain how sexual ability, libido and masculinity are somewhat "sacrificed", or lost as a result of the treatment. The healthy, masculine and abled body becomes something of a bodily memory, a fantasy, causing feelings of sadness and a sense of disconnectedness (from one's own body and in a relationship). Another participant, Steve, continued in this line, speaking about the ability to have an erection:

> You know about it, how it is, and still if I were to watch an erotic film, it feels strange when nothing happens. I feel nothing at all. There is no erection and not at all the same kind of feelings that I used to experience. (Steve, 79 years old, former cultivator)

The body's reaction to the ADT treatment resulted in a physical inability that was understood as unfamiliar and strange. This understanding resonates with Merleau-Ponty ([1962] 2002) who discusses bodily sensations of disconnectedness in terms of the phantom limb. Accordingly, lived experience influences embodied feelings, even if there is an actual body part (in this case function) that is missing. Steve and Owen both felt the lost ability. Several other participants discussed the side-effects of their treatment in a similar manner, especially when talking about erectile dysfunction. Some did, however, link the inability to the ageing process in general, rather than to treatment side-effects. On such occasions, expectations (or lack thereof) regarding the degenerated ageing body became the overall bodily construct (cf., Oliffe 2005).

Though some of the men seemed to accept expected erectile dysfunction, connecting it to ageing, for example, other bodily changes were less likely to be excused. One common side-effect discussed among the participants was the development of breasts, which was understood to be a direct consequence of ADT, and which resulted in body image dissatisfaction (Harrington et al. 2009). The changed body was, however, not only discussed in terms of emasculation and as an aesthetic problem, but also as a body that was ill-equipped for physical activity. In one of the focus groups the following conversation took place:

> Owen: My experience is that I gained weight due to these hormone injections and because of them my body shape changed. I didn't like that, and I also developed breasts, that wasn't fun. (71 years old, former CFO)

> Levi: I share that experience. It was the same me. It's no fun at all. (70 years old, former cultivator)
>
> James: Were you sent to do radiation? (75 years old, former CEO)
>
> Owen: No, I haven't done anything with my breasts.
>
> Ethan: You didn't? (78 years old, former economist)
>
> James: I did, after six months and by then they had already grown a bit. Now when I play and jump with my grandchildren my breasts hurt.
>
> Liam: Are they supposed to do radiation on them? (69 years old, former truckdriver)
>
> James: Yeah, preferably before you start with your hormones.
>
> Levi: They did it on me, and now I have an area without hair, and my nipples are always stiff.
>
> James: I agree, and they became quite large. I mean, they do hurt when I jump.
>
> Levi: Same here. I have experienced that, too, sometimes.
>
> Ethan: I went to massage therapy because of my neck and the therapist joked about it and said I should borrow my wife's bra.

The development of breasts was a topic that engaged the men in both the focus group interviews and the individual conversations. In such discussions, the men talked about how these changes were experienced, dealt with, and possibly could be prevented (through radiation). Usually, however, such discussions tended to refer to the feminization of the body (see also Andreasson et al. 2023b). At the same time, the men seemingly felt comfortable in each other's company, and in one of the focus groups several of the participants (not all) lifted their shirts to compare their breasts. Certain forms of masculinity can serve to suppress feminine traits (Connell 2020), and in the men's discussions, the development of breasts was indeed considered unwanted and problematic (see also Andreasson et al. 2023a; Buote et al. 2020; Gentili et al. 2019; Oliffe 2005, 2006). Not only breasts but also hot flashes, voice changes, weight gain and mood changes were discussed in this manner. Not all of these topics could be linked to expected side-effects; nevertheless, they also were associated with a process of becoming more feminine or less masculine, as in the two excerpts below:

> Yes, I have experienced side-effects, like hot flushes from the hormone treatment, that make you feel less masculine. Also, I have less hair on my body and stuff like that. (Bob, 71 years old, former pilot)
>
> I think I'm changed, at least my wife says that my mood has changed. I don't know if that's the case, but she says that I'm more irritable. Like mood swings. (James, 75 years old, former CEO)

Clearly, testosterone is understood and experienced as a source of masculinity, and of masculine traits. Consequently, the absence of testosterone following treatment leads to ongoing reflection on how to understand the (ageing) body in treatment and its connection to masculinity. Mirroring previous research, ideas about masculinity are often related to the notion of young, healthy men who are ready to perform (Andreasson and Johansson 2022; Chapple and Ziebland 2002; Connell 2020; Hedestig 2006; Jackson 2016). In relation to such imagery, the ageing ADT body becomes an embodied experience, and a site of feminization, emasculation, and a sense of loss or "ghoul" limbs. In the next section, we will look further into this and how bodily changes are dealt with.

5.2. Stoic Acceptance as a Way to Deal with ADT

In the data, the time of diagnosis ranged from some months to up to 18 years ago. Despite this variability, the men were seemingly united in how they talked about the treatment as something that they had accepted. This approach corresponds with Schwab et al. (2016), who suggest that stoic masculinity can act as a barrier to approaching and

talking about stress and illness. In the interviews, several participants initially explained that their side-effects had been mild, only to later describe quite severe bodily effects. Due to embodied dissonance, some participants seemingly found it difficult to express or even recognise feelings of discomfort, worry or sadness in relation to their predicament. In the extended excerpt below, we can see how such difficulties are related to notions of masculinity and thoughts about what it means to be a man.

> Frank: Yes, why men don't show feelings I think has something to do with our genetic heritage. We stand for being calm; as men, we provide safety. This is our genes, I think. I can't really cry, it has almost never happened. I'm not sure why that is.
>
> Interviewer: Has it been like that always, even growing up?
>
> Frank: I think it was easier when I was a child. But I don't know how it works, I've observed people crying and feeling sad, but I don't have that ability. This might be a weakness because I've heard that it can be good to have a cry now and then. But for example, when I got my diagnosis ten years ago, I felt moody but didn't cry once.
>
> Interviewer: What does it mean to be moody?
>
> Frank: I don't know but maybe describe it as being low and overthink. But this wasn't a big issue for me.
>
> Interviewer: Feeling moody, does that include worry or anger?
>
> Frank: Well, yes, like when I got my last briefing about the medicine not working, I experienced some anxiety. I understand this as being moody. But in the end, I got new medicine that was better and my anxiety disappeared.
>
> Interviewer: Did you mention your anxiety to your medical team?
>
> Frank: No, and no one asked me about it either. At the time I actually felt that nothing could be done—that all medicine was ineffective—and that didn't feel good at all.
>
> Interviewer: And you never considered talking to a psychologist?
>
> Frank: No. Maybe that is something that's a difference when it comes to masculine and feminine. No one in our exercise group mentioned getting help from a psychologist, maybe a bit weird actually. (65 years old, former economist)

This excerpt reflects what Connell (2020) explains as a tendency among men to reject weakness and femininity. Acting stoic is in this sense related to and ingrained in the rejection of certain emotions. Another participant, Liam, continued the thread, reflecting here on the source of his stoical approach:

> Liam: Sure, I can experience grief, but it's not like I'm going to cry my eyes out. Sometimes the disease hits me, like Damn!. . .but in the end, you harden up.
>
> Interviewer: Is this something that has evolved through ageing, and your prior experiences, or have you always been like that, and what do you mean by "harden up?"
>
> Liam: I mean, I grew up in different times, not like today; growing up you had to be independent. My father was tough on me, sometimes he punished me and gave me a beating. Sometimes with a stick, and I have friends who experienced the same. They had to make their own stick, and were then beaten by it. Our age group have experienced a whole lot. (69 years old, former truckdriver)

Stoic masculinity and the denial of pain were necessities growing up, and through these former experiences, Liam developed coping strategies that he now uses when dealing with the side-effects of his treatment. Discussing masculinity in retrospect also highlights the discrepancy between embodied ideals and norms, and current societal understandings

of masculinity. Conveyed through the eyes of their children, for example, some participants could talk in a positive manner of a society and form of masculinity that embrace gender equality and what is considered more healthy life choices. Still, even though participants were able to reflect on changing gender norms, to some extent, they found it difficult to move away from more stoical perceptions when dealing with their disease. For example, as Frank highlighted, all of the participants in the group had turned down the opportunity to talk to a psychologist. Consequently as a general consequence, there was also a disallowing attitude towards one's own vulnerability (Matheson et al. 2021; Mróz et al. 2013; Schwab et al. 2016).

As part of the effort to reject illness and weakness, having a capable body was seen as very critical. Several of the men expressed the importance of having a capable body and being able to conduct heavy physical work.

> In my case I feel good when I'm out working and doing forestry work. My work life hasn't involved physical labour, but I have always enjoyed working with my body, doing carpenter projects or fishing. Working with my body makes me feel good and as long I'm able to do this I'm satisfied. (Frank, 65 years old, former economist)

This perception of health and living a meaningful life captures some of the aspects of embodied masculinities, and their relevance in coping with ADT treatment. Other leisure activities were also mentioned by other participants, usually involving physical activity and notions of capable bodies (participating in sports, hunting, or gardening). This also mirrors previous studies in which physical activity has been seen as a coping strategy often combined with an instrumental approach to feelings of illness, ageing and more (Langelier et al. 2019; Sattar et al. 2021).

5.3. Facilitating Exercise and Participating in a Programme

Most men experienced fatigue and a weakening of the body as a result of their treatment. They talked about this in terms of not having the same energy and stamina as they did before. Participants also expressed that they were not able to carry out as many health-promoting activities as they wanted. Sattar et al. (2021) show that different side-effects following disease can function as both barriers and facilitators. This was also expressed by the participants in this study, who aspired towards a healthier lifestyle and body, but also felt fatigue and a lack of motivation. In the end, what motivated the participants to engage in the training programme was the wish to have a capable and masculine body. Simply, they did not want to gain weight and lose muscle mass. This wish was linked not only to illness, but also to ageing and masculinity. They had experienced physical degeneration, and wanted to do something about it, by investing in the programme, with the idea that it would make them stronger, and not so vulnerable to injuries or other consequences of their treatment. In this sense, the gendered values of having a strong and competent body were seen as a meaningful facilitator (Connell 2020; Hamilton et al. 2015). One participant explained the following:

> I really feel that this thing with the hormones, the medicine, it makes my body degenerated in some way. It affects my whole body, so when I do strength training, I can see that the muscles won't disappear completely. Also ageing affects my muscles and everything. The older you get, yeah, I can joke about the whole thing and say that I look like a woman over the bum, when it grows bigger. I'm not sure if it works like this, but it is pretty obvious that if you are inactive the muscles turn into fat, and you become weaker. It was a new discovery for me. I realized this just a week or so ago. (Adam, 78 years old, former CFO)

Exercise benefits are discussed as a countermeasure to feelings of becoming weaker and gaining weight, as a result of ADT treatment. For Adam, the realisation that he was developing a woman's bottom was thought about in terms of emasculation. In contrast to notions of masculinity formed through strong, hard bodies (Andreasson and Johansson

2018), Adam perceived that he was becoming weaker and softer. Therefore, to counter that experience he felt motivated to participate in the programme. Furthermore, the participants also mentioned another aspect of the programme, that motivated their participation. James explained the following:

> James: I think it's a good thing that we are doing this as a group. I'm not alone, thinking like that. We wouldn't have signed up it to be honest if it wasn't for the group.
>
> Interviewer: What is important, being able to exercise in a group?
>
> James: I mean there's an opportunity here to meet others. We can socialize and also have this as a joint appointment and experience. You don't want to be the one that cancels an appointment for example. I actually think that this is why we participate at all. (75 years old, former CEO)

Arguments such as these have been seen as motivators in previous findings; socializing with other men in a similar life situation may serve to create inclusive environments and feelings of responsibility towards the group (Langelier et al. 2019). Several participants also connected their participation to previous experiences within, for example, team sports or working in the army. They had enjoyed male camaraderie through physical training, previously, and were well familiar with the form of normative masculinity that could develop in such settings. At the same time, a majority of the participants also suggested that their participation was facilitated by the recommendations and support provided by their physician (Sattar et al. 2021). Levi, who lacked previous experiences of training, explained the following:

> I was asked to participate in this exercise project by my physician. I was unsure at first because I hadn't done any exercise the last 50 years. My wife told me that if I didn't sign up, she would do it for me. The programme already started so I thought why not, let's try it. The fact that I could meet others in the same position was motivating, I haven't regretted that decision once. (70 years old, former cultivator)

Recruitment to the programme was seemingly influenced by the men's contact with and trust in their physician. This contact also constituted a barrier as the men rarely met their physician after their treatment plan was implemented. Another challenge, as mentioned above, was that experienced side-effects were sometimes supressed due to stoic coping strategies, which most likely impacted how the men communicated their side-effects. Indeed, difficulties expressing emotions or living in a body that is understood as emasculated may serve as an impediment to men's motivation and communication (Jackson 2016; Sattar et al. 2021; Schwab et al. 2016). Still, this section has shown that masculine ideals can act as a facilitator for these men, when participating in physical activity programmes intended to counter expected side-effects of ADT treatment.

6. Conclusions

In his book *Testosterone Dreams*, Hoberman (2005) focuses on the hormone testosterone to sketch a history of how hormone treatments have been used not only to form lifestyles and identities, but also to reinforce "normalcy". In the cultural history of testosterone, its use has served to increase sports performance and workplace productivity, to improve soldiers' stamina, and to treat frigidity. Such cultural forms of hormonal perceptions stand in direct contrast to the situation that participants in this study experience, whereby their own production of testosterone is medically suspended (due to its "function" of fuelling the growth of prostate cancer tumours). We have seen how the symbolism and physicality of testosterone (or lack thereof) serve to influence these men's understanding of their changing bodies (see also Gentili et al. 2022; Harrington et al. 2009; Matheson et al. 2021). The participants discuss the absence of testosterone and their lack of libido in terms of an emasculated body and self. Bodily changes are sometimes also narrated as if they relate to a missing limb (Merleau-Ponty [1962] 2002), and lost masculinity. In trying to deal with

such bodily changes, the men sometimes referred to ideas about natural ageing. Although frustrated by the loss of potency and sexual capability, the men seemed to address these bodily changes through a stoic acceptance of their fate.

As regards the development of breasts and "a woman's bottom", however, such changes were more challenging for the men to explain as a part of an ageing process. At these points, the side-effects of their treatment become clear to the men, embodied as an emasculating effect of the chemical castration that they were experiencing. In order to emotionally deal with this, the participants largely expressed a stoic approach to feelings (Jackson 2016; Mróz et al. 2013; Scandurra et al. 2022; Schwab et al. 2016). Stoic masculinity can partly be seen as a generational issue, that is contrasted with the development of contemporary masculinity configurations that promote softer men, and men's emotional sensitivity. Bodily capability, being able to train and conduct "hard work", is instead seen as a potential way to counter the emasculated body and self.

The motivation to participate in the physical activity programme thus served to address the changes in the gendered embodied sense of self of these men. At the same time, it can be concluded that that participation in a physical activity programme may be precarious and is dependent on healthcare professionals acting as recruiters. As this study is based on the narratives of a small number of men, further research is needed as to how men's experiences of emasculation, and embodied loss, can be countered in and through physical training. In addition, this study shows the need for further research on patients' adherence to physical activity as a part of their treatment, the social significance of group training as treatment, and the role of healthcare professionals as facilitators.

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Article

Rethinking the Vulnerability of Groups Targeted in Health-Promoting Sports and Physical Activity Programs

Sine Agergaard * and Verena Lenneis

Department of Health Science and Technology, Aalborg University, 9260 Gistrup, Denmark; vl@hst.aau.dk
* Correspondence: sine@hst.aau.dk

Abstract: Vulnerability and related terms are increasingly used to describe the target groups of health-promoting programs involving sports and physical activity. Yet, such terms are often left undefined, creating an image of vulnerability that reinforces the health inequities the programs seek to counter. This article aims to reconceptualize vulnerability to help researchers and program personnel describe and support individuals and groups in vulnerable positions. To do so, we conceptualize vulnerability as a contentious phenomenon, emphasizing the spectrum between individual and community perspectives on vulnerability, along with between experts' evaluation of (health) risks and lived vulnerability. We illustrate the utility of this elaborate conceptualization of vulnerability through a single case study of a walking program organized by a health promotion unit in a so-called deprived area in Denmark. Interviewing the health professionals, it was not surprising to identify that experts' evaluations of risks are key to the program. However, employing the conceptual framework in its entirety, we also find indications of lived vulnerability and resistance towards their conditions among the program participants. We conclude that it is relevant for both researchers and program employees to consider the complete spectrum of risks and lived vulnerabilities, along with providing support not only to individuals in need but also to their communities.

Keywords: deprivation; community; minority-ethnic; elderly; walking

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1. Introduction

Today, an increasing number of programs are set up with physical activity and sport as key to promoting the health of specific target groups such as people with multiple chronic diseases (Geidne and Van Hoye 2021). In descriptions of such programs, there is a wide use of the concept of vulnerability, along with related terms such as social deprivation, fragility and being in need to describe these target groups. Yet, scholars have pointed out that the vague use of such concepts may reproduce the health inequities that the programs set out to counter (Katz et al. 2020). This article emerges from a growing discomfort with the use of such concepts (including our own) and seeks to contribute to a rethinking of vulnerability in particular.

Programs directed towards supporting the health promotion of groups that are dubbed vulnerable, socially deprived, fragile and in need are widely run in Denmark and elsewhere (Fernández-Gavira et al. 2017; Pilgaard and Rask 2018). Indeed, physical activity and sports are often key to such programs organized often by public institutions in collaboration with civil organizations (Ibsen and Levinsen 2019). Employees and volunteers often feel pressured to deliver high participation numbers and numerous program activities to satisfy the quantitative monitoring of modern self-governing (Agergaard and la Cour 2012). This leaves little time and space for program personnel to reflect on how they conceptualize their target group. Further, with increasing demands for raising external funds, researchers may turn to evaluations of whether the programs have met their measures rather than to the rigid theoretical conceptualization of key concepts such as vulnerability. Altogether, such developments highlight the current relevance for both researchers and program personnel to engage in a rethinking of the concepts utilized to approach the group in focus.

On the one hand, utilizing the concept of vulnerability may help to attract political focus and to fund programs, while also raising public concern about specific groups and individuals in need of support (Katz et al. 2020). On the other hand, describing program participants as in need and deprived may also reproduce ideas of 'the vulnerable' as a homogeneous group and reinforce distinctions between 'active and healthy selves' and the 'unhealthy others' (Agergaard et al. 2022). Furthermore, utilizing such concepts may also predetermine program participants as inherently vulnerable, leaving little attention to the possible resistance they exert and the conditions that surround them. This is detrimental, since paying attention to the agency of program participants and their surrounding communities may help us provide relevant support to the group in focus.

In that sense, the concept of vulnerability may be deemed too narrow, as it produces an image of a specific group in need, but also too broad, as it draws still more disparate persons and varying social conditions into our perceptions of vulnerability (Levine et al. 2004; Nickel 2006). Thus, there is a need for both researchers and program personnel to develop new ways of conceptualizing vulnerability to support the groups in focus without reproducing the health inequities the programs set out to counter. In fact, critical scholars have argued that the current vague use of the concept of vulnerability conceals the social inequity that has produced this condition (Katz et al. 2020). Such use allows the reader to reproduce their own image of vulnerability and to "... 'fill in the blanks' as to the root causes of the vulnerability." (Katz et al. 2020, p. 606). Thus, without elaborately defining what vulnerability is made of, research (and programs) may leave out the mechanism that generates vulnerability from the equation, obscuring the power dynamics at play.

The aim of this article is to reconceptualize vulnerability to help researchers and program personnel describe and support individuals and groups in vulnerable positions. In so doing, we focus on the spectrum between how vulnerability may be understood in an individual and a community perspective, respectively, along with the range between experts' identification of health risks and lived experiences of vulnerability. Utilizing a single case study of a walking program, we illustrate how an elaborate conceptualization of vulnerability helps encompass the range from the health risks described by the program personnel to the program participants' experiences of vulnerability. Such a conceptualization may also enable us to highlight the significance of identifying the everyday life resistance among the participants that may be supported along with considering vulnerability in a community perspective in particular. Before setting out on this endeavor, it is worth reviewing how vulnerability has been considered within health research and identifying a framework that may help us reach the aim of this article.

2. Health Research on Vulnerability

As observed by Levine et al. (2004), the term vulnerability is widely used in health research and clinical practices, although there is little preoccupation with defining the concept in further details. Originally, the term is thought to have been used to identify specific groups that needed particular protection. However, the term 'vulnerable' is now applied to describe very different groups and situations, often without further definitions of their conditions of vulnerability (Levine et al. 2004). Notwithstanding, studies have demonstrated that using the term 'vulnerable' has consequences for the health care practices that are assigned to the individuals and groups in focus (Clark and Preto 2018).

In alignment with key studies pointing to social and structural conditions as fundamental for health issues such as physical inactivity and smoking (Berkman et al. 2000; Link and Phelan 1995), it has been pointed out that vulnerability cannot simply be understood as an individual phenomenon, but rather is to be comprehended in a community perspective. This involves acknowledging that it is not simply individual behavior that makes some persons more vulnerable than others, but also the conditions and opportunities they are surrounded with (Aday 1994). Thus, when concepts like vulnerability are used to focus on specific individuals, it may disguise inter-related structural conditions such as historical,

political and economic conditions that constrain the individual pathway to health (Berkman et al. 2000).

To be more specific, qualitative health researchers have suggested that there might be three sources of vulnerability, ranging from inherent (existential) vulnerability to situational vulnerability and pathogenic vulnerability (Rogers et al. 2012). In that sense, there is an acknowledgement of not only the range between individual and community dimensions, but also the fact that illnesses can spark vulnerability for any individual and in any community. Furthermore, vulnerability has been defined as a state of being at risk in physical, mental and/or social dimensions, coupled with a decreased capacity to protect yourself from risk (Aday 1994; Kiyimba et al. 2019).

As such, vulnerability may be said to be a contentious concept, which is also reflected in numerous dilemmas in healthcare practices. When health professionals relate to persons in vulnerable positions there are numerous dilemmas involved, such as whether the health system should focus on treating the individual person and/or the context that needs change. Additionally, health professionals often face the challenge of transitioning from a static view of individuals and groups diagnosed as vulnerable to a dynamic perspective on how such conditions may be dealt with and changed (Kiyimba et al. 2019). Furthermore, it has been discussed whether health professionals should approach the issue of vulnerability with a so-called consent-based approach so that the capacity of the health system to deliver care is distributed equally across the population, or whether a fairness-based approach should be used, so that it is the ones that need most help that are provided with most support (Larkin 2009; Nordentoft and Kappel 2011).

A similar range of approaches has been described in relation to sports programs for adolescents, distinguishing between the universal equality approach directed towards promoting sports participation among large groups of adolescents, and the more specific targeted equity approach, which focuses on making sports accessible for the adolescents that need the most help (Hjort and Agergaard 2022). Yet, to our knowledge, no publications have set out to reconceptualize vulnerability to develop encompassing descriptions and adequate support to participants in health-promoting programs that offer physical activity and sport.

3. Conceptualizing Risk and Vulnerability

The concept of risk has long been connected to definitions of vulnerability in health research. Aday (1994) argues that risk is the probability that an individual becomes ill. She points out that everyone is potentially at risk, but the relative risk is higher for some individuals than others due to their exposure to poor health. Furthermore, she suggests that vulnerability can be understood from an individual perspective and a community perspective. In the individual perspective, vulnerability has to do with the availability (or rather lack of) individual resources along with individual health needs that make some individuals more susceptible to harm or neglect than others. In the community perspective, it is the ties between people and resources in the neighborhood that constitute community resources. When these resources are absent, local populations are at risk of not having their community health needs met (Aday 1994).

Bearing on Aday's conceptualization, Spiers (2000) argues that we should distinguish between vulnerability as relative risk, that is, the probability of becoming ill on the one hand and lived experiences of vulnerability on the other hand. This involves a distinction between understandings of 1. risk as an epidemiological and objective condition that can be quantitatively measured and is perceived as a deficient functioning that needs to be evaluated by experts, and 2. vulnerability as a subjective lived experience that is multidimensional and varied as well as it is interactional with other people and the environment that influence the individual's capacity of coping with conditions of vulnerability.

This is also described by Spiers and colleagues as a distinction between an etic view from outside on the objective risk of developing bad health, and an emic view from inside on vulnerability as 'a quality of experience which evokes different responses' (Spiers 2000,

p. 720). Further, it is pointed out that even if described as an objective risk, the etic view is also linked with normative values. These are values that are used to evaluate who are less capable of functioning adequately in socially desirable ways, making it necessary for society to intervene so the endangerment or threat of objective harm on these individuals and groups can be changed. Thus, certain groups in society (such as health professionals) are specially sanctioned to determine who needs interventions based on knowledge about those at-risk and ideas about normative social functioning. In this perspective, vulnerability is assumed to be the relative risk of potential or actual harm based on external judgements of functional capacity, and socially sanctioned interventions are put in place to minimize such risks (Spiers 2000).

According to Spiers, this contrasts with an emic view on vulnerability that is based on the person experiencing challenges (among others, health-related issues). This view starts from the assumption that vulnerability is a universal and lived phenomenon. Thus, contrary to the belief that health experts and health professionals can predict risk and intervene accordingly, " . . .vulnerability pertains to the whole experience rather than to a priori determinants based on population norms, many other forms of vulnerability may emerge." (Spiers 2000, p. 719). From this perspective, vulnerability is a complex whole and a dynamic phenomenon that evolves with lived experiences and the surrounding conditions. The consequence of such a view is that vulnerability can only be fully determined from the perspective of those experiencing it. Furthermore, Spiers argues that 'the emic view provides a framework for understanding how people integrate and manage multiple challenges in their daily experience' (Spiers 2000, p. 720).

Thus, the conceptual framework of Spiers encourages studies of the span from health professionals' view on risks and ideas about the necessity of intervening accordingly, to studies of lived experiences of vulnerability including ways of handling challenging life conditions. Paying attention to such variety is important when seeking a more comprehensive understanding of the vulnerability at play in programs utilizing physical activity and sport to promote health. Further, by incorporating attention not only to individual experiences of and resistance towards their vulnerable positions, but also understanding vulnerability in a community perspective, researchers and practitioners may develop their options for providing adequate and comprehensive support to the groups in focus.

4. Methods and Material

Studying the issue of vulnerability is a truly challenging methodological endeavor (Aldridge 2014; Larkin 2009; Nordentoft and Kappel 2011). Considering our initial description of the fallacies of reproducing images of a homogeneous group of inherently vulnerable people, this article seeks to be attentive to the variety not only between but also within a group of program employees and a (target) group of program participants. Thus, we seek to not presuppose vulnerability but explore it among the individuals involved in our qualitative study while also considering the structural context involved.

To illustrate the utility of an elaborate conceptualization of vulnerability, we will draw on an embedded single case study (Yin 2018). That is, we will focus on a walking program in particular, but also study the wider context of the program, which was organized by a health promotion unit funded by a municipality in Denmark. This unit is responsible for rehabilitation programs for people with various kinds of chronic diseases living in an area officially designated as deprived by the Danish government. The area is inhabited by minority-ethnic populations in particular, and there is a high percentage of the population as a whole who do not hold a formally recognized education and are outside the job market. Additionally, socioeconomic resources are limited among residents in this area. The residents who participate in the programs run by the health promotion unit often have multiple chronic diseases, such as type2 diabetes, osteoarthritis and mental health issues, and are typically middle-aged or elderly people, with the majority being women. The health promotion unit appears to us as a particularly interesting case to study due to the fact that they do not only organize standard interventions combatting the risks following with

chronic diseases, but also have community-embedded programs such as walking in the local area. Thus, this embedded single case study may provide us with a view into health professionals' perspectives on the risks facing their target group along with the participants' everyday lives and ways of relating to the vulnerable conditions that surround them.

As for the methods, we will draw on semi-structured interviewing in the tradition of Brinkmann and Kvale (2014). Interviews were made with 12 health professionals (i.e., dieticians, nurses, physiotherapists and occupational therapists) employed in the health promotion unit, and each interview had a duration of around 60 min length. A majority of the interviewees were women in the age range 30–60 years, but also men were among the employees, and several interviewees had minority-ethnic backgrounds themselves. In the interviews the health professionals were asked to describe their work and the target group/participants in their programs, along with reflecting on the challenges and dilemmas they encounter.

Furthermore, we draw on participant observation conducted by both of us over a one-year period (November 2020–November 2021, with COVID-19-related interruptions) following the weekly walking program (a 2–2 $\frac{1}{2}$ hour session involving walking and drinking coffee and tea together). Our observations were rather unstructured and focused particularly on the women's walking practices and ways of walking as well as the women's interactions with each other and with employees of the health promotion unit (Thorpe and Olive 2019). Additionally, participant observation also provided us with opportunities of having informal conversations with the participants about their daily lives (in particular with the ones who spoke considerable Danish since we did not have proficiency in the first languages of the participants).

In our analysis of the transcribed interviews and notes from participant observation we have worked rather deductively drawing partly on the theoretical distinction between risk and vulnerability (Spiers 2000), partly on the conceptualization of vulnerability as not only an individual condition but as a phenomenon that is linked to the surrounding community (Aday 1994). This means that we examined the health professionals' descriptions of the risks of the target group and the perceived needs of intervening to reduce such risks. On the other hand, we also delved into the experiences of the participants in the walking program while considering their surrounding conditions. Drawing on symbolic interactionism, a specific focus during participant observation has not only been interactions among participants as well as between participants and program employees, but also the meaning that material objects may have in such interactions. During the field work, we developed a keen interest in the shoes worn by participants in the walking program. This focus was further substantiated when one of the professionals from the health promotion unit applied for funds to provide hiking shoes for the participants.

Thus, the analysis below is partly a result of condensing the interview material (Brinkmann and Kvale 2014) to extract the perspectives on health risks expressed by health professionals. In addition, we have condensed the excerpts of notes from the participant observation that highlighted the significance of the shoes worn by the research participants and the interactions revolving around them. Furthermore, taking an interactive approach to vulnerability also involves reflecting on our own experiences. We will include some of these reflections below.

5. Results

The following analysis will be divided so that the first part is based on interviews with employees from the health promotion unit, and the second part on participant observation of the walking program in particular.

5.1. Risks and Interventions

Talking to the health professionals about the target group for their programs, it was not surprising to us that they described the group as at-risk, utilizing initially medical terms to describe their vulnerability. Below, we apply the conceptual framework of Spiers

and point out that the employees highlighted the multiple risks for the participants, and we argue for the relevance of intervening accordingly.

To be more specific, when the health professionals were asked to describe the group that participated in their activities, they depicted the target group as people with diabetes and/or other types of chronic diseases, along with mental health issues, such as PTSD, depression, and stress. Further, several of the health professionals also referred to the multiple risks of their target group:

> *. . ..because they really have many other challenges. We have many PTSD citizens, almost all of them have psychological problems, depression or stress. . .. They really have a lot of stuff. For many of them diabetes is nothing. (Faiza)*

In that sense, the health professionals alerted attention to the complexity of challenges that influence the participants' physical, mental and social well-being.

Further, the interviewed professionals described that the health promotion unit is in charge of running standardized programs, which target citizens with different medical diagnoses:

> *. . . there is a clearly described program, where there are some very clear goals for what the citizens must do. Not what they should achieve, but what they have to go through, i.e., descriptions of what the program should contain.... And now I can't quite remember them off the top of my head, but it's something like you have to know what diabetes type 2 is, what effect it has on the body, what low blood sugar means, how to work with your blood sugar and things like that. (Irene)*

As such, the health professionals pointed out that there existed a systematic framework for assessing the vulnerability of the targeted population defined as objective risks of developing sequelae from, e.g., type 2 diabetes. In the words of Spiers, the work of the health promotion unit is based on expert evaluations and what are indeed socially sanctioned interventions with specific program content and following measurements for the effects on objective risks (such as blood sugar).

Yet, in our discussions with the health professionals, it became evident that they tailored the programs to the specific needs of the many different people they met.

> *In other words, when they come in for a meeting... it's initially about where they are and what their biggest problem is, and where should we start. And if it turns out that it would be a good idea to enroll them in one of our programs and that they are ready for it now, then they will... then they will be introduced to what we have. (Lone)*

Besides adapting programs to every new individual, the specific health promotion unit puts in extra efforts such as employing bilingual professionals to improve their options for communicating (and interacting) with the group in focus.

Still, when analyzing the health professionals' descriptions of their target group through the lens of Spiers, we recognize the etic perspective on the deficits of the group that needs intervention. This is evident in the following description of the group:

> *I find that there is a group of women in particular who are extremely unaccustomed to exercise, who have never tried to get their heart rate up or move, and who may not have always understood the purpose of it either. (Merete)*

It is worth noticing that this health professional did not only point to deficit approaches to physical activity among the participants, but also outlined a lack of experience with exercising as well as inadequate translation of the meaning of exercise to the women in focus here. Thus, the health professionals appeared to run the programs not merely to remove deficits but also to change the participants' experiences, making use of bilingual employees to explain physiological reactions as a consequence of physical activity such as palpitations and shortness of breath.

Notwithstanding the dominant focus on risk and the need to intervene to remove deficits, one of the health professionals described her main concern as supporting the group in accessing and navigating the programs available to them. Like others in the health

promotion unit, this employee also explained how intersecting dimensions shaped the vulnerability of the group in focus. Furthermore, she also pointed out that the health promotion unit made use of different terms to describe their target groups, among other things, because they were dependent on continuous political support. As political discourses change, there may be instances where they need to refrain from mentioning some dimensions (e.g., the ethnicity and/or religion of the major part of the group). In contrast, at other points in time, they would describe the mental health issues of their target group rather than pointing to their physical health challenges. Still, in their work with the group, they remained conscious that the group may be exposed to various challenges at the same time:

> *. . . it is really about many different kinds of vulnerabilities and exposures, right. When we articulate it here and frame it, it is not all the elements we describe rather they are exposed citizens with general vulnerabilities. (Susanne).*

Thus, while the health professionals evidently pointed out the multiple risks for the group in focus, they did so in ways that demonstrate their consciousness about the terms used to describe their target group. Despite having to follow standardized programs, the health professionals adapted the programs intended for groups with specific medical diagnosis to every individual (and their multiple challenges) and to the variety within the target groups. In so doing, the employees also strongly related to an understanding of vulnerability as lived experiences that will be described in further detail below.

5.2. Lived Vulnerability and Resistance

To illustrate the significance of also analyzing vulnerability as lived experiences, we will draw on our conversations and observations from regularly participating in the walking program. It became soon evident for us that the participants dealt with multiple challenges in their everyday lives. Furthermore, moving with and talking to the women as part of the walking program gave us some insight into how the participants lived with, but also sought to cope with their conditions.

When we first arrived to participate in the walking program in the cold weather of November, we were equipped with either sports shoes or hiking boots, along with weatherproof pants and jackets. We immediately noticed that such clothing was uncommon in the context in which we had arrived. Contrary to us, many of the women wore dresses, skirts and long scarfs. Further, since walking took place in the nearby green area all year round, our attention was drawn to the participants' footwear, as highlighted in this extract from our fieldnotes:

> *I am intrigued by the shoes that the participants wear; not only for the function they have since none of them have shoes for walking and/or rubber boots, but also for the symbolic meaning. A few of the women have sports shoes, while most have open shoes which are not supportive to walking, especially at this time of the year when it is very muddy and slippery. Fadda nearly fell several times during our trip, while Sana shuffles around in loose boots.* (24 November 2020, Sine).

As described, the shoes of the participants did not appear to us as beneficial for participating in the walking activities. In fact, slips and falls happened often, and posed a risk for the participants, since several of the participants had cartilage damage in their knees and hips. Notwithstanding such incidents, the women would arrive again wearing the same shoes the next time, and would continue walking, even if challenged. Initially, the continuous wearing of such footwear seemed to us linked to the women lacking socioeconomic resources. However, it became apparent to us that since the women also suffered from multiple health-related challenges such as type2 diabetes, loose and spacy shoes were possibly the most suitable option for them.

Turning our attention towards the lived experiences of the participants provided us with insight into how socioeconomic and/or health-related vulnerabilities may materialize in the shoes of the women walking on steep and muddy surfaces. Yet, we also observed some diversity in the shoes worn. While one of the women had a pair of sneakers, on

which her 14-year-old son had written 'NIKE' with a permanent marker, another woman wore slippers on the 1 $\frac{1}{2}$-hour walking trail. Furthermore, we noticed that there was a considerable variety in the ways in which the women approached the walking program. Some walked in ways that suggested they were in considerable pain, while others engaged in brisk walking and opted for the steeper routes. While a program employee sought to motivate and inspire the women to take novel tracks every time and included stretching and/or other activities along the route, the women often opted for each other's company and took their usual route.

Thus, inquiring into the experiences of the women also provided us with an insight into their agency and how they engaged with their daily surroundings. While the women, who were often also mothers, seemed to like getting away from their homes (and duties there) and enjoyed walking in the nearby green area as a recreational activity, it also became clear to us that there were boundaries for the women's space of movement.

> *We make it to the top (of the hill). Fatima and Nadja are exhausted, Nadja tells me that her heart is beating fast, using her hand clapping on her heart to express herself. We sit on a piece of concrete and enjoy the view all over the city. It makes me think about the women's radius of movement, which seems to be limited to [name of the residential area] and the very close surroundings. I ask Fatima and Nadja and they confirm that they don't go downtown.* (18 May 2021, Verena).

As such, walking with the women in their close surroundings provided a glimpse into their everyday lives: where they lived, who they were related with and how these relationships unfolded. This also highlighted the delimitation of their surroundings, for instance, how they refrained from moving into the city center, in which they were a visible minority.

During our fieldwork, however, one of the program employees applied for funding to purchase hiking shoes for the participants, which encouraged them to visit an outdoor shop in the city center to try on shoes and cash in their voucher. The whole situation developed our insight into not only the lived challenges of the women but also the variety of coping strategies enacted by the women. During the period when the program employee handed out vouchers for free walking shoes, attendance rates grew. Women also came to the health promotion unit to ask about the opportunity of having hiking shoes. Furthermore, some key participants (themselves in vulnerable positions) helped others in accessing a voucher by advocating for them as regular attendees, if not currently, then previously.

> *Nadja talks to a woman who says that she often came to the walks before Covid-19, but that she didn't make it this time so she could get shoes. Nadja confirms to the woman that she is one of those who usually come and suggests that she can tell (the program employee) who usually comes.* (25 May 2021, Sine)

Such debate about who qualifies as regular participants in the program also led to discussions about the origin of the walking activities. The woman referred to above, along with several other participants, pointed out that she/they had been attending the walking activities long before the program employee and before the health unit supported these activities. Thus, to us, such incidents showcase the importance of not only focusing on the health risks of program participants but also paying attention to the lived experiences of vulnerability, in line with our conceptual framework. In so doing, we got to observe how individuals in vulnerable positions may support each other and negotiate their position, even if the program employee is in the position to 'sanction' (to use a term from Spiers) who is given a voucher in this case.

Other acts of resistance became evident to us when we discovered that many of the women travelled to the outdoor shop in the city center in small groups to try on and obtain the shoes they wanted. Yet, additional insights arose when we realized that few participants actually wore the shoes and, if they did, it seemed that they only wore the shoes as brand new and then put them aside. Despite trying to ask the women and the program employee, it remains unclear to us whether the women disliked wearing brand new shoes or if the

shoes did not fit well, e.g., due to their conditions such as type 2 diabetes. Among our reflections (bearing on our view to the socioeconomic vulnerability of the women) are also the considerations that the shoes might have been resold to provide the women (and their family) with financial resources. While reading such acts as a testimony to the complex vulnerable positions of the women, observing the interactions around the hiking shoes also made us aware of the diversity of approaches taken by the women.

Studying the lived experiences of health-related and socioeconomic vulnerabilities (and the women's way of coping which such conditions) through the perspective of Spiers, we are also reminded about the significance of understanding vulnerability in a community perspective. When moving with and talking to the women, it became clear to us that they prioritized the needs of their family members higher than using time and resources on caring for their own well-being. This was also affirmed by some of the health professionals, who described that the women did not cater first but last for their own well-being. As such, the women may possibly refrain from using the expensive shoes (if not simply due to the fact that the shoes did not fit them) to align with community needs and values.

A similar focus on collective and intragenerational well-being rather than individual health has been observed in other studies with non-Western women in particular (Agergaard et al. 2022). In fact, through the above-mentioned study, the first author was reminded of her own community values seeking to care for her elderly parents and children while also being highly engaged in her work as well as exercising to take care of her own health in middle-age. Indeed, when the first author started to reflect on her difficulties in balancing her family, individual health and work, she began to perceive a sense of vulnerability as a lived and universal experience (Spiers 2000).

While such an emic view on vulnerability may help us approach an understanding of how vulnerability is felt, the first author's experiences also remind us to utilize our conceptual framework in its entirety. The first author may experience the challenges of promoting her own and her family's health equally as strongly as some of the women frequenting the health promotion unit, yet their conditions are surely different. While the first author may not have the time some of the women in focus have for caring for their families, her socioeconomic conditions provide her with other options. In the words of Aday (1994), it is relevant to also consider the community resources and health needs.

In sum, through our empirical analysis, we have illustrated the relevance of considering vulnerability not only from an individual but also from a community perspective, taking in the complete spectrum of risks, including challenging medical and socioeconomic conditions, along with lived experiences of vulnerability. Such an understanding may help researchers and program personnel not only in describing but also supporting individuals and groups in vulnerable positions, through—among other things—building on their acts of resistance along with developing community resources to provide support.

6. Concluding Discussion

In response to the widespread and often undefined use of the concept of vulnerability in health-promoting sports and physical activity programs, we set out in this article to re-conceptualize vulnerability. This has involved not only conceptual (theoretical) considerations but also operationalizing and illustrating the utility of such ideas through an embedded single case study of a walking program organized by a health promotion unit.

As for the theoretical development, we have integrated Aday's understanding of vulnerability as not only an inherently individual phenomenon but also as community resources and needs, along with Spier's distinction between experts' evaluation of health risk and lived vulnerability. When focusing on risks, we acknowledge the challenging (and often complex) medical and socioeconomic conditions surrounding target groups in health-promoting sports and physical activity programs, and the fact that interventions directed towards such risks are socially sanctioned. The running of programs is not objectively determined, but rather defined by experts and other people in a position of power to categorize what should count as risks and how society should intervene in relation to such

risks. Applying this approach in our study, we have identified that the design of health-promoting sport and physical activity programs are often based on expert evaluations but may be adapted to the individuals in focus by the program employees.

Further, when focusing on vulnerability as lived experiences, we turn our attention to how individuals may experience their challenges and cope with complex medical and socioeconomic conditions. Such a conceptualization points to the relevance of exploring everyday life experiences of participants targeted in health-promoting sport and physical activity programs, while also paying attention to the variety within the group. Altogether, we argue against simply using the concept of vulnerability as an empty signifier, but to define it in further details and explore how the program participants experience their challenges in order to better understand and support them.

Furthermore, we have sought to contribute to methodological development. While a multiplicity of methods may be employed in studies of at-risk conditions and lived vulnerability, in this article, we described the utility of observing material objects (i.e., shoes) and the interactions around them. With such attention and an interactionist methodology, we suggest that researchers and program employees can find ways to approach a lived sense of vulnerability. In so doing, we also encourage reflections on how researchers' (and program employees') own experiences interact with their interpretations.

Still, there are several limitations in this article that may guide us in drawing perspectives for future research. First of all, our analysis of the interviews with the health professionals reveals that although they are very well aware of the complexity in the conditions that influence the target group, they refrain from describing some of these conditions (such as their minority religion that may be politically debated). As such, future research could draw greater attention to the possible experiences of vulnerability among health professionals. In line with descriptions of the dilemmas of street-level bureaucrats (Lipsky 1980), the health professionals in our study appear to face a cross-pressure between supporting the individuals and groups in focus on the one hand, and following changing political regulations and public discourses that shape how they can describe and design the programs on the other hand.

Another perspective that could have been developed further is the researchers' own positionalities and experiences of vulnerability. In this article, we suggest that reflections on our own experiences may help approach a lived sense of vulnerability, while also pointing to the clear limitations in the researcher not sharing conditions with the program participants. Yet, much more could be carried out with these reflections, as well as considering the ethical, emotional and professional vulnerability of researchers (Nordentoft and Kappel 2011; Sikic Micanovic et al. 2019). As described in this article, there are numerous dilemmas involved in conducting programs and research with individuals and groups in vulnerable positions that call for much more attention.

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Article

STIHL Timbersports® and the Reconceptualization of Modern Sport in the Light of Decontextualization and Eventification of Forestry Work

Bo Carlsson [1], Isak Lidström [1,2,3,*] and Leif Yttergren [2]

[1] Department of Sport Sciences, Linnaeus University, 351 95 Växjö, Sweden; bo.u.carlsson@lnu.se
[2] Swedish School of Sport and Health Sciences, 114 33 Stockholm, Sweden; leif.yttergren@gih.se
[3] Department of History, Stockholm University, 114 19 Stockholm, Sweden
* Correspondence: isak.lidstrom@historia.su.se

Abstract: This article examines STIHL Timbersports® and its amalgamation of craftmanship, competition, eventification and branding, through the lens of decontextualization of sport. It thus revisits and revitalizes the concept of sportification, as well as discusses the characteristics of sport such as authenticity and "uncertainty of outcome". The aim of the article is to grasp the different processes that challenge our common positions regarding sport, which may in turn progress sport beyond the prevalent conceptualization of modern sport.

Keywords: sportification; work and play; Timbersports; technologization; indoorization; Got Talent; virtual reality

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1. Introduction

In *Homo Ludens*, Johan Huizinga ([1939] 2004) argues that sport originates from play, but that the play element appears to get lost in modern sport due to a mounting seriousness in the wake of increasing rationalization and professionalization as well as various commercialization processes. Play, Huizinga argues, is a nonutilitarian activity performed for its own sake; it serves no other purpose than play itself. Consequently, the emergence of modern sport—with its focus on achievement, specialization, rationalization and standardization—has meant that the lightheartedness of play was lost. Play turned serious, with the organization and regulation of hitherto spontaneous games occurring at the expense of joy and spontaneity. Though Huizinga's work is no longer new, his thesis is still considered a crucial argument.

Huizinga's acclaimed thesis regarding sport's genesis is generally supported, for instance by Norbert Elias' figurative analysis of the civilization processes and the extended regulation of sport (Elias and Dunning 1986), as well as by Allen Guttmann's Weberian analysis of the sportification process in modern sport (Guttmann 2004). Although Guttmann emphasizes rituals more than play, he uses a Weberian typology to describe the gradual process whereby a physical activity goes from a primitive stage to a modern sportified activity (Guttmann 2004). Guttmann presents seven criteria in this sportification process, with fairness/equality, standardization, quantification and records as the basic driving forces.

Guttmann, like Huizinga, has had a great influence on sports history research, as many researchers have continued to use his typology, often in a revised form to analyse when and how specific sports, countries or cities have reached a modern stage of sport (e.g., Goksøyr 1991; Yttergren 1996; von der Lippe 2001; Pfister 2007). Most likely, a current revision of Guttmann's conceptualizations will consider trends such as the increasing "eventification" of sport as well as the devaluation of records as the result of a quest for more spectacle (a "ballyhoo").

While these foundational ideas are compelling at their core, there are sports that have developed in a different and reverse manner than from play or ritual to sport. Rodeo, for instance, originates from the professional skills and livelihood of cowboys, as an additional opportunity to present their talents in the forms of amusement and competition. The competition forms in modern pentathlon builds on military forms and capabilities. Fencing seems to have historical roots in chivalric games and training for war, yet it is also presented in medieval carnivals and exhibition games, although in a rather brutal fashion. Today we can also observe sports that have generated from fictional origins, such as Quidditch, created in the successful *Harry Potter* novels. Still, following the logic of sportification, there are also new or altered sports that have originated internally, for instance competitions in rowing machines, which previously served as training equipment.

In this article, we focus on sports that originated in craftmanship and forestry work. In relation to sport, many (Swedish) athletes have worked in the forestry industry and thus have natural training as a basic support to their success in various competitions and championships (cf., Svensson 2017; Sörlin 1995; Svensson and Sörlin 2019). However, forest machines have increasingly supported and even replaced natural craftmanship in the forest industry due to increasing rationalization and technological advances. In comparison to the period of 1920–1960, in more recent decades heavy work with chainsaws on the ground has been superseded by advanced forestry trucks and wagons (Hjelm 1991).

Despite this change, the craft and craftmanship have turned up in a different setting, albeit in an altered manner: in the form of Timbersports. This development foregrounds our rationale in the reasoning and aim of this analysis. Thus, our approach will broaden the field of sport studies and its analysis of the sportification process in modern and post-modern society.

Still, an initial question arises concerning the probability of including tree felling, tree splitting and woodcutting in the common conceptualization of sport, in comparison with, e.g., weightlifting or speedway. There are, however, substantial reasons for such an assessment. For instance, Timbersports is a production of STIHL, labelled and branded as STIHL Timbersports®, and is explicitly launched as a sport event and has progressed and matured, becoming increasingly "sportified" as depicted in Guttmann's (2004) concept of modern sport. In addition, Timbersports is characterized by physical activity.

Notwithstanding these characteristics, there might be objections in light of the traditional concept of sport. Sport has regularly been regarded as a leisure activity, produced in an "imaginary setting" (Elias and Dunning 1986), regardless of sport's commercial and professional progress. By contrast, woodcutting, as a profession, is regarded as a serious part of our social life, albeit the mundane practice in the spring at the holiday cottage, which is more related to leisure.

However, through the progress of Timbersports, a real social activity (a work/profession) gradually transformed into a sport—or a sport event—which, in turn, has generated professional timber athletes, trained and coached to compete, not to work. Thus, STIHL Timbersports® challenges our familiar concept of sport and offers a clear and analytical focus on social processes in sport such as decontextualization and eventification. In this respect, STIHL Timbersports® appears, as an enigmatic sport, to blend the characteristics of modern sport with the tendencies and predictions of future sports (Carlsson and Jönsson 2010; Jonasson 2014).

2. Aim and Methods

By focusing on STIHL Timbersports®, this study aims:

(1) to analyse professional skills' transition from work to sport, as well as the legacy of when craftsmanship is replaced by sports talent, as seems to happen in STIHL Timbersports®

(2) to focus on the effects of the sportification process and to comprehend the processes of decontextualization and eventification of sport, with a special focus on the progress of STIHL Timbersports®

Accordingly, the article examines STIHL Timbersports® and its amalgamation of craftmanship, competition, eventification and branding, through the lens of decontextualization of sport. It thus revisits and revitalizes the concept of sportification and discusses the characteristics of sport such as authenticity and "uncertainty of outcome" (cf., Loland 2002). The aim of the article is to grasp the different social processes that challenge our common positions regarding sport, which may in turn progress sport beyond the prevalent conceptualization of modern sport.

The study was based on a mixed methods approach involving three types of data collection. First, we made observations of the company's Swedish website and Facebook account. Second, we made observations of videos and competitions (STIHL Timbersports® Four Nations Cup and the STIHL Timbersports® Virtual European Championship) on social media (Facebook and YouTube). The collected data were analysed using an inductive content analysis with a focus on (1) how the company visually (in pictures and videos) and textually presented the sport and (2) the innovations the company has developed by introducing the sport in new media contexts on television and online.

Third, we relied heavily on two semi-structured interviews with Ferry Svan, a celebrated Timbersports athlete in Sweden. The interview guide was structured based on three themes: (1) talents, motivations and general experiences; (2) his participation in 'Got Talent' on Swedish television; and (3) his participation in the digital championship of the 2020 STIHL Timbersports® on 27 December 2020. The choice of informant was based on Ferry Svan being the most well-known practitioner of Timbersports in Sweden. He is not only one of Sweden's leading Timbersports athletes, with gold medals in the Junior World Championships and Nordic Championships, but he is also the son of Gunde Svan, who was a famous and celebrated cross-country skier (a traditional "modern sport") and a supreme model of a rational modern athlete, with multiple gold medals in the Olympics and World Championships (Ehn 1989). In this respect, Ferry Svan was raised in the culture of modern sport. He shared that, as a child, he used to compete in everything, even everyday tasks: "everything has been competition in my upbringing [...] my dad has taken time" (TV4/Talang [Got Talent], 15 January 2021).

3. The Progress and the Marketing of STIHL Timbersports®

The forest and garden machine company STIHL launched STIHL Timbersports® due to the firm's reputation as a strong chainsaw brand.[1] STIHL Timbersports® is an international competition series in extreme sports that started in 1985 in the United States and came to Europe in 2001. The sport's roots are found in 19th-century Australia and New Zealand, when lumberjacks competed against each other by chopping and sawing wooden blocks. Today's forms of competition have become more technological, with advanced equipment, but they have also considerable elements of more naturalistic—and authentic—tools. Still, the "equipmentification" is palpable and contributes greatly to the sport's nerve, frenzy and attraction as a motorsport and as a physical strength sport.

STIHL Timbersports® consists of six forms of contests: three with axe (Underhand Chop, Standing Block Chop and Springboard), two with chainsaw and one with a two-meter hand saw (Single Buck). The motorized races are Stock Saw, which is performed with one of STIHL's stronger standard chainsaws, and Hot Saw, which is performed with a custom-built chainsaw of 62 horsepower.

All competitions simulate felling a tree or cutting an already felled tree and have a historical origin in how trees were felled and cut in the past. But the equipment is adapted to the sport, due to the sportification process. The contestants are marketed with the fact that they possess strength, endurance and technology—as well as courage. For example, Hot Saw is described thus:

> "The goal is to cut off three panels from the 46 cm thick and horizontally mounted wooden block as quickly as possible. [. . .] The challenge in this branch is to control the powerful chainsaw that has 60–80 horsepower. With speeds of around

> 250 km/h and weight of close to 30 kg, these machines require the absolute best of the athletes".[2]

In a similar manner, Underhand Chop is presented via cool and powerful videos,[3] giving the impression of attractive, speedy and muscular entertainment, with an exalted 'show quality', though still within the logic and form of sport.

There are competitions for individual athletes as well as for national teams. There is, for instance, the Team World Cup, with over 100 athletes from more than 20 countries (where STIHL has local offices). In these competitions, four athletes compete with each national team, where the fastest times advance further in the championship. The two teams that win all rounds make it to the final and battle for the world title in the Team World Cup. There is also the World Championships, in which the world's top 12 athletes compete in six different contests for the prestigious world title. After each event, the athletes with the lowest score are eliminated, following a sports logic. The sport:

> "[r]equires mental strength, perfect technique and perseverance. Contestants need to use all their reserves and give everything they have in each round. A 100% stake is required in each duel. The slightest mistake can lead to being knocked out" (https://stihltimbersports.se, accessed on 1 October 2021).

Yet, the pursuit of records—an important criterion in Guttmann's analysis of modern sport—seems to be less important, and the entertainment—the event—has become increasingly the focus, as in Formula One®. While this does not mean that there is no world record, the record is not essential for the progress of the sport, compared to the show and the instant excitement at the arena during specific events.

At the same time, the commercial link of STIHL Timbersports® is quite clear and natural, in comparison with the naming of national football leagues by a bank or brewery, or with a football team become associated with a cosmetics company or energy drink producer. STIHL's connection to Timbersports is, in this respect, much more natural, and the mutual influence seems obvious. The sport's strong connection to STIHL means that other chainsaw brands are not used or officially permitted in competitions. If any of the athletes happen to choose a different machine, the company brand would have to be pasted over and hidden. This limit does not affect Hot Saw, where the huge and impressive chainsaw is provided by STIHL, and all competitors must use the same machine due to its price and, following the sportification process, out of fairness.

Of course, STIHL tries to create attraction around the sport and, by extension, the company's tools and equipment, as well as perhaps an image of the organization's culture. The presentation of the sport thus has elements of a dramatic show and of the spectacular, something of a "rock concert" (cf., below). At the same time, there is an impression that the sport is extremely serious and that the athletes are very fit and technically skilled athletes truly competing against other athletes, much like the regular modern sport as presented in Guttman's conceptualization.

Yet, STIHL Timbersports® could also be regarded, and thus conceptualized, as a traveling theatre group or as an activity like the Harlem Globetrotters, presenting an extravagant exhibition. However, in comparison, the crucial sport logic—such as competition and the uncertainty of outcome—is taken seriously in STIHL Timbersports®. The event is more comparable to Formula One® than to skills in rodeo, though it is less directed and staged than, say, Ultimate Fighting or Formula One®, with their assigned hierarchies within the stables and among the contestants.

In conclusion, what we have observed is a decontextualization of skills in the wake of a sportification of a profession, although there remains a certain contextual resemblance and logical connection between STIHL as a company and STIHL Timbersports® as an event and regular modern sport.

3.1. An Athlete's Perspective and Experiences

Ferry Svan trains and competes full-time, but he also has broad experience in forestry through his training and work as a forest machine operator. However, he has not had any

particular benefit from his Timbersports skills when engaging in practical forestry. He states, "If you are going to split firewood at home, it is absolutely an advantage, but all forestry today is run with chainsaws and forestry machines, so the axe is no longer in the profession. But it is always good to have a good physique, to be able to fell trees and to work manually with chainsaws".

Timbersports can to some extent be likened to a representation of traditional forest work as it was once practiced, before the time of the large forest machines. But such an image is simultaneously simplified, because as a modern sport, the logic of competition in Timbersports' various contests has changed the practice into something completely different from the forest work that it was originally meant to emulate.

Timbersports is not about a professional skills competition, as Ferry Svan emphasizes: "I would say that it is like any other sport, even if it is in close relation to old forestry. Today it has developed into an athlete sport, where the axe is part of several forms of competitions". Being world champion in Timbersports is therefore not comparable to being the best forest worker in the world.

Thus, STIHL Timbersports® strives to "sportify"—i.e., standardize—the contests as far as possible, to create fair competitions. Ferry Svan discusses this problem at length:

> "At competition, all timber is turned so that it is completely round and equal for everyone. After all, one tree doesn't have to be like the other in hardness when you chop or saw. You compete on each wooden block that are two consecutive pieces out of the same tree, they are 'brothers' you could say. It's as always as you can get it. We chop a lot in aspen in Sweden. Out in the world, you compete on the woods that there is a lot of and that it is easy to get hold of. If you have a spruce that is twiggy, the axes and saws are too sharp and thin and easily break. At competitions down in Europe there is not so much aspen, but then you often run with poplar [. . .]. At larger competitions, the material is equivalent, but as in any sport, the conditions can be changed, different years. It's fun to break a record, but then you must be in a lot of competitions. Wood is wood, it's living material. In some competitions it is a bit harder, on others it is softer".

In addition to the sport's environmental impact (i.e., the consumption of timber and petrol) and the idea of sustainable sport, the problem that 'wood is wood [...] and a living material' has led to the creation of special "Timbersports forests" in Belgium and the Netherlands,[4] due to the sportification process (and still, the timber must be transported to the global events!).

The sport is developed under STIHL's supervision and dominance. Thus, being attached to a specific brand is a distinctive feature of STIHL Timbersports®, in comparison to other (motor) sports (Formula One®, for instance, consists of several car brands advertising their racing cars). It would be difficult and complicated to compete on a chainsaw from a different brand. Ferry Svan comments on this aspect of the sport:

> "Since STIHL is the one holding the event, it is their products that apply. Then it is not possible to advertise on stage for a competitor to STIHL. But really, the chainsaw (STIHL Stock Saw) is the only STIHL product that we use. The competition organizer is responsible for this, and you do not have to bring your own to the competition. In Hot Saw, it's a completely different setup. You can trim your engine as much as you want. You're supposed to wear it yourself and it's supposed to be one cylinder, that's the rules. It's a lot freer [but difficult to use another product than STIHL, our remark]. These are specially built, and where you get to buy an engine, trim it up, put on a chain and sword and little else".

Even when competing in prestigious competitions such as the Swedish, Nordic, European and World Championships, show competitions are the most common forms of competition in which Ferry Svan participates. The atmosphere in the 'shows' is therefore elevated and animated, which he describes thus:

> "Since everything happens on stage with sound and light, there's a bit of a rock concert over it, I have to say! When you come out to world competitions with several thousand in the audience, it becomes a completely different thing! Something happens to the audience all the time, it's action and everything happens on stage. It's not like a marathon where you see the runners for a few minutes in the stadium. It's speedy, fun and entertaining!"

That it is "speedy, fun and entertaining" and "a little rock concert" is in line with the "eventification of sport" (and popular culture at large), in which STIHL Timbersports® seems to ride or even accelerate a general trend, thus increasing sport's role in the entertainment industry.

3.2. Got Talent' and Virtual Championships as New Platforms for Sport

This section further emphasizes the decontextualization of sport in relation not only to place but also to time. In addition, we will focus on sport as a produced—manufactured—form of entertainment, and as a part of the progress of popular culture.

(A) Interestingly, Ferry Svan showcased his skills on the TV show "Talang" (Got Talent),[5] competing against several musicians, a dance group, a stand-up comedian and a group of girl gymnasts. Notably, Ferry Svan did not apply for the show himself. In fact, he was contacted by the production team, who asked if he was interested in participating, most likely because of his well-known sporting ancestry and the spectacle of the yet unknown sport he practiced. Actually, there is a trend in which popular culture hacks the logic of sport, with programs like Masterchef and Robinson (cf., Carlsson and Svensson 2015).

In the TV-show, Ferry Svan is initially given the following introduction: "Unlike dad Gunde, 59, it wasn't the ski tracks that attracted him. It is Timbersports, professional lumberjack with chainsaw, sharp axes and saws with huge saw blades on time, which applies". The challenge he promises to complete is a mix of three elements in STIHL Timbersports®, which includes the chainsaw, the long saw and the razor-sharp axe, in an interval of 80 s. An even bigger challenge, however, was to get the equipment in place in the studio. Ferry Svan states:

> "It was difficult to transport all the equipment and get it fixed on the stage floor. Since the floor was made of glass, we had to be very careful, and we were not allowed to use bolts. Normally you want the scaffolding to be completely still, no matter how hard you hit the log. We had to solve it with large heavy weights and other special solutions. It actually went well!"

The judges cannot believe their eyes when Ferry Svan suddenly swings a razor-sharp axe, woodchips flying before their eyes as he saws a thick tree trunk with a strong and noisy chainsaw. As he stands on a log to cut it off between his feet, one of the judges becomes terrified, hides her eyes and screams: "Stop it, stop it! What's going on? Well, God, well God, help me, I panic, stop, stop, stop!" (cf., Ek 2021).

This is, consequently, excellent entertainment! Ferry manages to complete the challenge in 70 s. This is good television, and the atmosphere is excited and cheerful. After Ferry's successful performance, one of the judges admits, "I've never panicked like that. You came so close to chopping off your feet. I loved you and hated you at the same time. You're going to get so many girls after this" (cf., Ek 2021). Ferry laughs a little at the jury's strong reaction: "it looks much worse than it is, according to those who practice the sport. But "there are certainly not that many centimetres to the feet [...] a few centimetres in boom (in gymnastics, our remark) is a pretty big slip" (cf., Ek 2021).

All four judges regard Ferry's performance as satisfactory, and they voted unanimously for him, allowing him to bring his talent as a Timbersports athlete to the next stage of the show. One of the judges says: "Entertaining absolutely. Unique? Without doubt. Is this anything I want to see again? Well, not really hungry for it. But I think the viewers want it, so I say absolutely welcome back". In the end, however, Ferry Svan did not reach the show's final of eight talents (who were mostly musicians).

In retrospect, Ferry Svan believes that his participation in 'Got Talent' was a successful way to expose both the sport and his own brand. At the same time, he emphasizes the importance of representing the sport and his personality in a proper manner. He states:

> "Within the sport, we do not want to be associated with the old [lumberjack] style with braces and flannel shirt. The sport should be considered as any extreme sport. If you appear in media contexts, you must make sure not to be perceived as a hillbilly".

In some sense, we have, in the analysis of sport, moved away from Huizinga's thesis, then paradoxically back to Huizinga, due to the "play element" in Ferry Svan's exhibition of Timbersports at 'Got Talent'. Svan's performance resembles a circus act, but it is still sport in light of such factors as the time constraints. In the show, the skills of Timbersports are presented as a talent comparable to the talents of musicians or stand-up comedians. Sport becomes part of popular culture and blends with the logic of entertainment. Thus, we can observe a vanishing line between sport, show and circus (cf., Eichberg 1995). This can also be understood as a new qualitative step in the decontextualization of skills among Timbersports athletes as well as the previous decontextualization of the profession.

(B) Evidently, COVID-19 has restricted the possibility of holding various championships at arenas around the world. The internet has offered an alternative platform, even for sport. Accordingly, STIHL Timbersports® launched the Virtual European Championship 2020 as its first virtual international competition. The competition replaced the previously cancelled individual world championship, which should have been held in November at Partille Arena in Sweden, and was broadcast on 27 December 2020.

The competition consisted of ten athletes who qualified through national competitions during the year. In addition, the 2019 national champions from Great Britain, Hungary, Romania and Norway participated because the coronavirus pandemic had made national competitions impossible in these countries. Ferry Svan represented Sweden.

The competition format was customary for individual STIHL Timbersports® events, where the athletes perform the six contests: Underhand Chop, Standing Block Chop, Springboard, Single Buck, Stock Saw and Hot Saw. However, the locations of the competitions were unique and inventive. Each athlete conducted the competition at their place of residence, in accordance with local restrictions and strict hygiene requirements, between 30 November and 10 December and was filmed. In order to achieve similar conditions, the athletes competed on wood from the same logs that were split up into equal pieces and distributed among the competitors in each country after a lottery held in a Zoom meeting. All performances were observed by STIHL Timbersports® officials, and the times and video footage were sent to and approved by official judges.

These individual videos were later edited—"fabricated"—into one competition, the Virtual European Championship 2020, and was broadcast "live" 27 December, via Facebook, YouTube and Twitch. For Ferry Svan, it was thus possible to follow and compare the performances afterwards. Before the broadcast, he stated in a press release: "It will be exciting to see everyone's performance and the results *at home from the couch*" (our emphasis). In this respect, the competing athletes were required to be silent about their performance, like a production of Robinson or Masterchef. Still, Ferry Svan said, "I think the competition format is really good and gives us the opportunity to continue competing, despite the situation around the world" (*Siljan News* 2020, 15 December). In retrospect, Ferry considers this new form of competition successful. He states that "it went very well, I was pleasantly surprised", especially as it was so convenient to avoid traveling far to compete at the highest level. The only negative aspect of the competition form, Ferry Svan argues, was the difficulty of getting the adrenaline rush that arises the moment he meets the audience. Despite this, Ferry Svan hopes that the virtual form of competition can become a permanent feature of the sport—side by side with the live competitions—even after the pandemic.

This form of competition can be viewed as an additional step of decontextualization of sport, both in regard to space and time. Besides, the rationality of the entertainment industry and its production logics (e.g., produced predictability and showbiz) have a

substantial influence on the experience of the sport event. As Stephen Connor (2011) emphasizes, sport has regularly challenged our mundane experience of space and time. Sport, he states, moves, handles and manipulates—"plays with"—time and space, for instance with concepts such as overtime and attitudes such as delaying the game. However, in STIHL's Virtual European Championship, time and space were "played with" in a different manner. Thereby, the editing of the contest afterwards supports the trend of a general decontextualization of sport.

4. Theoretical Outlooks on STIHL Timbersports®, and Beyond

In addition to this specific case, the general subject of this article—"sport in transition"—addresses several theoretical departures in which the current conception of sport and its progress and origins may be accentuated and blended through different processes of social change.

In a Durkhemian perspective, events and patterns in everyday life could be illustrations of social processes and, thus, have implications beyond its intrinsic meaning and significance. For instance, individual signs and manifestations of the division of labour in society have been recognized due to their impact on new forms of social coherence/solidarity (Durkheim 1964). Subsequently, the glamour and the flourishing of different multi-arenas, for example, generate social processes beyond the individual arenas. Thus, the directions in a contemporary sportification process will be directed and formed by the mixture of technologization, decontextualization, commercialization and eventification. In this section, we will rather briefly illuminate some of these trends and processes.

4.1. Sportification Processes

Of course, the classic conceptualization has shaped our understanding and view of sport and the development of modern sport. But at the end of modernity, it is scientifically justified to question the plausibility of such a view of origin and developmental logic.

The sportification process also adds to a trend towards more and more competitions in society in general, making it possible to create competition, in the mirror of sport, out of most things, from Quidditch to Masterchef and Science Slam (cf., Carlsson and Svensson 2015; Carlsson 2019). In other words, popular culture and society are becoming increasingly characterized by the logic of sport. This escalating mediazation has added new drivers to the process, beyond Guttmann's categorizations.

STIHL has worked hard to make Timbersports a serious sport, with a focus on equality in competition, even though the fact that "wood is wood" may generate diverse conditions for the athletes. Special forests are the answer in this sportification process. As with eSports (e.g., Dreamhack), STIHL Timbersports® has received strong support in the sportification process through the media and entertainment industry. Besides, compared to eSports, no one will question the physical efforts involved in forestry and operating chainsaws, making people more likely to accept it as a modern sport.

As mentioned, skills in work have been origins of sport, and we have observed a sportification of some professions, that goes beyond competition as a leisure among i.e., chiefs, fire workers and policemen, with athletes directed to compete and not to work. In this respect, STIHL Timbersports® is related to a process in which professions and professional skills are transformed into sports and athletic aptitude. Here, of course, military pentathlon and rodeo can be mentioned as classic examples. The drive that turns professions into sport, by a sportification process, is another element in both the decontextualization of skills and the decontextualization of sport. Through STIHL Timbersports®, STIHL has converted professional skills to athletic talents, honed through training. At the same time, STIHL might use the sport to brand their tools and machines, not to be used in sports at all, but in the forests or the garden by ordinary people.

4.2. Technology and Authenticity

In modern sport, the search for peak performance as well as exceptional entertainment has led to the development of training methods, equipment and tools. In this respect, training—as well as the contests themselves—has become increasingly dependent on technological development. This development can be seen in the equipment of the contestants, from lighter running shoes and wetsuits to fibre rods and carbon bikes. Training has gradually become increasingly dependent on machines and appliances, from roller skis and treadmills to oxygen masks and high-air houses. In addition, sport has increasingly moved indoors, thus moving away from the influence of nature. This trend is captured in the concept of indoorization (van Bottenburg and Salome 2010).

However, technological developments in sport have been called into question in light of authenticity, which questions what a genuine sporting experience or phenomenon might be (Bedná 2014; Reid and Holowchak 2011; Hurych 2009). There are also researchers who claim that natural training has advantages over more rationalistic and technological training (Svensson 2014, 2017). Competitions using rowing machines (indoors) are an example that makes the above-mentioned problems clear. In our post-modern world, our representations and images can also be portrayed to appear more graspable or *real* than our reality (Baudrillard 1994).

These processes related to naturalism, technology and authenticity can be seen in STIHL Timbersports®, and they both illustrate and are illuminated by the concept of decontextualization. The qualities of the profession itself are precision, safety and knowledge of the environment. Through the sportification process, STIHL Timbersports® has basically stripped away the profession's natural and normal environment (i.e., the forest) via adapted arenas, while the variety of tools, from hand power (axe and hand saw) to machine (chainsaws in various models), seems to provide a mix of naturalism and technology (and equipmentification). Besides, the virtual event could give the impression of a produced—rectified—sport event, away from sport's natural settings, and the participation in a TV contest such as "Got Talent" builds on a logic other than the spirit of sport, despite the event's "sport-likeness".

4.3. The Indoorization and Urbanization of Sport

The general urbanization of society has also affected the development of sport (Horne et al. 2012). Sports that generally took place in rural areas such as skiing, climbing and rowing have entered cities in alternative manners, in sprint, climbing walls and rowing machine competitions. Thus, sport has increasingly also been used as a tool in city marketing (van den Berg et al. 2002). In addition to this urbanization process, when these sports enter the cities, they are also performed indoors, due to the general trend of indoorization of sport in various arenas (van Bottenburg and Salome 2010). Naturally, this trend has also shaped the progress of STIHL Timbersports®, in accordance with the desire to present a spectacular show, not to mention the sport logic of creating a comfortable experience for the audience. Thus, former "lumberjacks" enter the cities' arenas as sport athletes, decontextualized from the natural challenges of the forest.

4.4. The Eventification and Commercialisation of Sport

Guttmann has argued that the pursuit for records was a part of the conceptualization of modern sport. However, with increasing doubt towards the quality of contemporary records due to trends such as escalating doping in sport, the significance of records has seemed to decline. In a post-Guttmannian horizon, and as an alternate characteristic of sport, the focus on "the event" seems to escalate. The essence of modern sport and its legitimacy and image is that all results, regardless of where the sporting achievements were performed, could be compared with each other through measurability and the pursuit of records. But the fascination with records has waned with the increase in doping and the blurred boundaries between genders and between what is human and machine. Instead,

the moment and the spectacle—the eventification—has taken over, placing the focus on excitement and entertainment (cf., Carlsson and Svensson 2015; Carlsson 2019).

STIHL Timbersports® is evidently a part of the process of the eventification of sport, considering its focus on the show in national and international championships as well as the production of different exhibition games. In a sense, it is a "travelling circus", albeit increasingly sportified.

In this respect, several competitions in STIHL Timbersports® have the character of an exhibition, not just of the athletes but of the equipment as well. Hence, the eventification process goes a step further and becomes almost a circus, similar to wrestling (WWE) productions. In these fights—or performing arts—the regular stress on uncertainty has become distorted by the production of a show or spectacle. Yet, notwithstanding the logic of a fabricated spectacle, it remains a physical activity with a semblance of sport: a "sport-likenesses". Thus, exhibition games problematize the emphasis on authenticity, unpredictability, tensions and records. Still, they are conducted in a manner similar to that of ordinary games (sports), but without the tension of the result being counted or of the game being serious. Its imaginary setting is even accentuated. In recent history, media and sport have had mutual interest and benefits in their individual progress and internal logics. Today, however, the collaboration is more or less blended, as our case indicates, in a logic of entertainment and eventification (cf., Sherwin 2000; Carlsson 2014, 2019).

In Sweden, STIHL Timbersports® is not part of the Swedish Sport Federation. One reason is the lack of children and youth sports, albeit the "talent industry" at Orsa Forestry Gymnasium. But more importantly, the sport is likely to be linked to entertainment, to business, to branding and to product placement, making it ill-adapted to the virtues of the Swedish Sport Federation and its umbrella organization (cf., Fahlén and Stenling 2016).

No doubt, sport has become a tool in the marketing of various companies. It is not unusual for a team to be linked to a company and even to be named after that company. Whole football leagues have been labelled by a company name, such as the Barclays Premier League. But the fact that an entire *sport* has been linked to an individual company and its brand, such as STIHL, is unique and quite remarkable, serving as a litmus paper for analysis of sport in change.

All athletes are obliged to use STIHL's products in the competitions. In this respect, STIHL can use STIHL Timbersports® to brand and market the company and, by extension, their tools and machines. However, and paradoxically, the possible effect will not be shown in the sport itself, but in ordinary consumers' use of the products in their gardens or the forest.

5. Conclusions

STIHL Timbersports® stands out as a useful entry for reflecting on the origin of novel sports in contemporary society. Thus, we have tested multiple paths as a first attempt to detect different perspectives and concepts that might be used generally to analyse the "genealogy" and "architecture" of novel sports in light of various social processes (cf., Markula and Pringle 2006). However, it is difficult to present a firm conclusion regarding distinctive and independent concepts due to the mixture of social processes that operate intertwined. Still, the practice of STIHL Timbersports® presents interesting trends and challenges in relation to our general comprehension and conceptualization of modern sport and its future progress, expressing, for instance, the "hybridity" of sports as well as the "amalgamation" of the forms of entertainment. We will focus on several such trends in this conclusion:

Firstly, this article, with its unusual emphasis on work and professional skills as alternative sources of sports, complements the Huizingian thesis on sport's origin in play. Hence, the progress of STIHL Timbersports® could only partially be comprehended from the perspective of Huizinga, Elias and Guttmann, with the thesis of play becoming increasingly serious in the logics of modern sport.

Secondly, Timbersports recalls the countless professional skills competitions held around the world, such as special championships for chefs or world championships in flower bindery. Few world-class florists would consider themselves athletes in an elite sport. Timbersports initially served purposes other than their current ones. Originally, the aim was to promote and improve professional skills. However, as the competition evolved according to the logic of sportification, the original aims have been lost. The competition started to take place for the sake of the contest, creating its own purposes instead of serving the material (professional) purposes from which they were born. In this respect, STIHL Timbersports® stands for a change from a work logic to a sport logic, where it seems to be no advantage to have a background in forestry to become a successful athlete in Timbersports. This means that the forest as an original—and genuine—context disappears and that, thanks to the sportification process, new talents are developed in training facilities. The sport—and the skills—become decontextualized.

Thirdly, the process of decontextualization is enhanced through the urbanization and indoorization of the competitions, which means that the sport—as many other sports—takes place at arenas in cities. Hence, the progress of STIHL Timbersports® exemplifies a general trend in contemporary sport.

Fourthly, STIHL Timbersports® includes competitions with both state-of-the-art and old tools. Both hand saws and axes and advanced chainsaws are included in the sport, thus reflecting the technology development, rationalization and efficiency of the forest industry while at the same time projecting the history of forestry, before the work became increasingly alienated with the arrival of rather powerful forest machines. However, due to "the image of a show", the focus on the spectacular and heavy machines contributes to the eventification of the sport.

Finally, the process of decontextualization is, thus, enhanced through the eventification and commercialization of the competitions. There is certainly a clear sportification and a serious quest to win, but the pursuit of records as an inherent logic has been replaced by the actual contest and the challenges—and, thus, the immediate and emotional tensions—of a spectacular form of entertainment. This is also captured by the fact that the athletes might participate in forms of entertainment, such as "Got Talent", not regularly related to sport. Moreover, the novel virtual competitions seem to be well-suited to editing and to the production of sport entertainment, thereby supporting the brand and, thus, the branding of STIHL®.

Hopefully, the subject of STIHL Timbersports® and our initial reflections on decontextualization and eventification of sport will progress strategy and offer a theoretical departure in sport studies for comprehending and analysing the development of sports in contemporary—post-modern—society, beyond the common conceptualization of modern sport. Admittedly, the most advisable manner to handle the conception of sport, and its definition, is to regard the concept of sport as "polycentric", in a similar manner as socio-legal scholars have comprehended the law (cf. Petersen and Zahle 1995), and thus, their focus on e.g., legal pluralism. According to this departure, what is included in and regarded as the law can have different forms and characters, dependent on its settings and practices. This means that we, in the conceptualization of sport, ought to comprehend and depart from the various contexts in which sport originates and operates, which, paradoxically, also implies a contextual understanding of the "decontextualization of sport", as our initial judgement of STIHL Timbersports® has demonstrated.

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Notes

1 In 2018, STIHL, a German family company, had more than 17,000 employees and was the best-selling chainsaw brand in the world, with a distribution network of more than 50,000 dealers in over 160 countries.

2 https://www.facebook.com/watch/?v=223078548957292 (accessed on 1 October 2021).

3 https://www.facebook.com/watch/?v=223078548957292 (accessed on 15 September 2021).

4 https://www.stihl-timbersports.com/sustainability.aspx (accessed on 1 October 2021).

5 https://www.youtube.com/watch?v=wSwIFlmI4eA&list=RDCMUC8Nr0Vq0lRo5299y_G--XOA&start_radio=1&rv=wSwIFlmI4eA&t=39 (accessed on 14 January 2021).

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social sciences

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Article

Developmental Outcomes for Young People Participating in Informal and Lifestyle Sports: A Scoping Review of the Literature, 2000–2020

Reidar Säfvenbom [1], Anna-Maria Strittmatter [2,*] and Guro Pauck Bernhardsen [1,3]

[1] Department of Teacher Education and Outdoor Studies, Norwegian School of Sport Sciences, 0863 Oslo, Norway; reidars@nih.no (R.S.)
[2] Department of Sport and Social Sciences, Norwegian School of Sport Sciences, 0863 Oslo, Norway
[3] Department of Research and Development, Division of Mental Health Services, Akershus University Hospital, 1478 Lørenskog, Norway
* Correspondence: annamarias@nih.no

Abstract: The aim of this study is to review the literature on lifestyle sports and lifestyle sport contexts with regard to the developmental potential they may represent in young people's everyday lives. The review applies a relational developmental systems approach to youth development. The eligibility criteria are based on the phenomenon of interest and outcomes. Hence, we include studies examining the associations between young people performing lifestyle sports and potential developmental outcomes: mental, biological, social, and behavioral. The present study shows that the volume of research on informal lifestyle sport is rather extensive and that studies on the way these activity contexts may affect developmental processes in youth are diverse and wide ranging. The studies suggest that performing lifestyle sports may have several beneficial health and skills outcomes. Furthermore, positive associations are suggested between involvement in lifestyle sport contexts such as climbing, snowboarding, parkour, tricking, kiting, and surfing and (a) mental outcomes such joy, happiness, freedom, euphoria, motivation, self-efficacy, and well-being; (b) social outcomes such as gender equality, network building, social inclusion, interaction, friendship; and (c) behavioral outcomes such as identity, creativity, and expressions of masculinity and/or femininity. The review performed indicates that lifestyle sport contexts are flexible according to needs and desires that exist among the practitioners and that the human and democratic origins of these contexts make them supportive for positive movement experiences and for positive youth development. The findings have implications for PE teachers, social workers, policymakers, sport organizations, and urban architecture, in that providing lifestyle sport opportunities in the everyday lives of young people will foster a holistic development in a positive way.

Keywords: youth sport; lifestyle sports; sporting behavior; literature review; leisure sport

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1. Introduction

Research has confirmed positive associations between participation in organized, traditional, and competitive youth sports and various variables promoting youth development (Agans et al. 2014; Green et al. 2015; Högman and Augustsson 2017). In line with these associations, governments and policymakers have funded national sport federations and promoted traditional sport contexts to support developmental processes in individuals and to combat health problems and social challenges in society (e.g., criminality and unemployment among youths), as well as means for educational attainment (Lindsey 2020; Strittmatter and Skille 2017).

However, during the last 50 years, the Western world has witnessed a change in societal movement cultures. Traditional and organized competitive sports still dominate the public domain, yet the movement culture has become more diverse in terms of new

activities and thus new activity contexts based on different values and aims compared to traditional Olympic sports (see also King and Church 2015). In this new diversity, the growth of activities categorized under the umbrella term "lifestyle sports" (e.g., skateboarding, snowboarding, surfing, parkour, tricking, freeride skiing, longboarding, rock climbing, and other types of informal, explorative, and expressive movement activities) has garnered increased attention (Bignold 2013; Jonasson and Eriksson 2022; Rindler et al. 2022; Säfvenbom et al. 2018; Van Bottenburg and Salome 2010; Wheaton 2004; Wheaton et al. 2017). Research has shown that despite public concern regarding a lack of adult leaders and structure, the number of young people involved in these types of activity contexts has been steadily growing in many nations (Howell 2008; Jeanes et al. 2022; King and Church 2015; Thorpe 2012; Wheaton 2013) all over the world. In the early part of the research on lifestyle sports, these contexts were associated with some kind of subcultural positioning, but recent research has shown that the image of nonconformist outsiders has diminished. During the last 10 years, lifestyle sports have emerged and expanded in many ways. Yet, despite commercialization, sportification, and industrialization (Edwards and Corte 2014; Strittmatter et al. 2018), many young practitioners today who are involved in tricking, skateboarding, parkour, and other action- or adventure-oriented activities defend and practice the grassroots idea of participating in an independent, self-organized, and commitment-based alternative to traditional and competitive youth sports. Due to what seems to be a preferred absence of an authorized adult or instructor (Säfvenbom and Stjernvang 2020) and despite lack of governmental support (Jeanes et al. 2019), commitment-based, peer-oriented, and self-organized lifestyle sport contexts seem to persist as alternatives to traditional competitive youth sports, instructed by an appointed and formal authority.

The 20 years between 2000 and 2020 were characterized by an increasing interest in lifestyle sports. Although many studies during the last 20 years have considered lifestyle sport contexts as developmental assets for young people, this research has so far not been reviewed. This may have to do with a remaining notion of lifestyle sports as deviant, and of lifestyle sport contexts as unstructured groups of young people who engage in transgressive behaviors and who challenge existing values in sports (Midol and Broyer 1995, p. 210). The aim of this study is therefore to review the literature on lifestyle sports and lifestyle sport contexts with regard to the developmental potential they may represent in young people's everyday lives.

A Relational Developmental Systems Approach

Studying the developmental outcomes of involvement with any potential developmental asset such as self-organized lifestyle sports requires an idea of what human development is. In other words, assessments of movement contexts as developmental contexts require an understanding of what human development processes require and thus what can be considered developmental outcomes.

Within contemporary developmental science, variants of relational developmental system (RDS) theories have been claimed as being at the cutting-edge of the field (Lerner 2018). RDS theories are anchored in a process-relational paradigm (Overton 2015), acknowledging that human development cannot be understood without focusing on developmental processes and interaction. From an RDS perspective, human development is a result of "person $\leftrightarrow$ context relations within a certain culture and time of history" (Säfvenbom et al. 2018, p. 1992), and from this perspective, plasticity at both ends of the relationship is considered crucial for optimizing development processes. RDS theories offer this perspective to the study of development among young people in school and leisure contexts (Lerner et al. 2015; Lerner 2018) by analyzing "the goodness of fit" between individual characteristics of the person and current contextual specificities (e.g., lifestyle sports).

RDS models seek to understand human development by considering all parts of the person (biological, mental, social, and behavioral dimensions) and all parts of the environment (local, national, and international dimensions) as dynamic and relational systems (Lerner et al. 2015). Because these systems both affect each other and receive influence

from each other in a mutual relationship within a given historical period, they cannot be considered independently of each other. Development occurs because of changes in and between these systems. Not all changes lead to development in a young person, but for development to occur, a change must occur in one of the many relational systems. Based on this process-relational understanding of human development, the present review approaches the existing literature on lifestyle sport contexts from an integrative human development perspective incorporating biological, psychological, sociological, and historical perspectives. The lifestyle sport contexts studied in this review represent the historical dimension in terms of being something new and different compared to traditional sports, whereas outcomes are studied as biological, social, mental, and behavioral outcomes.

2. Materials and Methods

This study is an overview of peer-reviewed publications examining lifestyle sports and developmental outcomes in youth published between 2000 and April 2020. We have performed a literature search in seven databases because we aimed to include the majority of publications in this period. The aim of the study was to determine the scope of the literature, allowing for multiple methodological approaches, participants, and activities. As such, the review qualifies as a scoping review and not a systematic review (see Munn et al. 2018).

2.1. Literature Search

One researcher (G. P. B.), with help from a librarian, searched for peer-reviewed publications in the databases of PubMed, Web of Science, PsycINFO, ERIC, SPORTDiscus, EMBASE, and CINAHL in April 2020, using the following search words and combinations: (lifestyle sport* OR action sport* OR adventure sport* OR informal sport* OR alternative sport* OR extreme sport* OR self-organized sport* OR skateboard* OR snowboard* OR surfers or surfing OR bouldering OR rock climbing OR sport climbing OR traditional climbing OR indoor climbing OR parkour or tricking OR mountain bike OR beach volleyball OR street dance OR death diving OR frisbeegolf OR bossaball OR spikeball OR pickleball OR stand-up paddle surfing OR trampoline OR break dance OR circus OR drone racing OR freeski OR BMX OR longboard OR inline skating OR scootering OR ultimate frisbee OR bike polo OR capoeira) AND (youth* OR adolescent* OR young people OR young adult* OR children OR child OR teenager*). Where possible, the search was limited to peer-reviewed publications, publication year (2000 to April 2020), English language, and studies on humans.

2.2. Inclusion Criteria and Study Selection

One researcher (G. P. B.) assessed the retrieved studies for eligibility by reviewing the titles and/or abstracts using the software Distiller SR by Evidence Partners (Ottawa, ON, Canada, https://www.evidencepartners.com/products/distillersr-systematic-review-software, accessed on 1 April 2020), whereas full texts were divided between all authors and assessed for eligibility at the final stage. If there was uncertainty regarding inclusion or data extraction, this was discussed with the other authors before any decisions were made.

The eligibility criteria were as follows: Phenomenon of interest and outcomes: we included studies examining the associations between performing lifestyle sports and potential developmental outcomes (mental, biological, social, and behavioral). Although we recognize the importance of acquiring an overview of the literature examining the risk of injuries related to performing lifestyle sports, this was beyond the scope and feasibility of this review. Studies that examined injuries in lifestyle sports were therefore excluded from this overview article. *Sample:* the sample had to include participants between 10 and 25 years old, and they had to perform lifestyle sports. We excluded studies only examining competing athletes. We included both youth with and without disabilities/other health constraints. *Design*: we included qualitative and quantitative studies and had no exclusion criteria on study design. *Publication type*: we excluded theoretical or conceptual publi-

cations, publications not published in peer-reviewed journals, conference abstracts, and publications not written in English. *Publication year:* we excluded publications published prior to 1 January 2000.

The main reasons for the exclusion of publications at abstract and full-text screening were that the included participants did not perform lifestyle sports or studied competitive athletes; the publications were theoretical or conceptual papers or conference abstracts; there was no eligible outcome (mainly publications examining injuries).

The search resulted in 3866 potentially relevant studies after elimination of possible duplicates. From the initial search, 499 publications were included in the full-text assessment after screening the titles and abstracts. In total, 173 studies met the inclusion criteria and were included in the present overview of the literature. We divided all the included publications into categories based on outcome (biological, performance, mental, social, and behavioral). If a publication included more than one of the outcome categories (e.g., biological and mental), it was included in all relevant categories (Figure 1).

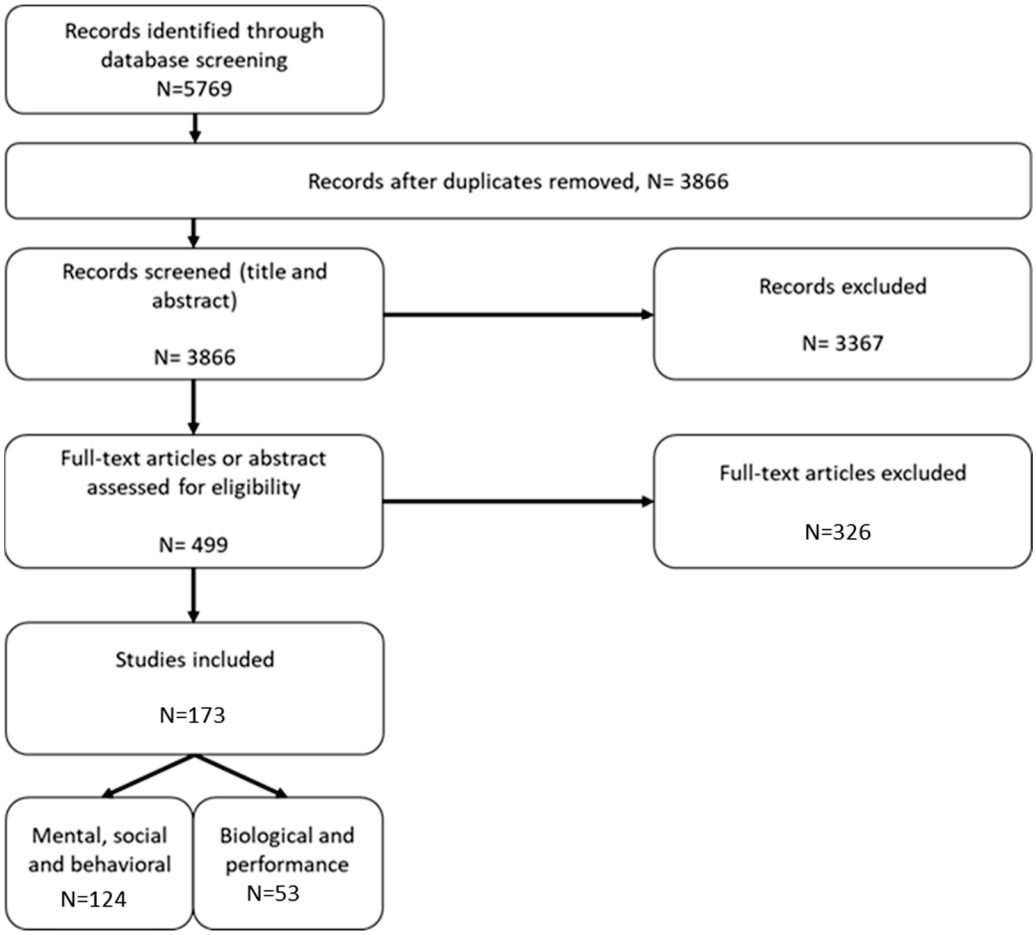

Figure 1. Flow chart of the included articles. Note: some of the publications (n = 3) include both biological/performance outcomes and mental/social/behavioral outcomes and are included in both categories at the final stage in the figure.

2.3. Data Extraction

Three researchers (R. S., A. M. S., and G. P. B.) shared the publications and extracted the following information: first author's name, year of publication, sports performed, study design, outcome category, outcome, and main result.

3. Results

In line with our theoretical understanding of human development, we structured the results of our study in form of (a) biological and performance outcomes and (b) mental, social, and behavioral outcomes for young people's participation in lifestyle sports. In this section, we provide a more descriptive overview before digging deeper and discussing the insights in the section that follows.

3.1. Biological and Performance Outcomes

Overall, the literature search resulted in 53 unique studies with biological and performance outcomes. The results from the studies are provided in Table 1 and were categorized as either beneficial, mixed (the study included several measures for the outcome and suggested both beneficial and no association), or having no association. Table 2 provides the references. The most studied outcome was metabolic cost or training intensity, and the results suggested that performing lifestyle sports is associated with an intensity or metabolic cost equivalent to the physical activity recommendations (at least moderate intensity). This applied for all the studied sports, except paragliding (Wilkes et al. 2018). Six out of eight studies suggested that performing climbing, trampolining, or surfing is associated with a more beneficial body composition or body weight. Twelve of fourteen studies suggested performing lifestyle sports benefits motor skills, including randomized controlled trials (RCTs) suggesting effects of trampolining on jumping height (Atiković et al. 2018; Arabatzi 2018; Giagazoglou et al. 2013) and balance (Arabatzi 2018; Giagazoglou et al. 2013; Zhong et al. 2019), effects of inline skating on balance and jumping height (Muehlbauer et al. 2013), and effects of climbing on balance (Aykora 2019). Three studies suggested the benefits of performing climbing (Aras and Akalan 2016) or surfing (Clapham et al. 2020; Hignett et al. 2018) on cardiorespiratory fitness, whereas nine of fourteen studies suggested an association between performing lifestyle sports and muscle strength/endurance. Of these, one RCT study suggested muscle strength and endurance effects of rock climbing on left elbow flexion and extension, and right elbow extension, but not right elbow flexion (Aras and Akalan 2016); one RCT suggested effects of indoor climbing on core muscle and hand-grip strength (Muehlbauer et al. 2012); and one RCT suggested an effect of trampoline training on knee-muscle strength (Zhong et al. 2019). We found eight studies that examined the association between lifestyle sports (climbing, surfing, and trampolining) and flexibility. Overall, five of these studies suggested a beneficial association between performing these sports and flexibility (Clapham et al. 2018; Aykora 2019; Giagazoglou et al. 2013; Koca et al. 2019; Muehlbauer et al. 2012), whereas two showed mixed results (Armitano et al. 2015; Siegel et al. 2015). We found few studies examining lifestyle sports in relation to systolic and diastolic blood pressure (Hignett et al. 2018), bone mineral density (Sherk et al. 2010), and markers of inflammation (Momesso dos Santos et al. 2015). One RCT showed that trampolining might benefit cystic fibrosis patients by reducing disease symptoms (Kriemler et al. 2016), whereas other studies were unclear on the medical benefits of performing lifestyle sports in children and adolescents with cerebral palsy (Böhm et al. 2015) or cystic fibrosis (Currant and Mahony 2008). Three studies suggested that participation in climbing or skateboarding might improve skills in other sports (i.e., ice climbing and snowboarding, respectively; Kunzell and Lukas 2011).

Table 1. Biological and performance outcomes categorized by outcome sample, lifestyle sport, study design, kind of outcome, and study participants.

Outcome Category	Outcome Sample	Lifestyle Sport	Study Design	Beneficial Association (Number of Articles)	Mixed Results [1] (Number of Articles)	No Association (Number of Articles)	Participants within Category
Biological benefits (unique studies = 48)							
	Body composition/body weight	Climbing	RCT	2			
			Experiment [2]	1	1		
			Cross-sectional	1			
		Trampolining	Experiment [2]	1			
		Surfing	Case report			1	Autism spectrum disorder: 1
			Experiment [2]	1			
	Motor skills [3]	Capoeira	Experiment [2]		1		Hearing disabilities: 1
		Circus arts	Experiment [2]	1			
		Climbing	RCT	2			Cerebral palsy: 2
			Experiment [2]	1	1		
		Inline Skating	RCT	1			
		Mixed activities	Experiment [2]	1			
		Parkour	Cross-sectional	1			
		Snowboarding	Experiment [2]			1	
		Trampolining	RCT	4			Intellectual disability: 1
			Experiment [2]	1			
	Cardiorespiratory fitness	Climbing	RCT	1			
		Surfing	Experiment [2]	2			Disabilities:1
	Muscle strength/endurance	Climbing/bouldering	RCT	1	1		Cerebral palsy: 1
			Experiment [2]	2	2	1	
			Cross-sectional	2			
		Parkour	Cross-sectional	1			
		Surfing	Experiment [2]:	1	1		Disabilities: 2
			Case-report	1			Autism spectrum disorder: 1
		Trampolining	RCT	1			

Table 1. *Cont.*

Outcome Category	Outcome Sample	Lifestyle Sport	Study Design	Beneficial Association (Number of Articles)	Mixed Results [1] (Number of Articles)	No Association (Number of Articles)	Participants within Category
	Flexibility	Climbing	RCT	2			
			Experiment [2]		1	1	
		Surfing	Experiment [2]		1		Disabilities: 1
			Case-report	1			Autism spectrum disorder: 1
		Trampolining	RCT	1			
			Experiment [2]	1			
	Metabolic cost/training intensity [4]	Capoeira	Cross-sectional	1			
		Climbing	Cross-sectional	6			Autism spectrum disorder: 1
		Paragliding	Cross-sectional			1	
		Scootering	Cross-sectional	1			
		Skate-/long-boarding	Cross-sectional	2			
		SUP	Cross-sectional	1			
		Surfing	Cross-sectional	3			Autism spectrum disorder: 1
			Case-report	1			
		Trampolining	Cross-sectional	1			
		Ultimate Frisbee	Cross-sectional	1			
	Systolic/diastolic BP	Surfing	Experiment [2]			1	
	Inflammation	Circus arts	Experiment [2]	1			Overweight/obese children: 1
	Bone mass/bone mineral density	Climbing	Cross-sectional			1	
	Medical conditions	Climbing	RCT			1	Cerebral palsy
		Trampolining	RCT	1			Cystic fibrosis: 2
			Cross-sectional		1		

Table 1. *Cont.*

Outcome Category	Outcome Sample	Lifestyle Sport	Study Design	Beneficial Association (Number of Articles)	Mixed Results [1] (Number of Articles)	No Association (Number of Articles)	Participants within Category
Performance (unique studies = 7)							
	Skills in other sports	Climbing	Cross-sectional	2			
		Skateboarding	Experiment [2]	1			
	Sport-specific skills	Climbing	Experiment [2]	2			Cerebral palsy: 1
			Cross-sectional	1			
		Surfing	Cross-sectional	1			

Note. [1] Mixed results: reported beneficial associations for some of the outcome measures, but not for others. [2] Experiment with no randomization or no control group. [3] Motor skills include basic locomotor motor skills, mostly jumping length/height and balance. [4] Metabolic cost/intensity at least at moderate intensity while performing the sport; moderate intensity consistent with physical activity recommendations. BP = blood pressure; RCT = randomized control trial; SUP = stand-up paddleboard.

Table 2. References on biological and performance outcomes included in the study.

Outcome Category	Outcome Sample	Lifestyle Sport	Beneficial Association (References)	Mixed Results (References)	No Association (References)
Biological benefits					
	Body composition/body weight	Climbing	(Aras and Akalan 2016; Aykora 2019; Balas et al. 2009; Sherk et al. 2010; Siegel et al. 2015)	(Siegel et al. 2015)	
		Trampolining	(Aalizadeh et al. 2016)		
		Surfing	(Clapham et al. 2020)		(Clapham et al. 2018)

Table 2. *Cont.*

Outcome Category	Outcome Sample	Lifestyle Sport	Beneficial Association (References)	Mixed Results (References)	No Association (References)
	Motor skills	Capoeira		(Lima 2017)	
		Circus arts	(Kriellaars et al. 2019)		
		Climbing	(Aykora 2019; Böhm et al. 2015; Gallotta et al. 2015)	(Schram Christensen et al. 2017)	
		Inline skating	(Muehlbauer et al. 2013)		
		Mixed activities	(De Araujo et al. 2012)		
		Parkour	(Grospretre and Lepers 2016)		
		Snowboarding			(Klos et al. 2019)
		Trampolining	(Arabatzi 2018; Atiković et al. 2018; Giagazoglou et al. 2013; Zhong et al. 2019; Aalizadeh et al. 2016)		
	Cardiorespiratory fitness	Climbing	(Aras and Akalan 2016)		
		Surfing	(Clapham et al. 2020; Hignett et al. 2018)		
	Muscle strength/endurance	Climbing/bouldering	(Balas et al. 2009; Fryer et al. 2017; Lirgg et al. 2006; Muehlbauer et al. 2012; Wong and Ng 2008)	(Aras and Akalan 2016; Gallotta et al. 2015; Schram Christensen et al. 2017)	(Siegel et al. 2015)
		Parkour	(Grospretre et al. 2018)		
		Surfing	(Clapham et al. 2018, 2020)	(Armitano et al. 2015)	
		Trampolining	(Zhong et al. 2019)		
	Flexibility	Climbing	(Aykora 2019; Muehlbauer et al. 2012)	(Siegel et al. 2015)	(Gallotta et al. 2015)
		Surfing	(Clapham et al. 2018)	(Armitano et al. 2015)	
		Trampolining	(Giagazoglou et al. 2013; Koca et al. 2019)		

Table 2. *Cont.*

Outcome Category	Outcome Sample	Lifestyle Sport	Beneficial Association (References)	Mixed Results (References)	No Association (References)
	Metabolic cost/training intensity	Capoeira	(Moreira et al. 2018)		
		Climbing	(Fencl et al. 2011; Oriel et al. 2018; PanáČková et al. 2014; Siegel et al. 2015; Theodosiou et al. 2000; Watts and Ostrowski 2014)		
		Paragliding			(Wilkes et al. 2018)
		Scootering	(Kijima et al. 2007)		
		Skate-/longboarding	(Board and Browning 2014; Hetzler et al. 2011)		
		SUP	(Willmott et al. 2020)		
		Surfing	(Barlow et al. 2014; Bravo et al. 2016; Clapham et al. 2018; LaLanne et al. 2017)		
		Trampolining	(Budzynski-Seymour et al. 2019)		
		Ultimate Frisbee	(Madueno et al. 2017)		
	Systolic/diastolic BP	Surfing			(Hignett et al. 2018)
	Inflammation	Circus arts	(Momesso dos Santos et al. 2015)		
	Bone mass/Bone mineral density	Climbing			(Sherk et al. 2010)
	Medical conditions	Climbing			(Böhm et al. 2015)
		Trampolining	(Kriemler et al. 2016)	(Currant and Mahony 2008)	
Performance					
	Skills in other sports	Climbing	(Seifert et al. 2013; Seifert et al. 2016)		
		Skateboarding	(Kunzell and Lukas 2011)		
	Sport-specific skills	Climbing	(Blasing et al. 2014; Espana-Romero et al. 2012; Schram Christensen et al. 2017)		
		Surfing	(Barlow et al. 2014)		

3.2. Mental, Social, and Behavioral Outcomes

In the literature search, 124 unique studies that focused on mental, social, and behavioral outcomes were identified. The results of these studies are provided in Table 3, and they were categorized as either positive, negative, or neutral based on whether the outcome was considered favorable. Table 4 provides the references of the included studies. Although some studies only focused on one type of outcome, a major part of the literature found a mix of outcomes (see Table 3). Of the total numbers of studies, 13 unique studies showed positive associations between practicing lifestyle sports and changes in mental systems. Examples of mental outcomes from practicing lifestyle sports are joy and happiness, freedom, euphoria, motivation, self-efficacy, and well-being (e.g., Carlman and Hjalmarsson 2019; Motl et al. 2000). For example, Eckstein and Rüth (2015) found that activities such as rock-climbing have positive outcomes on attention and affect regulation for children and adolescent psychiatric inpatients. In addition to the 13 mentioned studies, we found 12 studies that solely included social outcomes, such as gender equality, network building, social inclusion and exclusion, interaction, and friendship (see, e.g., Müller and Mutz 2019; Sisjord 2012; Spencer-Cavaliere et al. 2017), and 13 studies that included only behavioral outcomes, such as identity, creativity, expressions of masculinity and/or femininity, knowledge development, risk taking, sporting behavior, and use of alcohol (see, e.g., Cheng and Tsaur 2012; Oriel et al. 2018; Säfvenbom and Stjernvang 2020).

However, the most frequent identified outcomes are the combination of social and behavioral outcomes (37 articles). One of the most identified outcomes was building of community, social participation, and identity construction, such as studies that showed lifestyle sports enhance the construction of gender identity—both masculinity and femininity—in skateboarding, snowboarding, and parkour (Atencio et al. 2013; Dupont 2014; Kelly et al. 2005; Kidder 2013; Thorpe 2010), which also affect social hierarchy. These mechanisms were shown in Dupont's (2014) study on core and consumer skateboarders and in Sisjord's (2009) study on various identities of female snowboarders. The outcome "identity within a community" was classified as a positive outcome because it enhances community and comradery (see e.g., Bradley 2010) and negative as a show of status (Edensor and Richards 2007) and enhancing social class differences. Table 3 shows additional examples of the identified outcomes.

One-fifth of the 124 studies reviewed included a mix of mental, behavioral, and social outcomes connected to lifestyle sports. An example is Wheaton et al.'s (2017) qualitative study identifying improved life chances, self-improvement, self-management, self-governance, and self-reliance among the young participants of a surfing program. Other examples of positive outcomes of this category are resilience, self-esteem, interpersonal relationships, and increased school attendance, which Momartin et al. (2018) identified among young refugees practicing capoeira. Loiselle et al. (2019) found increased self-perception and self-efficacy, enhanced participation levels, and decreased parental bonding among young people living with physical disabilities practicing circus activities.

Although most of the included studies are qualitative, several experiments and mixed-method studies were also examined. The study participants showed a variation of young people who were already regularly active in lifestyle sports, but also young people in general without specified physical activity behavior. Several studies covered marginalized young people (e.g., Ugolotti 2015), as well as people with physical and mental disabilities (e.g., Loiselle et al. 2019).

Table 3. Mental, social, and behavioral outcomes categorized by outcome sample, lifestyle sport, study design, type of association, and study participants.

Outcome Category	Outcome Sample (Examples)	Lifestyle Sports Sample (Examples)	Study Design	Beneficial Associations (Number of Articles)	Negative Associations (Number of Articles)	Neutral Association/No Outcome (Number of Articles)	Participants within Category
Mental outcomes (unique studies = 13)	Joy, freedom, euphoria efficacy, satisfaction, confidence, perception of self, motivation, self-efficacy, emotion, well-being	Climbing, caving, circus arts, surfing, sailing, street dance, trampolining, surfing	Qualitative study	5		1	Children and adolescent psychiatric inpatients, young people participating in lifestyle sports
			Experiment	5			(School) children, young people; autism spectrum disorder
			Cross-sectional	1			Young people participating in lifestyle sports
			RCT			2	Children with special needs
Social outcomes (unique studies = 12)	Gender equality, network building, social capital, social inclusion, democratic values, teamwork, health equity, social esteem, interaction with other young people, friendship, sport skills	Circus arts, snowboarding, parkour, urban football, skateboarding	Qualitative study	9	2		Marginalized youths; children and young people participating in lifestyle sports
			Cross-sectional	1			Young people
			Mixed methods	1			Street-involved youths
Behavioral outcomes (unique studies = 13)	Identity (construction), creativity, expressions of masculinity/femininity, taking risks, sporting behavior/sport participation, use of alcohol, environmental consciousness	Surfing, rock climbing, Ultimate Frisbee, parkour, street dance, capoeira, dance	Qualitative	5	2	1	Children and young people participating in lifestyle sports
			Cross-sectional	2	1	1	Children and young people; young people participating in lifestyle sports
			Experiment	2		1	Adolescents with autism spectrum disorder; at-risk adolescents

Table 3. *Cont.*

Outcome Category	Outcome Sample (Examples)	Lifestyle Sports Sample (Examples)	Study Design	Beneficial Associations (Number of Articles)	Negative Associations (Number of Articles)	Neutral Association/No Outcome (Number of Articles)	Participants within Category
Mental/behavioral (unique studies = 14)	Hyperthymic temperament; self-regulation, learning of skills, attention, hedonic balance, and life satisfaction; mix of above examples	Street dance, trampolining, surfing, extreme sports, trolley surfing, capoeira, skateboarding, snowboarding	Qualitative study	6		1	Children associated with attention-deficit/hyperactivity disorder; young people; young people living and learning in a risk society
			Experiment	4			Young people with mental health needs who are experiencing social exclusion; minority schoolchildren (predominantly Black and economically disadvantaged); at-risk youth
			RCT	1			Young adults with anxiety disorders
			Multiple-baseline across skills design	1			A family of three children: 11-year-old boy with autism spectrum disorder and his two siblings
			Case-control			1	Young people engaging in extreme or/and high-risk sports, and age- and sex-matched control group
Mental/social (Unique studies = 10)	Freedom, identity, disciplinary power, spatial limitations; mix of above examples	Kitesurfing, rock climbing, circus arts, freeriding, skateboarding, skiing	Qualitative study	8	2	1	Youth in Gaza, Indigenous youth, children and young people participating in lifestyle sports, young people
			Cross-sectional	2		1	Youth with disabilities; young people participating in lifestyle sports

Table 3. *Cont.*

Outcome Category	Outcome Sample (Examples)	Lifestyle Sports Sample (Examples)	Study Design	Beneficial Associations (Number of Articles)	Negative Associations (Number of Articles)	Neutral Association/No Outcome (Number of Articles)	Participants within Category
Social/behavioral (unique studies = 37)	Autonomy, community, gender equality, social class equality, interpersonal skills, youth engagement, trust, gender identity, social hierarchy, social inclusion and exclusion; mix of above examples	Martial arts, mountain biking, longboarding, tricking, wakeboarding, windsurfing, roller derby, skateboarding, snowboarding, snowshoeing	Qualitative study	23	4	6	Young people participating in lifestyle sports, children of immigrants' identity, marginalized youth, children and their families from socially disadvantaged areas, parents of children with disabilities
			Cross-sectional	3		2	Young people
			Experiment	3			Refugees, students
			Mixed methods	5	1	1	Young people, marginalized youth, young people participating in lifestyle sports
Mental/Social/behavioral (unique studies = 25)	Mix of the above; reduced trauma, achieving goals, empathy towards new culture, mental well-being	Dance, kayaking, paddle boarding, sailing, unicycling, quidditch, capoeira, rock climbing, skateboarding, parkour, circus arts	Qualitative study	16			Children and adults requiring physical, cognitive, and/or psychosocial supports; at-risk disengaged youth; Indigenous youth in Australia; young people living with physical disabilities; young males diagnosed with high-function autism; youth in sites of war, conflict, and disaster; young people participating in lifestyle sports
			Cross-sectional	1			Young people participating in lifestyle sports
			Experiment	4			Schoolchildren, young people facing mental health issues or social exclusion; refugees
			Mixed methods	3			Children who experienced abuse with families
			Quasi-experiment	1			Young people

Note. Beneficial, negative, and neutral outcomes can occur in the same study.

Table 4. References on mental, social, and behavioral outcomes included in the study.

Outcome Category	Outcome Sample (Examples)	Lifestyle Sports Sample (Examples)	Beneficial Associations (References)	Negative Associations (References)	Neutral Association/No Outcome (References)
Mental outcomes (unique studies = 13)	Joy, freedom, euphoria efficacy, satisfaction, confidence, perception of self, motivation, self-efficacy, emotion, well-being, addiction withdrawal symptoms	Climbing, caving, circus arts, surfing, sailing, street dance, trampolining, surfing	(Agans et al. 2014; Carlman and Hjalmarsson 2019; Cavanaugh and Rademacher 2014; Ceciliani et al. 2008; Clapham et al. 2018; Eckstein and Rüth 2015; Fletcher and Prince 2017; Heirene et al. 2016; Kriellaars et al. 2019; Motl et al. 2000; Seifert and Hedderson 2010)		(Heirene et al. 2016; Mazzoni et al. 2006, 2009)
Social outcomes (unique studies = 12)	Gender equality, network building, social capital, social inclusion, democratic values, teamwork, health equity, social esteem, interaction with other young people, friendship, sport skills	Circus arts, snowboarding, parkour, urban football, skateboarding	(Atencio et al. 2019; Spencer-Cavaliere et al. 2017; Geertman et al. 2016; Heller and Taglialatela 2018; King and Church 2015; L'Aoustet and Griffet 2001; Leather and Nicholls 2016; Müller and Mutz 2019; Sisjord 2012; Skille 2005; Spiegel et al. 2015)	(Anderson 2001; King and Church 2015)	
Behavioral outcomes (unique studies = 13)	Identity (construction), creativity, expressions of masculinity/femininity, taking risks, sporting behavior/sport participation, use of alcohol, attitude towards environment	Surfing, rock climbing, Ultimate Frisbee, parkour, street dance, capoeira, dance	(Bowers et al. 2014; Cheng and Tsaur 2012; Cross 2002; Gieseler and Sheppard 2019; Holland-Smith et al. 2013; Moore and Werch 2005; Schwamberger and Curtner-Smith 2017; Säfvenbom and Stjernvang 2020; Oriel et al. 2018; Waitt 2008)	(Halldorsson et al. 2014; Moore and Werch 2005; Waitt 2008)	(Kern et al. 2014; Schwamberger and Curtner-Smith 2017; Stapleton and Terrio 2012)
Mental/behavioral (unique studies = 14)	Hyperthymic temperament, self-regulation, learning of skills, attention, hedonic balance and life satisfaction; mix of above examples	Street dance, trampolining, surfing, extreme sports, trolleysurfing, Capoeira, skateboarding, snowboarding	(Arvidsen et al. 2020; Kutty et al. 2017; Lau et al. 2016; Levin 2016, 2018; Marshall et al. 2019; McCulloch et al. 2010; McGuire and Harrison 2008; Morrissey 2008; Mutz et al. 2019; Taylor 2013; Thomas et al. 2019)	(Siweck et al. 2015)	(Spowart 2019)

Table 4. *Cont.*

Outcome Category	Outcome Sample (Examples)	Lifestyle Sports Sample (Examples)	Beneficial Associations (References)	Negative Associations (References)	Neutral Association/No Outcome (References)
Mental/social (Unique studies = 10)	Freedom, identity, disciplinary power, spatial limitations; sexism; increased well-being, peers and social support; mix of above examples	Kitesurfing, rock climbing, circus, freeriding, skateboarding, skiing, rock climbing	(Beal 2001; Ennis and Tonkin 2018; Frumberg et al. 2019; Frühauf et al. 2020; Rynne 2016; Smits 2019; Thorpe and Ahmad 2015; Thorpe 2016; Vazou et al. 2015; Whittington et al. 2011)	(Beal 2001; Smits 2019)	(Frumberg et al. 2019; Frühauf et al. 2020)
Social/behavioral (unique studies = 37)	Autonomy, community, gender equality, social class equality, interpersonal skills, youth engagement, trust, gender identity, social hierarchy, social inclusion and exclusion; mix of above examples	Martial arts, mountain biking, longboarding, tricking, wakeboarding, windsurfing, roller derby, skateboarding, snowboarding, snowshoeing	(Atencio et al. 2013; Backstrom 2013; Bradley 2010; Dupont 2014; Evin et al. 2014; Gilchrist and Wheaton 2011; Harper and Webster 2017; Hollett 2019; Hortiguela et al. 2017; Jones 2011; Kelly et al. 2005; Kidder 2013; King and Church 2020; Light and Nash 2006; Mom et al. 2019; Moore et al. 2017; Morgan 2010; Petracovschi et al. 2011; Petrone 2010; Rannikko et al. 2016; Schori et al. 2017; Shannon and Werner 2008; Skille and Waddington 2006; Singer 2019; Spiegel and Parent 2018; Son et al. 2017; Sutherland and Stroot 2009; Säfvenbom et al. 2018; Ugolotti 2015, 2017; Ugolotti and Moyer 2016; Walker et al. 2014)	(Backstrom 2013; Beal and Wheaton 2003; Dupont 2014; Edensor and Richards 2007; Sisjord 2009; Skille and Waddington 2006)	(Atencio et al. 2013; Beal and Wheaton 2003; Edensor and Richards 2007; Kidder 2013; Rannikko et al. 2016; Rhea and Martin 2010; Schori et al. 2017; Sisjord 2009; Thorpe 2010)

Table 4. *Cont.*

Outcome Category	Outcome Sample (Examples)	Lifestyle Sports Sample (Examples)	Beneficial Associations (References)	Negative Associations (References)	Neutral Association/No Outcome (References)
Mental/social/behavioral (unique studies = 25)	Mix of the above; reduced trauma, achieving goals, empathy towards new culture, mental well-being	Dance, kayaking, paddle boarding, sailing, unicycling, quidditch, capoeira, rock climbing, skateboarding, parkour, circus arts	(Ashworth 2017; Backstrom and Sand 2019; Bernadowski 2017; Bignold 2013; Cohen and Peachey 2015; Cotterill and Brown 2018; Dumas and Laforest 2009; Fernández-Río and Suarez 2016; Godfrey et al. 2015; Henstock et al. 2013; Hignett et al. 2018; Lai et al. 2020; Loiselle et al. 2019; Méndez-Alonso et al. 2015; Merrick et al. 2020; Momartin et al. 2018; Norton et al. 2019; Petracovschi 2012; Radicchi et al. 2019; Stephens and Delamont 2014; Spiegel et al. 2019; Stevens et al. 2019; Sutherland and Stroot 2010; Thorpe 2017; Wheaton et al. 2017)		

4. Discussion

We conducted the present review of the existing literature on potential developmental outcomes of lifestyle sports involvement among young persons because of the following: (a) the number of lifestyle sports, lifestyle sport practitioners, and thus lifestyle sport contexts is growing; (b) the informal structure, the nonconformist practice, and the lack of adult leaders within these contexts have been questioned regarding their effects on developmental processes among youth; and (c) a review of studies on informal lifestyle sport contexts and their developmental potential is lacking.

Initially, the present study shows that the volume of research on informal lifestyle sports is rather extensive and that studies on how these activity contexts may affect developmental processes in youth are diverse and wide ranging. The number of studies retrieved in our literature search shows that lifestyle sports are well established within the movement culture in Western societies and that this part of the movement culture has received an increase in scientific attention during the last decade. The final samples of 53 unique studies on biological and performance outcomes and 124 unique studies on mental, social, and behavioral outcomes have proven that alternative activities and thus alternative activity contexts have increasingly reached the interest of not only sports researchers but also researchers representing preventive and clinical medicine, sociology, psychology, and behavioral research.

The trajectory of published studies is one source of proof of this increased interest. Our findings from the literature review allow us to identify four distinct periods in the development of studies on lifestyle sports and youth participation: 2000–2005, 2006–2010, 2011–2015, and 2016–2020. The number of articles focusing on lifestyle sports and young people has steadily increased from period to period.

In 2000–2005, ten studies were found, of which only one focused on biological and performance outcomes. Among the studies during this time period, two-thirds only focused on one type of outcome and mostly on social or behavioral outcomes.

In the period between 2006 and 2010, we found 25 articles that qualified for inclusion in our review. Among these, we can see that the number of studies focusing on mental outcomes has increased. However, the majority still handle behavioral and social outcomes. Only five articles focused on biological and performance outcomes.

In the period of 2011–2015, 54 articles were found. In this period, studies on biological and performance outcomes increased to 21 in total. Among the other 33 articles, we found mixes of relational outcomes such as mental, behavioral, and social outcomes. Here, we can see that studies published during this time period include more complex outcomes that affect developmental processes in young people.

From 2016 to 2020, we witness a big jump in the number of published articles: 88 in total. However, the bigger jump is made in the articles with mental, behavioral, and social outcomes (61) than in the articles handling biological and performance outcomes (26). Regarding the former, more than half of the studies identified mental outcomes combined with other outcomes. This shows that mental outcomes have garnered increased attention within lifestyle sport research over the past decade. Also, in the most recent period, mostly positive associations were identified. This can be explained by an increase in knowledge about lifestyle sports (and their benefits) as a research area in general. We did not find any typical pattern regarding the type of outcomes in the biological and performance publications. However, it appears to be a tendency of a shift from cross-sectional studies in the early years, to a larger proportion of experimental studies from 2010 onward. Furthermore, the studies published in recent years also show a larger variety in the sports studied, whereas the vast majority of the earlier studies were performed on climbers.

The biological and performance publications suggest that performing lifestyle sports may have several beneficial health and skills outcomes. The different types of sports may have various health and fitness outcomes based on which body system is affected. For example, trampolining is suggested to increase jump performance (Aalizadeh et al. 2016;

Arabatzi 2018; Giagazoglou et al. 2013), whereas climbing, an activity with a greater load on muscles in the upper body, is subsequently associated with improved grip and core strength (Muehlbauer et al. 2012), and so on. As long as the activity has an adequate intensity, load, or challenge, it has the potential to cause subsequent physiological adaptation and increased performance. It is therefore promising that several of the typical lifestyle sports, such as capoeira (Moreira et al. 2018), climbing (Siegel et al. 2015), skateboarding (Hetzler et al. 2011), and surfing (Bravo et al. 2016; LaLanne et al. 2017)—to mention a few—are associated with at least moderate intensity. In youth, moderate to vigorous physical activity (MVPA) is associated with several health outcomes, and the World Health Organization (2020) recommends that children and adolescents accumulate at least 60 min of MVPA per day and that adults accumulate at least 150 min of MVPA per week. The age period, ranging from adolescence to early adulthood, is characterized by a rapid decline in the proportion meeting the recommended physical activity level (Steene-Johannessen et al. 2020). This decline is possibly largely explained by changes in activity pattern and domain, where the activities typically transition from being organized and competitive to more internally paced and noncompetitive (Van Der Zee et al. 2019). Lifestyle sports may therefore be an important arena when promoting movement activity to youth.

Although most of the studies included in this overview suggest beneficial biological and performance outcomes, it is also important to note that some studies have not (e.g., Gallotta et al. 2015; Siegel et al. 2015; Wilkes et al. 2018). However, some of the studies that showed no association were built on rather high-risk hypotheses. For instance, no effects were seen on the gait function of cerebral palsy patients performing climbing (Böhm et al. 2015). It should also be noted that none of the 53 reviewed studies indicated unbeneficial associations.

Based on existing knowledge on biological effects as dose–response relationships, some of the abovementioned associations between lifestyle sports and biological and performance outcomes were expected. However, although a dose–response relationship (Pate 1995) governs most biological benefits of movement activities, associations between such activities and mental, social, and behavioral systems are far more complex. Possible mental, social, and behavioral associations are not necessarily the result of the activity itself in terms of duration or intensity but may as well be related to norms, values, aims, power relations, and other dimensions that may affect the total context and thus also the relationship between the persons involved and the movement context. From a relational perspective, the possible mental, social, and behavioral associations rely on a relational fit between developmental trajectories of persons involved in a context, as well as what this particular context may offer to and require from the persons involved. Mental, social, and behavioral effects of involvement in movement contexts reflect a certain alignment between strengths of the youth (internal developmental assets) and developmental qualities in the movement context or asset (external developmental assets: (Benson et al. 2019): it reflects a match between what the youth must progress in during their ongoing developmental process, as well as how well the contexts satisfy these needs.

The presented review of 124 unique studies on possible mental, social, and behavioral outcomes of lifestyle sport involvement showed that 12 studies revealed negative associations and that 112 had positive associations. A majority of the studies indicating negative associations were conducted explicitly looking for unbeneficial associations, such as the work of Halldorsson et al. (2014), who investigated the relationship between adolescent sport participation and alcohol use, focusing on differences in sport contexts. Examples for neutral associations include the study by Kern et al. (2014), who identified that informal sports, such as skateboarding and free skiing, are associated with higher risk-taking among participants. We did not judge this outcome as either positive or negative for developmental processes; therefore, we labeled these studies as having neutral associations.

The remaining studies (N = 112) showed positive associations between involvement in lifestyle sport contexts, such as climbing, snowboarding, parkour, tricking, kiting, and surfing, and the following developmental outcomes: (a) mental outcomes such as joy,

happiness, freedom, euphoria, motivation, self-efficacy, well-being, and so on; (b) social outcomes such as gender equality, network building, social inclusion, interaction, friendship, and so on; (c) behavioral outcomes such as identity, creativity, expressions of masculinity and/or femininity, knowledge development, risk-taking, sporting behavior, and alcohol consumption.

As already mentioned, the most frequent associations identified in the review were mixed associations that include various fusions of mental, social, and/or behavioral associations. Outcome variables such as improved life chances, self-improvement, self-management, self-governance, and self-reliance, as well as resilience and increased school attendance, rely on a variety of within-person resources that may develop in interaction with functional external developmental assets, and they represent typical comprehensive internal developmental assets that are of great importance for further development.

Prior research has argued that potential external developmental assets such as movement contexts must be flexible to the needs of their participants (Högman and Augustsson 2017) in order to become functional assets and that movement contexts do not become functional external assets until individuals undergo core developmental experiences with these assets. The present review supports prior research arguing that lifestyle sport contexts may function as an external asset and thus provide asset-building energy to young persons who are involved. The performed review indicates that skateboarding, snowboarding, surfing, parkour, tricking, B-boying, freeride skiing, longboarding, rock climbing, and other types of informal and expressive movement activities do have characteristics that are applicable for human development, not despite but because of the relaxed and easygoing format. The present review confirms prior research arguing that the dominant understanding of lifestyle sports as unorganized and unstructured rather than self-organized and self-structured is a misinterpretation (Säfvenbom et al. 2018). Even if the activities in many of the studies reviewed were not performed in their original contexts but moved into more organized or semiorganized formats, studies have indicated that the flexibility, exploration, and coactive production remained as major characteristics.

The diversity in the samples of youth involved in the studies reviewed is perhaps the most interesting finding. In the total sample of studies reviewed, almost one-third were conducted on minority groups such as the following: (a) youth requiring physical, cognitive, and/or psychosocial supports; (b) at-risk disengaged youth; (c) disabled youth facing mental health issues or social exclusion; and (d) refugees and youth in sites of war, conflict, or disaster. This unexpectedly high number of studies focusing on minorities and vulnerable groups of young people indicates that lifestyle sport contexts are considered an appropriate alternative to help young people not necessarily to become more physically active but to develop a better everyday life.

5. Limitations, Conclusions, and Implications

The inclusion and thus mix of subjects, activity contexts, and outcome variables studied from a mix of scientific approaches and designs are seen as both the strengths and limitations of the review presented. It embraces a wide range of combinations that exist, yet it also compares and counts results from what are usually seen as incompatible designs. Some of the publications have methodological limitations that preclude the possibility of making firm conclusions, and although the total number of publications could be considered substantial, few studies have examined each specific outcome. Therefore, further well-designed studies examining these associations are warranted.

However, in line with what scoping reviews have worked toward, we have indicated that the volume and pattern of the available literature covering a field have not yet been reviewed and that this unveils a rather large and heterogeneous nature (Peters et al. 2015). The relational developmental systems approach applied in the present study provides a rather complex picture of relationships between a variety of activity contexts (that represent possible external developmental assets), a variety of developmental variables (representing internal developmental systems), and a variety of human samples (that represent multiple

developmental trajectories and developmental processes). The review performed includes all studies performed on lifestyle sports that advocate developmental outcomes of being involved over the period from 2000 to 2020. Therefore, it includes (a) all types of qualitative and quantitative studies performed; (b) all types of random, purposive, convenient, and other types or research samples that exist; (c) all types of movement activities and movement contexts that cover a very large spectrum of activities under the umbrella definition of lifestyle sports; and, finally, (d) all types of people that cover the very large spectrum under the umbrella definition of youth. This means that the present study includes RCTs on, for instance, how climbing can affect muscle strength and endurance among participants with cerebral palsy, but it also includes qualitative and cross-sectional studies on a variety of behavioral outcomes among random children and young people participating in lifestyle sports such as surfing, climbing, Ultimate Frisbee, parkour, street dance, and capoeira. Although we have performed a comprehensive literature search aiming to include the majority of publications in this field, we cannot guarantee that we have not overlooked some publications. It was beyond the scope of this manuscript to perform a systematic review on such a broad topic, and as such, many of the criteria for a systematic literature search have not been fulfilled. As a next step, systematic reviews with narrower research questions, e.g., focusing on one specific outcome and study design, are warranted.

The review performed indicates that lifestyle sport contexts are flexible according to the needs and desires that exist among the practitioners and that the human and democratic origins of these contexts make them supportive for positive movement experiences (Agans et al. 2014) and for positive youth development. The findings have implications for PE teachers, social workers, policymakers, sport organizations, and urban architecture. It is reasonable to conclude that the very first review of literature on lifestyle sports and youth development highlights the importance of promoting lifestyle sports as something different from and thus an alternative to both organized sport contexts and fitness contexts.

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Spatial Bodies: Vulnerable Inclusiveness within Gyms and Fitness Venues in Sweden

Greta Helen Bladh

Department of Humanities and Social Sciences, Mid Sweden University, 852 30 Sundsvall, Sweden; greta.bladh@miun.se

Abstract: Today, gyms and fitness venues set out, on a superficial level at least, to cater to the individual, no matter what their gender and are therefore often seen as inclusive spaces for physical activity and its concomitant health benefits. However, previous research has shown that gyms as such, as well as certain areas within gyms, are perceived as specifically masculine spaces, often referring to a contextually contingent hegemonic masculinity, thereby deterring those who do not align with this image, especially women, but also certain men. Even when these dividing lines are crossed, a gendered movement schema remains, because there are different social expectations of what, how, and where men and women should exercise. As we will see in this paper, these movement schemas are produced and reproduced through discursive spatial linkages within the gym and fitness culture. In addition to investigating in what ways gendered norms are implicated within the very architecture of gyms in general, one gym, in particular, is used as an example since it is written into its statutes that it should work in a norm-critical way, providing a case study that shows an attempt to disrupt this inhibiting gendered spatial discourse and, thereby, possibly creating a more inclusive gym space.

Keywords: gym and fitness; gender; inclusiveness; architectural economy

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1. Introduction

During the late 20th century, sporting practices that do not adhere to any formal gender-segregated organizational rules, such as gyms and fitness centres (Andreasson and Johansson 2014; Sassatelli 2010; Smith-Maguire 2008), became a global trend, attracting a large proportion of the adult population in both Sweden and other Western societies (The Swedish Sports Confederation 2018; Andreasson and Johansson 2014; Sassatelli 2010; Coen et al. 2020, 2021). Just as with organized sports, physical activities, such as working out at gyms, were, from the outset, seen as a male prerogative (Andreasson and Johansson 2014; Smith-Maguire 2008; Vertinsky 2004). At the end of the 20th century, the concept of "gym practices" evolved to include "fitness practices", and these terms are sometimes used interchangeably to signify the process of creating a "fit, strong, and healthy" body. It is also within this shift of semantics that the male prerogative of commanding the space within gyms, and now also fitness centres, has, to a certain extent, withered, thus making room for women's entrance to these spaces (Andreasson and Johansson 2014; Sassatelli 2010; Smith-Maguire 2008). Today, gyms and fitness practices are set out, on a superficial level at least, to cater to the individual, no matter what their gender (Dworkin and Wachs 2009; Smith-Maguire 2008) and are often seen as inclusive spaces for physical activity and its concomitant health benefits (Fisher et al. 2018). These sites, i.e., gyms and fitness centres, along with the even more recent dissemination of CrossFit boxes (Crockett and Butryn 2018), are part of a global industry, with vast capital investments at stake and 162 million members globally (Walsh 2017; Coen et al. 2020, 2021).

Although constructed as a panacea for the ills of sedentary urban life (Smith-Maguire 2008; Sassatelli 2015), as sites to attain healthy bodies, gym and fitness venues are places where gendered ideals and images of body-making are constantly being reproduced and

perpetuated (Bladh 2020; Andreasson and Johansson 2014; Dworkin and Wachs 2009; Salvatore and Marecek 2010; Fisher et al. 2018; Coen et al. 2020, 2021), which, in turn, is translated into making the gym more inclusive for certain people, rather than for others (Bladh 2020; Fisher et al. 2018; Coen et al. 2020, 2021). Thus, as earlier research has shown, the inclusive character of the contemporary mixed-gendered gym, although seemingly welcoming to all, is still conditioned by a mindset focused on to what extent one approximates a certain masculine ideal (Salvatore and Marecek 2010; Fisher et al. 2018; Coen et al. 2020, 2021). This has been evidenced through empirical work showing that both the gym as such, as well as certain areas within the gym, are perceived as specifically masculine spaces, often referring to a contextually contingent hegemonic masculinity and thus deterring those who do not align with this image, not only women but also certain men (Fisher et al. 2018; Coen et al. 2020, 2021). As such, there seems to be an unofficial (albeit sometimes official, in terms of "girls only" areas) spatial gendered division within gym and fitness sites, with a larger number of men seen using the free weights, while women tend to make use of cardiovascular machines and attend more group exercise classes (Craig and Liberti 2007; Dworkin 2003; Johansson 1996; Salvatore and Marecek 2010; Fisher et al. 2018; Coen et al. 2020, 2021). Even when these dividing lines are crossed, a gendered movement schema remains because there are different social expectations of what type, how, and where men and women should exercise; as we will see in this paper, these movement schemas are produced and reproduced through discursive spatial linkages within the gym and fitness culture. In addition to investigating in what ways gendered norms are implicated within the very architecture of gyms, in this paper, *the Club* refers to a gym that has the belief written in its statutes that it should work in a norm-critical way. This could be understood as an attempt to seek to disrupt a gendered spatial discourse that premiers certain forms of masculinity, thereby possibly widening the gym doors to be open to more diverse members. This leads to further questions regarding what kind of environment is enabled by a norm-critical stance, as well as another leading question—when something is specifically included, what else is then excluded?

Aims and Research Questions

The following article seeks to explore how a physical context in space and the making of places are saturated with norms; in this case, particularly those norms regarding gender within the vicinity of recreational sites, such as the different types of fitness gyms. It thus problematizes the inter-relationship between the making of bodies and spaces/places and the power relationships within these corporeal–spatial makings. By taking this perspective of spatiality and bodies, one is able to deconstruct *(socio-)spatial thresholds* within and surrounding these fitness venues. *Thresholds* are here understood as gendered social constructs and norms that direct bodies in certain ways, and, thus, circumscribe potential movements and capabilities. The issue of thresholds is further nuanced by inquiries regarding whether or not endeavors to be norm-critical and working toward inclusivity somehow mitigate the gendered thresholds that impede movement; if so, in what ways are thresholds being rearticulated? The aims of this paper are addressed by the following research questions:

- What architectural features are seen as problematic within gyms and fitness venues?
- What does work in a norm-critical way at a gym entail, in terms of inclusivity?
- In what ways are bodies oriented differently, due to gendered spatial directions, within gyms and fitness venues?

In order to contextualize this study, Section 2 gives the study background and examples from the literature, which will be followed by the analytical framework utilized in Section 3. Here, I draw upon Elizabeth Grosz and her reading of Derrida; she argues that place and bodies are co-constructed through architectural discourses, i.e., *architectural economies* (Grosz 1995). Section 4, *Settings*, is intended to enable an analytically engaged (visual) comprehension of the different types of fitness venues referred to in this paper, in order to highlight their architectural links. The empirical material and the methods used to collect

the data are presented in Section 5, *Materials and Methods*, and the analytical approach is thereafter employed in the subsection, *Analysis: Narrative and Deconstruction*. The results of the study will be presented in Section 6, *Findings,* which is structured according to certain themes found in the material. Section 6.1, *Gazing and (Non)Specular Surfaces*, deals with how specular surfaces—whether they be mirrors, pictures, or socially induced images of what types of bodies fit where—affect what directions people choose. Section 6.2, *Vulnerable Inclusiveness*, focuses specifically on the particularity of the Club, and the meanings behind how working in a norm-critical way is interpreted and experienced. In Section 6.3, *Gendered Spatial Orientations*, a directory of bodies according to gender is presented by referring to the participants' experiences of traversing different gym sites. The findings of this article are then summarized in Section 7, *Conclusions*.

2. Background and Literature

With the booming popularity of gyms and fitness culture during recent decades (Andreasson and Johansson 2014; Sassatelli 2010), research concerning this phenomenon has also expanded, at least to a certain extent. This section sets out to present an overview of the previous research regarding gym and fitness culture, especially that which relates to the specific themes running throughout this study. Consequently, the corpus of works considered here will by no means represent an exhaustive account of the literature regarding gyms and fitness culture but will instead serve as an academic background against which this present study can be understood. In addition, even though gyms and the fitness culture are nowadays understood to be a global enterprise (Parviainen 2011; Sassatelli 2010; Steen-Johnsen 2007; Coen et al. 2020, 2021), the scholarly literature referred to herein springs from Western institutions, as does this study.

The academic corpus regarding gyms and fitness culture is quite diverse in terms of its primary topics. So, too, are the methodologies, methods, and theories employed, ranging from extensive ethnographies (Andreasson and Johansson 2014; Sassatelli 2010; Hedblom 2009; Andrews et al. 2005; Smith-Maguire 2008; Söderström 1999; Johansson 1998) to cultural media analyses of fitness magazines (Tolvhed 2016; Dworkin and Wachs 2009) and other fitness media (Kennedy and Markula 2011), such as fitness blogs (Boepple et al. 2016; Andreasson and Johansson 2013, 2014), Instagram accounts (Camacho-Miñano et al. 2019; Deighton-Smith and Bell 2018), and Pinterest boards (Lewallen and Behm-Morawitz 2016).

The gyms that earlier researchers encountered during the 1990s differed from those with which later scholarly work has engaged, especially regarding their demographic profile. These early scholars were met with gym spaces that were a male preserve and were predominately associated with bodybuilding practices (Andreasson and Johansson 2014; Sassatelli 2010). Within this context, studies regarding gym culture mainly focused on issues relating to masculinity (Saltman 1998; Klein 1993), with reference to R.W. Connell's theoretical framework regarding (hegemonic) masculinities (Connell 2005) and bodybuilding (Klein 1993). As for the women attending the gyms of that time, their bodybuilding practices attracted the most scholarly attention, in terms of female bodies transgressing gendered bodily norms by acquiring (masculine-connoted) muscle mass and reducing subcutaneous fat (Bunsell 2013; McGrath and Chananie-Hill 2009; Dworkin 2001; Aoki 1996; Johansson 1998).

With the advent of aerobics as a form of exercise that is offered within the same venues as weightlifting, as well as bodybuilding competitions incorporating subdivisions emphasizing aesthetic fitness, rather than an overtly big and muscular body, "gym and fitness" became a conjoined term, and the references to *gym and fitness culture* arose. Like the research regarding women bodybuilders, which pointed toward potential gender transgressions and the malleability of gender, so too was aerobics conceived of as a practice whereby women could challenge the image of traditional femininity, in terms of the thin and weak woman gaining strength (Krane 2001; Johansson 1998; Lloyd 1996; Markula 1995). However, at the same time, the literature also suggested that aerobics is yet another

means of disciplining the female body so that it remains slender and feminine (Krane 2001; Bordo 1993; Maguire and Mansfield 1998; Johansson 1998; Lloyd 1996; Markula 1995).

With the marriage of gyms and fitness, the gym became co-opted into consumer culture. The momentum of the commercialization of gym and fitness activities was, and is, enhanced by means of certain understandings of gender, perpetuating a hierarchical relationship between masculine and feminine, as well as the privileging of white skin (Dworkin and Wachs 2009). Although the fitness industry is seen as a platform upon which power relations are being reproduced and cemented, in terms of gender and ethnicity, the previous literature has also entertained the idea of gyms and fitness centers as places where gendered norms are being negotiated and transgressed (Andreasson and Johansson 2014; Dworkin and Wachs 2009; Krane 2001; Dworkin 2001; Maguire and Mansfield 1998). However, this empowerment can also be understood as a type of commodity feminism, whereby, rather than working to alleviate unequal power relationships, individuals are encouraged to consume fitness and, thus, empower their own social positioning (Dworkin and Wachs 2009; Smith-Maguire 2008). This indicates that, in order to achieve empowerment through fitness, one has to have sufficient capital to be able to consume it, in terms of available leisure time, economic capital, geographical proximity, and so on. Hence, this empowering message can primarily be capitalized upon by the middle classes (Dworkin and Wachs 2009; Smith-Maguire 2008). Entangled with this empowering message for the affluent individual, the individualization of health is also apparent (Fisher et al. 2018). Gym and fitness practices are constructed as a means to combat ill health among the population, but these are achieved by each individual's actions, without addressing other issues that undoubtedly have an impact on people's health, such as social relations and environmental pollution (Tuana 2008). This individualization of health under the auspices of Western neoliberalism is often referred to as healthism (Lupton 2018; LeBesco 2011; Crawford 1980). Furthermore, the gym and fitness industry has capitalized on the promotion of health through certain images, with the consequence that health is identified in terms of aesthetics, equating a fit-looking body with a healthy body (LeBesco 2011; Dworkin and Wachs 2009; Smith-Maguire 2008). This has dire consequences for those who do not conform to such bodily ideals, leading to the stigmatization of people who carry certain amounts of subcutaneous fat (Lupton 2018; LeBesco 2011).

As such, research during the first two decades of the 21st century has identified the workings within and through gym and fitness culture as a signifying trait of postmodern and neoliberal times, due to its complicated relationship with consumer culture (Sassatelli 2010; Smith-Maguire 2008; Dworkin and Wachs 2009). The consequences for the individual during this temporal era are frequently understood by utilizing the theoretical framework of Michel Foucault regarding discourse, discipline, and self-surveillance (Sassatelli 2010; Hedblom 2009; Dworkin and Wachs 2009; Smith-Maguire 2008; Turner 2008; Chilling 2003; Pronger 2002; Söderström 1999).

However, countering the process of the commercialization of fitness and the selling of gym memberships is the increase, in recent years, of the construction of open non-commercial outdoor gyms in predominately urban areas (Bergmann et al. 2021; Jansson et al. 2020; Sami et al. 2020; Cranney et al. 2019; Jansson et al. 2019; Chow et al. 2017; Ramírez et al. 2017; Scott et al. 2014). This trend has been commended for its potential to offer an inclusive venue for health promoting physical activity among the general public, as no membership fee is required and there are no specific opening hours. As such, at first sight, these outdoor gyms may seem to be accessible to anyone and everyone. Nonetheless, these open gyms are not built in a contextual vacuum but may be conditioned by certain spatial discourses regarding health and bodies, in terms of gender and ability, something that will be elaborated upon later in this article.

Although the research from various perspectives regarding gyms and fitness is nowadays quite comprehensive, only a minimal amount of scholarly work has considered a socio-spatial framework within the field when trying to understand the gendered implications within the concept of gyms and fitness (Bladh 2020; Coen et al. 2020, 2021). Within

a socio-spatial framework, gender and place are considered to be co-constructed (ibid); as such, in order to understand in which ways gendered norms are realized as unequal gender hierarchies within gym and fitness, one has to take its very architecture (Bladh 2020) and geography into consideration (Coen et al. 2020, 2021). While Coen and her colleagues have used feminist emotional and visceral geography as points of departure, when understanding the unequal gendered prerogative to claim space within gyms and fitness sites (Coen et al. 2020, 2021), this article focuses on the ways in which the architectural economy (Grosz 1995) of gyms and fitness implies gendered conditions for inclusiveness (or not) within these spaces.

3. Analytical Framework: The Architectural Economy of Gyms and Fitness

Aided by the empirical material gathered for this paper, I will argue that gender norms, such as those expressed through contextually sensitive *hegemonic masculinity*, are incorporated and spread within the very architecture of gym and fitness venues, and that different sites of gym and fitness culture are linked through a specific *architectural economy* (Grosz 1995). The term hegemony is derived from Antonio Gramsci's analysis of class relations, where one particular group claims and sustains a leading position in social life. Hegemonic masculinity is, thus, temporally and spatially contingent, where one form of masculinity is privileged over others, as well as over femininity (Connell 2005). Even though it is not referring to gym and fitness culture in particular, the concept of hegemonic masculinity is useful when theorizing tacit thresholds within the vicinities of these places, because it is not men per se who command the space but, rather, the image of hegemonic masculinity (Coen et al. 2020, 2021). In this case, this image is specifically that of the well-trained and athletic white male body, to which both men and women have to relate as the body that has the prerogative to inhabit gym spaces. The production of masculinity throughout the sporting world is marked by the hierarchical, competitive structure of the institution, which also defines masculinity in mass culture and provides a continuous display of men in motion (Connell 2005; Messner and Sabo 1990). Adjacent to this, the gym has the historical association of being a purely masculine space (Vertinsky 2004).

Of note, Grosz does not specifically refer to gym and fitness culture when arguing how architecture and spatiality are produced, and at the same time reproduced, via certain norms and discursive practices (Grosz 1995). An economy refers to the distribution of material, such as cultural, social, and economic goods, within a system of production, circulation, and consumption (Grosz 1995, p. 118). The term "architectural economy" is not merely entwined in the distribution of:

> " . . . bricks, stone, steel, and glass, but also in the production and distribution of discourse, writings (including the bodily traces of a building's occupants), and its division of space, time and movement, as well as the architectural plans, treatises, and textbooks that surround and infuse buildings." (Grosz 1995, p. 118)

Through a Derridean understanding of textuality, in that it exceeds the written letters and is seen as a trace, inscription, or writing (Grosz 1995, p. 126), we are able to deconstruct the spatial discourse of gyms in textual terms and illuminate their architectural economy. Even though they are differentiated, due to divergent geographical locations, or due to being attributed differently as "general" gyms, fitness centres, "girls-only" areas, outdoor gyms, or CrossFit boxes, these different places, with their seemingly differentiated specific characteristics, still relate to each other through a certain architectural economy. Discursive power does not work within Hobbesian terms but is rather predicated upon subjection and enaction. Hence, the architectural economy refers to spatiality as being co-constructed with human beings (Grosz 1995).

4. Settings

An architectural economy can be understood as the discursive framework that enables fintess spaces to be understood as recreational areas, as places where bodies are able to move in specific ways. I would argue that this notion is supported by the recent globalization

of gyms (Andreasson and Johansson 2014; Parviainen 2011; Sassatelli 1999a, 1999b, 2010; Steen-Johnsen 2007), making it possible to enter a gym in almost any city in the world and recognize its spatial features. The topographies of these recreational sites often consist of compartmentalized areas that are aligned to certain movement patterns, such as lifting areas containing free weights, with mirrors covering large areas or entire walls. Such large-scale mirrors also feature in rooms designated for group exercise classes and become a form of hyper-dimensional reflective surface. Their presence can be experienced as overwhelming to some visitors due to their abundance and magnitude, as we shall see later in this paper. In addition to the free weights, such as barbells, dumbbells, and kettlebells, regular gyms usually incorporate spaces for weight machines designed for a range of different exercises targeting different muscle groups as well as isolated muscles. Nowadays, with the booming popularity of functional fitness and CrossFit routines (Crockett and Butryn 2018), cross cages are frequently also part of a modern-day gym. Structured in rows, cardiovascular machines, such as treadmills, stationary bikes, air bikes, cross-trainers, and/or stationary rowing machines, stand in formation, waiting for patrons to exude sweat and heavy breaths full of carbon dioxide. A concomitant scene is an area that is sometimes a little secluded, intended for stretching, and furnished with soft yoga mats, bosu balls, Pilates balls, resistance bands, and the like. Another feature that differentiates some gyms from others is that of offering a spatial section reserved for women only. In Sweden and also, to a certain extent, in the surrounding Nordic countries, as well as in a few gyms worldwide, a large chain of ca. 250 gyms has standardized its venues to include specific "girls-only" sections. Even though they are discriminating against male patrons, the structural spatial logic within these "girls-only" gym areas resemble the common area of the gym. However, the number of square meters allotted to "girls only" is significantly smaller, as is the range of free weights available, in favor of more weight machines and cardiovascular machines. In contrast to the common area, the "girls only" section has frosted windows, preventing people from gazing in from the outside. The gym chain's website reveals that these specific areas reserved for women represent an effort to ensure that women feel comfortable at their gyms (fitness24seven.com). It seems that there is a sort of inclusion by seclusion logic, by means of offering spatial shielding to ensure gender segregation. Although the effort of this work towards inclusiveness may lower the thresholds for women to initially enter the gym, its concrete existence runs the risk of reinforcing gender stereotypes about what types of bodies should engage in what types of movements. In addition, previous research suggests that despite the existence of gyms with facilities designated for women only, it is still the case that "real" gyms are those gyms that predominantly contain men (Craig and Liberti 2007), which suggests that this seclusion might induce comfort, but it is at the cost of reproducing a gendered hierarchy of what can be considered a "real" gym or not.

Contrasting with these spatial seclusions is an additional type of gym, with an exercise area that is hyper-visible to any gaze. This is the outdoor gym, as seen in Figure 1, which is absolutely devoid of dividing concrete walls and windows. However, a spatial and architectural economy is still prevalent, as seen in its chin-up/pull-up bars, dip bars, shoulder presses, and the like. These sites have much in common with military training courses (see Figure 2), showcasing events included in the military pentathlon, which were initially designed to train young men to become strong, fit soldiers (Heck 2011).

Figure 1. Pictures of an outdoor gym in Umeå, Sweden.

Figure 2. A military training course by I20, a military regiment in Umeå, Sweden.

Although CrossFit boxes and functional training gyms place a greater emphasis on free weights, cross-cages, and climbing ropes instead of weight machines, if the latter are present at all, it is still the case that these places inherit well-established spatial features from those established in the "regular gym", serving as instructional cues for the moving body. As the pictures of the CrossFit box show (Figures 3 and 4), it harbors numerous features that are similar to those in outdoor gyms and military pentathlon courses, in terms of its cross-cage, as well as features similar to general gyms (Figure 5), in terms of its rows of cardio machines and its stack of barbells.

Figure 3. Boxen Umeå Syd (a CrossFit box in Umeå, Sweden).

Figure 4. Boxen Umeå Syd (A CrossFit box in Umeå Sweden.

Figure 5. Umeå Sport & Motion Utopia, Sweden.

Figure 5 also depicts a row of squat cages at a general gym. Although the squat cages resemble the cross cages found in CrossFit boxes and at outdoor gyms, a significant dissimilarity is the feature of hyper-dimensional mirrors covering the walls.

This section has provided an overview of how, even though different types of gyms and recreational centers are laid out differently, they are still recognizable as places encouraging certain schemas of movement because they are structured according to an architectural economy. Most importantly, this architectural economy cuts through and organizes the meaning-making of recreational gym spaces, even though these spaces are clearly discernable from each other, in terms of the number and size of mirrors and/or pictures on the walls, if there are any walls at all, the absence of free weights in favor of weight machines, or statutes instructing norm-critical work. The differences among these recreational gym spaces set the stage for local meanings, but there is still a syntax, a certain discourse, that enables these places to be recognized as gym spaces. Thus, they carry an architectural economy that, in turn, affects and is co-constituted by the bodies moving within these spaces, as well as those bodies that are kept out of them.

5. Material and Methods

The fieldwork was initiated at a certain gym, the Club, which presents an interesting case study when investigating the workings of thresholds and repays taking an exploratory case-study approach (Yin 2003). Written into the statutes of the Club was a proclamation of active engagement by trainers, coaches, and patrons to work from a norm-critical perspective, interpreted (by the participants) as countering expressions of misogynistic displays of masculinity. This can be understood as a queer positioning because it is actively working against a circumscribing form of heteronormativity (compulsory heterosexuality) (Ahmed 2014). As such, this particular site represents a rare example within the gym and fitness scene, explaining its omission from the previous research concerning these types of gyms.

The overall collection of data was undertaken during the years 2017 (first set of data) and 2019 (second set of data) in Sweden. The material sourced from the first set of data consisted of transcribed semi-structured interviews (Oakley 1998) from 9 participants who all resided in the same city, as well as field notes from participatory observations. The second set of data was retrieved by conducting memory exercises with two different groups of women residing in different cities, where one group was affiliated with the Club, and the other one was not.

After browsing the homepages of other gyms, the sui generis character of the Club made it favorable for a case study, and the board of the club was contacted via email. As a result of this correspondence, I was approved for conducting participatory observations at their gym. However, given my own history as an avid gym-goer, not to mention having worked as a gym instructor, and attaining my Personal Trainer's certification, I did not experience any physical displacement when entering the field. According to John Van Maanen, physical displacement is a requirement for a researcher to achieve first-hand experience of an environment together with the participants, thereby observing the problems, backgrounds, language, rituals, and social relations of that environment (Van Maanen 1988). In fact, I was already enculturated within the gym and fitness culture and was aware of gym etiquette, its implicit rules, and its vernacular. In hindsight, I can acknowledge that I might have been blinded by my previous understanding of the field, taking some aspects for granted as being knowledge that everybody possesses, things that I cannot explain in detail since (whatever these aspects might be) they are still cloaked beneath a veil of embodied habit (see also Chapman Sanger 2003); however, simultaneously, being an insider also eased the process of access to the field.

The field notes from these observations generated the ideas, issues, topics, and themes (Tracy 2003; Emerson et al. 1995) that would prove useful when writing guidelines for the forthcoming interviews and collective memory exercises. I participated in the activities held at the Club, mostly kettlebell workouts and bodyweight training sessions, along with a

few yoga classes. All in all, I spent approximately 10 h at the Club during the spring of 2017, dispersed across five different days, in conjunction with group workouts and additional time spent talking and interacting with the gym members before and after the workouts.

The interviews involved questions about those factors that had implicitly propelled the patrons to locate themselves in this specific recreational venue (the Club), and how their previous experiences are part of any spatial comprehension; that is, our past is part of what builds our present dwellings. In this case, past experiences of sports and training were seen as an integral part of the understanding of "gyms" in general, as well as of "the Club" in particular. The benefits of conducting in-depth semi-structured interviews include enabling the researcher to describe and understand the unique experiences of others (Stage and Mattson 2003; Kvale 2007); I was on a quest to solicit the histories of bodily movement and the thresholds surrounding it. Although I had intended to interview an equal number of men and women among the gym members at the Club, it seemed as if the research project predominantly attracted women to participate in the study, which resulted in 2 males and 7 females as interviewees, with an age range of mid-twenties to mid-seventies. In addition to this, some interviewees were more talkative than others, rendering the interviews different in terms of time, ranging from mere a 30 min to 90 min. Certainly, both the underrepresentation of male participants, as well as the diverse lengths of the interviews, can be seen as limiting the study by means of premiering female experiences, as well as the fact that the lengthier interviews yielded a more extensive set of data, which, in turn, implicated a higher degree of empirical presence when presenting data for the study.

Inspired by the method of collective memory work, (Jansson et al. 2008; Brown et al. 2011; Stephenson 2005; Frost et al. 2012; Snelgrove and Havitz 2010; Haug et al. [1987] 1999), the second set of data was retrieved during March and April in 2019 while conducting what I have chosen to call collective memory exercises at two different locations in Sweden. Within the collective memory work/exercises, memories are written down as narratives of past events, and, in this way, embodied experiences are investigated (Brown et al. 2011, p. 499). In terms of this study, the measures were similar in many ways to those employed by Frigga Haug and her colleagues during the 1980s (Haug et al. [1987] 1999), although there is one significant difference, in terms of time. Haug and her colleagues worked together on their collective memory project for two years, while the groups with which I was involved spent between two and three hours together, working with our memories. Thus, rather than referring to collective memory work as the method employed in this study, the term "collective memory exercises" is more appropriate. There is by no means a single template regarding the process protocol for conducting these types of exercises, and the technique is seldom presented in textbooks on research methods. Although there are different protocols, there are still some commonalities that are also present in this study, such as the choosing of a word or meaning to trigger memories and talking about them as a group (Jansson et al. 2008; Brown et al. 2011; Stephenson 2005; Frost et al. 2012; Snelgrove and Havitz 2010). The premise for attaining knowledge production through working collectively with our memories is that our experiences, which we re-live as memories, are constructed collectively, in that they are socially constituted (Haug et al. [1987] 1999, p. 44). The memory exercises that I conducted were centred around the topics of training, sports, and the body. This was performed as a means to uncover the taken-for-grantedness of our exercising bodies, or rather, the constructed directory of our strides and their thresholds, as we do not always know the significance that an experience carries until it can be re-articulated into words (Ahmed 2017).

Along with myself, two previous interviewees (25–29 years old) made up one of the groups. The second group consisted of two students in their early twenties (and myself) at a university in a medium-sized city that was geographically distanced from the location of the first group. Thus, gathering data from two geographically differentiated groups of participants when engaging in the collective memory exercises had specific ramifications for the sourced material as one group of participants conversed specifically in relation to the Club, while the other group's dialog centered on regular gyms and CrossFit

boxes. In addition, with myself included, the group sizes during the two different memory exercises consisted of three individuals each. This numerical proportion proved to be quite conducive for dialog, as evidenced by the material produced through the memory exercises. Furthermore, we were all women participating in the memory exercises, and gender is a factor that should be taken into account while producing data (see Krizek 2003; Broom et al. 2009). This, in turn, opens up the possibility that the material retrieved from these exercises might have been different if the group constellations had been of mixed genders.

The requirement for the sampling was nothing more complicated than having reached the age of 18 as this is the age at which, by law, one is considered an adult and able to make one's own decisions, such as to participate in a research study. Given that the advertisement for the study was posted on social media pages related to sport, and that the printed ads were pinned up at a gym, I had an implicit anticipation of reaching individuals with experience in sports and training, which was confirmed by the actual individuals taking part in the study.

The two memory exercises resulted in a total of four hours of recorded data, which were transcribed verbatim. Just as in the interviews, some participants were more talkative than others; thus, the amount of data differed. This difference in the quantity of verbal dialog might be explained by several factors, one being that I had already established a social relationship with the members of one of the groups, namely, those that I had already interviewed. This also gave them time to reflect upon several of the issues discussed during our prior conversations. Furthermore, the fact that one group did not have any relation to the Club also had an impact on the material, analysis, and results. In addition to the transcripts, during the memory exercises, I jotted down keywords during our discussions in order to moderate our conversations to a certain extent, and also to record my initial interpretations.

Analysis: Narratives and Deconstruction

Given that I have approached the empirical material using both a narrative and a deconstructive approach, one might say that I have conducted a deconstructive narrative analysis. This may seem like an oxymoron, given that a narrative serves as that which makes fragmentary experiences appear cohesive and sensible (Horsdal 2012; Sparkes 1999), while deconstruction seeks to undo the constructs that make things "appear" to be naturally given and cohesive (Derrida 2004; Borradori 2003). One such cohesive narrative device is the binary construction of gender (Warhol and Lanser 2015). However, deconstruction and narrative can be conjoined to serve an analytical purpose. While deconstruction seeks to identify the constructedness of binary pairs, their inherent power relations, and strives for novel terminologies (Borradori 2003), taking a narrative approach in the context of this paper recognizes, as does a deconstructive perspective, the socially constructed aspect of narrating our movements, as well as the experience of how these narratives come about and come to be the foundation for our perception of bodies in movement, within gym and fitness venues. Although not specifically referring to deconstruction, a narrative approach can still acknowledge the inherent power relationships within certain binary constructs by asking: "How might we write so that the warping tyranny of dualism, such as subjectivity/objectivity, masculine/feminine, temporarily able-bodied/disabled, young/old, and so on, are dissolved?" (Sparkes 1999, p. 29). When attempting to approach the body's movement through narrative, one is prone to think that the very constitutive properties of text are also those that structure our bodily presence in the world (Brandon 2016). Although the stories told by the participants during the interviews were individually reported, the very ability to narrate them is dependent upon the social context (Sparkes 1999). Thus, by analysing several transcripts from interviews with different individuals, as well as the notes from our conversations during the collective memory exercises, I was able to discern common themes that are part of the sense-making of bodily movement and perception. This approach to narrative is often referred to as paradigmatic (Sparkes 1999; see also Polkinghorne 1995); it closely resembles a content analysis "whereby the

researcher seeks central themes, typologies or instances of paradigmatic categories within the narratives told by one person or by a number of people about a similar issue" (Sparkes 1999, p. 21).

A prominent theoretical position that directed the analytical process was that of gender as a social construct and a performative orientation (Ahmed 2006, 2014; Butler 2007, Butler [1993] 2011). Similarly, but with a change in direction, unforeseen themes and concepts were derived from the material in an inductive manner (Sparkes 1999), which required identifying the relationships and categorizing the findings into a generalizable theoretical framework.

By taking a paradigmatic approach to narrative, one can approximate and understand "the subjective meanings associated with bodies in different contexts by highlighting the common themes that emerge in the stories told and the manner in which they relate to wider social issues" (Sparkes 1999, p. 21). This process entailed several readings of the material, whereby the initial readings involved noting, on a more colloquial level, the topics repeatedly mentioned by the participants during the interviews and memory exercises. To be sure, these topics were largely induced by the questions asked and, albeit to a lesser extent, by the triggers used during the memory exercises. However, there was not any univocal expression of the way in which these topics were discussed, signifying the individuality of the unoriginal. Although the codes were frequent and were dispersed throughout the material, the talk concerning them was identified within clusters of meaning, or rather, meaning-making. In order to enable an interpretation of these clusters of meaning, as produced through certain power relationships, a deconstructive reading of the material was conducted. Deconstruction aims to identify the constructed character of a binary pairing that is otherwise seen as natural (Derrida 2004; Borradori 2003) and to illuminate the hierarchical ordering of the pairs (Borradori 2003). In terms of this article, one binary pair has been in focus, that is, masculine/feminine. By means of coding and the subsequent clusters of meaning, I was able to identify the power relations pertaining to masculine/feminine.

6. Findings

6.1. Gazing and (Non-)Specular Surfaces

A common denominator among the participants' descriptions of the Club was the lack of mirrors or pictures on the walls depicting "slender and fit" bodies, which was mentioned both during interviews and also in conversations with patrons while stretching after a workout at the Club. One participant, Maria, recognized the functionality of mirrors, in terms of enabling gymgoers to ascertain the correct movement schemas. Still, an abundance of reflective surfaces may induce reflexive thoughts about other things than checking one's exercise form, such as physical appearance.

> "There was probably more fixation on looks at my other gym too, a lot more mirrors and stuff like that. Here, there's only one mirror, while at the other gym, you became more self-aware of what you did and how you looked . . . I can, in a way, feel like it's a good thing with mirrors, in order to check if you're doing things right, in that way I can understand it . . . but there's a limit when it gets too much." (Maria)

Although recognizing the instrumentality of mirrors in terms of making sure that one pursues the exercises with the correct form, participants stated that at a certain point, it can get too much. The mirrors' presence then induce a heightened self-awareness and reflexivity regarding one's own, and others', appearances. It seemed that regular gyms were places where surfaces magnified certain sentiments about appearance, clothing, and diet, making them sites of implicit unease. This type of heightened self-awareness within the walls of gyms and fitness centers due to the presence of mirrors is in accordance with previous research (Fisher et al. 2018)

Furthermore, the images of slender or muscular bodies covering the walls of (general) gyms signified an expectation of the kinds of bodies that should "fit" in the gym, inducing

sentiments of shame in those who do not "fit" in, as though they carried a pathological disease that was contagious through body norms.

As mentioned by the participants, a differential feature that separated "regular gyms" from the Club was the prevalence of specular surfaces, which induced self-regulatory practices in terms of the self-checking of appearance and conformity to bodily ideals. Even though they used other words, the participants had reflected on how social bodily norms seep through the concrete walls of gyms, appearing through reflexive surfaces, such as mirrors, and the visual depictions of bodies. Hence, social corporeal expectations become embedded in the architectural economy of the gym and are embodied through the act of gazing/mirroring. I argue that the materialization of norms is a sensed phenomenon, one that is especially tangible in the feelings of shame when failing to match the norm. Despite existing outside of the gym, these norms become clarified through the gaze, at oneself, at others, at photographs. The architectural economy of the gym facilitates the circulation of bodily ideals, enmeshed in the architectural features; they are articulated through sentient bodies, i.e., feeling bodies, through feelings of shame, unease, or heightened self-reflexivity. As such, the architectural economies of the gym and fitness could be said to harbor a certain emotional geography (see Coen et al. 2020).

However, there are gyms with no concrete walls, no pictures, or mirrors, but there are still certain images that linger. In contrast to the aforementioned types of gym walls, saturated with mirrors and "motivational" pictures, are those boundaries that are not walls at all, at least in their literal, constructional sense. These invisible dividing structures enclose what has today become a common feature in Swedish cities, as well as globally; that is, outdoor gyms (Bergmann et al. 2021; Jansson et al. 2020; Sami et al. 2020; Cranney et al. 2019; Jansson et al. 2019; Chow et al. 2017; Stride et al. 2017; Ramírez et al. 2017; Scott et al. 2014). As these outdoor gyms lack what several participants had mentioned as being problematic, i.e., mirrors, they would seem, at least at first sight, to encourage inclusiveness, as no membership fee is required; they have no particular opening hours, there are no depictions of gender-normative bodies, and they are open to everyone. However, when contemplating them more closely, the inclusive character of outdoor gyms appears to be somewhat elusive:

> "There are no mirrors, so you have to be confident that you really know an exercise . . . maybe you don't need a mirror anyway . . . I think that everyone can, even though there's a certain type. Or, maybe I shouldn't say a particular type, but one notices that it's people who train other things as well. There are not that many beginners . . . in any case, I've felt that I had to work myself up, before starting training at the outdoor gym. Maybe it isn't that welcoming, or maybe not, but it's a little hard to get into it at the beginning." (Maria)

Even though there were no mirrors in sight at the outdoor gym, there were still reflective surfaces at work. The recurring representation of certain types of bodies, moving in certain ways, at the outdoor gym worked as surfaces to gaze at; if one recognized oneself in those images, one could have the confidence to enter. If not, one had to train beforehand to be able to train there and fit into the movement schemas of the directory of the outdoor gym.

This is an example of how bodies are part of the architecture included in the construction of place because it was by their presence that the specific bodies perpetuated an architectural economy of gyms. Maria had to work herself up to be fit enough, in order to make herself visible (conforming to what was expected) and to be reflected in the outdoor training venue. Expectation is due to the repetition of events and images; these expectations, in turn, direct our views on what it is possible to envision. Like the spellings of words, some letters go together with other letters, creating words and sentences and, in cohort, presenting meaning. In an analogous manner, one can (un)read the outdoor gym, to be deconstructed textually, rendering its architectural economy visible as part of the distribution of a reiteration of the norms governing recreational gym spaces. These norms are manifested via certain types of bodies that ease into these spaces. For those

bodies, the outdoor gym is an open space, and this constructs an expectation of an image to be reflected as/at. As such, the comfort and inclusiveness of space is a co-construct of bodies and spatial architecture. While not referring to outdoor gyms in particular, but more to the masculine-impregnated walls of the gym in general, Vertinsky (2004) explains that different kinds of social relationships and power initially contained within the gym are being stretched out across space. Increasingly, fewer of these relations are contained within the gym itself but instead reach beyond its walls, linking that space to the places beyond. Consequently, even though it is devoid of concrete building elements, the outdoor gym is still a habitat for the particular architectural economy that is present at regular gyms.

One participant reflected on an outdoor gym's architectural economy, in terms of what kinds of movements were enabled and encouraged there, as well as what types of people were regular inhabitants that engaged in these movement schemas. When asked about her thoughts on outdoor gyms, Erica reflected on how these types of gyms catered for certain types (of bodies), creating an expectation of what bodies should do and how they should move:

> "I live really close to an outdoor gym, but never set foot there alone, because I feel that it's very male-dominated and I often think that at those outdoor gyms, there is [an assumption that] there you should have movements that you should subscribe to and do right in that place and they're formed according to particular types. And it gets like, one should do chin-ups or pull-ups or some stuff, and I only felt comfortable there when I've done outdoor sessions with the guy I train with. Because then it means that one can be there, one has, like, a buffer." (Erica)

This quote from Erica signifies how architectural properties can pervade open spaces. The architectural economy of the gym is dispersed across other places, such as outdoor gyms, and so are its concomitant power relations. As described above, the social relationships and power initially contained within the gym are being stretched out across space (Vertinsky 2004). Even though it is a site with no visible walls, and there are consequently no mirrors or pictures, there was still a masculine ideal that had extended out of the gym, enclosing seemingly open spaces with well-trodden paths for certain schemas of movement. For someone not fitting those schemas, not speaking its masculine language, or having a "buffer" for comfort, there still seemed to be walls keeping people out. Thus, place is not just structured space; it can be conceived of as an outcome, the product of an activity, which has a temporal dimension (Vertinsky 2004). The outdoor gym is formed according to certain expected movements, a prescription, as mentioned, to "subscribe" to. Insofar as outdoor gyms are nowadays a common feature of Swedish cities, this example can be related to what Grosz writes: "The city is one of the crucial factors in the social production of (sexed) corporeality: the built environment provides the context and coordinates for contemporary forms of body" (Grosz 1995, p. 104). Whether out in the open, or enclosed by concrete walls, gyms are an urban phenomenon (Sassatelli 2015), and, as we have seen here, power relations that direct bodies in certain ways are being reproduced while bodies (dis)align themselves within architectural economies.

The abundance of mirrors, depictions of normative bodies on the walls, and branded clothing codes were features associated with general gyms but were lacking at the Club. These characteristics, as well as other bodies inhabiting these spaces, became specular surfaces through which the architectural economy of the gym could seep into the flesh of the participants, via the act of gazing, and be physically materialized through emotion.

6.2. Vulnerable Inclusiveness

At times, when talking about the Club, the participants placed other training venues in juxtaposition to it and, thus, oscillated between a close-focus reference to the Club and a distant echo from faraway gyms. The Club was commended by the participants for its ambiance, accredited by the lack of pictures of norm-congruent bodies or of mirrors or trendy clothing, as well as the silencing of any discourse regarding diet. This was the

makeup of a comfortable setting, which, according to Nina, made the Club into a kind of "chilled" environment:

> "When I got to this club, I felt like, it's tough, it's heavy, it's sweaty, it's a new form. I felt like I was evolving, it felt like kind of a chilled atmosphere . . . It's a small place, not that many classes, it's one or two classes per day, and it's like, there are new people, but it's still like this, you recognize everyone and say hello and such. That's why I didn't go to other gyms . . . I've experienced them as quite large and pretty anonymous." (Nina)

Through the accounts uttered by the participants, and as Nina described it, one gets a sense of the Club's atmosphere as being laid back, but still being a site for pushing boundaries, an intimate setting that has friendly verbal exchanges among its patrons. In Nina's case, the intimacy was something that attracted her to this place, as opposed to other more general and more anonymous gyms. Another feature that was mentioned, which is congruent with the sampling logic of including the Club as an initial entry point to the research field, was its critical stance toward circumscribing gender norms. However, bearing this in mind, one coach, Juan, acknowledged that, due to the fact of the Club being a functional fitness/CrossFit-inspired gym, it did attract certain gendered articulations, which they actively worked to keep out:

> " . . . a lot of this, this norm that exists around CrossFit clubs. What type of guys and what type of manliness thrives there. How it reflects when new people come . . . For instance, those "macho" men, with stringer tank tops and taking selfies, they're not welcome. Sometimes new guys come, and you can tell they think that they're the biggest and strongest there." (Juan)

At such times, Juan will usually ask one of the female members to demonstrate an exercise, someone whom he knows lifts heavy weights. As soon as the new member sees the woman lifting this much weight, sometimes more than he can lift, his attitude immediately changes. This was an action demonstrating being norm-critical on the scene, at training. What was being demonstrated was not only the correct technique to perform an exercise but also that they did not accept certain displays of what Butler would term gender performances (Butler 2007, Butler [1993] 2011), and at the same time reinforcing other performances, such as women being strong and lifting heavy weights. Congruent with Juan's analysis regarding CrossFit gyms and masculinity, previous research has similarly inquired into the CrossFit gyms in terms of their harboring and perpetuating the discourses of a certain hegemonic masculinity, cloaked behind a veil of "natural taken-for-grantedness" (Kerry 2016), demonstrated by analyzing its semiotic landscape. Here, hegemonic masculinity refers to the image of the strong and athletic prowess of the male body (Connell 2005). In the case of the Club, instead of closing their eyes to attempts to reinforce a certain gendered (masculine) hierarchy, the written words of their statutes were taken seriously and acted upon. With a rainbow flag decorating the walls, instead of a profusion of mirrors and/or depictions of ideal confirmative bodies, in conjunction with its "chilled ambiance", "openness" would be the adjective most appropriate to describe this particular gym.

However, as Butler reminds us, to always include means simultaneously to exclude (Butler 2015). Inclusion is not achieved merely by stating it in words, rather, it is something that has to be constantly created. What was necessary to exclude were the articulations of certain expressions of masculinity that could be seen as a deterrent for those not living up to the big, muscular (male) morphology that is often on display by revealing clothing at other gyms. The prevalence of "the biggest and strongest", or at least its self-proclaimed image, corresponds to the image of hegemonic masculinity, in terms of being big, strong, and muscular, which is something of an inherent trait within gym spaces. Previous research suggests, in support of Juan's statement regarding the meaning of being inclusive, that such displays of hegemonic masculinity work as deterrents for both men and women (Coen et al. 2018, 2020; see also Fisher et al. 2018). This approach to inclusiveness was

something that was commended by several of the female patrons when differentiating between the Club and other training venues. Although they did not specifically refer to it as "hegemonic masculinity", as the types of spaces were seen to be male-dominated, such venues were something they avoided; they did not feel comfortable in such places. If they did go to such a gym, they would not spend time in the areas where these men were. One participant said:

> "There were rooms within rooms, and some rooms you just don't go into, because you're a woman, even though there isn't any formal rule that you shouldn't." (Sandra)

This exemplifies how gendered power relations are articulated through spatial discourse, as exclusionary partitions are created and distributed throughout the specific architectural economy of gyms. Rooms are created within open spaces by means of what type of body carries the prerogative to ease into such spaces in comfort. This, in turn, meant that, for Sandra, it was not closed doors keeping her out of certain spaces; rather, it was the socially constructed gendered norms of what types of bodies go where that affected her orientation within the gym. Thus, tacit thresholds are constructed, chimerical in their visibility but concrete in their effects on bodies. Expressions through the prevalence of hegemonic masculinity thus function as a silent exclusionary process, moving along gendered lines (Coen et al. 2018, 2020; see also Salvatore and Marecek 2010; Fisher et al. 2018).

The Club reinforced counter-exclusionary practices, such as demonstrating certain exercises through displays by strong and competent women; in that way, they diluted the normative images of large men as having precedence in terms of bodily strength. To ensure comfort for the Club's patrons, other practices were also enforced. For instance, there was an awareness of suitable clothing, to diminish the occurrence of negative corporeal evaluations in relation to others' bodies, sentiments that were corroborated in previous research (Fisher et al. 2018; Coen et al. 2020). A trainer at the Club, although visibly well-trained, had a rule of not showing too much skin, in order to work against an environment of bodily comparisons. The encouragement to keep clothes on the body, shielding bare skin, was a recurring sentiment among the participants.

Additionally, inclusiveness, or rather "radical inclusiveness", a term used by one participant, Viveca, was also discussed during one of the memory exercises. It was addressed both in positive terms, such as was previously mentioned regarding the atmosphere at the Club, and also more negatively; this kind of inclusiveness carried with it an inherited vulnerability and informal regimes of emotional control and work. During this particular memory exercise, the trigger was "When I went to the gym and got angry", to which one participant wrote down a specific memory of an event that represented several other occasions with similar content. The plot of the written memory centered on how the participant experienced vulnerability, followed by anger, due to unsolicited looks from the male coach, unprepared exercises during the class, and the odor seeping out of the coach's body, leaving a trail of stink after him. On the way to the Club, the participant was filled with anticipation—what kind of work were they going to do today? Once there, and recognizing that it was THAT coach, she was careful to avoid eye contact. During the class, the patrons were on the floor doing sit-ups, and he, the coach, was positioned in such a way that he was right in line to see between their legs and was seemingly staring right at the space between her thighs. Her defensive strategy of avoiding eye contact then changed to an offensive attack, one of staring back at the coach, while silently screaming her thoughts, as though they were verbalized through ocular instruments:

> "I see you, you creep. Hope he doesn't take it as an invitation . . . Do you have to stand exactly there?! . . . Can't you just go and find some other place to stand? [When you were] There, you felt so vulnerable . . . " (Maria)

After Maria had recited her written memory, from which the above quote originates, another participant in the memory exercise responded:

> "What a relief to hear such feelings expressed! As an adult and being at a place that is so "inclusive", [with] radical inclusiveness. You can't be mean in a place

> where you should be inclusive, in an environment like the Club . . . or other venues where there should be such radical inclusiveness . . . there's no place for such feelings . . . " (Viveca)

The written memory articulates the feelings of not being in control, but at the same time being forced to control one's feelings throughout an ongoing and recurring situation, in this specific place, resulting in fermented feelings of anger. To sustain an inclusive environment, the inhabitants of the Club had to undertake emotional labor (see Hochschild [1979] 2012), in that working out at the club not only meant taxing one's muscles and cardiovascular system but also carried a requirement to handle other people's feelings, as well as one's own (see ibid.).

To create an open environment, something had to give, and, in this case, for Maria, it meant the emotional labor of suppressing emotions that were, in this particular setting, inappropriate. Even though the Club was, in many ways, a construct aligned with the architectural economy of gyms, in terms of it being a place where the body is supposed to move in certain ways (Coen et al. 2018; Hedblom 2009; Sassatelli 1999b), its stipulated work to ensure inclusiveness created a situated context that involved local norms. While, as Sassatelli describes it, gyms are characterized as exhibiting elements signifying that "this is a training session", such as the participants' particular focus or certain sounds, such as grunting, tense faces, and sweaty clothing (Sassatelli 1999b), within the specifics of the Club, participants are informed about the types of actions that are not to be expressed, in order to reinforce the message that "we are inclusive here". This was further nuanced by Maria, as:

> " . . . Especially with the Club, it's sometimes just like, "Ah, God, I don't want to speak to anyone, but I kind of have to be nice anyway" . . . I actually experienced this earlier this week in another conversation, that I have to be even nicer there than what I'm elsewhere. It's not like you can have a "bitch-face" there, like at a regular gym . . . there's such an expectation . . . you have to be even more [at the Club] . . . " (Maria)

Viveca completes Maria's sentence: " . . . in order for your non-action to become an action" (Viveca).

What is being described in this discussion during the memory exercise is how, in the effort to create an open environment of radical inclusiveness, certain expectations are also created through the framed activities. In this case, not talking or saying hello, which is considered a "non-action", becomes a discernible action, as it rubs up against certain expectations. Due to its specific context, seemingly non-expressive actions serve as communicative messages. This implies that, although they are silent, due to the specific temporal and spatial locality, bodies are powered to be verbalized by sight. Grosz writes about how bodies "become coded with and as signs. They speak social codes. They become intextuated, narrativized" (Grosz 1995, p. 35). By means of recognizing her own (non)actions as verbal, and concomitant with this knowledge, the participant experienced an emotional workload when trying to live up to the Club's expectations of sociability. Radical inclusiveness, despite its positive connotations, certainly has its benefits, but it also implies arduous emotional work, because it requires conscious deliberations about one's own conduct. Again, referring to Grosz, social codes, laws, norms, and ideals become corporeal (Grosz 1995), as they are indeed felt in the flesh of sentient bodies, and are verbally loud, even without sound. Being aware of how one can speak without words and act without acting implies emotional labor, which, at times, caused deliberations about whether to go and work out at all, and to grumble about how one's previous demeanor was perceived by others. This type of deliberation was something that Maria and Viveca conversed about, when talking about the specifics of the Club.

> "Should I or should I not go and work out? I mean, I want to work out, but I kind of don't want to be around people, and then it gets like, I didn't say hello to people by mistake, and then, 'but God, this person . . . like . . . hope this person

> didn't interpret it as I don't want to, that I only say hello to some people, and not others' ". (Maria)
>
> "Shit, so much responsibility!" (Viveca)
>
> "Yes, exactly!" (Maria)

The dialog between these two participants illustrates how the maintenance of the recommended "open" atmosphere at the Club required involvement by its members in ways other than by certain kinds of exercise. It also included taking responsibility for others and their potential feelings and suppressing emotions and ongoing reflections regarding one's own (non)actions. Therefore, the situatedness of the Club not only mandated bodies to move according to a certain gym economy but also required a specific emotional involvement from its patrons. As Maria pointed out, having a "bitch-face" within the walls of the Club was endowed with a certain meaning that was not present in other places, such as in generic gyms. The benevolence of inclusion at the Club carries with it expectations of sociability, as part of that which has been set up to ensure inclusion. However, this is not an effortless act; rather, it is, at times, experienced as strenuous work. The specific involvement required from patrons of the Club, in order to ensure (radical) inclusiveness, was recognized by Viveca as a certain way of "taking care of each other", which in turn demanded overt sociability.

Radical inclusiveness set the Club apart from other training venues, along with its "open and chilled" ambiance. This was, in part, attributed to the Club's work at being inclusive and norm-critical, which was manifested via actively working against certain expressions of hegemonic masculinity. This could possibly be elevated to work as a template since transformations indoors have the potential to transform social-environmental relations outdoors as systems indoors often seep out into the open (Coen et al. 2018). However, this type of radical inclusiveness was not without its own perils, as it demanded an amount of emotional labor and care for others from its patrons, which was not required to the same extent at other gyms. This reveals how inclusiveness is a process, rather than a static state of being, and that it requires constant demanding work to be fulfilled. Radical inclusiveness is thus a tightrope to be carefully balanced, and is thereby inherently vulnerable. As the material suggests, something has to give, and sometimes this becomes too much. As such, not only does being inclusive mean that not everyone is welcome but, in a "radical" form, it is also a threshold, because it requires a certain amount of emotional labor to be enforced, resulting in some members leaving the Club. This makes radical inclusiveness *vulnerable inclusiveness*.

6.3. Gendered Spatial Orientations

Some gyms that were mentioned in the empirical data had ambitions of inclusiveness for women and girls by means of a specific spatial structure, providing "girls-only" sections separated from the common area. This was performed in order to ensure that women and girls "feel comfortable" when working out at their gyms (fitness24seven.com). Anne, a retired 74-year-old who frequented both the Club and a Fitness24seven gym, did not use the "girls-only" area. When asked why, she answered that she felt that the air quality in the bigger main area was better because it was not as stuffy.

> "The girls-only gym gets so stuffy and cramped, and as I do not feel ashamed when working out among the guys, I make sure to leave room for those who like not mixing." (Anne)

Thus, for Anne, the "girls only" part of the gym was not comfortable at all, as it obstructed her breathing, due to it being "stuffy". However, Anne articulated an ethics of care (see Koehn 1998) for other women, with her implicit assertion that women were reluctant to work out in the common area because they experienced shame while being there. This care for others should not be conflated with the care for others mentioned in relation to the Club, where caring for each other was a component of its framed activities, while at this gym, "care for others" was, rather, the built-in "girls-only" area itself. As

such, the ethics of care described by this participant was not part of what was expected but was instead an aberration. By not occupying space, Anne left more room for those wanting the comfort of seclusion. This spatial division is supported by previous research, suggesting that women (and some men) avoid certain areas of gyms where a particular hegemonic masculinity that is connected to physical prowess is on display (Salvatore and Marecek 2010; Fisher et al. 2018; Coen et al. 2018, 2020, 2021). However, for Viveca, who had also previously attended a gender-segregated gym, this comfort was referred to in terms of·safety:

> "In the common space, there were a lot of dudes. Not many of them seemed to work out, they mostly just hung out, stood, and watched others and took pictures . . . it was a weird atmosphere . . . It felt safer in the 'girls-only' part . . . " (Viveca)

It seemed that the gym chain's ambition to create a space where women would feel comfortable working out was indeed achieved by establishing a spatial standard of "girls-only" areas at their gyms. This was evidenced through Anne's implicit assumption that other women would feel too ashamed to train in the common area, feelings that were supposedly alleviated by entering a secluded area that was only open to women. Another example of comfort attributed to "girls-only" areas was how feelings of safety were instilled because this was a space where, specifically, in this case at least, certain manly behavior created negative sentiments toward the common area. As Anne exemplifies, a "girls-only" section does not necessarily mean that the common area is only inhabited by men. However, it seemed as though it was not just any type of woman who was a regular patron among the weights in the mix of the commons. When discussing the division between the common area and a secluded space for women only, one participant recounts that it is not necessarily merely one's sex that prescribes one's social standing at the gym:

> " . . . There are well-trained women . . . yes; they get looks, of course, and some guys dare to ask them if they need any help . . . but you look at them and see that they've been there for a long time; then they rise in the ranks, anyway . . . " (Viveca)

In terms of this participant's observation, women occupying a space in the common area were noticeably gym-savvy. It was also recounted that the gym contained a certain hierarchy, according to a sort of training "know-how". Hierarchical ordering within the gym is in agreement with previous research, as bodies that approximate the hegemonic masculine image of the strong and physically competent male are given a certain prerogative to take up space (Coen et al. 2018). However, as stated in the quotation above, these women were able to command space due to their occupying high-level echelons of training competence. It was as though, for a woman, residing in the common area was not something to take for granted, but was, rather, conditional upon her inhabiting a specific position within the gym hierarchy. Even so, despite their "ranking", women were still approached by men offering them "help", which, in turn, constantly brought these women's spatial occupation into question by the presupposition that they needed assistance in order to be there. Another participant, Tia, corroborated this, by recounting her own lived experience at a general gym, with no formal spatial division in regard to gender:

> I mean, I consciously bench-press only at one particular place, because if I walk into the bench press room, then I get tips on how you do it, and I don't want tips . . . I mean, I'm always there, so a friend of mine asked me why. But I want to bench-press by myself, and I don't want anyone to show me how to do it. I can bench-press by myself." (Tia)

Clearly, in terms of competence, Tia would occupy the ranks of women qualified to command space at the gym. However, as a woman, her capabilities were repeatedly questioned by means of unsolicited advice. Even though they are weightlifting-savvy, women pushing a barbell are, due to their gender, questionable subjects within the gym hierarchy. This suggests that the architectural economy of the gym prescribes certain relations of power, in terms of which certain bodies have spatial prerogatives, and by which bodies are questionable within the very same space. The (discouraging) gendered directory

within the gym environment was additionally emphasized by an observation at a general gym, where some men were pretending to do an exercise, laughing, and making a parody of girls attending the gym:

> " . . . it was that hip thruster, as if that was a particular girl exercise. Girl exercise?! What the hell is a girl exercise? And why can't girls be by the barbells? I find that quite common . . . " (Tia)

As such, these circumscribing gendered norms regarding body movements work to confine not only the women's comportment but also the men's. The "perceived" humor of this group, as they seemingly imitated women working out, was premised on the idea that this type of exercise was not something a man would do. The quotation reveals that you never see a man performing a hip thruster unless as a joke, which, in consequence, implies that men, as well as women, are confined within gendered norms of movement. This shows that gender is also constructed through the use of humor.

7. Conclusions

The concept of an architectural economy enables a deconstructive reading of spatiality, whereby places are recognized as textual. Thus, the architectural economy of the gym describes the ways in which these sites are inextricably linked through spatial discourse and how it is produced, as well as reproduced, by gendered norms, and is thus part of the directory inciting bodies to move in certain ways. In other words, they are part of the construction of *thresholds* (Bladh 2020), in both concrete and social terms. To reiterate, "thresholds" in this paper refer to gendered social constructs and norms that direct bodies in certain ways, thereby circumscribing their potential movements and capabilities. The way that thresholds are used in this paper could be understood as adjacent to what previous research has labeled gendered barriers and/or boundaries within the gym and fitness environment (Salvatore and Marecek 2010; Fisher et al. 2018; Coen et al. 2020, 2021), in that it circumscribes human body movement according to unequal gendered norms within the gym and fitness culture. However, the choice of thresholds is preferable, in that, through an analogy with aerobic and anaerobic thresholds, the gendered thresholds within the gym and fitness culture denote constraints, as well as malleability; therefore, they are not static, but, as a result of continuous work, they might be displaced, allowing for other movements and prerogatives of space.

With a close-up view, the specific contours of the Club could be illuminated as radical inclusiveness, achieved through a spatial structure in terms of a diminished quantity of mirrors and body-normative pictures, as well as establishing framed activities promoting sociability and care for others. In turn, this induced a "chilled and open" atmosphere and a particular sense of community, features that were commended by the Club's members. An inherent part of the work to attain inclusiveness was the ambition to relinquish negative expressions of masculinity, or macho men, because these expressions are seen as deterrents, keeping people out. Thus, inclusiveness at the Club was not equivalent to "everyone being welcomed". However, despite the benevolence of radical inclusiveness, it required arduous emotional labor in terms of emotion management, overt sociability, and taking personal responsibility to ensure the "openness" of the Club. Safeguarding the "radical" nature of this inclusiveness was a balancing act on an emotional tightrope, thus making it vulnerable, rendering radical inclusiveness into *vulnerable inclusiveness*. As such, while a threshold might have been lowered, thus making the Club an inclusive place, this work does not do away with thresholds; they remain, albeit somewhat displaced.

As stated, the architectural economy of the gym was negotiated differently at different sites. At some gyms, a sort of "inclusion by seclusion" logic was literally built into the walls. These were gyms with a "girls-only" area, in addition to a common area. Although comforting for some women, who were deterred from using the common area, thereby being, in that sense, inclusive, this logic reinforces the gendered spatial orientations and hierarchies. In addition, by using the term "girls only", instead of "women only", women are being infantilized. Within the literature, when referring to generic gyms, even in those

not having a built-in spatial gendered division, this infantilization of women was still part of the gendered directory of bodies because female bodies are hypothetically incompetent at lifting weights and are, thus, in need of a helping (male) hand, leading female bodies to orient themselves toward other spaces. This demonstrates that both human geographies and spaces are socially produced and are intricately connected with the maintenance of power and the production of various subjectivities (Fusco 2004, p. 160). Even though contemporary Western bodily ideals sanction a more muscular feminine body than in the past (Tolvhed 2016; Heywood and Dworkin 2003; Krane 2001; Halberstam 1998; Markula 1995), as well as an increase in the number of women engaging in gym and fitness practices (Andreasson and Johansson 2014; Dworkin 2001), socio-spatial thresholds are still being reproduced through an architectural economy of gym and fitness venues. At the core of the architectural economy of the gym and revealing its settings, one can see that, despite their internal differences, therein lies the imperative to move. However, certain gendered power relations condition the movements of our bodies, both spatially and socially. Our range of motion is, thus, not merely conditioned by our biomechanical capabilities. Indeed, we do not really know what they are, while we align ourselves with gendered delineations.

> "If bodies are to be reconceived, not only must their matter and form be rethought, but so too must their environment and spatiotemporal location". (Grosz 1995, p. 84)

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Article

Examining the Role of Source Evaluation in Athlete Advocacy: How Can Advocate Athletes Inspire Public Involvement in Racial Issues?

Waku Ogiso [1,*], Hiroaki Funahashi [2] and Yoshiyuki Mano [3]

[1] Graduate School of Sport Sciences, Waseda University, Nishitokyo 202-0021, Japan
[2] School of Health and Sport Sciences, Chukyo University, Toyota 470-0393, Japan
[3] Faculty of Sport Sciences, Waseda University, Nishitokyo 202-0021, Japan
* Correspondence: wakuogiso@akane.waseda.jp; Tel.: +81-42-461-1241

Abstract: Athlete advocacy is recognized as an important method of persuading the public on social issues, and it demonstrates the role of athletes in achieving racial justice. However, how athlete advocacy can gain the persuasiveness to encourage public involvement remains unclear. This study investigates how the evaluation of an advocate athlete functions to encourage public issue involvement, focusing on Naomi Osaka's racial advocacy. In particular, driven by balance theory and attribution theory, this study examines the effects of five sociopsychological factors on public involvement in racial issues: perceived credibility, hypocrisy, cause fit, effort expended, and role model status of advocate athletes. Data were collected from a cross-sectional online survey of 855 Japanese adults who were aware of Osaka's advocacy. The findings highlight that public involvement in racial issues is significantly associated with the evaluations of the athlete's credibility and hypocrisy. These evaluations are further influenced by perceptions of the athlete's cause fit and role model status. This study enriches the literature on the management of sports for social change by demonstrating the importance of source evaluation in athlete advocacy in achieving advocacy outcomes. Our evidence implies that athletes looking to promote racial justice issues should effectively be seen as credible, knowledgeable, and non-hypocritical in their issue advocacy.

Keywords: athlete advocacy; social influence; public involvement; Black Lives Matter; racial justice; interpersonal persuasion

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1. Introduction

Athlete advocacy represents efforts by elite athletes to advocate for social and political issues; it is currently gaining attention among sport management and sociology researchers (e.g., Agyemang et al. 2020; Cunningham et al. 2021; Schmidt et al. 2019; Yan et al. 2018). Prominent elite athletes, such as Colin Kaepernick, LeBron James, and Megan Rapinoe, to name a few, have advocated for social reforms in matters, such as racism, social inequality, and injustice (Agyemang et al. 2020; Evans et al. 2020). Among others, the Black Lives Matter (BLM) movement, which made significant strides in 2020, has brought public attention to the influence of athletes in achieving racial justice.

Athlete advocacy aims to leverage the fame and persuasiveness of athletes to raise public awareness and engagement on social issues (Agyemang et al. 2020; Kaufman 2008). In other words, a key outcome of athlete advocacy is public involvement. Public involvement is conceptualized as an individual's cognitive, emotional, and behavioral engagement with social issues (Rothschild 1984). Athlete advocacy, according to some academics, may serve as a meaningful vehicle for affecting attitudes and behaviors, such as public awareness, knowledge, and information-seeking habits on the specific issues being advocated (e.g., Babiak et al. 2012; Casey et al. 2003; Frederick et al. 2019; Nownes 2021). Accordingly, it is

necessary to deepen the discussion on how advocate athletes can use their persuasiveness to enhance public involvement.

Although the growing body of literature has shown the effectiveness of athlete advocacy in society, how athlete advocacy gains persuasiveness remains unclear. In particular, how the receivers of athletes' persuasion evaluate and accept their message has not been adequately discussed. Although all athletes should not be expected and forced to engage in social issue advocacy (Coombs and Cassilo 2017), advocate athletes, referring to athletes who choose to advocate social issues, can be agents for disseminating social and political issues (Agyemang et al. 2020; Kaufman 2008; Pelak 2005). Based on this ability, it is necessary to discuss how receivers' evaluations of advocate athletes function, which is an indispensable part of persuasion (Hovland et al. 1953). Therefore, this study examines the role of the receivers' evaluations of advocate athletes in encouraging public issue involvement through the lens of persuasion.

We focus on Naomi Osaka, a notable example of an advocate athlete. Osaka is a multiracial professional tennis player, who supported the BLM movement in 2020. During the 2020 US Open, she wore a different mask before each of her seven games in the tournament; each mask featured the name of a Black victim of racial injustice. Her activity was intended to convey the seriousness of racial issues to a broad audience, including the Japanese public (Deflem 2022a; Ramsay 2020). Osaka's racial advocacy targeting the Japanese can be a suitable case to examine the relationship between source evaluation and public issue involvement from the following three perspectives: (1) the Japanese public is generally regarded as insensitive to and unfamiliar with racial issues owing to their ethnically homogeneous society (Iwabuchi and Takezawa 2015), (2) Osaka's advocacy is an unprecedented athlete's racial advocacy in Japan, and (3) Osaka has received both praise and criticism for her advocacy. Thus, this study centers on Osaka as the research focus in Japan and investigates the function of public evaluation in her advocacy. Note that instead of assessing Osaka's persuasiveness, the present study intends to examine the relationship between the receivers' evaluations of Osaka as an advocate and involvement in public issues.

The present study provides potential theoretical contributions to the sport management and sociology literature by answering the question: "How do the evaluations of advocate athletes function in fostering public issue involvement?" Consistent with the academic trend of managing sport for social change and justice (Cunningham et al. 2021; Love et al. 2019, 2021; Sherry et al. 2015), we demonstrate how the reputations of athletes advocating for social issues work from the perspective of the receivers of advocate athletes' messages. Cunningham et al. (2021, p. 31) expressed the view that "the recognition that sport and athletes can play a role in shaping cultural discourse and promoting social justice" is largely missing from the sport management research. Given the importance of attitudinal and behavioral changes at the individual level in reducing racial discrimination (Pager and Shepherd 2008), exploring the psychological process underlying the acceptance of athletes' messages would help further define the role of advocate athletes as communicators for achieving racial justice.

2. Theoretical Framework and Literature Review

2.1. Existing Logic behind Potential Effects of Athlete Advocacy on Public Issue Involvement

Celebrity athletes are often compelling advocates of social and political issues because they can attract public attention, allowing others to observe their beliefs and actions (Babiak et al. 2012; Kim and Na 2007). This idea is underpinned by the human capacity for observational learning, which means that individuals expand their beliefs and behaviors by learning through the information they receive (Bandura 2001). This process could be facilitated by the societal power of sport and athletes. To elaborate, Smith and Westerbeek (2007, p. 25) argued that "sport, more than any other potential vehicle, contains qualities that make it a powerful force in effecting positive social contributions". Athletes have unique resources, such as fame and influence, which they can leverage to effectively

advocate for social and political issues (Babiak et al. 2012). For example, Nownes (2021) demonstrated that athletes' messages about health issues impact the public's awareness of these issues. Additionally, athletes are often expected to be role models of behaviors and values (Brown and de Matviuk 2010; Bush et al. 2004); in particular, during the BLM movement, athletes were identified as possessing unique perspectives and exercising significant influence (Nielsen 2020). Additionally, Ogiso et al. (forthcoming) observed that exposure to athletes' racial advocacies is associated with the level of individuals' issue involvement, using the Japanese sample. Based on the discussion above, exposure to the advocate athletes' messages has the potential to enhance the public's psychological and behavioral involvement due to their status and fame.

2.2. Balance Theory and Attribution Theory

Athlete advocacy comprises the dissemination of messages by athletes that aim to foster public issue involvement, which has the potential to drive proactive civic participation, such as encouraging donations, volunteering, and social activism (Babiak and Sant 2021). This study adopts two theoretical foundations to understand interpersonal persuasion. First, to understand how public issue involvement (i.e., the outcome of athlete advocacy) is influenced by an individual's evaluation of an advocate athlete, this study adopts the balance theory (Heider 1946). Furthermore, attribution theory (Heider 1958; Kelley 1973) is employed to interpret how individuals formulate source evaluation in persuasive communication.

Balance theory (Heider 1946) helps explain how individuals accept or reject a specific persuasion from an interpersonal relationship perspective. This theory posits that, in triadic relationships, humans prefer a balanced state and resolve imbalances by adjusting their attitudes toward others. The balance theory of celebrity persuasion assumes a triadic relationship, where P is the receiver, O the communicator, and X is the endorsement target. In addition, the dynamics of these triadic relationships depend on the circumstances of connections among the receiver, communicator, and object (Mowen 1980; Woodside and Chebat 2001). In advocacy situations, O positively endorses X; thus, P will decide to accept or reject this persuasion by considering the P–O relationship (Roy et al. 2012; Wood and Herbst 2007). Hence, if individuals positively evaluate an advocate athlete, they are more likely to support their advocacy. On the other hand, negative evaluations of communicators should result in rejection of the target content. This decision-making based on source evaluation is especially pronounced when the recipient is insensitive to the topic of persuasion, indicating when the motivation and ability to process persuasion are relatively low (Petty and Cacioppo 1986; Woodside and Chebat 2001). This theory has been employed to explain the influence of celebrities on marketing (Min et al. 2019; Roy et al. 2012), tourism advertising (Zhang et al. 2020), and political campaigns (Wood and Herbst 2007).

In advocacy appeals, evaluations of communicators are not spontaneously generated; receivers form evaluations from multiple pieces of information associated with the message. The present study utilizes attribution theory to understand the formation of the public's evaluations of athlete advocacy (Heider 1958; Kelley 1973; Malle 2011). Attribution theory explains how people make causal inferences about others' actions and has been applied in the context of celebrities' social activities (Park and Cho 2015; Garcia de los Salmones et al. 2013). This theory posits that people tend to consider the motivations underlying others' actions (Heider 1958). These attributions are based on the information related to communicators or circumstances (Kelley 1973). In the issue advocacy context, receivers attribute altruistic or egoistic motivations to advocacy efforts based on observations of communicators' actions (Ellen et al. 2000; Garcia de los Salmones et al. 2013; Park and Cho 2015). Researchers have reported that altruistic-motivated actions are perceived as favorable, whereas egoistic-motivated efforts are evaluated as unfavorable (e.g., Ellen et al. 2006; Park and Cho 2015). In addition, these attributions could eventually lead to a

communicator's evaluation (Heider 1958). Thus, how receivers perceive athlete advocacy can be an important cue through which receivers evaluate athletes.

From the receiver perspective, the present study examines what factors may increase or decrease the public's issue involvement in athlete advocacy. Through the lens of balance theory, we apply perceived credibility and hypocrisy as source evaluations of advocate athletes. Using attribution theory, we employ perceived fit, effort expended, and role model status as antecedents of communicator evaluations. To explain the individual's involvement in social issues, we develop a two-layered hypothesized model for the relationships among these concepts (Figure 1). In the following subsections, we present our hypotheses.

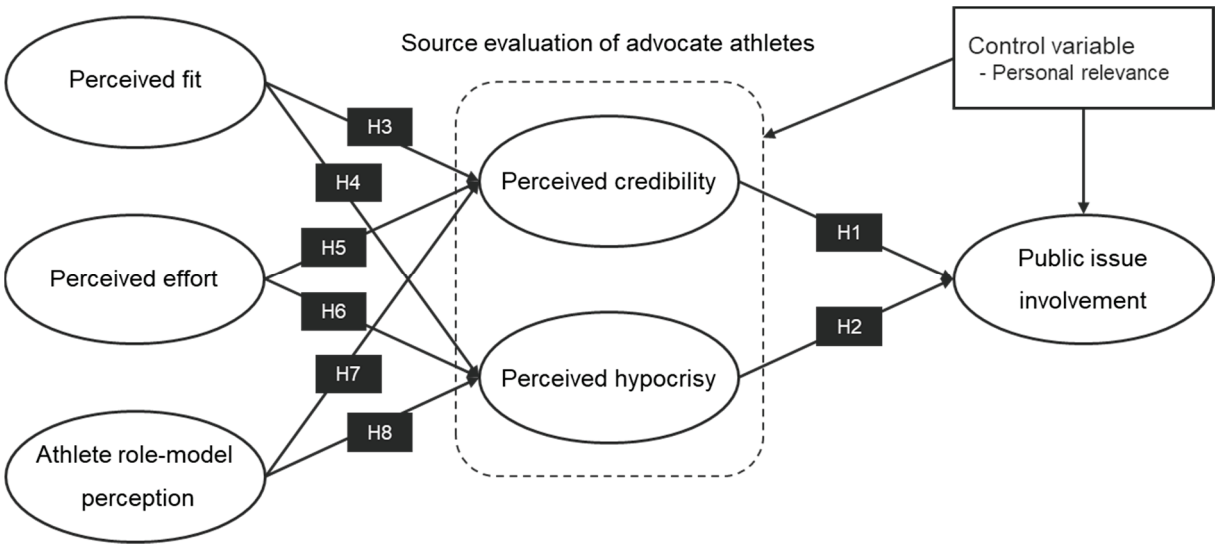

Figure 1. Hypothesized Model. H = hypothesis.

2.3. Effects of Source Evaluation on Public Issue Involvement

2.3.1. The Role of Perceived Credibility

While communicating social issues, how receivers evaluate the communicator determines the persuasion effectiveness (Hovland et al. 1953; Ohanian 1990). Researchers have reported various aspects of source characteristics, such as source credibility, attractiveness, similarity to recipient identity, and performance (e.g., Amos et al. 2008; Halder et al. 2021; Hovland et al. 1953). In particular, scholars focusing on persuasion aiming at individuals' attitudinal and behavioral changes have discussed the role of source credibility (Hovland et al. 1953; Inoue and Kent 2014). Source credibility refers to the extent to which a "source is perceived as possessing expertise relevant to the communication topic and can be trusted to give an objective opinion on the subject" (Goldsmith et al. 2000, p. 43). This definition posits two crucial dimensions of source credibility: trustworthiness and expertise (Hovland et al. 1953). Trustworthiness is defined as the perceived willingness of the source to make valid assertions, whereas expertise refers to the perceived ability of the source to make valid assertions (McCracken 1989). In other words, the perceived credibility of an advocacy appeal is interpreted as the receivers' evaluations of the communicators' credibility as an information source.

The role of perceived credibility of message sources in persuasion aiming for attitude change has been extensively examined (Amos et al. 2008; Halder et al. 2021; Hovland et al. 1953). Previous researchers have studied perceived credibility in the context of celebrity endorsements for nonprofit and political campaigns (e.g., Jackson and Darrow 2005; Nisbett and DeWalt 2016). Most source credibility studies state that persuasion is more likely to be accepted when the communicator is perceived as a credible source (Amos et al. 2008; Halder et al. 2021). This element of the source credibility model can be explained by balance theory (Heider 1946). In advocacy appeals, perceiving an advocate athlete as credible and,

thus, formulating a positive attitude toward them increases the likelihood that individuals will support the advocated position. Thus, the following hypothesis is developed:

Hypothesis 1 (H1). *Perceived credibility of advocate athletes will be positively associated with public involvement in social issues.*

2.3.2. The Role of Perceived Hypocrisy

In issue advocacy, the ethical evaluation of sources plays a key role in persuasion situations. In particular, as celebrity engagements in social issues are often regarded as hypocritical efforts, the role of perceived hypocrisy is also noteworthy (Robeers and Van den Bulck 2021). Hypocrisy refers to "the morally discrediting interpretation of perceived word-indeed misalignment" (Effron et al. 2018, p. 65). People have a sense of hypocrisy not only regarding themselves but also others (Barden et al. 2005). Wagner et al. (2009) conceptualized perceived hypocrisy as consumers' evaluations of an organization's pro-social communication. In addition, messages about engagement in social issues can paradoxically provide an opportunity for the public to generate hypocritical perceptions (Waddock and Googins 2011). This paradox is due to the emphasis on the additional benefits derived from social issue advocacy. Engagement in social issues could be perceived as a vehicle for athletes' self-promotion and, thus, attracts criticism of egocentrism rather than moral motives (Samman et al. 2009). Hence, in the context of engagement in social issues, the sense of hypocrisy can be interpreted as reflecting the public's ethical judgment of athletes' issue advocacy (Shim and Yang 2016). These ethical evaluations of sources can lead to negative consequences in the aspects of the receivers' attitudes (Shim and Yang 2016; Wagner et al. 2009) and behaviors (Jain et al. 2021; Zhigang et al. 2020).

According to balance theory, negative attitudes toward advocacy communicators negatively influence persuasion effectiveness (Heider 1946). Wagner et al. (2009) found that perceived hypocrisy of corporate social responsibility (CSR) messages can have negative consequences in cause-related communication. In addition, celebrity engagement can cause the audience's skepticism, and this perception becomes an important requirement that can spill over to the acceptability of the message in persuasion situations (Jain et al. 2021; Robeers and Van den Bulck 2021; Samman et al. 2009). Thus, perceived hypocrisy in athlete advocacy can hurt the athletes' ability to encourage involvement in social issues.

Hypothesis 2 (H2). *Perceived hypocrisy of advocate athletes will be negatively associated with public involvement in social issues.*

2.4. Antecedents of Source Evaluation in Athlete Advocacy

2.4.1. Perceived Fit and Effort

Public perceptions of advocacy-related attributes can influence their evaluations of the athletes (Haley 1996; Inoue and Kent 2014). Ellen et al. (2006) and Du et al. (2010) suggested that such attributes, including perceived communicator–cause fit and communicator effort, affect the receivers' responses to the message. Perceived fit is commonly defined in celebrity endorsement research as "the similarity or consistency between the brand and the celebrity" (Bergkvist et al. 2016, p. 173). Empirical studies argue that when people perceive the communicator–cause relationship as congruent, they also perceive altruism, leading to positive evaluations of the communicator (Bergkvist et al. 2016; Garcia de los Salmones et al. 2013; Ilicic and Baxter 2014; Park and Cho 2015). Thus, those who positively evaluate athlete–cause fit are likely to form positive evaluations of advocate athletes. Hence, the following hypotheses are proposed:

Hypothesis 3 (H3). *Perceived fit will be positively associated with the perceived credibility of advocate athletes.*

Hypothesis 4 (H4). *Perceived fit will be negatively associated with the perceived hypocrisy of advocate athletes.*

Meanwhile, perceived effort refers to "the amount of energy put into a behavior" (Mohr and Bitner 1995, p. 243). This concept can be defined as the amount of energy an athlete puts into an advocacy appeal. Ellen et al. (2000) suggested that people perceive the sender as more generous and caring if they believe the sender is expending more effort on advocacy; Du et al. (2010) suggested a similar effect for companies. Conversely, low-effort advocacy may be regarded as extrinsically motivated behavior intended to create a positive impression, consequently inducing unfavorable evaluations (Lim 2013; Noland 2020). In summary, perceptions of the efforts athletes devote to advocacy influence evaluations of the athletes. Thus, we propose the following hypotheses:

Hypothesis 5 (H5). *Perceived effort will be positively associated with the perceived credibility of advocate athletes.*

Hypothesis 6 (H6). *Perceived effort will be negatively associated with the perceived hypocrisy of advocate athletes.*

2.4.2. Athlete Role Model Perception

Whether receivers perceive athletes as role models may affect evaluation and persuasion outcomes, as athletes are often considered objects of social admiration. Such perceptions can be understood as general evaluations of athletes that function as bases for evaluations of their advocacy. Haley (1996) found that communicators' general attributes are antecedents of evaluations of their advocacy messages. Moreover, several studies (e.g., Bandura 2001; Bush et al. 2004; Dix et al. 2010) have argued that endorsements by role model athletes can encourage supportive behavior and attitudes toward endorsement objects. These arguments suggest that evaluations of advocate athletes are influenced by how favorable the athletes are viewed as role models. Therefore, the following hypotheses are formulated:

Hypothesis 7 (H7). *Perception of advocate athletes as role models will be positively associated with the perceived credibility of advocate athletes.*

Hypothesis 8 (H8). *Perception of advocate athletes as role models will be negatively associated with the perceived hypocrisy of advocate athletes.*

2.5. Control Variable

In addition to the hypothesized effects, other variables may affect the evaluation of advocate athletes and issue involvement. For the hypothesis testing, this study applies a control variable: personal issue relevance. Personal issue relevance, which refers to the degree to which a particular issue is relevant to an individual's life, may also influence the public's involvement in an issue and evaluation of advocate athletes (Petty and Cacioppo 1986). This concept appears when people predict that an issue "will have important consequences for their own lives" (Apsler and Sears 1968, p. 162). The elaboration likelihood model (Petty and Cacioppo 1986), one of the prime theories explaining the effectiveness of persuasion, posits that the relevance of an issue to an individual can cause a disturbance in the effectiveness of the message. Based on this discussion, we conceptualized the personal issue relevance as a control variable to take into account their potential effects on the hypothesized relationships.

3. Research Context

The present study is contextualized in Japanese responses to Naomi Osaka's racial advocacy. Osaka is a leading athlete who has explicitly shown support for BLM, a movement against racism. She has continuously engaged in outreach on racial issues. One of

her most symbolic activities was her declaration that she intended to boycott the Western and Southern Open, which drew considerable attention. Furthermore, at the US Open in September 2020, she appeared before each of her matches wearing a face mask that featured the names of Black victims of racism. Several of her activities represented a protest against the shooting of Jacob Blake, a Black man, by a white police officer on 23 August 2020. Along with these protests, Osaka has spread her message through social media platforms. Her advocacy has received considerable media coverage in Japan, which is the research setting for this study.

Although racism and racial discrimination are becoming increasingly prevalent and visible in Japan, the Japanese people are generally considered insensitive to racism in their country (Iwabuchi and Takezawa 2015). Additionally, not many celebrities address political issues in Japan and other Asian nations (Deflem 2022b). Given this cultural background, it is believed that Osaka's message highlighted her belief and motivated people to be aware of racial discrimination (Deflem 2022a; Reid 2020). Consistent with the purpose of general advocacy, her messages were intended to enhance public involvement in racial issues, such as awareness, concern, knowledge, and information-seeking behavior (Brockington 2014; Ramsay 2020). These outcomes of interest are supposed to be initial steps for the Japanese, who have been relatively insensitive to racial discrimination, to think about racial issues.

4. Method

4.1. Participants and Procedure

4.1.1. Questionnaire Development and Pilot Study

To ensure the clarity of survey instruments, we began with an assessment of content and face validity using a panel of experts and a pilot study. First, our measurement tool was examined by two academic experts and eight postgraduate students in sport management for face validity, the wording in the local language, and suitability to the athlete advocacy context. Based on this panel's suggestions, we made minor changes to the item wording. Then, a pilot study was conducted to assess the instrument's readability and validity with 32 undergraduate students who were enrolled in sport management courses at a Japanese university. As a result, no concerns or issues arose in the pilot study. Through this process, the final version of the questionnaire included 23 items.

4.1.2. Main Study

For the main study, data were collected through an internet-based survey conducted by a Japanese online survey firm, executed independently of the pilot test. Participants were stratified into 12 groups by gender (female/male) and age (18–24/25–34/35–44/45–54/55–64/65–74 years). Respondents were selected in a manner to ensure that an even sample size was achieved. Potential participants received an invitation from the survey firm noting that they were eligible for a survey. To minimize self-selection bias, the survey was named "questionnaire about yourself". Participants were compensated for their participation by the survey firm.

Overall, 2834 respondents answered the first question, which concerned whether they were aware of Osaka's advocacy. We included respondents who reported awareness of Osaka's advocacy in this analysis to achieve the research purpose. Furthermore, to reduce the risk of respondents providing insincere responses, some items included an "I do not know" response option; we excluded respondents who answered, "I do not know", which further assured that the results were representative of "aware" subjects. Then, those who answered incorrectly to the screening question (i.e., "Please answer X to this question") in the questionnaire and those whose responses were extremely consistent (i.e., those who answered the same anchor for most questions) were excluded from the data analysis. This procedure led to the final sample size of 855; the data did not include any missing values.

To ensure the validity of the cross-sectional study, we randomly divided the sample of 855 participants into test and validation samples: sample A (n = 428) and sample B (n = 427), respectively. The sample size exceeded the minimum recommended size of 161

based on the item/variable ratio (Westland 2010). We then assessed the homogeneity of the two samples by conducting chi-square tests and a t-test for personal attributes (Table 1). No differences were shown between the groups regarding any of the characteristics.

Table 1. Sample characteristics.

Variables	Description	Sample A		Sample B		Difference Test
		n	%	n	%	
Gender	Female	236	55.1	215	50.4	1.97 [a, n.s.]
	Male	192	44.9	212	49.6	
Age	Average age	49.6		49.4		0.16 [b, n.s.]
Employment	Full-time	183	42.8	177	41.5	0.15 [a, n.s.]
	Other	245	57.2	250	58.5	
Education	Four-year university degree or more	216	50.5	228	53.4	0.73 [a, n.s.]
	Other	212	49.5	199	46.6	
Marital status	Married	274	64.0	286	67.0	0.82 [a, n.s.]
	Other	154	36.0	141	33.0	
Income	Less than 4 million JPY	155	36.2	156	36.5	5.05 [a, n.s.]
	4–8 million JPY	171	40.0	144	33.7	
	More than 8 million JPY	102	23.8	127	29.7	

Note. JPY = Japanese Yen; there were no differences for any characteristics difference between sample A (n = 428) and sample B (n = 427); [n.s.] not significant; [a] χ^2-value, [b] *t*-value.

4.2. Measures

This study examined how athlete advocacy encourages the public to become involved in racial issues; this was performed by analyzing the relationships among multiple sociopsychological constructs: public issue involvement, personal issue relevance, and perceptions regarding athletes' credibility, hypocrisy, cause fit, effort expended, and role model status. Except for perceived credibility, all variables were measured using a seven-point Likert scale ranging from 1 ("strongly disagree") to 7 ("strongly agree"); perceived credibility was assessed using a seven-point semantic differential scale. All items are listed in Table 2.

We constructed a four-item scale to assess public issue involvement, indicating individuals' cognitive, affective, and behavioral engagements in racial issues. The items were extracted from empirical (Austin et al. 2008; Becker 2012; Casey et al. 2003; Nownes 2021) and descriptive (Babiak et al. 2012; Yan et al. 2018) studies of celebrity and athlete advocacy, reflecting the following aspects: awareness, concern, knowledge, and information-seeking.

As the concepts represent the receivers' evaluations of advocate athletes, we adopted perceived credibility and hypocrisy. Perceived credibility was measured using a six-item scale modified from Ohanian (1990) that focused on receivers' evaluations of celebrity credibility. These items were used in previous athlete endorsement research (Sato et al. 2019). To measure public perception of athlete hypocrisy, we adopted three items from Wagner et al. (2009); given that these items were initially developed in the CSR context, we modified them to reflect athlete advocacy.

The perceived fit between Osaka and her advocacy was measured using two items sourced from the literature (Kim and Na 2007). Perceived effort was measured using two items developed by Mohr and Bitner (1995). Athlete role model perception was measured using a five-item scale developed by Funahashi et al. (2015). As this scale was developed for a general Japanese athlete setting, to reflect the present research context, we modified the wording of items, changing "Japanese athletes" to "Naomi Osaka".

Finally, we included a control variable: personal issue relevance. Personal issue relevance was measured using a single item developed through consideration of previous studies (Inoue and Kent 2012; Apsler and Sears 1968).

Table 2. Standardized factor loadings (λ), average variance extracted (AVE), and composite reliability (CR) for the measurement model (Sample A: n = 428).

Constructs	Items	λ	AVE	CR
Perceived credibility (PC)	PC1. Dishonest/Honest	0.77	0.71	0.94
	PC2. Insincere/Sincere	0.80		
	PC3. Untrustworthy/Trustworthy	0.87		
	PC4. Not an expert/Expert	0.82		
	PC5. Inexperienced/Experienced	0.88		
	PC6. Unqualified/Qualified	0.92		
Perceived hypocrisy (PH)	PH1. Naomi Osaka acts hypocritically.	0.88	0.72	0.88
	PH2. What Naomi Osaka says and does are two different things.	0.77		
	PH3. Naomi Osaka pretends to be someone that she is not.	0.88		
Perceived fit (PF)	PF1. Naomi Osaka and the BLM movement fit together well.	0.93	0.71	0.83
	PF2. Naomi Osaka and the BLM movement have a lot of similarities.	0.75		
Perceived effort (PE)	PE1. Naomi Osaka puts a lot of effort into her advocacy.	0.91	0.79	0.88
	PE2. Naomi Osaka spends much time in her advocacy.	0.87		
Athlete role model perception (ARM)	ARM1. Naomi Osaka provides a good model for me to follow.	0.93	0.84	0.96
	ARM2. Naomi Osaka leads by example.	0.89		
	ARM3. Naomi Osaka sets a positive example for others to follow.	0.90		
	ARM4. Naomi Osaka exhibits the kind of work ethic and behavior that I try to imitate.	0.92		
	ARM5. Naomi Osaka acts as a role model for me.	0.93		
Public issue involvement (PI)	PI1. I am aware of the seriousness of racial discrimination.	0.84	0.62	0.87
	PI2. I am interested in racial discrimination.	0.90		
	PI3. I know a lot about racial discrimination.	0.70		
	PI4. I actively seek out information concerning racial discrimination.	0.69		
Personal relevance (PR)	PR1. The condition of racial discrimination affects the quality of my life.	-	-	-

Note. Measurement model fit: χ^2/df = 3.66 (769.30/210), $p < 0.001$; CFI = 0.94; TLI = 0.92; RMSEA = 0.079; SRMR = 0.049; all standardized factor loadings (λ) were significant ($p < 0.001$).

4.3. Data Analysis

For the preliminary analysis, we first examined the normality of the data using the Skewness–kurtosis test (Table A1). The skewness values were less than 3 (from −0.78 to 0.67), and the kurtosis values were less than 7 (from −0.51 to 1.06), indicating that the data were normally distributed (Kim 2013).

Before testing the proposed hypotheses, a confirmatory factor analysis (CFA) was performed using Sample A to assess the adequacy of all constructs. The appropriateness of the measurement model was assessed using the criteria of the overall model fit index, composite reliability (CR), convergent validity, and discriminant validity. We defined the cut-off values for the fit indices as follows: χ^2/df: ≤ 5, confirmatory fit index (CFI) and Tucker–Lewis index (TLI): ≥ 0.90, root mean square error of approximation (RMSEA): ≤ 0.08, and standardized root mean square residual (SRMR): ≤ 0.10 (Hair et al. 2010; Kline 2016). We also tested the replicability of the measurement model using another CFA with Sample B. Then, we employed structural equation modeling (SEM) to examine the hypothesized relationships. The structural model's overall fit was assessed using the same indices and criteria (χ^2/df, CFI, TLI, RMSEA, and SRMR) as the measurement model test.

4.4. Common Method Variance

As the independent and dependent variables were taken from the same sample, it was necessary to consider the potential impact of common method variance (CMV). We applied the following procedures to minimize CMV: (1) notifying respondents that their responses were anonymous and that the data would be treated confidentially; (2) informing respondents that there were no right or wrong answers; and (3) randomizing the order of some

scale items to control for possible item order effects. Furthermore, we employed Harman's single-factor test as a post hoc statistical procedure. An exploratory factor analysis using the unrotated principal axis factoring method was conducted on all psychological measurements (k = 23); multiple factors were identified. The value of the Kaiser–Meyer–Olkin measure was 0.93, indicating that it was an adequate sample size for the factor analysis. Bartlett's test of sphericity (χ^2 = 16333.61, df = 253, $p < 0.001$) indicated that the sample was suitable for the factor analysis. The first factor accounted for 44.87% of the total variance, below the criterion value of 50%, indicating that no dominant factor was identified. These results indicated that CMV bias was not a serious problem affecting the validity of this study (Podsakoff et al. 2003).

5. Results

5.1. Measurement Model

To assess the measurement model, CFA with maximum likelihood estimation was conducted using Sample A (Table 2). The goodness-of-fit indices indicated that the overall fit of the measurement model was good (χ^2/df = 769.30/210 = 3.66, $p < 0.001$, CFI = 0.94, TLI = 0.92, RMSEA = 0.079, SRMR = 0.049). We then examined the reliability, convergent validity, and discriminant validity (Tables 2 and 3). The composite reliability (CR) values for all seven constructs ranged from 0.83 to 0.96, exceeding the threshold of 0.70 (MacKenzie et al. 2011). All factor loadings were within the acceptable range (0.70–0.93). The average variance extracted (AVE) for all constructs (0.62–0.84) exceeded 0.50, indicating acceptable convergent validity (Hair et al. 2010). All correlations were less than the cut-off point of 0.85 (Kline 2016). Across all pairs of constructs, the square root of the AVE was greater than the correlation coefficient (Fornell and Larcker 1981). The results showed acceptable internal consistency, convergent validity, and discriminant validity.

Table 3. Descriptive statistics and correlations of the constructs (Sample A: n = 428).

Constructs	Mean	SD	Correlation Matrix						
			1	2	3	4	5	6	7
1. Perceived credibility	5.03	1.14	***0.85***						
2. Perceived hypocrisy	2.60	1.12	−0.67 ***	***0.85***					
3. Perceived fit	4.77	1.04	0.73 ***	−0.60 ***	***0.84***				
4. Perceived effort	4.78	1.00	0.52 ***	−0.48 ***	0.72 ***	***0.89***			
5. Athlete role model perception	4.46	1.34	0.75 ***	−0.58 ***	0.62 ***	0.42 ***	***0.92***		
6. Public issue involvement	3.97	1.06	0.38 ***	−0.36 ***	0.39 ***	0.40 ***	0.51 ***	***0.79***	
7. Personal relevance	3.48	1.53	0.15 **	−0.06	0.11 *	0.15 **	0.35 ***	0.47 ***	-

Note. The diagonal (in bold and italics) shows the square root of AVE for each construct; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

To assess the replicability of the measurement model constructed in the previous CFA using sample A, another CFA was conducted using sample B (n = 427). The fit of the measurement model was satisfactory (χ^2/df = 712.62/210 = 3.39, $p < 0.001$, CFI = 0.93, TLI = 0.92, RMSEA = 0.075, SRMR = 0.052). These results suggest that the measurement model exhibits replicability for different samples.

5.2. Structural Model

For hypothesis testing, SEM with maximum likelihood estimation was performed using Sample B (Figure 1). A control variable (i.e., personal relevance) was included to examine the hypothesized relationships more rigorously. The goodness-of-fit of the structural model was acceptable (χ^2/df = 801.46/214 = 3.75, $p < 0.001$, CFI = 0.92, TLI = 0.91, RMSEA = 0.080, SRMR = 0.066). Table 4 provides the results of the hypothesized path, followed by the effect of the control variable on the receivers' evaluations of the advocate athlete (i.e., perceived credibility and hypocrisy) and advocacy outcome (i.e.,

public issue involvement). The structural model accounted for 64.5% of the variance in perceived credibility, 29.0% in perceived hypocrisy, and 32.8% in public involvement in racial issues.

Table 4. Standardized results of the structural model (Sample B: n = 427).

	Antecedents	Consequences	β	SE	Hypothesis
Hypothesized direct effects					
H1	Perceived credibility	Public issue involvement	0.29 ***	0.05	Supported
H2	Perceived hypocrisy	Public issue involvement	−0.18 ***	0.08	Supported
H3	Perceived fit	Perceived credibility	0.39 ***	0.05	Supported
H4	Perceived fit	Perceived hypocrisy	−0.20 *	0.08	Supported
H5	Perceived effort	Perceived credibility	0.03	0.05	Rejected
H6	Perceived effort	Perceived hypocrisy	0.07	0.09	Rejected
H7	Athlete role model perception	Perceived credibility	0.48 ***	0.04	Supported
H8	Athlete role model perception	Perceived hypocrisy	−0.45 ***	0.06	Supported
Effects of control variable on athlete evaluations and advocacy outcome					
	Personal relevance	Perceived credibility	−0.01	0.02	
		Perceived hypocrisy	0.07	0.04	
		Public issue involvement	0.37 ***	0.03	
Squared Multiple Correlations (R^2)					
	Perceived credibility		0.65		
	Perceived hypocrisy		0.29		
	Public issue involvement		0.33		

Note. Structural model fit: χ^2/df = 3.75 (801.46/214), $p < 0.001$; CFI = 0.92; TLI = 0.91; RMSEA = 0.080; SRMR = 0.066; β = Standardized coefficients; * $p < 0.05$; *** $p < 0.001$.

Perceived credibility was positively associated with public involvement in racial issues ($\beta_{H1} = 0.29$, $p < 0.001$), supporting H1. Perceived hypocrisy had a significant negative association with public involvement ($\beta_{H2} = -0.18$, $p < 0.001$), confirming H2. Perceived fit was significantly associated with perceived credibility ($\beta_{H3} = 0.39$, $p < 0.001$) and hypocrisy ($\beta_{H4} = -0.20$, $p = 0.014$), confirming H3 and H4. However, perceived effort was not a significant predictor of perceived credibility ($\beta_{H5} = 0.03$, $p = 0.54$) or perceived hypocrisy ($\beta_{H6} = 0.07$, $p = 0.32$), rejecting H5 and H6. Athlete role model perception was significantly associated with perceived credibility ($\beta_{H7} = 0.48$, $p < 0.001$) and perceived hypocrisy ($\beta_{H8} = -0.45$, $p < 0.001$), supporting H7 and H8.

Finally, we examined the effects of the control variable on source evaluations and the advocacy outcome. Personal relevance was considered a control variable that might confound the results of the hypothesized model. The analysis indicated that personal relevance ($\beta = 0.37$, $p < 0.001$) was significantly associated with public involvement in racial issues.

5.3. Mediation Analysis

The proposed model implies that perceived credibility and hypocrisy mediate the effects of perceived fit, perceived effort, and athlete role model perception on public issue involvement (Table 5). We employed bootstrapping estimation with 5000 resamples to calculate bias-corrected 95% confidence intervals (CIs) for indirect effects. This analysis was based on the structural model with the control variable. Perceived fit was significantly related to public involvement in racial issues, mediated by perceived credibility (β = 0.12, $p < 0.001$, 95% CI [0.06, 0.22]) and perceived hypocrisy (β = 0.04, $p = 0.04$, 95% CI [0.001, 0.11]). Additionally, athlete role model perception was positively associated with advocacy outcomes through perceived credibility (β = 0.12, $p = 0.004$, 95% CI [0.07, 0.20]) and hypocrisy (β = 0.07, $p = 0.011$, 95% CI [0.02, 0.14]). Conversely, we found no significant indirect effects of perceived effort on public involvement through perceived credibility (β = 0.01, $p = 0.54$, 95% CI [−0.04, 0.06]) and hypocrisy (β = −0.01, $p = 0.36$, 95% CI [−0.08, 0.02]).

Table 5. Results of mediation analyses (Sample B: n = 427).

Paths	β	SE	95% CI Lower	95% CI Upper
Perceived fit → Perceived credibility → Public issue involvement	0.12 ***	0.07	0.06	0.22
Perceived fit → Perceived hypocrisy → Public issue involvement	0.04 *	0.03	0.00	0.11
Perceived effort → Perceived credibility → Public issue involvement	0.01	0.05	−0.04	0.06
Perceived effort → Perceived hypocrisy → Public issue involvement	−0.01	0.03	−0.08	0.02
Athlete role model perception → Perceived credibility → Public issue involvement	0.12 **	0.04	0.07	0.20
Athlete role model perception → Perceived hypocrisy → Public issue involvement	0.07 *	0.03	0.02	0.14

Constructs	Direct Effect	Indirect Effect	Total Effect
Perceived credibility	0.39	-	0.39
Perceived hypocrisy	−0.17	-	−0.17
Perceived fit	-	0.15	0.15
Perceived effort	-	−0.004	−0.004
Athlete role model perception	-	0.19	0.19
Personal relevance	0.26	−0.01	0.25

Note. β = unstandardized coefficients. CI = confidence interval; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

6. Discussion

Researchers have anecdotally argued that athlete advocacy can drive the public's cognitive, affective, and behavioral involvement in social issues (Babiak et al. 2012; Cunningham et al. 2021; Pelak 2005). Thus, it is important to examine how advocate athletes can develop their persuasiveness. The present study aimed to examine how the evaluations of advocate athletes function in motivating the public's issue involvement, focusing on Naomi Osaka's racial advocacy in the Japanese context.

The present study contributes to the literature on athletes' social influences by answering the question: "How do the evaluations of advocate athletes function in fostering public issue involvement?" To elaborate, the theoretical foundations we adopted in this study (i.e., balance theory and attribution theory) advance our understanding by explaining the persuasive function of source evaluation in athlete advocacy. Using balance theory (Heider 1946; Mowen 1980), we identified the effect of source evaluation (i.e., perceived credibility and hypocrisy) on the social outcomes of athlete advocacy (i.e., public issue involvement). Although most studies (Amos et al. 2008; Halder et al. 2021) in this field have focused on the positive aspects of information sources, this study introduced the concept of source hypocrisy, which is the public's ethics-based evaluations. The observation that perceived hypocrisy functions to enhance persuasiveness similarly to perceived credibility illuminates the role of the public's ethical evaluation in issue advocacy. This finding contributes to establishing a multidimensional view of source evaluations, and theoretically advances the literature on the source effects in issue advocacy (Jain et al. 2021; Samman et al. 2009). From the attribution theory perspective (Heider 1958; Kelley 1973), we examined whether perceptions of athlete–cause fit, effort expended, and role model status are determinants of evaluations of advocate athletes. Our findings highlight the role of interactions among the communicator, receiver, and content and empirically illustrate the functions of these attributes in the context of athletes' issue advocacy (Haley 1996; Inoue and Kent 2014). The findings are further discussed in the following sections by referring to the existing literature.

Consistent with balance theory, we found that perceived credibility is positively associated with public issue involvement, whereas perceived hypocrisy is negatively related. These results indicate that, in interpersonal relationships, perceived credibility and hypocrisy are significantly associated with the outcome of athlete advocacy (i.e., raising the public's cognitive concern, providing issue knowledge, and encouraging information-seeking behavior). This empirical evidence supports the existing literature (Amos et al. 2008; Halder et al. 2021; Ohanian 1990) that argues that perceived credibility is a significant

determinant of persuasion effectiveness. Additionally, the findings provide empirical insights into findings from descriptive studies concerning public skepticism of celebrity engagement (Robeers and Van den Bulck 2021; Samman et al. 2009). This result may be somewhat due to the context of this study. Respondents could have prioritized their perception of the source (i.e., Naomi Osaka) in their acceptance of persuasion because racial issues may be considered as not so critical in Japan's social circumstances (Iwabuchi and Takezawa 2015). Moreover, our findings lead to the idea that Osaka needs to be perceived as credible, knowledgeable, and non-hypocritical to raise public cognitive, emotional, and behavioral engagement in racial issues. Although athletes are not always technical experts on social issues (Sports Philanthropy Project 2011), this idea would be helpful for other athletes who are seeking to promote effective issue advocacy.

This study showed that perceived athlete–cause fit is significantly related to athletes' credibility and hypocrisy. This result indicates that individuals who perceive athlete–cause fit as high tend to evaluate athletes' credibility and hypocrisy positively, supporting previous research on celebrities' involvement in social issues (Bergkvist et al. 2016; Garcia de los Salmones et al. 2013; Ilicic and Baxter 2014). This observation is consistent with attribution theory and can be interpreted as indicating that a strong perceived fit between athletes and racial issues facilitates a positive evaluation of the advocate athletes. It is clear that communicator characteristics, such as race and identity, matter in public perceptions (Deflem 2022a; McCracken 1989). In this study's context, Naomi Osaka highlighted the compatibility of her BLM support with the statement, "before I am an athlete, I am a Black woman". (Jurejko 2020). This communication, which aims to stress the athlete–issue congruence, can be considered a strategy for improving her reputation as an advocate.

Meanwhile, the results also implied that perceptions of the effort athletes devoted to social issues might not be a determinant factor in evaluating athlete advocacy. Although this finding contradicts our hypothesis, it can be interpreted from multiple perspectives. First, the "discounting principle", a psychological mechanism for evaluating and reasoning about others, may provide a better explanation for our results. This principle proposes that when one cause of a phenomenon is emphasized, the perceived influence of other causes diminishes (Kelley 1973). Our findings might reveal a discounting of the role of perceived effort due to the prominence of other causes, such as perceived fit and athlete role model status. Additionally, we should consider the possibility of a backlash against athlete advocacy. Generally, the amount of effort expended is positively related to the effectiveness of messages (Du et al. 2010); however, athletes who engage excessively in racial issues may receive public criticism and institutional sanctions (Kaufman 2008). Indeed, after Osaka expressed her support for BLM by declaring her intention to withdraw from a tournament, she faced not only praise but also considerable criticism for bringing politics into sport (McNeil 2020). This complicated structure regarding athletes' advocacy may distort people's evaluations of advocates.

Finally, this study revealed that the receiver's perception of an advocate athlete's role model status determines perceived credibility and hypocrisy and is indirectly related to involvement in racial issues. These results provide empirical support for role models' influence in observational learning (Bandura 2001). The finding that whether athletes are perceived as positive role models indirectly determines the effectiveness of issue advocacy extends our understanding of athletes' social influences (Bush et al. 2004; Dix et al. 2010). As celebrities in Japan have not often engaged in advocacy and activism, some participants might have recognized Osaka as a notable advocate due to her role model attributes, such as the uniqueness of her resistance to racism besides on-the-field successes (Deflem 2022b). Meanwhile, for participants who do not value issue engagement in the role model element of athletes, Osaka's advocacy effort can be a potential cause for discomfort, which leads to a negative evaluation. Given the association between role model status and source evaluation, future research should focus on how athletes become perceived as positive role models.

This study has several implications for athletes who engage in advocacy and seek to facilitate their fame as a vehicle for promoting social and political causes. A point worth noting is that not all athletes address political and institutional issues. Furthermore, "athletes should not be required—or even expected—to take public stances on issues important to them and/or their communities" (Coombs and Cassilo 2017, p. 439). However, athletes who decide to advocate social issues can be agents for motivating the public to be involved in social and political issues (Agyemang et al. 2020; Kaufman 2008; Pelak 2005). Therefore, a discussion on how advocate athletes can enhance the persuasiveness of their messages is needed. The current study showed that the outcome of advocacy is related to the receivers' evaluations of advocate athletes. In addition, our data revealed that advocacy appeals that lack of perceived congruence between the athlete and the issue can promote public skepticism, resulting in negative judgments of the advocacy effort. Hence, athletes should carefully consider the social issues they involve themselves in. Moreover, establishing athletes as role models is vital for communicating social issues. Our findings suggest that athletes should aim to be regarded as good role models in society to enhance their effectiveness in advocating issues. Our data imply that deviant behavior that damages athletes' images can hinder the success of their advocacy. This observation indicates that athletes must seek to understand who perceives them as role models and how.

7. Conclusions

This study provides evidence on the function of source evaluation in fostering public issue involvement through the lens of balance theory and attribution theory. This study showed that the perceived credibility and hypocrisy of advocate athletes are directly related to individuals' involvement in racial issues. Additionally, these public evaluations of athlete advocacy could be influenced by the athletes–cause fit and their perceptions as role models. The findings of this study enrich the literature on the management of sports for social change by demonstrating the importance of source evaluation in athlete advocacy in achieving advocacy outcomes. Further, these findings may help athletes seeking to fight against social issues develop an effective strategy for promoting issue advocacy.

This study contained several limitations. First, we focused on one case of athlete advocacy (Naomi Osaka and racial issues); thus, although this study provides a unique contribution to clarifying the Japanese response to athlete advocacy, caution should be exercised regarding generalizing the results. Future research could investigate the function of source evaluation in athlete advocacy across different settings and issues. Second, as self-reported questions were used to identify respondents who were aware of Osaka's advocacy, we could not consider the channel through which respondents received this information. As consumers respond differently to athlete advocacy depending on media framing (Park et al. 2020), further investigation of message channels is necessary. Third, as this study could not address actual behavior, there remains space for a better understanding of the link to individuals' political participation, such as donations, volunteering, and social activism. Fourth, this study focused on specific source evaluations of advocate athletes (i.e., credibility and hypocrisy). However, the existing literature (Amos et al. 2008; Hovland et al. 1953) indicates that the persuasiveness of celebrities' messages is associated with other persuasion components (e.g., source attractiveness, on-the-field performance, and message content). Therefore, future research could investigate the effects of diverse persuasion components to fully understand the dynamics of athlete advocacy. Finally, although this study used balance theory and attribution theory to understand the mechanism of influence of athlete advocacy, this result does not fully identify causal relationships. In other words, we cannot deny the causal relationship that individuals' strong involvement in racial issues increases the reputation of advocate athletes. As Knoll and Matthes (2017) highlighted, the effectiveness of celebrity endorsements remains controversial; therefore, future research should examine the effectiveness and dynamics of athlete advocacy using methods that provide greater internal validity.

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Appendix A

Table A1. Descriptive statistics (all sample: n = 855).

Constructs	Items	Mean	SD	Skewness	Kurtosis
Perceived credibility (PC)	PC1	5.47	1.21	−0.76	0.92
	PC2	5.39	1.21	−0.68	0.54
	PC3	5.24	1.29	−0.78	0.75
	PC4	4.50	1.28	−0.18	0.25
	PC5	4.73	1.26	−0.37	0.42
	PC6	5.15	1.28	−0.51	0.23
Perceived hypocrisy (PH)	PH1	2.56	1.25	0.61	0.08
	PH2	2.73	1.31	0.67	0.26
	PH3	2.57	1.21	0.62	0.18
Perceived fit (PF)	PF1	4.96	1.13	−0.44	0.57
	PF2	4.64	1.09	−0.38	1.06
Perceived effort (PE)	PE1	4.95	1.07	−0.23	0.34
	PE2	4.59	1.02	0.01	0.49
Athlete role model perception (ARM)	ARM1	4.28	1.40	−0.28	−0.03
	ARM2	4.61	1.39	−0.45	0.07
	ARM3	4.74	1.40	−0.54	0.20
	ARM4	4.31	1.40	−0.30	−0.05
	ARM5	4.32	1.40	−0.27	−0.15
Public issue involvement (PI)	PI1	4.53	1.22	−0.48	0.14
	PI2	4.42	1.24	−0.46	0.09
	PI3	3.69	1.24	−0.06	−0.18
	PI4	3.11	1.28	0.22	−0.25
Personal relevance (PR)	PR1	3.48	1.53	0.25	−0.51

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Athlete Perceptions of Governance-Related Issues to Sexual Abuse in Sport

Jörg Krieger [1,*] and Lindsay Parks Pieper [2]

[1] Department of Public Health, Aarhus University, Dalgas Avenue 4, 8000 Aarhus, Denmark
[2] Department of Sport Management, University of Lynchburg, 1501 Lakeside Drive, Lynchburg, VA 24501-3113, USA
* Correspondence: krieger@ph.au.dk

Abstract: Cases of abuse in sport have emerged with frightening regularity over the past two decades. Scholarship has identified risk factors that can help facilitate abuse in sport and has explored athletes' experiences with sexual abuse. However, less is known about athletes' perceptions of the systematic organizational-level problems that fail to curtail sexual abuse. This article, therefore, explores what athletes believe to be the key issues in governance that facilitate sexual abuse in sport. An analysis of the lawsuits that athletes filed against US sport organizations and the testimonies they provided to the US Congress from 2017 to 2022 show four primary ways in which organizational culture, decisions and policies helped permit misconduct in sport. Athlete perspectives suggest governance issues related to monopolistic power structures, a lack of athlete representation, conflicts of interest, and commercialization facilitated an abuse-prone culture within Olympic and Paralympic sport in the United States. These findings show that athletes feel that the adjudication mechanisms that remain connected to sport bodies do not always curtail abuse.

Keywords: safe sport; abuse; sexual assault; governance

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1. Introduction

Cases of sexual abuse in sport have emerged with frightening regularity over the past two decades. Researchers have, therefore, identified risk factors that can help facilitate abuse in sport in an effort to remedy them. These include the prioritization of performance over athlete well-being (Parent and Demers 2010), coach influence and authority over athletes (Stirling and Kerr 2009), limited guardian or parental oversight of training (Stirling and Kerr 2009), and unequal gender dynamics (Messner 1990). Cense and Brackenridge (2001) also suggest that the authoritarian leadership culture of sport creates a system with potential for abuse.

More recently, scholars have identified links between abuse and governance, or the "exercise of power and authority in sport organizations" (Hums and MacLean 2018, p. 4). For example, Edelman and Pacella (2019) posit that the inability of USA Gymnastics to identify and detect the sexual abuse of hundreds of gymnasts over several decades at least partially stemmed from the organization's failures in governance, including internal power inequities and a lack of adequate reporting channels. Nite and Nauright (2020) similarly argue that organizational practices, such as hierarchical structures, disciplinary practices, the valorization of leaders, and the silencing of victims, can also perpetuate sexual abuse. Such studies suggest that governance is another important consideration in detecting and preventing abuse.

Yet, what remains less explored is athletes' understanding of the governance-related issues that facilitate sexual abuse in sport. Scholarship that includes athletes' views most often focus on their experiences of (Bisgaard and Støckel 2019), coping mechanisms for (Kavanagh et al. 2017), and effects of abuse (Wilinsky and McCabe 2021). Research has also

emerged on the rise of athletes speaking out against the current governance mechanisms in Olympic sports and their demands for increased representation (Seltmann 2021a). However, questions remain in terms of what athletes believe to be the systematic problems in sport, and how its organizations exercise power and authority in handling sexual abuse. This paper therefore asks: what do athletes perceive to be the key issues in governance that facilitate sexual abuse in sport?

To answer this question, we analyzed the lawsuits athletes filed against US sport organizations and the testimonies they provided to the US Congress. From 2017 to 2022, hundreds of athletes filed lawsuits against thirteen National Governing Bodies (NGBs) for failing to protect them from sexual abuse. During that same period, Congressional committees and subcommittees held seven hearings to rectify rampant sexual abuse in sport and invited athletes to share their experiences. Taken together, athlete insights demonstrate links between breaches of governance and the facilitation of sexual abuse. Athletes identify four primary ways in which organizational culture, decisions, and policies helped permit misconduct in sport. Governance issues related to monopolistic power structures, a lack of athlete representation, conflicts of interest, and commercialization helped facilitate an abuse-prone culture within Olympic and Paralympic sport in the United States. These findings show that athletes feel that the adjudication mechanisms that remain connected to sport bodies do not always curtail abuse. We therefore call for an outsourcing of abuse allegations, as well as for the establishment of an independent body to represent athletes, in order to prevent and resolve sexual misconduct in sport more effectively.

2. Literature Review

Many people tout the virtues of sports participation; however, evidence suggests that sport can also induce various types of harm. Along with other pervasive problems such as sexism, racism, and violence, issues of abuse are omnipresent in sport. Based on definitions by the World Health Organization, researchers have identified four primary forms of abuse: psychological abuse, physical abuse, neglect, and sexual abuse (Krug et al. 2004). Studies suggest that all four types of abuse remain prevalent in sport, despite an array of remedial efforts. For example, Hartill et al.'s (2021) study of abuse in six European countries found that 65 percent of children experienced psychological violence, 44 percent experienced physical violence, 37 percent experienced neglect, 35 percent non-contact sexual violence, and 20 percent experienced contact sexual violence. Similar trends hold true in other countries. Vertommen et al. (2016) found that 38 percent of Dutch and Belgian children experienced psychological violence, 14 percent experienced sexual violence, and 11 percent experienced physical violence. In Germany, 38 percent of athletes reported experiencing at least one sexual violence situation (Ohlert et al. 2017). Though psychological abuse, physical abuse, and neglect are serious problems that continue to harm athletes, academics and sport organizations have most frequently focused on sexual abuse (Kerr and Kerr 2020).

As a result, research on sexual abuse in sport often strives to identify the characteristics of sport that help foster an abuse-prone culture. Sexual abuse in this article is defined as "any conduct of a sexual nature, whether non-contact, contact or penetrative, where consent is coerced/manipulated or is not or cannot be given" (Mountjoy et al. 2016, p. 1021; Koontz et al. 2021, p. 132). While no single explanation is sufficient on its own (Brackenridge and Rhind 2014; Bowling and Beehr 2006), scholars often categorize identifiers into three interconnected realms: individual factors, sporting culture, and structures and procedures (Roberts et al. 2020). Studies show an assortment of behavioral, contextual, and motivational influences for those who commit acts of sexual abuse (Messner 1990; Cheever and Eisenberg 2022). Cense and Brackenridge (2001) outlined a model to help identify potential risks in sport, which identified perpetrators' sex, age, status, and previous record of sexual crimes, among others, as potential factors. Other studies confirm that most acts of sexual violence in sport are conducted by men (Vertommen et al. 2016), who oftentimes have high status in the sport community (Bisgaard and Støckel 2019).

The culture of sport itself has also received significant attention as a contributing factor for sexual abuse. Numerous studies argue that the power imbalance between athletes and coaches or administrators can help facilitate sexual abuse (Brackenridge et al. 2008; Stirling and Kerr 2009; Roberts et al. 2020; Wilinsky and McCabe 2021; Gaedicke et al. 2021). Coaches assume guardian-like supervisory responsibilities over young athletes (Ecorys and Vertommen 2019); therefore, they not only hold significant authority, but also form close relationships with dependency. Some abusers use this influence to "groom" athletes, which entails gaining trust, developing isolation, initiating sexual abuse, and ensuring secrecy (Bjørnseth and Szabo 2018; Gaedicke et al. 2021). Scholars have identified that power relations are a significant factor of abuse in numerous cultures, including German sport (Gaedicke et al. 2021), Portuguese sport (Alexandre et al. 2022), Turkish sport (Çetin and Hacısoftaoğlu 2020), and US sport (Eiler et al. 2018). Moreover, the prioritization of athletic success over athlete well-being has been identified as an additional contributing factor, particularly when abusers are renowned individuals in the sport community (Parent and Demers 2010).

Finally, burgeoning research illustrates the role of organizational culture in the facilitation of abuse. Mountjoy et al. (2016) note that "sexual harassment and abuse in sport stem from abuses of power relations facilitated by an organisational culture that ignores, denies, fails to prevent, or even tacitly accepts such problems" (p. 1020). Roberts et al.'s systematic review of relevant scholarship found that organizational tolerance oftentimes precedes abuse. The authors identified four interrelated beliefs that encourage sport organizations to tolerate misconduct: the lack of punishment for abusers, the abusive treatment of reporters of abuse, the silencing of victims and bystanders, and the lack of clarity about the forms of behavior that constitute abuse. The in-depth case studies by Nite and Nauright (2020) provide further insights into systemic, governance issues. They explored how organizational practices within three US universities permitted and legitimized abuse. First, power imbalances between the universities and the victims meant that the former had the ability to control investigations to their benefit. Second, universities mobilized their extensive resources to silence victims, oftentimes valorizing the individuals identified as abusers. Third, administrators colluded to protect themselves from scrutiny. Only after external sources exposed abuses did the institutional structures protecting the abusers break.

Despite the importance of organizational culture in the facilitation of sexual abuse, remedies in this area are oftentimes not considered as solutions. Kerr and Kerr (2020) show that most initiatives target individual-level factors (i.e., athletes) through educational programs and the athletes' entourage (i.e., families, teachers, coaches). Sport organizations implement protective policies, but oftentimes do not consider how organizational governance perpetuates abuse. This paper, therefore, analyzes athletes' understanding of the links between sexual abuse and US NGB organizational decision-making processes to identify common breaches of governance that helps facilitate sexual abuse in sport.

3. Conceptual Framework: Organizational Governance

Despite its importance, defining sport governance has proven elusive and confusing. The term first gained prominence during the 1990s, when traditionally self-governed sport organizations increasingly engaged with commercial and political stakeholders. Since then, sport scholars have outlined a range of definitions. For example, Ferkins et al. (2009) define sport governance as "the responsibility for the functioning and overall direction of the organization"(p. 245). Hoye and Cuskelly (2007) posit that it entails "the structure and process used by an organization to develop its strategic goals and direction, monitor its performance against these goals and ensure that its board acts in the best interests of the members" (p. 9). As Dowling et al. (2018) found in their assessment of the existing sport governance literature, "definitional agreement . . . remains problematic" (p. 1).

Although ambiguity persists in a single definition of governance, scholars Henry and Lee (2004) helpfully conceptualize it as three overlapping concepts: systematic, political, and organizational governance. Systemic governance is "concerned with the competition,

cooperation and mutual adjustment between organizations in business and/or policy systems". It addresses the interplay between sporting bodies, as no single organization is "the sole author of its own sport's destiny" (p. 4). In the US context, NGBs govern sport separately, yet they coexist and maintain similar goals, all under the umbrella of the United States Olympic & Paralympic Committee (USOPC).

Political governance "is concerned with how governments or governing bodies in sport 'steer', rather than directly control, the behavior of organizations" (Henry and Lee 2004, p. 1). Within this realm, governments do not command actions, but instead use moral pressure, financial incentives, licensing agreements, regulations, etc., to influence the decisions of sport bodies. For example, Congress passed the "Protecting Young Victims from Sexual Abuse and Safe Sport Authorization Act", discussed below, which affects the actions and decisions of the USOPC and NGBs.

Organizational governance refers to "the accepted norms or values" of the entity, as well as the "conduct of processes involved in the management and direction of organisations in the sports business" (Henry and Lee 2004, p. 3). These include governing board dynamics and management behavior, "the issues surrounding the governance boards that oversee sport organizations" (Dowling et al. 2018, p. 4). These include the actions and behaviors of people in positions of power, and the enactment, or not, of rules and regulations. We use organizational governance as an umbrella concept to explore the organizational norms, practices, and decision-making processes that are linked to abuse in sport.

Henry and Lee (2004) further outline several key principles for ensuring good governance practices within organizational governance, which we argue are necessary in the handling and curtailing incidences of abuse. They suggest that sport organizations provide clarity in their procedures and treat all stakeholders, including athletes, fairly. Historically, athletes have been marginalized from governance processes in sport (Donnelly 2015). Even though national and international sport organizations are slowly committing to providing athletes with a voice, they continue to be kept away from power (Thibault et al. 2010). Henry and Lee (2004) also add that organizations must ensure equitable treatment based on gender, as well as democratic and equal access to decision-making processes for everyone in the community. Following these key principles can help dismantle power imbalances, which is essential in preventing abuse. As noted in a recent United Nations' (2021) report, (sexual) abuse and harassment are rooted in organizational culture due to influence and the gender differentials that allow the misuse of power. An assessment of the allegations within NGBs demonstrates similar organizational-level issues.

4. Safe Sport Efforts in the United States

US sport leaders at different organizational levels have introduced a variety of safe sport initiatives throughout the years. The USOPC serves as the National Olympic Committee and National Paralympic Committee for the United States, and oversees both sport movements. It directs 50 NGBs (37 Olympic summer sport NGBs, 8 Olympic winter sport NGBs, and 5 Pan American sport NGBs), which manage all aspects of particular sports in the United States. The USOPC assists NGBs with business operations and strategic planning, and provides them with funding. Together, the USOPC and NGBs have launched different safe sport programs, typically in response to the discovery of widespread abuse and coverups. Initially, safe sport programming focused on education and prevention; later it centered on external review and sanctions. Yet, athlete testimonies suggest that most efforts did not rectify governance issues related to abuse.

The USOPC convened a working group in 2010 to study sexual misconduct in sport after reports of abuse surfaced in swimming. That same year, the group released recommendations that suggested that the USOPC develop training materials and develop resources for clubs and organizations. It also encouraged NGBs to adopt policies to address abuse (Lyons 2018). In 2011, the USOPC hired a director of safe sport to develop a program that offered the recommended information and training (USOPC 2013).

In 2012, the USOPC launched Safe Sport. This initiative served as a resource to help NGBs "recognize, reduce and respond to child physical and sexual abuse and other types of misconduct in sport" (USOPC 2012a). It included a video certification training program, a website with downloadable resources, and an 80-page handbook entitled "Recognizing, Reducing and Responding to Misconduct in Sport: Creating Your Strategy". The handbook outlined six strategies and sample policies for NGBs to consider adopting. Strategies included requiring personnel to undergo training; incorporating screening practices for certain positions; defining prohibited conduct; supervising athletes during program activities; adding a reporting policy for allegations of abuse; and maintaining an evaluation plan for the organization (USOPC 2012a).

Although Safe Sport identified best practices, it did not require NGBs to implement them. Rather, the handbook was used as a resource to "guide the development, implementation and internal review of effective" practices (USOPC 2012b, p. 5). It therefore "impose[d] no obligation on any national governing body or any of its members or affiliated organizations" to follow the recommendations (USOPC 2012b, p. 9). In fact, it explicitly noted that "the organization does not need to utilize all the strategies identified in this handbook" (USOPC 2012b, p. 8). In doing so, most responses to allegations of abuse remained under the oversight of individual NGBs at this time.

In 2014, the USOPC recognized inconsistencies across NGBs in the regulation of allegations and approved the creation of an independent safe sport entity. However, it took congressional pressure for it to open. Testimonies from hundreds of girls and women about decades of systemic abuse within USA Gymnastics served as the tipping point (Hampel 2018). Congress passed the "Protecting Young Victims from Sexual Abuse and Safe Sport Authorization Act" in 2017, which established the Center as an independent organization to protect athletes in all Olympic, Paralympic, Pan American, and Para Pan American sports in the United States. It formed SafeSport as an independent organization with exclusive jurisdiction to review allegations of sexual misconduct in Olympic and Paralympic sports (Gurgis et al. 2022). The act also requires the USOPC, NGBs, and Local Affiliated Organizations (LAOs) to comply with the policies and procedures of the Center. This includes following the "SafeSport Code", which outlines prohibited categories of conduct, reporting requirements, and resolution procedures.

Participants are prohibited from engaging in ten types of conduct (see Table 1). These include behaviors "related to emotional, physical, and sexual misconduct in sport, including bullying, hazing, and harassment" (US Center for SafeSport 2022, p. 7). Of note, "Aiding and Abetting" occurs when a participant assists in the act of a prohibited conduct by another participant, allows an ineligible person to be "in any way associated with" the NGB, LAO, or USOPC, including as a coach or instructor, or allows an ineligible person to violate the terms of their punishment (US Center for SafeSport 2022, p. 15). The SafeSport Code also requires participants to report "actual or suspected Sexual Misconduct or Child Abuse to the Center" (US Center for SafeSport 2022, p. 16). The SafeSport Code aims to protect athletes from both abusers and enablers. As a result, the US Center for SafeSport received almost 5000 reports and sanctioned 627 individuals within the first two years of its existence (Kier 2020).

Despite its exclusive jurisdiction and encompassing areas of prohibited conduct, some athletes, leaders, and journalists have pointed out flaws in the SafeSport structure. One major criticism is how SafeSport is funded. In 2021, Congress mandated that the USOPC contribute $20 million annually to the center; the USOPC, in turn, required the NGBs to contribute in relation to the number of cases reported in their sport. The amount each NGB paid was based on the number of allegations it reported and the costs of investigations. In other words, the more claims filed, the higher the cost to the NGB. Such a setup potentially disincentivizes the reporting of abuse (Murphy and Madden 2022). As US gymnast Aly Raisman aptly surmised in a 2021 congressional hearing, "If you're SafeSport and you are funded by the organization you're investigating, they're likely not going to do the right thing" (Dereliction of Duty 2021).

Table 1. SafeSport Prohibited Conduct.

Criminal Charges or Dispositions
Child Abuse
Sexual Misconduct
Emotional and Physical Misconduct
Aiding and Abetting
Misconduct Related to Reporting
Misconduct Related to the Center's Process
Retaliation
Other Inappropriate Conduct
Violation of Minor Athlete Abuse Prevention Policies/Proactive Policies

A second criticism points to the ability of participants to return to the sport despite facing numerous allegations. In a 2021 letter to SafeSport, New York State Senator Alessandra R. Biaggi detailed two such incidents. Numerous allegations surfaced about two Olympians, but neither was suspended. They both competed at the Tokyo Olympics. "These reports are not only disturbing, but illustrate a pattern of shortcomings by SafeSport", she argued (Biaggi 2021, para. 5). Investigative reporting also found that an overwhelming 42% of participants who appealed a SafeSport decision had their sanctions modified, reduced, or removed (Murphy and Madden 2022). These criticisms have led some athletes to speak out against the center for not remedying issues of abuse in sport. For example, a weightlifter alleged that Safe Sport is "controlled and concocted by USOC to protect its interests, hide abusers in the ranks of NGBs, and ultimately, shield itself from public scrutiny" (Doe v. USA Weightlifting 2019).

SafeSport is, therefore, not the only option available for athletes to seek recourse for sexual abuse. Athletes not satisfied with how their NGB and/or SafeSport handles allegations can file lawsuits. In 2017, Congress enacted the "Protecting Young Victims from Sexual Abuse and Safe Sport Authorization Act". Among other things, the act amended the statute of limitations for reporting abuse, which had previously prevented victims from coming forward about past misconduct. Several athletes therefore filed lawsuits against NGBs in the years immediately following the enactment of the law. Common legal claims against the organizations include negligence and/or trafficking. Negligence refers to the failure to exhibit reasonable care. It can arise in sport-related lawsuits in relation to the lack of supervision over administrators and coaches, as well as in failing to protect athletes from emotional distress or harm. Trafficking refers to the use of coercion to obtain labor. It can arise in sport-related lawsuits when coaches force athletes to engage in sexual acts in order to compete. Lawsuits filed against NGBs not only typically include numerous causes of action, but also allow athletes to highlight systemic organizational problems.

5. Materials and Methods

This study ascertains what allegedly abused athletes believe to be the key issues in organizational governance that facilitate sexual abuse in US Olympic sport. To include athlete perspectives in the study, we assessed lawsuits filed against NGBs and athletes' testimonies before the US Congress over a five-year period. Our content analysis consisted of three steps: (1) the selection of cases of NGBs that dealt with allegations of abuse between 2017 and 2022; (2) the coding of the data collected on the different NGBs under investigation in the study; (3) and an analysis of the codes (Hall and Wright 2008).

First, we identified athletes' allegations of sexual abuse in the Olympic sport structure, as discussed in lawsuits and testimonies. We conducted a review of the lawsuits filed against NGBs from 2017 to 2022 using the Westlaw database. The 2017 starting point aligned with the Congressional enactment of the "Protecting Young Victims from Sexual Abuse and Safe Sport Authorization Act", mentioned above. We outlined two inclusion criteria for the study. One, lawsuits were included if the plaintiff filed for injuries that stemmed from experiencing sexual abuse in sport. Two, we included lawsuits that named a recognized NGB in the United States as a defendant. The criteria resulted in the identification of

lawsuits against thirteen NGBs: US Bowling Congress, US Equestrian, US Figure Skating, US Speedskating, US Tennis Association, USA Diving, USA Fencing, USA Gymnastics, USA Hockey, USA Swimming, USA Taekwondo, USA Water Polo and USA Weightlifting. All of the NGBs, with the exception of the US Bowling Congress, oversee sports on the Olympic programme. USA Gymnastics was removed from the study as the hundreds of lawsuits filed against the organization have received significant scholarly attention. Issues within other NGBs have largely been left in the shadow of the gymnastics federation. The causes of action against the twelve remaining NGBs included negligence; negligent supervision/failure to warn; negligent hiring/retention; intentional infliction of emotional distress; forced labor; and trafficking. See Table 2 for a breakdown of the legal issues filed against the twelve NGBs included in the study.[1]

Table 2. Legal Claims Filed Against NGBs, 2017 to 2022.

NGB	Legal Issue(s) against NGB
US Bowling Congress	Negligence
US Equestrian	Negligence, Negligence Supervision/Failure to Warn
US Figure Skating	Sexual Harassment; Negligence; Negligent Supervision; Negligent Hiring/Retention; Negligent Failure to Warn, Train, or Educate; Intentional Infliction of Emotional Distress; Constructive Fraud
US Speedskating	Negligence; Negligent Infliction of Emotional Distress; Intentional Infliction of Emotional Distress
US Tennis Association	Negligent Hiring, Supervision, Credentialing, and Retention; Respondeat Superior; Battery; Intentional Infliction of Emotional Distress; Negligence
USA Diving	Forced Labor; Trafficking; Trafficking with Respect to Forced Labor; Obstruction, Attempted Obstruction, and Interference with Enforcement; Negligence; Intentional Infliction of Emotional Distress; Negligent Infliction of Emotional Distress
USA Fencing	Negligence; Negligent Infliction of Emotional Distress; Sex Trafficking; Forced Labor
USA Hockey	Vicarious Liability; Intentional Infliction of Emotional Distress
USA Swimming	Sexual Assault of a Minor; Negligence;
USA Taekwondo	Forced Labor; Trafficking with Respect to Forced Labor; Sex Trafficking of Children, or by Force of Fraud or Coercion; Benefiting from a Venture that Sex Traffics Children, or by Force Fraud or Coercion
USA Water Polo	Negligence
USA Weightlifting	Gender Violence; Sexual Battery; Sexual Assault; Sexual Harrassment; Intentional Infliction of Emotional Distress; Unfair Business Practices; Breach of Fiduciary Duty; Constructive Fraud; Negligence; Negligent Supervision; Negligent Hiring/Retention; Negligent Failure to Warn

We also included athlete testimonies before Congress in our analysis. In the wake of the USA Gymnastics scandal, congressional committees and subcommittees held seven hearings about sexual abuse in sport, from 2017 to 2021. The aim of the hearings was to unearth the prevalence of sexual abuse in US sport to rectify the causes. These hearings included eight gymnasts, one speedskater, and one figure skater, who discussed the abuse they suffered and the organizational breakdowns in responding to their allegations. See Table 3 for an overview of the hearings, including the names of the athletes who testified. The testimonies of speedskater Bridie Farrell and figure skater Craig Maurizi in 2018 were particularly helpful as they provided insights into organizations besides USA Gymnastics.

Second, we conducted a textual analysis of the lawsuits and congressional testimonies. We assigned open codes to words or entire statements within the documents. No attempts to narrow down the categories were undertaken at this stage. These initial codes included labels and themes such as "NGB interference with operations", "failure to investigate", "personal connections", "competition culture", "financial interests", and "threats to individuals". Following this first order analysis, we collected our codes and collaboratively assessed whether the codes could be understood and categorized within the framework of the governance literature we had reviewed (Gioia et al. 2012). For example, we found that

our code "personal connections" correlated with issues of conflict of interest, as discussed as an indicator of poor governance in the sport governance literature (Henry and Lee 2004). Likewise, our code of "NGB interference with operations" correlated with what other scholars have identified as obscured processes (Nite and Nauright 2020). Several second-order categories were defined accordingly, and we ensured that the extraction process was led by the theoretical considerations and the existing literature (Gläser and Laudel 2009, p. 201). The categories included "distrust in organizations", "purposeful denial", "lack of oversight", "athlete representation", "no accountability", and "positions of power".

Table 3. Congressional Hearings on Sexual Abuse in Sport, 2017–2021.

Date	Sub/Committees	Title	Athletes
28 March 2017	Senate Judiciary Committee	"Protecting Young Athletes from Sexual Abuse"	Jamie Dantzscher, Jessica Howard, Dominique Moceanu
18 April 2018	Senate Commerce Subcommittee on Consumer Protection, Product Safety, Insurance, and Data Security	"Olympic Abuse: The Role of National Governing Bodies in Protecting Our Athletes"	Jamie Dantzscher, Bridie Farrell, Craig Maurizi, Jordyn Wieber
23 May 2018	House Subcommittee on Oversight and Investigations	"Examining the Olympic Community's Ability to Protect Athletes from Sexual Abuse"	(only administrators)
1 October 2018	Senate Commerce, Science, and Transportation Subcommittee on Consumer Protection, Product Safety, Insurance, and Data Security	"Protecting U.S. Amateur Athletes: Examining Abuse Prevention Efforts Across the Olympic Movement"	(only administrators)
5 February 2020	Senate Committee on Commerce, Science, and Transportation	"Athlete Safety and the Integrity of U.S. Sport"	(only administrators)
15 September 2021	Senate Judiciary Committee	"Dereliction of Duty: Examining the Inspector General's Report on the FBI's Handling of the Larry Nassar Investigation"	Simone Biles, McKayla Maroney, Maggie Nichols, Aly Raisman

Third, we contextualized the themes and jointly went back and forth between the data and the existing literature in order to distill the codes into the final four themes: (1) monopolistic power structures; (2) lack of athlete representation; (3) conflicts of interest; and (4) financial motivations. We agree with Nite and Nauright (2020) that the constant exchange between researchers on the analyses that eventually led to consensual interpretations of the data helped us to confront biases and strengthen our confidence in the findings.

6. Organizational-Level Problems

Our analysis found that athletes highlight organizational governance issues in matters of (1) monopolistic power structures; (2) lack of athlete representation; (3) conflicts of interest; and (4) financial motivations, which they believe collectively helped foster an abuse-prone culture within the NGBs.

6.1. Monopolistic Power Structures

Sport is rife with asymmetrical power dynamics, which can lay the foundation for sexual abuse. While the existing literature oftentimes points to problematic coach–athlete power differentials, imbalances exist in organizational governance as well. Several athletes alleged that the NGBs maintained internal monopolistic power structures, which helped foster and conceal abuse. As several explained in their legal filings, their only path to the Olympics and to other international sport forums was through their NGBs. This created an

insular system whereby administrators, coaches, and executives had complete control over them (United States District Court Southern District of Indiana 2018, p. 4; Olympic Abuse 2018). Such a setup renders athletes powerless.

Athletes said they therefore had to remain silent to remain in the system. For example, the figure skater Craig Maurizi testified before Congress that he did not report the abuse he experienced by his coach because "[he] believed the Federation and [his] coach were in cahoots. The Federation was all powerful and could make or break [his] career" (Olympic Abuse 2018, p. 57). Other athletes made similar claims (Does v. Robert Piraino 2022; United States District Court District of Colorado 2018). This type of organizational structure "creates a monopoly-like situation" that exposes vulnerable athletes "to a very dangerous dynamic in which they are forced to do anything their coaches" or NGB executives say (United States District Court Southern District of Indiana 2018, p. 4). The lawsuits and athlete testimonies illustrate a lack of available options for victims outside of those overseen by the NGBs and/or USOPC.

6.1.1. Internal Discipline and Obscured Processes

Moreover, athletes said that those who do report abuse are oftentimes "met with obstruction, denials, and cover-ups" (United States District Court Southern District of Indiana 2018, p. 5). This finding mirrors Nite and Nauright's (2020) five themes, identified above, that help perpetuate abuse in sport. The lawsuits suggested several NGBs responded to allegations of abuse with internal disciplinary measures—non-publicized suspensions and/or internal reprimands. As found in Nite and Nauright's analysis, such actions not only failed to solve the root issue, but frequently allowed the perpetrator to remain in the sport. For example, plaintiffs in a lawsuit against USA Taekwondo alleged that athletes came forward with accusations against a fellow athlete regarding non-consensual and uninvited sexual advances. A 2016 ethics panel found this athlete guilty and the board suspended him for five years. However, the NGB neither publicized nor informed the USOPC of the decision, and he was allowed to attend the Rio Olympics. He later participated in the world championships as a member of another country's coaching staff (United States District Court District of Colorado 2018). As another example, after two speedskaters came forward with allegations in 2013, US Speedskating announced an investigation, but never disclosed its findings nor issued public statements. The individual accused of abuse quietly forfeited his membership to the NGB in 2015 (Farrell v. United States Olympic & Paralympic Committee 2020). Such examples illustrate the tendency of sport organizations to "rely on internal discipline procedures for perpetrators while shielding them from justice under established legal mandates" (Nite and Nauright 2020, p. 123).

Athletes also detail experiencing what Nite and Nauright identified as obscured processes, when NGBs failed to follow legally required protocols, did not engage in public investigations, and/or purposefully complicated the investigations. Bridie Farrell's lawsuit against US Speedskating illustrates this theme. She alleged that the NGB received several complaints, which spanned decades, about an athlete's inappropriate behavior. However, the NGB not only allowed him to continue to compete, but later promoted him to its Board of Directors. According to Farrell, when she met with the then-director of the USOPC Scott Blackmun in 2013 to file a complaint, he said that he could not help because the "USOC did not have such jurisdiction over the national governing bodies" (Farrell v. United States Olympic & Paralympic Committee 2020, p. 15). However, at the time, the USOPC maintained legal rights over NGBs and had launched its first safe sport initiative.

Likewise, in the lawsuits against USA Taekwondo, athletes described how taekwondo leaders seemed to intentionally complicate investigations, another indication of obscured processes (Nite and Nauright 2020). The athlete Mandy Meloon filed a complaint against Steven and Jean Lopez, brothers who competed for and coached the US Olympic team. Yet, then-CEO David Askinas conducted what Meloon described as a sham hearing over the telephone and quickly declared her allegations not credible (United States District Court

District of Colorado 2018, p. 59). In a similar fashion, when other athletes came forward against the well-known taekwondo coach Marc Gitleman, the NGB convened an ethics panel and voted, 3-0, to ban him. However, the NGB lawyer intervened and recommended that the board not act, citing concerns about potential lawsuits (United States District Court District of Colorado 2018, pp. 60–61). Only after Gitelman was found guilty of sexual abuse by a Los Angeles Court did the NGB ban him from the sport. Such instances suggest the purposeful manipulation of investigations to either protect the accused or the organization.

A lawsuit against USA Weightlifting and Safe Sport provides additional evidence of obscured processes. Safe Sport banned Olympian Colin Burns for twelve years. When he appealed the decision, a three-member panel overturned the sanction. The lawsuit alleged that the panel vacated the ban after subjecting the plaintiff to "vigorous cross-examination without representation", which included controversial and unethical questioning about her sexual history (Doe v. USA Weightlifting 2019). Mirroring Nite and Nauright's (2020) argument, by using internal discipline and obscuring the processes, sport leaders help "lay the foundations of prolonged abusive institutions" (Nite and Nauright 2020, p. 127).

6.1.2. Silencing and Collusion

Athletes also mentioned victim silencing and collusion. According to Nite and Nauright, victim silencing refers to the encouragement of victims to not report abuse. Collusion refers to either administrators working with outside entities, including law enforcement, to hide abuse; it can also refer to administrators working together to minimize reporting and fallout (Nite and Nauright 2020, p. 120). Victim silencing appeared most frequently in the form of NGB leaders discouraging the reporting of abuse. For example, in the 2018 lawsuit against USA Taekwondo, several women said they reported their abuse to then-CEO David Askinas, which he ignored. Plaintiff Meloon alleged that Askinas told her she could be a member of the 2008 Olympic team if she recanted her statement. She did not and was dropped from the national team. Another plaintiff, Heidi Gilbert, alleged that Askinas explicitly told her to keep quiet about the sexual abuse she experienced. "He was basically calling me to tell me to shut up", she said in the lawsuit. Because of the demand, Gilbert did not file a report at the time (United States District Court District of Colorado 2018, p. 59).

Athletes suggested that NGBs leaders also engaged in collusion. This appeared most frequently as the purposeful discouragement of investigations (Nite and Nauright 2020, p. 120). The 2020 lawsuit against US Figure Skating provides a clear example of stymying investigations into abuse. Plaintiff Craig Maurizi claimed that to "bury" his allegation, the then-NGB President James Disbrow removed the chair of the USFS Grievance Committee to intimidate him into abandoning the investigation. Disbrow himself then rendered a decision, dismissing the complaint because it was not filed within the 60 days permitted by the organizational bylaws (United States District Court, Western District of New York 2019). The lawsuit against USA Taekwondo provides another example. In 2015, USA Taekwondo hired the lawyer David Alperstein to investigate the allegations against Jean and his brother Steven Lopez. In a statement to USA Today, the NGB suggested that it "gave Mr. Alperstein a broad charge and unfettered ability to carry out his task". However, the lawsuit argued that, contrary to what it said publicly, the NGB halted the investigation to ensure that the brothers could attend the Rio Olympics. After Steven Lopez lost in Rio, one of the plaintiffs verified that she received an email from Alperstein that said he could commence the disciplinary proceedings because the Olympics had concluded. As suggested in the lawsuit, it appears that the USOPC and NGB worked together, "behind closed doors, to make sure that the investigation against the Lopez brothers was delayed and obstructed" (United States District Court District of Colorado 2018, pp. 63–64).

6.2. Lack of Meaningful Athlete Representation

Another cornerstone of good organizational governance is the inclusion of main stakeholders who are directly affected by rules and regulation changes in decision-making

processes. As outlined in Henry and Lee (2004), this includes incorporating the organization's "internal constituencies", such as athletes, into decision-making processes (p. 10). Yet, due the hierarchical structures of many organizations, athletes feel they have been marginalized and excluded from most positions of power in sport. For example, by 2013, only 11 percent of international governing bodies had granted athletes some form of direct influence in decision-making processes (Geeraert et al. 2013). Many governing bodies attempted to address this issue by allowing representatives of athletes' commissions or athletes' councils one or several votes in their executive boards. In the United States, the USOPC rendered athlete's representation a compliance requirement for their organizational members, including NGBs. According to the USOPC Compliance Standards, any recognized NGB must award at least 33.3 percent of its board of directors to athletes and adopt (and maintain) an Athletes Advisory Council composed only of athletes (USOPC 2022b). Underscoring the importance of athletes' voices, the USOPC's NGB audits and the US Safe Sport audits both include athletes' rights as a section to assess the bodies' compliance with the USOPC statutes (USOPC 2022a). Yet, an assessment of the allegations against NGBs illustrates the ongoing issues in athlete representation. Athletes believe that they have been explicitly and implicitly marginalized, hampered by conflicts of interest, and limited by serving on boards that are not gender equitable.

Athlete testimonies support the notion that they are marginalized in decision-making processes (Schwab 2018). Their experiences, testimonies, and lawsuits show how some organizations explicitly limit athlete power. For example, US Modern Pentathlon Multisport requires its athlete representatives to pledge to carry out the organization's mission in writing prior to service. This raises the question of whether or not the athlete can represent athletes' interests if doing so conflicts with the aims of the NGB (Board Member Agreement n.d.). Such statutes potentially prevent athletes from acting independently (Koss 2011; Seltmann 2021a). The 2022 USOPC audit of US Skateboarding provides another example of the purposeful minimization of athlete voices. The audit found that US Skateboarding bylaws did not specify whether the athlete representative on the board was voted for directly by the athletes. In fact, auditors highlighted that "[t]he most recent athlete board representative elections were conducted without receiving any athlete nominations, or verification that the individuals included in the elections wanted to serve in those roles". (USOPC 2022b). The election process, as described by the eventual winner Jamie Fox, was merely a list of all the athletes who had competed in the Olympic qualifiers with an option to vote (Wilder 2020). According to the USOPC audit, athletes in the voter pool had not, prior to the election, given consent to act as athlete representatives and had not been confirmed to be eligible according to USOPC regulations (USOPC 2022a). With athletes not directly involved in the election of their representatives, their trust in the organizational processes and structures might decrease and hence, they might not come forward with abuse allegations, as has been reported in Canada (Willson et al. 2022).

Athlete testimonies also suggest that NGBs use more implicit tactics to prevent athletes' representatives from acting independently and in the interests of their peers. Former US Gymnastics athlete representative Terin Humphrey revealed in 2019 how the USA Gymnastics' leadership recommended she stay silent during the investigation of Larry Nassar. Humphrey wrote, "I was instructed by USAG not to speak out or express an opinion. For example: 'Terin, stay quiet,' 'Terin, no speaking out or posting,' and 'Terin, you can't have an opinion.'" She further suggested that the NGB tried to sever her ties to other athletes. "They perpetuated a dysfunctional and dangerous culture by allowing the release of confidential emails and creating an intentional disconnect between me and the athletes I was charged with supporting", she alleged (Humphrey 2019). Her statement shows how NGBs can influence the public sentiments, independence, and actions of athlete representatives.

Conflicts of interest amongst athlete representatives also emerged in our analysis. Researchers and policy makers agree that athlete representatives should not hold double roles, such as serving as the athlete representative and as a member of the selection

committee (Udowitch 2020). Athletes report not confiding in athlete representatives who hold multiple positions because they fear it might impact their future in the sport. This is particularly problematic if an athlete representative also serves as a member of a group that decides upon the selection of individuals for teams (Rulofs et al. 2022). Such arrangements reduce the potential for reporting abuse. In the proceedings on abuse in USA Gymnastics, this was mentioned as an obstacle that prevented the athletes from speaking out (Daniels 2017, p. 92). As the US gymnast Jordyn Wieber testified before Congress, "So even if she would be there to advocate for us, we didn't want to tell her anything because we were scared and it would ruin our chances, which we know it probably would have" (Olympic Abuse 2018).

Currently available information on NGB websites indicates that athlete representatives in some NGBs occupy double roles on executive boards and on nomination committees. For example, in USA Fencing, the Chair of the Athletes Advisory Group is also a member of the Nomination Committee and, in fact, is that working group's board liaison (USA Fencing Committees 2023). Similarly, one of the three athletes on the US Modern Pentathlon board is one of three members of that sport's Governance and Nomination Committee (USA Pentathlon Multisport 2022). While the athletes should not be blamed for their double-role, it potentially poses a conflict of interest that hampers others from reporting abuse (Eckstein 2022).

Finally, good organizational governance also requires equitable treatment, including based on gender (Henry and Lee 2004, p. 10). However, most NGBs fall well short of having gender equity in decision-making positions, including those of athletes. For example, a 2021 gender breakdown of NGB executive boards found that 33 had 60% or higher male representation. The boards for US Speedskating (80%), USA Modern Pentathlon (81.8%), USA Wrestling (84.6%), USA Karate (88.9%), and USA Baseball (91.7%) were the most egregious in their lack of female representation (Houghton et al. 2022). In US Modern Pentathlon Multisport, the four athlete representatives on the board were all men. Women were also underrepresented on the board in general, as only two women served on the eleven-member board (USA Pentathlon Multisport 2022). This NGB is not an exception, as institutional hierarchies in sport continue to be shaped by men (Çetin and Hacısoftaoğlu 2020). Recent research reveals that an increase in female board members raises debates and awareness in sport organizations about gender inequality, including about abuse and harassment within sport (Valiente Fernández 2020). Therefore, gender-balanced boards with true athlete representation are needed so allegations of abuse cn be investigated without patriarchal gender prejudices.

6.3. Valorization and Conficts of Interest

Finally, in addition to monopolistic power structures and the lack of meaningful athlete representation, athlete accounts suggest the esteem granted to perpetrators can further legitimize violations. Nite and Nauright describe this phenomenon as valorization, positively describing the impact of the legacy of the perpetrator (p. 120). As evidenced in almost every lawsuit, the perpetrators' inappropriate behavior was well known to people within the organization, but their respected position within the sport or NGB convinced them not to speak out.

One of the more disturbing themes present across the lawsuits was how many people were aware of abuse but did not act. Whispers and rumors about inappropriate conduct were commonplace. For example, a lawsuit against the US Bowling Congress suggests that individuals within the bowling community "were all aware that [the defendant] would travel with youth bowlers whom he coached yet did not take steps to prohibit or prevent this conduct in spite of Rule 801" (A.C. v. United States Bowling Congress Inc. 2019, p. 22). One person testified that the coach's conduct was "discussed frequently by people that had misgivings about his relationships" (A.C. v. United States Bowling Congress Inc. 2019, p. 22). But nothing was done to stop him. Similar rumors also surfaced for years about the equestrian coach George H. Morris. A New York Times article found that his "stature

in the sport was nearly unrivaled, even though some in the horse world said they had long been aware of his relationships with minors". The article further alleged that Morris's reputation for having sexual relationships with boys "was common knowledge among students and barn staff" (Nir 2019). In several lawsuits, athletes suggest that others knew about the misconduct, but the perpetrators held positions of importance that rendered them untouchable (A.C. v. United States Bowling Congress Inc. 2019; Farrell v. United States Olympic & Paralympic Committee 2020; United States District Court, Western District of New York 2019; New York County Courts 2020).

Those accused of abuse were not only valorized, but also deeply connected in the institutional structure of the NGB. Examples abound in the lawsuits and testimonies regarding the connections that the defendants held within the organizations. According to the lawsuit against US Fencing, for example, "[the defendant], with USA Fencing's knowledge and assent, became the most powerful person in the Tennessee fencing community" (Does v. Robert Piraino 2022, p. 10). Within USA Diving, an athlete informed Congress that his abuser was a longtime friend of the USFS president, which he believed helped shield him from punishment (Olympic Abuse 2018). In taekwondo, USA Taekwondo not only selected Jean Lopez to coach the 2008 Olympic team, despite allegations of sexual misconduct, but allowed him to select his two brothers and sister to the team (United States District Court District of Colorado 2018, p. 97). The valorization of the individuals, and their deep connections within the NGB, helped legitimize their actions.

Finally, turning a blind eye to allegations of abuse appears to have stemmed from the NGBs' prioritization of commercial interests. Like the institutions under investigation by Nite and Nauright (2020), "Concerns over damaging the commercial enterprise ... appeared to outweigh the need to protect victims" (p. 127). Athletes similarly allege that administrators permitted the misconduct of "individuals with positive reputations and money-making capabilities". Several lawsuits boil the motivations of the NGBs down to "medals and money" (United States District Court Southern District of Indiana 2018). Filings against USA Diving and USA Taekwondo both argued that the organizations "reached for commercial success at all costs by ignoring, denying, obstructing, or covering up complaints of sexual abuse" (United States District Court Southern District of Indiana 2018, p. 1; United States District Court District of Colorado 2018). According to athlete accounts, an imbalanced attention on financial gain outweighed the need to protect athletes.

7. Conclusions

We investigated the perception of athletes on key issues in governance that facilitate sexual abuse in sport. Our assessment of the lawsuits filed against US NGBs and athlete testimonies before Congress illustrates numerous issues within all three levels of the governance—systematic, political, and organizational—of NGBs. However, our analysis indicates significant issues within the organizational governance of NGBs. Our findings mirror those of Nite and Nauright (2020), which found that "institutional structures ... resulted in the perpetuation of sexual abuse" (Nite and Nauright 2020, p. 125). Athletes argued that monopolistic systems allowed for internal disciplinary measures, obscured processes, and collusion, which helped fto cover up allegations of abuse. Inadequate athlete representation further hindered athletes' abilities to come forward and did not allow for equitable say in decision-making matters, including those that pertained to sexual misconduct. Athletes further identified valorization and conflicts of interest, shaped by the prioritization of finances, as protecting those accused of abuse. Taken together, the athletes' accounts reveal power imbalances within US NGBs, whereby governance decisions protected the most powerful, the administrators and coaches, rather than supported processes to protect the most vulnerable, the athletes.

Congress recognized the limitations of the internal reporting mechanisms in 2017 and attempted to rectify the insularity and skewed power dynamics within NGBs through the launch of the Safe Sport Center. However, as evidenced in the lawsuits and athlete testimonies, the independence and authority of Safe Sport is questionable. For example, a

plaintiff in 2022 argued that despite congressional intervention, the NGB still "lacked an effective and independent audit, compliance, or other mechanism to detect when repeated and pervasive violations of applicable laws and policies relating to sexual misconduct were occurring at one of its member clubs" (Does v. Robert Piraino 2022, p. 16). She further alleged that the organization "operates in fact and function, as a shill for USOC ... to absolve its abusive members from sanction, oversight, and discipline, under the auspices of the USOC" (Doe v. USA Weightlifting 2019, p. 8). From the athlete vantage, Safe Sport appears limited in its ability to curtail abuse in sport.

Our findings, therefore, support those who have questioned the approaches that are driven from within the sport sector and argue that sport's self-regulation of abuse and mistreatment is not working (Donnelly et al. 2022). Put simply, allegedly abused athletes feel that sport cannot regulate sexual misconduct itself. They argue that NGBs too often prioritize commercial interests over athlete well-being. As pointed out repeatedly in the lawsuits and testimonies, sport organizations prioritized medals and money above athlete safety. In light of our results, we suggest that the reporting and investigations into sexual abuse must be removed from the self-managing sport sector entirely.

In addition, we further recommend the creation of an independent body for athlete representation to help alleviate abuse in sport. This follows calls for a unionization of athlete groups to allow for collective bargaining, mutual aid and protection amongst athletes (Edelman and Pacella 2019). Some athletes have already joined forces at the international level to establish independent athlete organizations to challenge the power balance in sport (Seltmann 2021b). This development has allowed athletes to increasingly speak out on topics such as abuse and harassment, including voicing their own views on how structures in sports prevent the reporting of cases. An independent body would help balance the power dynamics in sport and allow athletes more say in organizational governance (Donnelly 2015; Seltmann 2021b).

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Note

[1] The causes of action listed in the table include only those filed against the NGBs. Other claims–such as assault and battery, child pornography, and sexual harassment–filed against individual defendants were not included in the table.

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Policies in Need of a Problem? A Qualitative Study of Medical and Nonmedical Opioid Use among College Student-Athletes in the United States

Katherine McLean

Penn State Greater Allegheny, McKeesport, PA 15131, USA; kjm47@psu.edu

Abstract: Concern around nonmedical opioid use (NUPO) among student-athletes in the United States abounds, yet research around NUPO in this population is mixed. While some studies have identified athletic participation and related injury as risk factors for NUPO, the balance of research has found the inverse, or no association. This study represents the first qualitative inquiry into college student-athletes' history of injury, medical and nonmedical opioid exposure, and pain management practices. Drawing on surveys (n = 280) and interviews (n = 30) with less-elite (i.e., non-NCAA Division I) athletes attending a large state university, our analyses documented little NUPO in this population, despite significant rates of injury and opioid prescription. Interview participants evinced little knowledge, but high fears, around opioid use, while describing potentially harmful levels of over-the-counter drug use. Overall, this study suggests the need for the development of broad, evidence-based curricula concerning pharmacological pain management within this population.

Keywords: opioids; drug use; drug testing; student-athletes; pain management

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1. Introduction

In March 2022, a handful of veteran legislators in the U.S. Congress introduced a bill seeking to address the "scourge of our time": "opioid misuse" among young people, and specifically, young athletes. The Student Athlete Opioid Prevention Act proposed a new federal grant mechanism for the creation of educational and training programs concerning opioids, aimed at coaches, athletic administrators, and student-athletes themselves. Citing sports participation as a risk factor for opioid experimentation, co-sponsor Josh Gottheimer identified a mandate to "take better care" of young athletes, who faced not only injury, but subsequent exposure to "dangerous and addictive opioids". A press release accompanying the bill's introduction overflowed with data meant to establish the urgency of the underlying problem (Gottheimer 2022).

Indeed, statistics reflecting the severity of the U.S. opioid epidemic are not difficult to come by. A simple review of overdose mortality data from the past 15 years reveals a chronic, mutating public health crisis that has evaded definitive intervention. After a sharp decline in accidental opioid deaths from 2017 to 2019, overdose fatalities accelerated alongside the COVID-19 pandemic, fueled by both stressful social conditions and the continuous spread of synthetic opioids (namely fentanyl) throughout diverse drug markets (Tanz et al. 2022). Moreover, the most recent data show the increasing toll of overdose deaths within populations previously thought to be more "protected", those being residents of urban areas, African-Americans, and individuals who primarily use stimulants. Some bright spots are present in the latest numbers. However, in 2020, rates of opioid prescribing fell to their lowest levels since 2006, and the past-year surge in overdose appears to be largely driven by illicitly-manufactured, rather than prescription, opioids (CDC Injury Center 2022a, 2022b). Furthermore, while the percentage of overdose deaths involving individuals under age 24 rose from 2019 to 2020, this proportion has fallen by nearly 50%since 2013 (Kaiser Family Foundation 2022). In fact, national survey data show that

the rates of nonmedical opioid use fell significantly among 12-to-25 year-old's from 2019 to 2020 (U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality 2020).

Interestingly, supporting data did not accompany the primary claim underwriting the proposed legislation, namely that "student athletes are at risk of developing a dependency on opioids and other substances at a young age due to common pain treatment following injuries" (Gottheimer 2022). To be certain, data on rates of overdose and nonmedical opioid use—the consumption of illicit opioids, unprescribed opioids, or prescribed opioids in ways that depart from medical guidance—among young athletes are difficult to source. While the former metric is impossible to calculate using public records, estimates of opioid exposure, nonmedical use, and clinical disorders among athletes exist only in limited scholarly analyses, which are increasingly out of date. The relative absence of data on this population is somewhat surprising, given a surfeit of stories concerning their vulnerability to opioid-related harms, not to mention a flurry of policymaking on their behalf. Since 2016, 39 U.S. states have passed legislation limiting the dosage and/or duration of opioid prescriptions for minors, often implementing standards that depart from those mandated for adult patients (Stone et al. 2022). Largely targeted to opioid dispensing for acute (rather than chronic) pain, such laws specifically seek to restrict the use of prescription opioids for injuries and surgeries, such as those related to athletic participation (National Conference of State Legislators 2019).

While an abundance of caution has perhaps animated policy in this area, legitimate questions remain as to the extent and nature of opioid use among young athletes, including the relationship between medical and nonmedical use. Without further insights into how student-athletes receive opioids or initiate nonmedical use, it is hard to evaluate the impact of existing legislation (on prescribing caps, for example), or define the objectives of new programming, such as that solicited by the impending Student Athlete Opioid Prevention Act. Furthermore, there is ample evidence surrounding the unintended consequences of other well-intentioned opioid prevention policies. For example, some research suggests that policies reducing access to prescription opioids both exacerbated, and displaced, the problem of nonmedical use. Unable to secure opioid medications (or crush/inject newly-formulated pills), many individuals moved on to their illicit counterparts, whose unknown contents imply increased overdose risk (Haynes et al. 2016; Kuo et al. 2018; Powell and Pacula 2021; Rhodes et al. 2019). An incomplete understanding of athletes' motives for and patterns of opioid use may lead to similarly fraught successes, while a single-minded focus on opioids may obscure other ill-informed pain management practices involving over-the-counter analgesics, or marijuana. Drawing on surveys and interviews with current student-athletes at a large public university, this article seeks to address a near vacuum of qualitative research concerning young athletes' exposure to opioids. Asking student-athletes about their history of injury, pain management, opioid knowledge and experience, this study finds scant evidence of a relationship between athletic participation and opioid consumption, with few reporting nonmedical use. At the same time, students' strategies for pain management may warrant further attention, with participants describing common patterns of self-medication that carry both medical and social risks.

2. Opioids and Athletes: Theory, Research, and Rhetoric

Concerns around young athletes' exposure to opioids dates back to the "early days" of the U.S. opioid epidemic—or at least, the first stirrings of public recognition around increasing rates of overdose and nonmedical opioid use. In 2015, President Barak Obama announced a host of public and private initiatives meant to roll back rising rates of prescription drug "abuse", including educational campaigns undertaken by the National Collegiate Athletics Association, the National Association of High School Coaches, the National Athletic Trainers' Association, the National Interscholastic Athletic Administrators Association, and the American College of Sports Medicine (The White House, Office of the Press Secretary 2015). Returning from a national "Turn the Tide Rx" tour, Surgeon

General Vivek Murthy reiterated the administration's attention to plight of young athletes, writing " . . . in Oklahoma City, a mother and father shared the tragic experience of their son, an all-American athlete, whose fatal disease began with prescriptions he received after sports injuries" (Murthy 2016). Anecdotal evidence, meanwhile, swirled within the popular mediascape, with feature exposés appearing in Sports Illustrated, and a primetime Public Service Announcement (PSA) depicting an "All-American" cheerleader abandoning her team, school, family, and dog for heroin (National Council Against Drug Abuse 2016; Wertheim and Rodriguez 2015).

Anxiety surrounding a possible sport-opioid nexus is, of course, understandable. While athletes serve as a cultural metonym for national strength, progress, and glory, the linkage between sports participation and opioid exposure appears intuitive. Sports-related injuries, and surgeries, have increased alongside participation in youth and young adult athletics, with approximately three million children seeking emergency medical care for athletic injuries in 2021 (Bannon et al. 2021). There is significant data, moreover, to suggest that the era of peak opioid prescribing coincided with a dramatic rise in sport-related surgeries among pediatric patients. While the U.S. opioid dispensing rate peaked in 2012, after a decade of steady increases, orthopedic surgeries among individuals 18 and under nearly doubled from 2004 to 2014 (Bannon et al. 2021; CDC Injury Center 2022a; Tepolt et al. 2018). Some procedures, such as anterior cruciate ligament (ACL) and medial ulnar collateral ligament (UCL) reconstruction—linked to running and throwing sports, respectively—increased three- to four-fold among children and young adults over the same period (Mahure et al. 2016; Tepolt et al. 2018). In light of such numbers, a rational observer might postulate an association between athletic and opioid "careers", with injury representing a precipitating event for first medical, then nonmedical, opioid use. Of course, this hypothesis rests upon an assumption that prescribed opioid use commonly escalates into uncontrolled consumption, if not a conflation between physical dependence and opioid use disorder or "addiction" (Minozzi et al. 2013; Muhuri et al. 2013; Noble et al. 2010). It also neglects a wealth of studies demonstrating that young athletes are significantly less likely to consume illicit drugs or develop substance use disorders than their peers outside of sports, as well as emerging research which suggests that exercise and physical activity more generally may protect against neurochemically "reward-seeking" behaviors such as substance use (see, for example, Dunn and Wang 2003; Exner et al. 2021; Fontes-Ribeiro et al. 2011; Kantomaa et al. 2008; Lisha and Sussman 2010; Wechsler et al. 1997; Weinstock et al. 2012).

Luckily, the sports/pain management pathway into nonmedical opioid use has been assessed by over a half-dozen survey-based studies that, on the balance, qualify its salience for young athletes in the U.S. On the one hand, two secondary analyses conducted at the pinnacle of opioid prescribing found evidence of increased medical opioid consumption in sports. A 2013 cross-sectional study of college students found that individuals reporting interscholastic sports participation in high school had a higher odds of lifetime opioid prescription, while longitudinal data collected among high school and middle students from 2009-10 and 2011-12 found similarly elevated rates of medical opioid exposure among male participants (Veliz et al. 2014, 2015). Such findings resonate with the above research revealing rising injuries and surgeries among young athletes—but don't necessarily speak to the issue of nonmedical opioid use in this population. Here the scholarship is murkier, even in studies conducted within similar populations. Veliz et al. (2014) also pointed to increased odds of nonmedical opioid use (taking "too much" medication, and taking medication to "get high") among male organized sports participants in secondary school. Moreover, Ford et al. (2018), looking at past-year NUPO among college students between 2008 and 2011, isolated varsity athletics involvement as a risk factor. Yet several other analyses of NUPO among 8th grade, 10th grade, 12th grade, and university students found no overarching association between athletics exposure and outcome (Veliz et al. 2015, 2017; Veliz et al. 2013). Two additional studies showed an inverse relationship between these variables, with young athletes protected against NUPO and heroin use (Ford 2008; Veliz

et al. 2016). Finally, other analyses focused solely on college student-athletes documented levels of NUPO well-below those reported by broader college-age populations (Moore and Abbe 2021; National Collegiate Athletic Association 2018; U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality 2020).

The implications of this research remain ambiguous, especially in the absence of qualitative data that might illuminate the specific pathways, motives, and sources for nonmedical opioid use among young athletes. While few studies have highlighted any athletic involvement as a risk factor for nonmedical opioid use, the above research does point toward subpopulations with greater vulnerability. Specifically, male athletes are identified by two studies as reporting elevated levels of NUPO, compared to both female athletes and all non-athletes (Ford et al. 2018; Veliz et al. 2014). Additionally, several sports involving solely or disproportionately male participants—American football, wrestling, weightlifting, and ice hockey—showed statistical associations with NUPO by young athletes (Veliz et al. 2017; Veliz et al. 2013). Though it is difficult, in these analyses, to disentangle the effects of gender and sport-type, Ford et al. (2018) does suggest their interaction. Beyond revealing past-year injury as a risk for nonmedical opioid use, this study found that injured male athletes had the highest odds of NUPO within a national sample of college students defined by gender, injury history, and varsity sport participation. Moreover, a cross-sectional survey of retired U.S. National Football League (NFL) players documented startling levels of prescription opioid use, medical and nonmedical, among participants, with NUPO particularly prevalent among those reporting a history of 3-plus injuries, a career-ending injury, or undiagnosed concussions (Cottler et al. 2011).

Significant questions remain as to why and how young athletes might obtain and consume opioids in nonmedical ways. With all extant analyses referencing datasets that are now nearly a decade (or more) old, the contemporary prevalence of both medical and nonmedical opioid use in this population is unclear, as are the effects of state-level prescribing policies in restricting access to prescription opioids among minors. Similarly, the impact of educational efforts undertaken by schools, athletic leagues and administrators, and coaches remains to be assessed. Drawing primarily on in-depth interviews with 30 current student-athletes at a large public university, this mixed-methods study seeks to describe the relationship between participants' sport involvement, injury history, and lifetime substance use, including both medical and nonmedical opioid consumption. It additionally captures participants' knowledge and attitudes toward opioid-type drugs, and their willingness to use opioids, and/or other substances, for pain management. While interviews and surveys revealed little opioid use—medical or nonmedical—for sports-related pain, the data did reveal an overwhelming lack of knowledge, yet high fear, around these drugs, even as student-athletes consumed other analgesics in unregulated ways.

3. Methods

This paper reports on data from a mixed-methods study of opioid use, knowledge, attitudes, and beliefs among student-athletes attending 19 "satellite" campuses within the Pennsylvania State University (Penn State). From April 2021 to October 2022, all individuals competing in intercollegiate sports at an eligible campus were invited to participate in a 20-minute survey inquiring about their injury history, medical and nonmedical use of opioids and other substances, and perceptions of opioids and opioid use among their athlete peers. Nonmedical drug use is here defined as: (1) taking prescription drugs just for the feeling or experience they cause; (2) taking prescription drugs more often or at higher doses than prescribed; (3) taking prescription drugs that were not prescribed to the respondent; or (4) taking illicitly-prepared drugs. Basic demographic information (age, gender, race and ethnicity) was also solicited, while specific campus information was not collected in order to preserve respondent anonymity. The survey recruitment proceeded in two phases. From April 2021 to April 2022, the Primary Investigator asked campus athletic administrators to forward an email invitation for the survey to their student-

athletes, with requests being sent once per semester (3 semesters total). Given the difficulty in tracking the breadth of this indirect recruitment method, a more efficient method of student-athlete contact was approved for the final six months of the study, with the study team reaching out to potential participants directly, using publicly-available team rosters and the Pennsylvania State University directory. A $15 gift card was offered as an incentive for survey participation.

While the survey component of this study informed estimates of opioid prescription and nonmedical use within the study sample, it was also intended as a means of interview recruitment, which forms the primary data informing this paper. At the end of the main instrument, students were directed to a separate survey to enter their contact information for compensation, and indicate their willingness to do a follow-up interview. All survey participants who expressed interest in an interview were contacted by the PI, until thematic saturation was achieved. Interviews captured participants' lifetime athletic history (including sports-related injury), past and present substance use, and opioid exposure, knowledge, and attitudes. The interviewees were also asked to speculate on the existence of a relationship between sports involvement and substance use, including opioid use. Given the geographic distribution of interviewees across the state, all interviews were conducted by the PI on the teleconferencing platform Zoom, with participants invited to leave their cameras off. Interviews ranged from 38 to 93 min, with an average duration of roughly one hour. All interview participants received a $25 gift card as compensation for their time.

The survey data were cleaned, recoded, and subjected to preliminary analyses that generated the estimates of opioid use prevalence reported below. The interview transcripts produced by Zoom were checked and corrected using the original audio, while any video files were deleted immediately following the interview. While qualitative coding was initially guided by interview questions and topics of interest (for example, injury history, opioid exposure, opioid knowledge), other latent themes were allowed to emerge over three rounds of coding, with analysis specifically attuned to connections among codes, particularly those concerning substance use and sports participation. Ultimately, four major themes, presented in the following section, were identified with relation to interviewees' opioid use, knowledge, and pain management practices. The original study protocol, and April 2022 modification, was approved by the Pennsylvania State University Institutional Review Board.

4. Study Sample

All survey and interview participants participated in intercollegiate athletics at one of the Pennsylvania State University's 19 Commonwealth campuses between the Spring 2021 and Fall 2022 semesters. The Penn State "campuses", as they are known, represent just under half of the university's undergraduate population, and disproportionately enroll in-state students, as well as a larger population of first-generation, "nontraditional" and adult learners, compared to the flagship campus. While all NCAA Division I (D-I) sports operate out of "Penn State Main", the Commonwealth campuses offer a tremendous diversity of athletic opportunities at the NCAA Division III (D-III), National Association of Intercollegiate Athletics (NAIA), United States Collegiate Athletic Association (USCAA), and intermural levels. Collectively, 17 intercollegiate sports are represented across the Commonwealth teams, with most campuses offering at least 6 different options for aspiring student-athletes. Even as many student-athletes are actively recruited at the D-III, NAIA, and USCAA levels, tuition support is much less common, and students may walk-on to many teams at will.

While more attention is naturally paid to student-athletes competing in the top NCAA division, this study is specifically interested in less-elite athletes, who represent the vast majority of intercollegiate college sports participants (National Collegiate Athletic Association 2022). Moreover, some research suggests that athletes at the lower divisions of college athletics may engage in higher levels of substance use. For example, the most recent (2017) NCAA Study on Substance Use Habits of College Student-Athletes found that Division

III Athletes were significantly more likely to report past-year alcohol, marijuana, cigarette, cocaine, amphetamine, and anabolic steroid use, compared to their D-I peers (National Collegiate Athletic Association 2018). The published data on rates of "narcotic medication" use were not disaggregated by division. Such disparities may reveal a de facto gradient in drug testing policies by division, a less rigorous training and competition schedule at the lower levels, or simply a more recreational orientation toward sport by D-III athletes (who may only access academic, not athletic scholarships). Moreover, given differences in the size and tuition of D-I and D-III schools, gaps in substance use may also reference institutional characteristics and student demographics (NCAA n.d.). Whatever variables may animate divisional differences in substance use, such findings are more concerning in light of concurrent gaps in training, academic, and athletic success resources available to student-athletes at different levels (Navarro et al. 2019). While the directionality of this association is untested, it suggests that the student-athletes who are more likely to engage in substance use enjoy fewer supportive services—or possibly, that inadequate training or health resources may encourage nonmedical substance use.

5. Results

5.1. Participant Demographics, Injury, and Substance Use History

Table 1 describes the demographic features of the survey (n = 280) and interview (n = 30) samples, as well as variables related to sport affiliation and related injury. A majority of individuals within both samples reported current affiliation with female-only teams (58.9% of survey, and 56.7% of interview respondents), with slightly more than one-third of survey and interview respondents competing on male-only teams (37.5% and 36.7%, respectively.) Participants in both samples overwhelmingly identified their race as "white" (81.3%, 83.3%), with 8.3% and 10% of survey and interview respondents self-identifying as Black, respectively. Only a few respondents in either sample indicated a Hispanic or Latina/o ethnic background (7.5%, 6.7%). While the mean age within both groups hovered around 20 years (19.82, 20.37), most survey respondents identified as "lowerclassmen" (i.e., freshmen or sophomores), while the interview sample skewed slightly toward "upperclassmen" (i.e., juniors and seniors). Sport-related injuries were extremely common in both samples, with 81.1% and 93.3% of survey and interview participants affirming a lifetime history of injury. Roughly half the people within each group (46.8%, 50%) characterized their injuries as "recurrent" (or occurring "in the same location, after a period of recovery"), with 10.7–13.3% reporting a sport-related surgery. Within both samples, the most common categories of injury included muscle strains/ruptures/tears, joint sprains/ligament tears, bone fractures, contusions/bruises, and concussions. Despite similar rates and types of injury, specific sport participation varied slightly among survey and interview respondents. A plurality (18.9%) of survey participants competed in softball, with other popular sports including soccer (17.5%), basketball (16.7%), baseball (14.6%), and volleyball (13.9%). By contrast, volleyball was the sport most frequently reported by interviewees (23.3%), followed by basketball (16.7%), soccer (16.7%), track and field (13.3%), baseball (10%), and swimming and diving (10%). All sports offered across the Commonwealth campuses were represented across the combined samples, including bowling, cross-country, golf, ice hockey, tennis, water polo, and wrestling.

Table 1. Full Sample Demographics.

Team Type	Survey Sample (%)	Interview Sample (%)
Male	37.5	36.7
Female	58.9	56.7
Co-Ed	7.9	13.3
Mean Age (years)	19.82	20.37
Class Standing		
Freshman	18.6	20
Sophomore	34.6	26.7
Junior	24.6	23.3
Senior	22.1	30
Race (Self-identified)		
White	81.3	83.3
Black	8.3	10
Asian	4.7	3.3
Other	5.7	3.4
Hispanic or Latino/a (Self-identified)	7.5	6.7
Lifetime Sport-Related Injury	81.1	93.3
Most Common Injuries (Top 5)		
Muscle Strain/Rupture/Tear	46.1	46.4
Join Sprain/Ligament Tear	41.2	50
Bone Fracture	38.2	42.9
Contusion/Bruise	37.7	46.4
Concussion	37.3	21.4
History of Recurrent Sport-Related Injury	46.8	50
Mean Participation Days Lost to Injury	47.7	31.6
Surgery to Repair Sport-Related Injury	13.3	10.7
Current Sports Participation (Top 5)	Softball (18.9), Soccer (17.5), Basketball (16.8), Baseball (14.6), Volleyball (13.9)	Volleyball (23.3), Basketball (16.7), Soccer (16.7), Track & Field (13.3), Baseball (10), Swimming & Diving (10)

Table 2 summarizes rates of past-year substance use reported by both survey and interview respondents, and further provides comparative figures from surveys of NCAA (2017) and NAIA (2020) student-athletes (Moore and Abbe 2021; National Collegiate Athletic Association 2018). It should be noted that the latter two studies captured significantly larger, and representative, samples within their respective associations. Overall, survey respondents showed levels of substance use within the range of those reported by the NCAA and NAIA samples, with a few exceptions. Namely, smokeless tobacco consumption in the past-year was less common in the current survey (2.9%, vs., 13% and 8% of NCAA and NAIA samples), while the smaller sample may have struggled to capture rarer forms of substance use, including cocaine (0.4%), methamphetamine (0%), and heroin (0%). Medical (4.6%) and nonmedical opioid use (0.7), as well as nonmedical stimulant use (1.8%), in the past-year were also reported by fewer participants in the Penn State survey, a finding that may reflect sample size or possible cohort effects (U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration,

Center for Behavioral Health Statistics and Quality 2020). By comparison, rates of reported substance use among interview respondents more closely mirrored, or exceeded, those found in the NCAA and NAIA studies, a result that may indicate selection bias. Although all survey respondents were eligible to participate in follow-up interviews, it is possible that individuals with more experience, and interest, in substance use opted-in to interviews. For example, a much larger proportion of interview participants indicated past-year use of e-cigarettes (33.3%), cannabis (40%), and psychedelic-type drugs (6.7%), while levels of both nonmedical and medical opioid and stimulant use were similar to those within the larger studies shown below. Of course, the qualitative data presented below cannot be used to extrapolate larger trends in substance use prevalence among student-athletes. It may, however, reveal different motives for and experiences with substance use in sport that are relevant to a larger population of athletes or young adults.

Table 2. The rates of Reported Past-Year Substance Use, by Type, and Study/Year (%).

	Survey Sample (2021–2022)	**Interview Sample (2021–2022)**	**NCAA (2017)**	**NAIA (2020)**
Combustible Tobacco	7.8	16.7	11 *	5 *
Smokeless Tobacco	2.9	6.7	13	8
E-Cigarettes/Vapes	16.8	33.3	8	16.2
Alcohol	54.3	76.7	77	49.2
Cannabis	19.3	40	25	21
Cocaine	0.4	3.3	3.8	1.7
Psychedelics	2.5	6.7	1.9/1.7 **	1/3 **
Methamphetamine	0	0	0.2	0.1
Heroin	0	0	0.2	0.1
Nonmedical Opioid	0.7	3.3	3	2
Medical Opioid	4.6	13.3	11	9
Nonmedical Stimulant	1.8	6.7	7.5	3
Prescribed Stimulant	5.4	5.4	6.6	4.5

* These figures represent only past-year cigarette use among NCAA and NAIA athletes. ** These figures represent past-year Ecstasy/Molly and LSD use, respectively, among NCAA and NAIA athletes (Moore and Abbe 2021; National Collegiate Athletic Association 2018).

5.2. Qualitative Themes

Four primary themes relating to interviewees' sports careers, past and present substance use, and opioid exposure, knowledge, and attitudes emerged over three rounds of qualitative coding and analysis. Most participants emerged as "opioid naïve", reporting no lifetime medical or nonmedical exposure to opioids, yet the same individuals expressed a high-level of fear—and a low-level of knowledge—around this category of drug. At the same time, individuals who had received a prescription for opioids (40% of interviewees) described largely unremarkable experiences with these drugs, which were overwhelmingly received after dental surgery. A handful of interviewees did describe lifetime (n = 2) or current (n = 1) patterns of opioid use that departed from medical guidance. However, such use was not always recognized as "nonmedical", or as carrying potential risks. Finally, the problem of unmanaged pain, and its relief through illicit substance use—or high levels of over-the-counter analgesics—was reported by many participants, who were not always cognizant of associated harms.

5.3. Low Knowledge, High Fear of Opioids among "Naïve" Student-Athletes

As referenced above, a slight majority of the interview sample identified as "opioid naïve", having never received a prescription for an opioid-type drug, or used such drugs in nonmedical ways. For this reason, it is perhaps unsurprising that such participants evidenced little knowledge around this category of substance, struggling to identify specific opioid drugs or medications, or describe their effects. After questions relating to their sports career, injury history, and prior substance use, all participants were prompted about any lifetime use of opioids in medical or nonmedical ways. Individuals reporting no previous exposure were then asked "what they knew" about opioids, whether prescription or illicit, with further probes as to different types or names of specific opioids, and any knowledge of their bodily or psychoactive effects. Several participants confessed complete ignorance around this topic, often apologetically, while mischaracterizing the common effects, or uses, of opioids in their attempts to guess:

> What I heard about them, like I heard these were . . . and I know that they're . . . honestly, I literally couldn't even tell you. [Laughs] Like, I know that some people, like it helps with like . . . "Oh, I want to like hallucinate or something, so let me take this", or sorry, "I want to feel like, high, like up in the sky" . . . I'm not sure if that's actually the right drugs . . . [Interview 7, women's basketball]

> I seriously do not know much about them at all. I haven't heard anything about it. I don't know anybody that takes them. That's about all I can say about that. [Interview 30, co-ed track & field]

> In terms of like prescribed opioids . . . yeah, I don't know anybody that's experienced that or have . . . I know, like in church one time, when I was younger, I had this one guy come to speak . . . and he was talking about how he got addicted to like abusing his migraine medicine . . . So it's, it exists, like it's out there, it damages people's lives, but I, personally, haven't had too much experience or like exposure to that type of thing. [Interview 12, women's volleyball]

It should be noted that opioid naïve participants were not wholly unique in disclaiming little formal knowledge around these substances. While several interviewees who recounted prescription opioid use had not registered such experiences in their surveys (for lack of recognition), many additionally reported that they had had little prior knowledge of the drugs before their medical exposure. Instead, what distinguished the responses of individuals with no history of opioid consumption was fear, expressed in broad characterizations of opioids as dangerous, addictive, or life-threatening. Indeed, even those who denied knowing much about opioids still recognized their negative connotations, including the volleyball player quoted above:

> . . . Like, I don't want to die, so like, I'm not going to use a drug that can kill me in like two seconds or less, you know. [Interview 12, quoted previously]

> I know people, like, take it for pain, but they can really get addicted to it really fast . . . that's all I really heard about it. [Interview 9, co-ed tennis]

> Um, I know that . . . commonly people misuse them or they'll allow other people to take them . . . But that's pretty much it . . . I don't really know much about like, that situation, but like, I always see on the news like, "Oh this person, you know, might have overdosed or this person . . . Like usually, I only see when people are charged with something . . . opioids are like heroin? [Interview 20, women's volleyball]

As also expressed implicitly in the statement above, several participants who claimed to know little about opioids as psychoactive substances did understand them as sites of social stigma. Similar to how Interview 20 associated opioids with local news reports around overdose and arrests, others referenced popular linkages between opioids and criminality, or socioeconomic disadvantage:

> I think Percocet? I don't know, like OxyContin? [Looks for confirmation]. I always thought they were the same, but, like, I wasn't super sure. I know my grandpa took it when he broke his hip . . . I think they're highly addictive, but I'm not sure, because I don't know what the difference is between opioids and narcotics . . . because the only thing I know about narcotics is that, it's like very, very addictive, and that so is popping pills, so I've never popped pills . . . My grandpa is not like a criminal, but he does the thing that some criminals also do. [Interview 14, women's volleyball]

> Yeah I know they're, like, incredibly addictive. I know they kind of, like, alter your brain chemistry a little bit, so you get . . . really hooked on them, and terrible withdrawals . . . I just knew they were a painkiller, so they make you feel, like, high . . . they're very stigmatized in my eyes. [Interview 18, co-ed track & field]

Apart from two participants who had discussed opioids alongside the topic of substance use disorders in psychology or biobehavioral health courses, interviewees denied learning about opioids or the opioid epidemic in the context of their college education. Instead, information about opioids was sourced from more informal or less creditable venues: hometown gossip, social media or local news, and non-evidence-based high school curricula. The DARE (Drug Abuse Resistance Education) program was specifically identified, dismissed, and sometimes ridiculed by participants, who noted the inadequacy of the program's messaging:

> Not really a lot within my life, but I guess [opioids] could be prevalent . . . maybe with other athletes too, because like, that might help like pain interceptors so that's also an idea, mostly in the media . . . I went to a private middle school, so we covered a little bit, but we didn't really do a lot. Now there was, like, a DARE Program. But it was very brief, and it was, like, maybe a one-day thing. It was like, "Just don't do drugs", and I was like, "Okay . . . " They didn't really explain anything about, like, the effects . . . [Interview 6, men's swimming]

> It's like, "Say, no, like, walk away" . . . It's like, it's almost like a movie-type thing where it's like, "Hey little fella, like want a candy?" type thing . . . those type of some, like, basic scenarios . . . You know what I mean. I know I came out of school disappointed that no stranger has ever offered me . . . [Interview 23, men's basketball]

Even as hardline drug abstinence education was mocked by some interviewees, others did report that they—or their parents—had indeed "just said no" when offered opioids in a medical context, following dental or sport-related surgery. Of the 12 interviewees who affirmed the past receipt of a prescription for opioids, three had declined to obtain or consume the medications, citing fear of potential consequences.

> I had surgery a few years ago, just minor, you know, a few days recovery. But I was given stronger stuff to take, and I didn't touch it, just because I didn't want to risk getting addicted. [Interview 27, women's volleyball, co-ed track & field]

> I was actually prescribed OxyContin after my wisdom teeth surgery, but with discussion with my parents, they decided that it'd be better to just stick with regular Advil to deal with the pain, and not run the risk of having that addiction, or any other side effects. [Interview 22, men's soccer]

> I had it, but I don't remember taking it, because I was like . . . I think I might have gotten it. But I don't think my mom let me take it. [Interview 26, men's baseball]

5.4. Normalization of Opioids after Medical Exposure

Just under half of interview participants reported medical opioid exposure, with most (save the three individuals quoted above) choosing to use their medication. Nearly all such individuals had gotten their prescription following wisdom tooth extraction, while two soccer-playing participants were given prescription opioids after Anterior Cruciate

Ligament (ACL) reconstruction. Asked to characterize their experiences with the opioid medications, several participants struggled to articulate how the drugs made them feel, perhaps because their effective function was defined by the absence of feeling pain. However, some descriptions were doubly framed in the negative, as participants stated how the drugs did not make them feel, namely "high" or euphoric:

> I guess it made me feel like, it just numbs the pain for me. Like my mouth is just really sore, it like alleviates that pain. I don't think I really felt like doped-up or anything, I was just like, "Oh, no more pain in my mouth, like, I'm fine. [Interview 1, women's soccer]

> Personally, I never felt like a high from them . . . I mean, because I was taking them while in pain, so I would just feel the pain go away, so that was more, my only, like, mental connection with them like, I never associated a pleasure or any like really positive feelings, I really just had like, "Oh, it makes the pain go away". [Interview 18, co-ed track & field]

Such unmet expectations were echoed by participants who reported more mixed experiences with prescription opioids, due to the drugs' gastrointestinal side effects. While the first interviewee quoted below conceded that OxyContin served as an effective analgesic after ACL surgery, she lamented the chronic stomach upset that accompanied her use. By contrast, a women's water polo player suffered acute nausea and vomiting whenever using hydrocodone, which ultimately negated the drug's utility.

> I was still taking the prescription, because it was finally managing the pain, but . . . I was like, I don't know how people are addicted to these things because they're . . . what is it, I can't think of what they're called. They make you constipated . . . Like, it's basically just extra strength Advil, with the side effect of constipation, but other than that and a little bit of nausea, which I had an issue with in the beginning . . . that was another thing I was like, I don't understand why people just take this drug, because this sucks. [Interview 2, women's soccer]

> When I was eighteen, they gave me hydro . . . hydrocodone? Hydrocodeine? And I took those, and I wouldn't get the high from that, I don't think. And then, you know, I used it a few times and was like, that's it. I'm done. I don't like it. [Interview 25, women's water polo]

As might be expected of a category of drug known to produce feelings of euphoria in some consumers, a couple interviewees did describe an intensely pleasurable rush alongside medical use of opioids. In contrast to one participant's (Interview 2) statement above, these individuals affirmed what they saw as the addictive potential of opioids, even while they did not personally struggle with physical dependence, cravings, or withdrawals. Both interviewees quoted below had received prescription opioids after wisdom tooth extraction in high school, and described their experiences as positive, if unnervingly so:

> I felt like . . . I don't know, it just made me feel so . . . Like invincible, because I was just like . . . " I feel no pain, nothing can hurt me", almost. That's kind of where my mindset was at, but good. (Interview 10, women's swimming)

> I was like, I'm enjoying this a lot, like way too much. [laughs] I think that kind of scared me a little bit, because I was like . . . I never understood how people could, like, get addicted to pain meds and stuff and I was like . . . I kind of see it now. (Interview 17, women's basketball)

Asked if they suffered any adverse side effects, or difficulties ending their opioid use, both interviewees responded in the negative. In fact, neither finished their full prescription. Here, it should be noted that both interviewees—similar to nearly all participants medically exposed to opioids—also described personal strategies and/or social support mechanisms that allowed them to manage their use after surgery (however minor). Both participants emphasized the roles played by their respective mothers in administering pain medication, a theme that was common throughout this subsample. (In a couple cases, in

fact, interviewees complained that their parents' hypervigilance led to unmanaged pain, a theme that will be discussed in the final section alongside other forms of substance use). Similarly, all but one participant claimed to have no trouble finishing their prescription—if they even finished it.

> The only thing I can think of, was when I got my wisdom teeth taken out and, to be honest, I probably forgot to take it like half the time, because I just don't like medicine. [Interview 13, co-ed track & field, cross-country]

> I believe I had to take it for like seven or nine days, but I only took it at night, to help me sleep . . . So when I did take it, like 8:00 or 9:00 at night, I could sleep. I didn't really have pain. It was just swelling and discomfort . . . And then, when I was done with it, I was done with it. [Interview 28, co-ed golf]

> Um, it definitely knocked me out, like I didn't really feel much of anything and it made me tired, but . . . I was supposed to be on it for four days and I only used it for two, so I felt good enough to go back to just like an ibuprofen or something like that. [Interview 5, men's volleyball]

One participant in the interview sample did describe a period of opioid dependence and unmedicated withdrawal that followed a prescription for Percocet (hydrocodone) following complicated dental surgery. While his experience highlights the importance of social support, if not supervision, around medical opioid use among young adults, his exposure also occurred under circumstances extremely unique within this sample. Specifically, he had been given an extended prescription for opioids while stationed at an isolated Air Force base in Europe with few other personnel, and no advanced health care infrastructure. Moreover, he felt unable to seek medical or spiritual help, for fear of having his military record compromised:

> So then I think I had, like, a prescription for two weeks . . . Then they said, OK, I was probably good to not come back, so they gave me a prescription for a month . . . and then I ended up getting, like, another two weeks, because I was still struggling after that month, so it was like I was taking opioids for two months ... Yeah, that was hard to do in a place where I didn't know anybody, in a foreign country. I was very fortunate, I think, overall, like came out a much more functional human being. But it was pretty rough for a while, and I think I still struggle with anxiety and depression issues from that time. It's a lot less pronounced now than it used to be, but . . . Yeah, I think it got to the point . . . where I didn't realize how much at the time . . . I felt like mentally and emotionally like I was in the fetal position, just trying to make it through, and I would say that directly related to it was the withdrawals from opioids, like definitely played a serious role. [Interview 4, men's soccer]

Despite enduring a "traumatic" episode with medical opioid use, the same participant nevertheless affirmed his continued willingness to use prescription opioids in the future, if indicated by a health care professional. He is also one of three interview respondents who described some history of nonmedical opioid use, in an incident unrelated to the experience narrated above.

5.5. Nonmedical Use May Not Be Recognized

All of the individuals (n = 3) who identified a past instance or pattern of nonmedical opioid use had also received an opioid prescription at some point. However, for two out of three, the "qualifying" event involved an opioid medication prescribed to someone else—one of the very definitions of nonmedical use employed by this study, among others. Nonmedical opioid is commonly defined as the use of: (1) illicit opioids, such as heroin; (2) opioid medications prescribed to someone else; (3) opioid medications, more often than medically-advised; (4) opioids medications, at higher doses than medically-advised; or (5) opioids medications, for the express purpose of intoxication. While such criteria may be well-known among researchers or addiction specialists, participants in the study

were apparently unacquainted with such diverse forms of nonmedical use. While all three individuals freely related past experiences with nonmedical use in interviews, none indicated such a history in their survey responses (even as the above definition appeared on the survey instrument).

Participants' failure to recognize nonmedical use may stem from the fact that each had consumed non-prescribed opioids to manage pain, not to "get high". Before receiving his prescription for wisdom tooth extraction, the Air Force veteran cited above had taken opioid pills from a friend before getting a tattoo in a sensitive location. Another participant, also quoted in the previous section, had accepted an oxycodone from her grandmother when struck by sudden, debilitating back pain:

> I was getting a tattoo, like I have like this huge rib piece tattoo and, like the ribs suck, if you've ever gotten tattoos, and my buddy had gotten a surgery, I think he'd like messed up his ankle at a training school and he had a couple like Percocet leftover, and he gave me a couple Percocet before I went into the tattoo session . . . [Interview 4, men's soccer]

> I was at my granny's house when it started hurting again, because they didn't want to take me to the hospital that time, and I was literally crying in pain. She gave me . . . She goes on to Mexico all the time, and she comes back with cheaper prescription drugs than what she gets here, and she had Oxy, and she gave me a pill, and it still didn't help. I was throwing up still, and it wasn't from that. It was just the pain. [Interview 25, women's water polo]

Another interviewee described an ongoing, if necessarily limited, pattern of nonmedical opioid use for pain management. After receiving hydrocodone after wisdom tooth removal, she retained her excess prescription, consuming them when faced with a particularly trenchant migraine:

> Oh, I had oxycodone . . . One of those, I don't remember and then like, I have a few of those left, and I just take those whenever I have a migraine . . . So I try to save them for when it's really bad, and like obviously, [the prescription] was in 2018, so it's not like all the time, but if it gets really bad, I'm like, okay. [Interview 3, women's volleyball]

Perhaps due to the temporality (limited occurrences) or motivations (pain relief), participants showed little concern about their experiences with nonmedical opioid use, seeing little chance of dependency, overdose, or sociolegal sanctions. At the same time, these consumption patterns arguably carry certain risks within the larger context of participants' medical and nonmedical substance use, a theme that is developed further in the final section on unmanaged pain.

As shown in the three interviews excerpted above, participants' nonmedical opioid use was largely unrelated to their athletic participation, with only one (Participant 25) referring to undiagnosed back pain of uncertain origin. None had been prescribed opioids for a sport-related injury. Indeed, when asked about any perceived relationship between sports and opioid use—medical or nonmedical—all but a couple interviewees failed to observe a direct connection. While one interviewee, in men's basketball, said he had heard about nonmedical opioid use among "acquaintances, teammates, friends-of-friends", he had not personally witnessed such behavior (Interview 19). Two other participants with more specific knowledge of nonmedical consumption among teammates further complicated the "sport-opioid nexus", in characterizing peers' opioid use as unrelated to pain, or medical exposure. While one baseball team member understood opioid use to be more generally related to relaxation, a women's softball player who also managed men's basketball and baseball sketched the larger social ecosystem that animated opioid use among athletes:

> No, I haven't heard anybody even mention like Percocet for their pain management . . . if they're doing anything, I think it's more entertainment-related, like listening to music . . . [Interview 21, men's baseball]

> I know some of the players here, some of them take Percocet, some of them used to pop oxycodone so that their muscles wouldn't hurt when they were playing, and I was like, I could never do that. Well, and I mean like me personally, because I mean, I know people from my high school, like friends of older brothers' friends, like 'cause my town, we were very big in lacrosse, hockey, softball, soccer . . . yeah, and I know a lot of hockey players who would pop Vicodins, oxycodone before they would even play a game, and I was like, you've never even had a surgery. So where are you getting them from? And I think the biggest thing was, is, that, their parents have gotten it. [Interview 11, women's softball]

Overall, no interviewees characterized the theoretical sports pathway into nonmedical opioid use—athletic injury, followed by an opioid prescription that escalates into dependency or an opioid use disorder. Many participants, however, described other forms of drug use to deal with unmanaged pain, including practices that may imply both acute and chronic harms.

5.6. Unmanaged Pain and Underinformed Pain Management

Given the high rate of athletic injury reported by the interview sample, it is hardly surprising that many participants engaged in substance use related to pain management. Nearly every interviewee described rigorous, non-pharmacological pain management regimes (including physical therapy and electrical stimulation), yet most also conceded the convenience and accessibility of different psychoactive and non-psychoactive drugs for addressing residual pain. With reference to pain management, two primary categories of substance use emerged: cannabis and "over-the-counter" analgesics. Notably, every interviewee who reported past nonmedical opioid use also described the present consumption of cannabis, specifically for sport-related pain.

Just over half of interview participants affirmed a lifetime use of cannabis, with most identifying as "current" or past-year users. While a range of motives for cannabis consumption were reported—general relaxation, sociality and team bonding—pain management emerged as a top reason, with the drug prized both for its broad effectiveness and medical safety. Discussing her long battle to address chronic back pain, one participant identified cannabis as the sole useful remedy, while two others saw the drug as specifically benefiting their recuperation from sport.

> Interviewer: I think I heard that [cannabis] is also useful for pain management for you?
>
> Participant: That, and plus . . . some more sugar on top . . . I also have an eating disorder, too, so it helps me eat, and I have sleeping issues, so it helps me sleep, too. [Interview 25, women's water polo]

> Personally, I think it helps me a lot. Like I said, most of the time when I get home, especially after a game, like my entire body is screaming, and so I'll take a nice, long hot shower, try to like relax my muscles . . . I'm still aching and then, by the time I get downstairs, I usually smoke, and then just lay on the couch and like watch a movie or something . . . [Interview 3, women's volleyball]

> So, I love it. I love it and I also feel like this is the only opportunity that I might have ever to play collegiate level, so like, I gotta try to make the most of it . . . Like I said, my preference is to treat that with cannabis, like to kind of keep going, and I don't feel like it's making me worse. I think it's helping me . . . [Interview 4, men's soccer]

As noted, all three participants quoted above had also used prescription opioids—medically and nonmedically—to manage or prevent pain related to diverse medical conditions and circumstances, with two regarding such drugs warily, due to their side effects or potential for dependence. However, they were also aware of the diverse social and legal risks attached to consumption of an illegal and banned substance—prohibitions that also threatened participants' health, when buying cannabis from illicit markets:

> It was bad in my last school, because we had to test for it and stuff, which was kind of obnoxious, and if you test the positive, you miss, like, half the season. Which was super bad, especially if you were doing it for something like pain management, or like sleeping . . . It didn't matter even if you had your medical card. You still weren't allowed. [Interview 3, women's volleyball]

> There's a lot of adults that I know, like dealers. A lot of stuff up here like you have to be careful about . . . There's been a lot of cases where, like cards and weed pop up here, starting to be laced. [Interview 25, women's water polo]

Other interviewees who smoked cannabis to address sport-related pain were critical of how drug testing policies in athletics effectively incentivized not only opioid use, but high levels of over-the-counter drug consumption. A men's baseball pitcher reported using both "weed" and Ibuprofen to relieve soreness in his arm, but worried about consuming the former in-season, instead hoarding 800 milligram Ibuprofen pills:

> I'm supportive of not testing for marijuana in athletes, because it's better for you than taking the drugs that they're going to give you to keep you in the sport, because, plus, it helps. I don't know. Maybe they have trouble sleeping. Maybe they're having trouble with their knee or something. It helps. That's the thing about weed. For like relatively little risk, it'll do a lot of things for you. It can help you a lot more than it can hurt you. [Interview 26, men's baseball]

Many participants described the heavy use of over-the-counter analgesics, namely acetaminophen (Tylenol), ibuprofen (Advil), or naproxen (Aleve), although they were not consistently reflexive around the associated risks. While some acknowledged the potential harms of overuse (such as stomach or liver damage), others joked about their high levels of consumption, including several who had declined to take prescribed opioids.

> When I sprained my ankle up at [main campus], I didn't go to Med Express, I didn't go to like Urgent Care or whatever hospital, because I just knew the feeling. It's a sprained ankle. I just take like five Ibuprofen, and I'm good, which still isn't good for me, but . . . [Interview 14, women's volleyball]

> When it's, you know, usually at the height of the season, I'll be taking ibuprofen before practice or two, you know. [Interview 27, women's volleyball, co-ed track & field]

> Interviewer: How do you manage your injuries? What are your, kind of, "best practices"?
>
> Participant: Lots and lots of stretching, and lots of Advil too. I'm sure that's probably the source of some of my stomach issues, hopefully not liver issues down the way, but I'm pretty certain that's one of the reasons I can't stomach alcohol very well, because of my use of Advil in my sports career. [Interview 22, men's soccer]

> Yeah, hopefully I'm not addicted to [Tylenol]. [Interview 8, men's soccer]

In contrast to a sole allegation of nonmedical opioid use in men's baseball, discussions of a larger over-the-counter drug "culture" were more common, in baseball and beyond. Notably, each of the below participants played below the Division III level, within smaller regional conferences that largely involved inter-campus competition. Nevertheless, they described achievement-oriented team atmospheres that normalized preventive self-medication:

> I know a lot of guys, like, after they pitch, they'll pop 800 milligrams of Tylenol or ibuprofen like, I know ibuprofen's a favorite of baseball players. I don't know, I think it's a pseudo effect . . . I mean, I'm not too in tuned in with what the risks are, necessarily . . . [Interview 15, men's baseball]

> But I do know, like, people will take like ibuprofen often. Sometimes to practice hard, or before races and stuff like that. And some people take Aleve, and it's a

> pretty, sometimes, regular thing. I'm not a big fan of that, but I know that's just the culture . . . I know teammates that have, even though they do focus on only taking before races, they have upped the dose now, and they take like three to four to five . . . [Interview 18, co-ed track & field]
>
> Everyone on my team just carries [Ibuprofen] around . . . take a couple of those and you're good to go. [Interview 21, men's baseball]

6. Discussion

While restricted in its scope and generalizability, the data presented above do not support a persistent policy narrative alleging an opioid epidemic among young athletes. Both surveys and interviews found scant evidence of nonmedical opioid use (NUPO)—current or lifetime—among a population of college students athletes competing at or below the NCAA Division III level, with levels of reporting NUPO falling below those captured in other studies (Moore and Abbe 2021; National Collegiate Athletic Association 2018). Moreover, qualitative data demonstrated that participants' medical and nonmedical opioid use was rarely related to their sport careers. Where some research has highlighted both athletic involvement and injury as interacting risk factors for NUPO, interviews failed to illuminate the hypothesized "sports injury pathway" into medical, then nonmedical opioid consumption (Ford et al. 2018; Veliz et al. 2014). Instead, interviewees reported largely received prescription opioids following routine dental surgery, with most terminating their use earlier than expected—if they took the medication at all. All but one individual ended their medical opioid use without incident, with interviews demonstrating the importance of social support in inappropriate consumption.

At the same time, interviews did reveal fertile ground for the harmful use of assorted pain medications, by young athletes lacking sufficient resources and information. On the one hand, individuals with and without medical exposure to prescription opioids evinced little knowledge around such drugs, often misidentifying opioid medications, or mischaracterizing their effects. Among the opioid naïve, misapprehensions around such drugs were linked to an inadequate education—sometimes grounded in "just-say-no" truisms—which in turn fed an inarticulate fear. Such individuals may be, in turn, more vulnerable to the overuse of over-the-counter medications. At the same time, a handful of interviewees who had been medically exposed to opioids reported consuming the drugs in nonmedical ways, in order to address residual pain. Ironically, the same individuals largely professed an aversion to opioids, preferring to take the social and legal risks associated with cannabis, a federally-prohibited substance that is additionally banned by the NCAA. While athletes regarded cannabis as a relatively benign substances compared to opioid analgesics, they also conceded that a "safe supply" could not be guaranteed, when purchasing the drug from illicit sources.

Even as this study fails to reveal a "hidden epidemic" of opioid or other pain medication use among student-athletes, it does suggest the need for broader, evidence-based education around drugs and pain management in this population. Where most interviewees cited little formal education around opioids, those who recalled specific curricula (in college or high school) described their content as inadequate, if not misleading. Given the prohibition on nonmedical (or non-therapeutically-exempt) opioid use among NCAA athletes in particular, an abstinence-based approach, which emphasizes the harms associated with such drugs, may seem appropriate. However, this tact may fail to equip students with the information needed to safely consume a category of substance that is still commonly prescribed. As shown in the data above, medical exposure to opioids was widely reported by interview participants, while nearly a quarter of survey respondents had received a prescription for opioids in their lifetime. Curricula that advise student-athletes (or any students) to "just say no" do not appreciate this reality, and may further incite adverse consequences. Students who "say yes" may not be equipped to recognize their own nonmedical use, or may simply dismiss messaging around opioid risk as illegitimate fear-mongering. At the same time, students who are discouraged from accessing opioids

prescribed by a medical professional may seek to self-medicate using over-the-counter substances that are not addressed at all (or in the case of cannabis, not discussed for pain management). Indeed, several studies have demonstrated college student-athletes' low knowledge around nonprescription pain medications that are easy to purchase and commonly self-administered (Christopher et al. 2020; Matava 2016; Pedersen et al. 2022).

Though addressed only obliquely in this paper, this study also points to the perceived irrelevance of drug testing for student-athletes competing within the NCAA's lowest division or smaller regional conferences. While a couple students criticized banned substance lists and testing procedures that threatened their athletic participation in theory, such policies did not effectively deter their use of cannabis (prohibited by the NCAA, and by specific institutions). More participants laughed off the possibility of random testing, reporting that neither they, nor any known teammates, had ever been selected, sometimes go so far as to denigrate their level of competition. Student-athletes in this study harbored few aspirations around a post-collegiate sport career, and were more likely to identify their classes, social relationships, and employment (paid or internships) as the primary foci of their lives. In this way, social drug and alcohol use, within certain boundaries, may be prioritized—as adjacent to a normal college experience—over the formal or informal substance use policies stipulated by teams, athletics departments, or associations. Of course, this does not mean that less-elite student-athletes do not take their college sport participation seriously, or do not want to perform their best under the circumstances. Instead, certain cultures of over-the-counter analgesic use may emerge as a means of managing overpacked schedules, where athletes' final years of competition are stacked with rising academic and professional obligations.

This study, of course, is characterized by methodological limitations that temper the broad applicability of its conclusions. Though not the focus of this paper, survey participants were not sampled randomly, and while the recruitment target (n = 280) was calculated to ensure the adequate capture of a rare behavior, a declining rate of nonmedical opioid use in this population may require a larger sample. Survey participants, who attended a large state university in the northeast United States, may not be representative of all student-athletes at the university, student-athletes in other regions, or those enrolled at other types of institutions. Notably, over 80% of both survey and interview participants self-identified as white, but current enrollment statistics across the university's Commonwealth campuses revealed that white students comprised of less than 62% of the overall student body. While demographic information on student-athletes alone is unavailable, this discrepancy suggests that non-white students are significantly underrepresented in above data, for reasons that may not be random. Indeed, myriad studies have documented challenges to engaging underrepresented minority populations in health research specifically, with potential participant distrust representing a major barrier. In a study asking individuals to report highly-stigmatized, and sometimes illegal, behavior, non-white students may have felt greater reluctance to participate (particularly when receiving a remote invitation from an unknown researcher) (Wambua et al. 2022; Yancey et al. 2006). Ultimately, the resulting selection bias in the data presented here may have yielded overestimates of nonmedical opioid use in this population, with previous research showing higher levels of NUPO among white student-athletes (Denham 2014). Survey response rates may only be calculated for individuals invited directly by email, with 10.5% of students targeted through this recruitment method completing a survey—a response level in keeping with other web-based surveys of college students (Van Mol 2017).

While qualitative data are not intended to produce generalizable results, more restrictive interview eligibility criteria may have yielded other themes. All survey participants were eligible to participate in the interviews that informed this analysis. Recruitment that had focused solely on individuals with reported opioid experience (medical and nonmedical) may have revealed different levels or kinds of opioid knowledge, attitudes, and consumption practices. Moreover, student-athletes' knowledge and attitudes around other forms of pharmacological pain management were not explicitly addressed in the interview

instrument. Rather, this information emerged in more general discussions of opioids and pain mitigation practices. Further studies might intentionally explore the relationship between student-athletes' knowledge, attitudes, and experiences around opioid use, and their consumption of other kinds of pain medication.

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Trauma Prevalence and Desire for Trauma-Informed Coaching in Collegiate Sports: A Mixed Methods Study

Elizabeth Alma Hertzler-McCain, Aerin McQuillen, Shalini Setty, Stephanie Lopez and Erica Tibbetts *

Department of Exercise and Sports Studies, Smith College, Northampton, MA 01063, USA; ehertzlermccain@smith.edu (E.A.H.-M.); amcquillen@smith.edu (A.M.); ssetty@smith.edu (S.S.)
* Correspondence: etibbetts@smith.edu

Abstract: This study investigated trauma prevalence amongst collegiate student-athletes and openness towards trauma-informed coaching practices among athletes and coaches at two small Division III colleges. Surveys gathered quantitative data from athletes (n = 91) and coaches (n =18) and qualitative data from athletes (n = 33). Quantitative results indicated that 52.7% of athletes experienced at least one potentially traumatic event during their lifetime. The most prevalent trauma was unwanted sexual contact. Additionally, 50.5% of athletes experienced sport-based harassment or abuse during their lifetime, with 21.7% of affected athletes experiencing said abuse in college sports. Athletes reported that 8 out of 10 trauma-informed coaching techniques included in the study were already implemented or desired for implementation at rates between 73.2–93.1% on their teams. Coaches also showed support for trauma-informed coaching, with 88.2% indicating they believed the practice was necessary in college athletics and a large majority of coaches agreeing or strongly agreeing with 8 out of 10 techniques. Qualitative results highlighted the variety of impacts that traumatic experiences have on athletes. The most reported themes were negative psychological and performance effects. Findings support the idea that trauma-informed coaching is necessary and desired in collegiate athletics.

Keywords: trauma; trauma-informed coaching

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1. Introduction

Experiencing trauma is a widespread and common occurrence; between 50% and 80% of adults have experienced at least one traumatic event throughout their lifetime (Benjet et al. 2016; PTSD: National Center for PTSD n.d.; Kessler et al. 1995; Roberts et al. 2011). *The Diagnostic and Statistical Manual of Mental Disorders* (DSM) *V* defines trauma as exposure to death, threat of death, extreme violence, or sexual violence through directly experiencing the events oneself, witnessing the events as they happened to other people, learning that the aforementioned events happened to a close family member or friend, or experiencing repeated or severe exposure to the inhumane details of traumatic events through work (American Psychiatric Association 2013). Past literature measuring rates of trauma has often focused on combat veterans, abuse survivors, and refugees (Oakley et al. 2021). However, trauma is not a unique experience contained in only a few communities. Rather, trauma is common and affects people from different communities and backgrounds (McLaughlin et al. 2018; McCormick et al. 2018).

Traumatic event exposure has been tied to a variety of physical and mental health challenges. Chronic or repeated instances of trauma exposure, particularly in childhood, have been connected to negative psychiatric and physical health outcomes (Anda et al. 2006; Felitti et al. 1998). Acute or one-time exposure to trauma can also negatively impact both physical and mental health (D'Andrea et al. 2011). Depression, substance abuse, obesity, stroke, chronic bronchitis, diabetes, smoking, heart disease, bone fractures, hepatitis, aggression, low self-esteem, identity confusion, difficulties in interpersonal relationships,

and other physical health challenges have all been linked to previous traumatic event exposure or are considered secondary responses to trauma (Carlson and Dalenberg 2000; Felitti et al. 1998). Due to the prevalence of trauma and the severity of related outcomes, it is increasingly viewed as a widespread public health threat (Magruder et al. 2017).

Addressing trauma as a public health threat requires an interdisciplinary approach that incorporates trauma-informed care into many or all sectors of life and makes the world more accessible to individuals who have experienced trauma (Magruder et al. 2017). While research is mixed, some studies show that black, white, and Latino Americans experience trauma at roughly the same rate, with Asian Americans experiencing less than the other groups (McLaughlin et al. 2018). Additionally, LGBTQ+ youth experience trauma at higher rates than their straight and gender-conforming peers (McCormick et al. 2018). These findings indicate that utilizing more trauma-informed approaches could increase rates of access and inclusion by building more positive and supportive spaces.

Trauma-informed care has been incorporated into many levels of education and youth-level sports. This has been shown to help promote growth and healing for children who have experienced trauma (Brunzell et al. 2016a; D'Andrea et al. 2013). Frameworks for trauma-informed pedagogy at the college level have also been theorized with the goal of prioritizing student mental wellbeing to help individuals learn to the best of their ability (Wood 2021). Despite the first steps towards the incorporation of trauma-informed pedagogy at the collegiate level and trauma-informed sport practices at youth levels, currently no research exists on the need for or approaches to trauma-informed coaching with college athletes. This paper will begin to address this gap with the goal of making collegiate athletics a more positive experience and thus more accessible.

1.1. Trauma-Informed Coaching

Trauma-informed coaching focuses on specific tactics designed to make the sports environment more accessible and inclusive for trauma-affected individuals. These techniques were created by pulling together common elements from a number of therapeutic approaches like cognitive behavioral therapy, dialectical behavioral therapy, and more (Bergholz et al. 2016). Some possible trauma-informed coaching techniques include, but are not limited to coaching in pairs to allow for more one-on-one support for athletes, implementing consistent, predictable practice plans that include thoughtful transitions and warm-ups and cool downs that engage the body and brain, creating time for personal and group reflection for the athletes, focus on progress not performance, allowing athletes to opt in or out of some activities, refraining from yelling at athletes currently playing and providing most of the coaching instruction to players on the bench or during substitutions, being available before or after practice for informal conversations and inviting athlete input on how to improve the team experience (Bergholz et al. 2016). Creating trauma-informed spaces would make sports more accessible for a variety of marginalized populations while encouraging a coaching style that benefits all.

Through building a supportive atmosphere and developing strong relationships with players, trauma-informed coaches can help athletes work on skills to cope with stress, regulate their emotions, and build concentration that they can use in sports and in life (Bergholz et al. 2016). Trauma-informed coaching cannot act as a cure for athletes' trauma symptoms, and clinical intervention is beyond the scope of coaches. Yet, coaches are uniquely positioned to help athletes who have been exposed to trauma because of the respect and trust their athletes frequently place in them and their ability to connect athletes to further mental health resources and professionals (Leibovitz and Martin 2022).

While coaches are often ideally positioned to create supportive environments for athletes and refer them to additional support, they can misidentify athletes' symptoms as disengagement or resistance to authority and identify the athletes as having inherent deficits (Leibovitz and Martin 2022). A deficit perspective based on ignorance about trauma can have detrimental impacts on coaches' opinions of athletes' abilities. Furthermore, this perception can be destructive for the coach-athlete relationship, eroding trust and making

it harder for the coach and athlete to work together cooperatively, thus preventing the coach from fully supporting their athlete (Leibovitz and Martin 2022) and the athlete from reaching their full potential. Trauma-informed coaching not only has the power to give athletes safe access to sports and work on emotional coping strategies (Bergholz et al. 2016); training on trauma-informed coaching can also improve coach efficacy and increase coaches' confidence in providing effective coaching, whether or not they are aware of which athletes have experienced trauma (Leibovitz and Martin 2022).

1.2. Benefits of Trauma-Informed Youth Pedagogy and Sports

Significant trauma experience is associated with a multitude of implications, such as "difficulty regulating affect and impulses, disengagement and low motivation for rewarding activities, difficulties with attention, low self-awareness, damaged sense of self, difficulty with peers, and exaggerated threat reactivity" (Bergholz et al. 2016, p. 244). Thus, it is challenging for traumatized youth to participate in age-appropriate events like athletics, music, and other structured activities from which they might enjoy and significantly benefit (Bergholz et al. 2016). School can be challenging for trauma-affected children, and much research has gone into trauma-informed pedagogy at the K-12 level. Strength-based models of trauma-informed pedagogy outline three areas where trauma-affected students most need support: repairing regulatory capacities, repairing disrupted attachment, and increasing psychological resources (Brunzell et al. 2016b). Examples of trauma-informed teaching techniques that can help accomplish this include brain breaks, mindfulness exercises, escalation maps, and physical regulation techniques like heart rate awareness (Brunzell et al. 2016a). Trauma-informed approaches have been implemented at the school, district, or statewide levels in at least 17 U.S. states, and both interest and support for trauma-informed schooling continue to grow (Overstreet and Chafouleas 2016). Training in trauma-informed pedagogy has been shown to cause meaningful change. Professional development on trauma-informed instruction for teachers and administration at one K-12 school led to over half of the participants reporting at least some change in their thinking and teaching practice with the general theme of increased empathy (Koslouski 2022).

Sports are frequently part of the K-12 educational experience, and while there is considerable evidence of trauma survivors benefiting from participating in sports, it is possible for sports to cause considerable, unintended harm by amplifying trauma symptoms, lowering self-esteem, and even promoting gender-based violence towards participants, especially if time, space, and local culture are not considered (Massey and Williams 2020).

Despite the potential for retraumatization, sports can be a positive, impactful experience for many children. Sports are ideal as an additional therapy for traumatized children because they can be fun, cooperative, skill-based, physically engaging, goal-directed, easy for coaches or interventionists to learn, and can be modified to include the most effective techniques as they emerge (D'Andrea et al. 2013). Sports and recreation activities may also help young people navigate and communicate nonverbally, thus creating a minimally confrontational coping method for otherwise overwhelming situations (Henley 2005).

D'Andrea et al. (2013) found that trauma-informed sport is feasible in a youth sport context and that sport can benefit youth impacted by trauma. Their study confirmed and expanded upon earlier findings that trauma-informed sport (yoga) is a positive adjunctive therapy for trauma-affected youth in residential treatment facilities for mental illness (Spinazzola et al. 2011). While there are risks that must be carefully mitigated (Massey and Williams 2020), trauma-informed coaching at the youth level can provide children with the opportunity to experience and learn the difference between good and bad stress in a controlled, supportive environment, potentially building resilience that they can use to thrive (Bergholz et al. 2016).

1.3. Trauma-Informed Pedagogy in Higher Education

Between 52% and 89% of undergraduate students have experienced at least one potentially traumatic event (Anders et al. 2012; Bernat et al. 1998; Frazier et al. 2009; Im et al.

2020; Owens and Chard 2006). Despite not reaching consensus on an exact prevalence rate of trauma in undergraduate students (and the relative datedness of some sources), these results are consistent with the finding that the peak age for exposure to potentially traumatic events is 16–20 (Breslau et al. 1998), an age range through which all undergraduates have passed while some have moved beyond the limits of the range. In order to adequately address these widespread rates of trauma among college students, a holistic, institutional approach is needed. Institutions, educators, and other authority figures must be able to recognize the signs and symptoms of trauma, which may manifest in the classroom as resistant or avoidant behaviors (Wood 2021), and actively resist retraumatizing their students (Palmer 2020; Harper and Neubauer 2021), which aligns with the Substance Abuse and Mental Health Services Administration's 2014 recommendations for trauma-informed organizations (Huang et al. 2014).

For many people, mental illnesses like PTSD, anxiety, or depression begin their onset in college (Cusack et al. 2019; Pedrelli et al. 2015). In response, research indicates that a trauma-informed approach to mental health services can be especially beneficial for college students in general (Sweeney et al. 2018). Places of higher education require a high level of coordination between administration, faculty, staff, and students to meet the safety needs of trauma-affected individuals so they can thrive socially and academically. Additionally, all university personnel should be provided with professional development on trauma and best practices for students and should work toward developing academic and nonacademic strategies to make campus a safe place for trauma-affected students (Palmer 2020). Applying these recommendations to collegiate sports would require coaches and sports administrative staff to receive trauma-informed training and be considered part of this holistic system of cooperation.

While trauma-informed pedagogy is developing at collegiate and lower levels and trauma-informed sports seem to benefit youth, we were unable to identify any studies examining attempts to implement trauma-informed coaching at the collegiate level. By outlining the benefits of these practices in other contexts, we hope to demonstrate the possible power of trauma-informed coaching with college athletes.

1.4. Trauma-Informed Sports and Coaching in Collegiate Sports

College students and athletes are both groups with reportedly high rates of trauma (Frazier et al. 2009; Mountjoy et al. 2016), yet hardly any literature exists that investigates trauma prevalence at the intersection of these two groups: college athletes. Earlier in this review, we summarized the research that explores trauma in other groups, like college students and youth athletes. But before universities can truly begin to holistically address trauma on their campuses as recommended (Palmer 2020), the trauma of some of the most highly pressured students, student-athletes, must be assessed. Given the prevalence of trauma at a national level (Benjet et al. 2016; PTSD: National Center for PTSD n.d.; Kessler et al. 1995; Roberts et al. 2011) and trauma's status as a public health threat (Magruder et al. 2017), it is likely that trauma is prevalent among student-athletes and could have detrimental impacts on their lives if it goes unaddressed. While trauma-informed coaching cannot replace clinical intervention or treatment (Bergholz et al. 2016), there are numerous cases of trauma-informed sport/coaching being used with other populations, like positive youth development (Weiss et al. 2016; Whitley et al. 2018), institutionalized youth (D'Andrea et al. 2013; Spinazzola et al. 2011), a national youth-serving organization (Shaikh et al. 2021), refugees (Whitley et al. 2022), and veterans (Braun et al. 2021; Steele et al. 2022). Student-athletes and coaches from a variety of settings must be surveyed in order to broaden collective knowledge of trauma prevalence in collegiate athletes and to begin the first step towards implementing trauma-informed collegiate coaching: gauging openness and interest in the practice.

To address this lack of information, the present mixed-methods study investigates the following: In terms of trauma prevalence, what is the prevalence of trauma among collegiate athletes? Existing research is not in agreement on how different racial groups

are impacted by trauma when compared to each other, yet it is clear that LGBTQ+ youth experience more trauma than their non-LGBTQ+ peers. Therefore, we investigated if college athletes who hold identities experienced more trauma or certain types of trauma at different rates than their peers. In terms of trauma-informed coaching, are collegiate athletes and coaches interested in integrating trauma-informed practices into their sports programs? What kinds of practices are they interested in? The goal is that this research can be a step towards making sports a more safe and accessible space for all athletes, especially those who have experienced trauma.

2. Methods

2.1. General Study Design

This study was conducted at two Division III, small, private liberal arts colleges in New England. One was a co-ed institution, while the other was a historically women's college[1]. The institutional review board at one of the institutions completed a full review of the study and approved it; the institutional review board at the second institution received and reviewed a copy of the proposed research and requested minor edits before approving it and allowing the researchers to contact student-athletes.

Two surveys were distributed at each institution via email; one survey was sent to student athletes, and the other to coaches. The surveys and corresponding informed consent forms were distributed by contacting the athletic directors and requesting permission to share the surveys with coaches and athletes. At one college, the athletic director shared the links to the two surveys directly with coaches and athletes. At the other college, participants were recruited via an email sent by the athletic department; following this, a member of the athletic department sent two additional emails two weeks apart encouraging athletes to participate in the study.

At the end of the survey, participants were provided with a list of mental health resources on a national level, as well as mental health resources specific to their school. To protect the anonymity of participants and prevent disclosure of traumatic event experiences, no identifying information was collected.

When participants completed the survey, the data were imported directly into Qualtrics. From that platform, researchers downloaded the data to Excel and later to SPSS version 28.0.1.1.

2.2. Participants

2.2.1. Athletes

Across two different liberal arts institutions, 91 athlete responses were collected. The ages of the athletes ranged from 18–24 (M = 20.68, SD = 1.67). In our sample, 64% of athletes (n = 58) identified as being women or female, and 29% of athletes (n = 26) identified as being men or male. Two athletes identified as transgender or another gender identity, and five athletes left the gender question blank or provided a response that could not be analyzed. In total, 85% of athletes (n = 77) identified as white. The other 15% of athletes identified as Asian (n = 3), black or African American (n = 4), white and Asian (n = 4), Metis (n = 1), or white and Arab (n = 1). One athlete preferred not to disclose their racial identity. In this sample, 35% of athletes (n = 32) identified as part of the LGBTQ+ community.

Out of 91 athletes, 9.8% (n = 9) played individual sports, 4.4% (n = 4) played both individual and team sports, and the other 85.7% (n = 78) played team sports. 10.9% (n = 10) of the participants were multi-sport athletes. The sports played by participating athletes are volleyball, rowing, swimming and diving, lacrosse, soccer, field hockey, cross country/track and field, basketball, softball, esports, golf, ice hockey, wrestling, and baseball. Length of sport participation in years ranged from 1.5–22 (M =14.19, SD = 4.39).

2.2.2. Coaches

Within the coaching sample, 18 coaches listed white as a primary racial identity, and two out of 18 (11%) listed an additional racial identity (in addition to also identifying

as white) as either Asian and/or black. A total of 15 out of 18 coaches indicated their gender identity, with 66% (n = 10) identifying as female/woman, 20% (n = 3) identifying as male/man, 6% (n = 1) identifying as queer, and 6% (n = 1) identifying as trans masc/nonbinary. Out of the 18 total coaches, 5.6% (n = 1) were assistant coaches, 27.8% (n = 5) were graduate assistants, and 66.6% (n = 12) were head coaches. Years of coaching experience ranged from 1–28 (M = 9.73, SD = 6.64), with only 15 coaches reporting their years of coaching experience.

2.3. Measures

2.3.1. Quantitative

The athlete survey included demographic questions, sports history questions, general trauma assessment questions, sport-specific trauma questions, and questions about the desire to see trauma-informed techniques implemented in their sports programs.

2.3.2. Brief Trauma Questionnaire

The trauma assessment questions were adapted from the Brief Trauma Questionnaire (BTQ), a research assessment measure utilized by the National Center for PTSD that has been implemented consistently in studies assessing trauma exposure (e.g., Sumner et al. 2015). Athlete participants were asked three yes-or-no questions about exposure to ten possibly traumatic events (see Table 1). Example questions included: "Have you ever been in a major natural or technological disaster, such as a fire, tornado, hurricane, flood, earthquake, or chemical spill?" followed by: (1) Has this ever happened to you? (2) If the event happened, did you think your life was in danger or you might be seriously injured? (3) If the event happened, were you seriously injured? (Schnurr et al. 1999). For the purposes of this study, we only required an athlete participant to answer "yes" to having experienced one of the 10 listed traumas in order to code them as having experienced trauma. We did not also require them to answer "yes" to the follow-up questions: "If the event happened, did you think your life was in danger or you might be seriously injured?" or "if the event happened, were you seriously injured?" to count their experience as traumatic.

2.3.3. Sport-Specific Trauma

To assess sport-specific trauma, athletes were asked questions about their experience with sport-based harassment and abuse as outlined by the International Olympic Consensus Statement (Mountjoy et al. 2016). Athletes were asked about sports harassment and abuse in their entire athletic career as well as during college specifically. The sport-based harassment and abuse questions followed the same format as the general trauma questions, in which participants were asked questions about different categories of harassment and abuse and follow-up questions about the nature of their experience. The categories included psychological abuse, physical abuse, neglect, sexual abuse, sexual harassment, and racial trauma. For example, athletes were asked, "Have you experienced psychological abuse in sport?" Then they were asked the follow-up questions: (1) "If this happened, did you think your life was in danger or you might be seriously injured?", (2) "If this happened were you seriously injured?" and (3) "Did this happen in the collegiate sports environment?"[2] Just as with the general trauma assessment questions, we did not require participants to answer "yes" to the first two follow-up questions to count their experience as traumatic.

2.3.4. Trauma-Informed Practices

The survey distributed to both athletes and coaches included questions about the desire to implement and active implementation of trauma-informed coaching techniques taken from Bergholz et al. (2016) and colleagues. For example, athletes were asked, "Rate each of the following trauma-informed coaching practices based on whether you as an athlete would like to see the practice implemented on your team. Ex. "Offering opt in/opt outs: players are allowed to step out and are encouraged to know their limits", and then

they were prompted to respond if each technique was already implemented on their team, if they would like to see it implemented, if they were unsure if they wanted to see it implemented, or if they did not want to see the technique implemented. Coaches used a Likert-like scale with five points to indicate their level of agreement with each technique. For example, coaches were asked to "Rate each of the following practices based on whether you as a coach would implement these on your team. he team focuses on progress and effort instead of performance and outcome". Coaches could choose whether they strongly agreed, somewhat agreed, neither agreed nor disagreed, somewhat disagreed, or strongly disagreed with the technique.

2.3.5. Qualitative

Athletes were asked two open-ended questions at the end of the survey. Qualitative data was collected from these open-ended responses. The athlete survey included the following questions: "If you have experienced trauma, how has it affected your athletic performance, mental health, or well-being?" and "Which resources (for trauma management) did you find helpful?"

2.4. Data Analysis

2.4.1. Quantitative

Participants submitted responses via Qualtrics Survey Software. The link to the survey was provided via email. After the survey was closed, researchers downloaded the data from Qualtrics Survey Software into an Excel file. Researchers removed incomplete data sets and analyzed the remaining data via SPSS (version 26). Two main statistical tests were used to assess differences between groups and individuals' self-reported experiences with trauma in order to ascertain if group differences existed. An independent sample *t*-test was used to examine differences between groups and overall rates of trauma, while a chi-square test allowed for the examination of differences in individual types of trauma. The level of significance was set at $p < 0.05$. To calculate differences in overall trauma rates, we coded the first response in each category of the BTQ as 1 (yes) or 0 (no) and summed the responses.

In this study, the researchers chose to divide athletes into two groups across two different social identities: LGBTQ+ identity and race. Both gender identity and sexual orientation can lead someone to identify as LGBTQ+, so this was used as the main category and compared to those who did not identify as LGBTQ+. Likewise, we chose to combine BIPOC individuals into a single category due to the limited number of participants who identified as BIPOC. The experiences of people of color of different races are not always similar, so this may not be an ideal solution. However, given the current sample size, this method seemed most effective.

2.4.2. Qualitative

Qualitative data were collected through responses to open-ended questions in the athlete survey. The exact wording of these questions is listed in the measures section of the methods. After reflecting on the purpose of the study, researchers decided to only include qualitative data gathered from the first question on the athlete survey, as the other qualitative data did not align well with the research questions. Thematic analysis was used to analyze athletes' responses to the first open-ended question. Thematic analysis has previously been used in similar mixed-method, entirely survey-based studies (Shipherd et al. 2021; Willson et al. 2022). The researchers engaged in the six phases of thematic analysis: data familiarization, initial coding, theme development, refinement/revision, naming, and writing up (Braun et al. 2016). The four primary researchers all individually familiarized themselves with the data before engaging in three rounds of semantic-level coding and theme generation. For the first round, the four primary researchers individually generated codes and themes, then came together to reach a consensus on a master list of codes and themes to apply to the data. For the second round, the researchers all applied

these codes and themes individually. Lastly, the four primary researchers met one final time to reach a consensus on the application of these codes and themes to the data. Revisions and naming were primarily conducted by only one of the primary researchers, but they received agreement from all other primary researchers before finalizing every change. The number of athlete responses that corresponded with each theme was tallied to indicate the most commonly mentioned themes.

3. Results

3.1. Quantitative Results

Traumatic Experiences of Athletes

Of the 91 athletes surveyed, 52.7% (n = 48) experienced at least one traumatic event, with 7.7% of athletes (n = 7) reporting three or more traumatic events as defined by the DSM V (see Table 1). The most common form of trauma was unwanted sexual contact, with 26.3% of athletes (n = 24) reporting this. Following that, 20.8% (n = 19) witnessed a situation in which someone was or could have been seriously injured or killed, 10.9% (n = 10) experienced being in a situation where they feared being significantly injured or killed, and an additional 10.9% (n = 10) experienced the violent death of a significant other.

Table 1. Rates of traumatic event exposure.

Type of Trauma	Number of Respondents
Involved in warzone	0
Serious car accident or other accident	10
Major natural disaster	9
Life-threatening illness or injury	1
Physical punishment or abuse before 18	4
Physical attack or mugging	5
Unwanted sexual contact	24
Violent death of family or friend	10
Witnessed death or serious injury of another	19
Other situation with serious risk of personal injury or death	10

3.2. Group Differences

3.2.1. LGBTQ

While identifying as LGBTQ+ was not correlated to or predictive of higher rates of trauma in general, t(df) = 1.33 (89), p = 0.19, athletes who identified as LGBTQ did report higher rates of unwanted sexual contact, χ^2 (2, n = 91) = 7.68, $p < 0.05$. Of the 32 total athletes who reported being LGBTQ, 14 (43.8%) reported experiences of unwanted sexual contact, while only 10 (16.9%) of the 59 non-LGBTQ athletes reported experiencing this form of trauma.

3.2.2. Race

Conversely, identifying as a race other than white was significantly related to higher rates of overall trauma t(df) = 2.30 (88) $p \leq 0.05$, as well as a higher likelihood of being involved in a serious accident χ^2 (1, n = 90) = 7.28, $p < 0.05$, experiencing a life-threatening illness or injury χ^2 (1, n = 90) = 4.28, $p < 0.05$, and experiencing physical abuse. Of the 13 athletes of color, 4 (30.8%) reported being involved in a serious accident, whereas five of the 72 white athletes (6.9%) reported this form of trauma. Only one athlete (a person of color) in the sample reported experiencing a life-threatening illness or injury, so this result should be considered in that context. Lastly, two of the 13 BIPOC athletes (15.4%), as compared to two of the white athletes (2.6%), reported experiencing physical abuse.

3.3. Sport-Based Harassment and Abuse Experienced by Athletes

The sport-based harassment and abuse scale asked athletes to report on the trauma experienced in sports as well as in college sports specifically. Within our sample, 50.5%

of athletes (n = 46) reported experiencing sport-based harassment or abuse. Of those 46 athletes, 10 reported that harassment and abuse had occurred in a collegiate athletic setting (see Table 2). Two athletes reported both psychological abuse and neglect within the collegiate sports setting. No significant differences appeared based on race or identification within the LGBTQ+ community.

Table 2. Sport-based harassment and abuse by type and setting.

Type	Sport in General	Collegiate Sport
Psychological abuse	38	10
Physical abuse	3	0
Sexual abuse	1	0
Sexual harassment	4	0
Neglect	15	2
Racial trauma	3	n/a[3]

3.4. Athlete Perception of Trauma-Informed Coaching Techniques

Athletes indicated that they believed many of the 10 suggested trauma-informed techniques were already implemented on their teams. The top techniques that the most athletes believed were already implemented were: coaches arriving early and staying late after practice to be available to players 69.4% (n = 50), the reframing of mistakes in a positive manner 57.7% (n = 41), and the use of consistently structured practice plans with phases of high and low intensity 57.7% (n = 41).

Athletes reported a willingness to implement almost all of the trauma-informed coaching techniques described in the surveys[4]. After removing responses that indicated a practice was already implemented on their teams, eight of the 10 techniques were desired for implementation by athletes at rates ranging from 54.1% to 86.1%. The techniques with the largest percentages of athletes saying they would like to see them implemented were coaches inviting player input, desired by 86.1% (n = 31), mistakes being reframed in a constructive manner, desired by 80% (n = 24), and coaches arriving early and staying late after practice to be available to players, desired by 77.3% (n = 17). The top techniques that athletes did not want to see implemented in their programs were: praise the play, coach the bench, 22.9% disapproval (n = 8), individualized schedules for practice and competition, 21.6% disapproval (n = 8), and providing space for breathing meditation and visualization, 20.1% disapproval (n = 10). In total, between 73.2% and 93.1% of athletes indicated that a technique was either already implemented or that they wanted to see it implemented for 8/10 techniques.

3.5. Coach's Perception of Trauma-Informed Coaching Techniques

Within the coaching sample, 88.2% (n = 15) indicated that they believed trauma-informed coaching is necessary at the collegiate level, based on their response to the question "Do you think trauma-informed coaching practices are necessary for collegiate sports teams?". When asked which trauma-informed techniques they would consider implementing in their programs, in general, most techniques were viewed favorably by the coaches[5]. For 8 of the 10 suggested trauma-informed coaching techniques, between 88.8% and 100% of coaches strongly agreed or somewhat agreed with 8 of them. The techniques most agreed with were giving feedback and support during substitutions, with 100% of responding coaches (n = 14) strongly agreeing with the technique; reframing mistakes in a positive and constructive manner, which 100.0% of coaches strongly or somewhat agreed with ((n = 15) strongly agree and (n = 2) somewhat agree); and planning consistent, structured, and predictable practices with periods of high and low-intensity activities, with 94.1% of coaches strongly agreeing or somewhat agreeing with the practice ((n = 13) strongly agree (n = 3) somewhat agree). Coaches least supported the idea that players on the bench are in a better mindset to listen and should therefore be coached rather than

players on the court or field. Only 50.0% of responding coaches agreed with this technique ((*n* = 2), strongly agree (*n* = 4), somewhat agree), 33.3% neither agreed nor disagreed (*n* = 4), and 16.7% somewhat disagreed (*n* = 2).

3.6. Qualitative Results

Near the end of the survey, student-athletes had the option to answer, "If you have experienced trauma, how has it affected your athletic performance, mental health, and wellbeing?" Responses revealed eight major themes and 12 corresponding sub-themes and categories. These themes were (1) psychological effects; (2) performance effects; (3) desire to quit; (4) general negative; (5) resilience/drive/motivation; (6) relationship effects; (7) injury; and (8) no impact. Responses corresponding with each theme were tallied to indicate the most commonly reported themes (see Table 3).

Table 3. Themes and sub-themes from open-ended responses.

Theme	Sub-Theme	Sub-Theme	Number *
Psychological Effects			23
	Anxiety		10
		Symptoms of anxiety	3
	Fear of Failure		2
	Decreased self-confidence/self-esteem		4
	Depression		2
	General negative to mental health		8
	Body image		2
Performance Effects			10
	Performance Impacts		6
	Focus		3
Desire to Quit			5
General Negative			5
Resilience/Drive/Motivation			4
Relationship Effects			4
	Issues with trust		4
		Fear of reactions	3
Injury			4
	Stress about future injury or dying		2
No impact			3

* 33 total athletes responded to the prompt, one response could fall under multiple themes or subthemes.

3.7. Psychological Effects

The impact of trauma most commonly reported by athletes in their open-ended responses was psychological. Seven sub-themes and categories were included under psychological effects: anxiety, symptoms of anxiety, fear of failure, decreased self-confidence or self-esteem, depression, general negative impacts on mental health, and negative body image. Many athletes reported experiencing psychological consequences that fell under several sub-themes or categories because of their trauma. Athlete 10 described how their desire for control was caused by their trauma, saying, "it drives me to want to be in control, to always be thinking about all contingency plans, and to be preparing for the worst-case scenario". Other athletes recounted how their trauma impacted them mentally, making them lose confidence. Athlete 4 said "the psychological abuse really damaged my self confidence, made me play poorly, and gave me nightmares" and athlete 48 said "it made me lose confidence in my abilities". Some athletes described specific psychological conditions and how they were related to their trauma, like athlete 35, who asked, "Does your coach making you weigh yourself three times a day and report it to him when you struggle with body dysmorphia count as trauma? In that case it definitely affected my mental health". Still others reported multiple negative psychological effects like athlete 13 who reported that their trauma experiences caused "anxiety and mental distress, self esteem issues".

3.8. Performance Effects

The second most reported result of an athlete's trauma was its effects on their performance. These effects included reduced ability to focus, increased difficulty in playing but no decrease in performance outcome, and decreased ability to perform. Athlete 52 candidly described how "It can become hard to focus on sports and trying to train when some[one] dies. I'm so mentally exhausted from other things tugging at my mind". Athlete 7 also experienced difficulty focusing, saying, "It's heavily weighted on me and impacted my ability to focus athletically". Athlete 6 noticed that their trauma made doing their sport more difficult, yet this increased difficulty was not reflected in worsened outcomes. They reflected, "I don't think it affected athletic performance, but it did make competing and practices more difficult at times". Still, others saw their performance suffer because of their trauma. Athlete 83 shared that their trauma experiences "made me get into my head and caused me not to perform to my best ability".

3.9. Desire to Quit

For five athletes, their trauma resulted in them wanting to quit their sport. Athletes 82 and 57 described this loss of athletic motivation, saying, "It made me want to quit a couple times" and "[the trauma] made me want to quit, not play, want to skip practices/lifts". Athlete 17 described in detail how psychological abuse from a coach made them want to quit their sport: "One of my high school soccer coaches almost pushed me to quit. I was starting varsity as a Freshman & even then he never thought anything I did was good enough. Some of the things he would say seriously hurt me psychologically & emotionally as a young female athlete".

3.10. General Negative Effect

A number of athletes gave brief, vague descriptions of their traumatic experiences impacting them negatively. Without additional information, the primary researchers chose to code responses such as "negatively, it affects how I live my life and see myself", athlete 14; "makes it not fun", athlete 64; "negatively all-around", athlete 25; and "negatively", athlete 47, as general negative effects. Although these responses lack detail, they indicate that trauma exposure had a detrimental impact on some collegiate student athletes' lives.

3.11. Resilience/Drive/Motivation

Contrary to the loss of motivation described by those whose trauma made them consider quitting, four participants reported that their trauma experiences ultimately pushed them to be better. Their trauma motivated them or created drive and opportunities to practice resilience. Athlete 53 reported that "it was more motivating than anything". Athlete 3 similarly noted that "At the time [the traumatic event] impacted my mental state and made me a very angry person but overall it made me a stronger individual". Athlete 17 shared how they found motivation in their trauma from an abusive coach, saying, "I thought a lot about why I was going to let this man who has no place in my life dictate my future. I let his gross words and remarks push me to be better & always strive to do better".

3.12. Relationship Effects

Trauma-affected athletes described how their experiences impacted their sport-based relationships, causing trust to break down and creating fear of peers' and coaches' reactions. Athlete 58 said that their trauma made them "not very trusting towards coaches". Athlete 45 shared how, "I was forced to play through injuries, so now I have to treat and recover from them but have a lot of anxiety about coaches/teammates being mad at me or being kicked off of my team". Similarly, athlete 59 shared that "I'm constantly afraid of how my coach might react to me doing something wrong because of previous trauma".

3.13. Injury

Some participants conveyed that their trauma experiences caused them to play through injuries or become anxious about future (re) injuries. Athlete 44 described that "when [I am] injured [I am] less likely to take care of my body and have recovery anxiety". Other athletes described their fear of (re)injury. Athlete 19 said, "after my trauma I was afraid of being hurt as severely again. I was afraid of my skill deteriorating", and athlete 5 said "seeing a serious injury happen in my sport has increased my anxiety and made it more difficult to perform certain events".

3.14. No Impact

Lastly, some athletes responded that their traumatic experiences did not impact them at all. Responses such as "no", athlete 65; "none", athlete 60; and "has not", athlete 81, indicate that for some athletes, experiencing trauma did not impact their athletic performance, mental health, or lives in general. However, this was only reported by three athletes. The majority of athletes who chose to respond said that they were impacted by their trauma in some way (as detailed above).

Overall, the qualitative findings indicate that trauma impacts student-athletes in a number of different ways. Our findings indicate that athletes' experiences vary greatly, with negative psychological effects and performance effects being the two most commonly shared results of trauma. The quantitative data show that over half of collegiate student athletes experienced at least one potentially traumatic event. The qualitative findings expand upon these findings and show, in their own words, how these traumatic experiences impact student athletes following their trauma, showing that trauma can have an impact on health and performance.

4. Discussion

The purpose of this study was to investigate trauma prevalence among the collegiate student-athlete population and gauge receptiveness to trauma-informed coaching practices among collegiate athletes and coaches. This research was informed by existing literature on trauma prevalence, trauma-informed pedagogy at the youth and undergraduate levels, and trauma-informed youth sports. This pilot study builds upon existing literature and provides a new foundation for further investigation into trauma-informed coaching at the collegiate level.

In response to the question of trauma prevalence, just over half of the athletes reported experiencing at least one traumatic event in their lifetime. This indicates that collegiate student-athletes experience trauma at rates that are consistent with the low end of the range that is reported for the broader college student population (Anders et al. 2012; Bernat et al. 1998; Frazier et al. 2009; Im et al. 2020; Owens and Chard 2006; Scarpa 2001). While sport is often considered a protective factor that can help manage mental health concerns (Babiss and Gangwisch 2009), it clearly does not result in immunity from traumatic events. In general, campus-wide trauma-informed approaches have been recommended as holistic support for undergraduates (Palmer 2020). The present study shows that athletes have high rates of trauma, some of which is specific to their sport. Therefore, colleges need to implement athlete- or sport-specific trauma-informed practices in order to best serve all students.

In this sample, the most frequently reported type of trauma among student-athletes was experiencing unwanted sexual contact. This finding did not match previous studies, which reported experiencing or witnessing domestic violence or a natural disaster (Owens and Chard 2006) or witnessing someone being killed, seriously injured, or sexually or physically assaulted (Im et al. 2020) as the most common traumatic experience among undergraduate students. Perhaps this difference can be attributed to the overall high proportion of LGBTQ+ athletes in the sample. In this study, 35% of student-athlete participants identified as being members of the LGBTQ+ community, whereas only 7.1% of the general U.S. population identifies as LGBTQ+ (Gallup 2022). LGBTQ+ individuals in

general (Flores et al. 2020) and LGBTQ+ athletes, specifically, are at higher risk of sexual violence in sport than their non-LGBTQ+ peers (Mountjoy et al. 2016).

LGBTQ+ athletes in our study were not found to experience higher rates of trauma in general compared to their peers, conflicting with previous literature that reports LGBTQ+ youth experience all types of trauma at higher rates than their non-LGBTQ+ peers[6] (McCormick et al. 2018). Yet our study found that LGBTQ+ student-athletes experienced unwanted sexual contact at a rate over 2.5 times higher than the straight and gender-conforming athletes in the sample. This is consistent with other previously mentioned studies that report LGBTQ+ people are at a higher risk of experiencing sexual violence than straight or gender-conforming individuals (Flores et al. 2020). However, it is important to note that only one participant in the study indicated that their experience of sexual abuse happened in a sporting context, meaning that for the vast majority of LGBTQ+ participants, the sexual abuse they experienced was not connected to the athlete part of their identity. This is an interesting finding given that LGBTQ+ athletes are at a higher risk of sport-based sexual abuse than their peers (Mountjoy et al. 2016), yet it appears almost all participants in the present study, regardless of LGBTQ+ status, had their experiences of sexual abuse occur outside of sport.

Additionally, the present study found that athletes of color were significantly more likely to experience overall higher rates of trauma, involvement in a life-threatening accident, and experiencing physical abuse than white athletes. Existing literature is not in agreement when it comes to trauma prevalence in relation to race. McLaughlin and colleagues (2018) found that black, white, and Latino Americans experience three or more traumatic events at roughly the same rate, with Asian Americans being the least likely to have experienced three or more traumatic events. On the other hand, another study found that white Americans are the most likely to report having experienced any traumatic event, followed by black Americans, then Latino Americans, and finally Asian Americans (Roberts et al. 2011). Therefore, the present studies' findings indicate a higher rate of trauma among BIPOC individuals than would be expected based on previous research. However, it is important to note that this study had a small number of BIPOC participants and, for the sake of statistical analysis, grouped all BIPOC athletes into one category, unlike the previously mentioned studies. It is difficult to draw strong conclusions from such a small sample.

In terms of sport-based trauma, 50.5% of athlete participants experienced sport-based harassment or abuse, with 21.7% of athletes reporting their experience happened in a collegiate setting. Although slightly more athletes experienced trauma in general across their lifetime compared to sport-based harassment and abuse, these findings indicate a need for additional interventions beyond trauma-informed coaching to make sport a safe and enriching environment for all athletes. In their consensus statement, the IOC recognizes how widespread sport-based trauma is. Our study aligns with the findings of Mountjoy et al. (2016), which indicate that athletes are not just experiencing trauma outside of sport but also within it.

Coaches are much more likely to draw upon personal experience, observation of other coaches, and tradition in the creation of their coaching practice than new emerging evidence-based techniques or training (Cushion et al. 2003; Harvey et al. 2010). Therefore, it is possible that coaches would reject trauma-informed coaching for more familiar, traditional approaches. Yet, many coaches and athletes responded favorably to the techniques that have been created for youth (Bergholz et al. 2016). A majority of athletes reported a willingness to implement almost all techniques or reported that they believed these techniques were already implemented on their teams. Between 73.2% and 93.1% of athletes indicated eight out of 10 of the trauma-informed coaching techniques were already implemented or that they wanted to see them implemented in their programs. The most popular technique, coaches inviting player input, was desired by 86.1% of athletes, and the least popular technique, having coaches praise the play and focus on coaching the bench, was only rejected for implementation by 22.9%, leaving 45.7%[7] who still wanted even the least popular tech-

nique to be implemented in their program. These results indicate that, overall, the athlete participants were very open and eager to have trauma-informed coaching techniques used in their programs. Importantly, 88.2% of sampled coaches indicated that they believed trauma-informed coaching is necessary at the collegiate level, showing that it is also desired by a large majority of the coaches. When asked about specific coaching techniques, between 88.2% and 100% of the coaches agreed or strongly agreed with eight of the 10 techniques. Coaches and athletes did not share a favorite trauma-informed technique, yet both were least enthusiastic about praising the play and coaching the bench. These findings show that both athletes and coaches approve of the trauma-informed coaching methods that have been successful in youth contexts. We take that as a hopeful sign that trauma-informed training for coaches and trauma-informed programming on an organization-wide level would be welcomed if offered at small, liberal arts, DIII schools such as those included in our study.

Even more importantly, our findings indicate that trauma-informed coaching would not represent a fundamental shift in sports coaching as we know it because many of the sampled athletes reported that trauma-informed practices are already being used on their teams. Athletes were asked about trauma-informed coaching techniques, and, at minimum, over a quarter of the sampled athletes believed that each technique was already implemented in their programs. Some techniques were even more common, with the majority of athletes reporting that coaches arrive early and stay late after practice to be available to athletes, mistakes are reframed in a positive manner, and practices are consistently structured with phases of high and low intensity. These results indicate that trauma-informed coaching is not only desired but doable at the collegiate level because elements of the practice are already in place.

In the open-ended responses, athletes revealed the wide range of effects that traumatic exposure had upon them, both within sport and in their lives in general. The majority of athletes reported that the impacts of their trauma experiences were decidedly negative, with the two most commonly reported themes being psychological and performance effects. Given that 10 out of 33 athletes who responded to the open-ended questions described their trauma as negatively impacting their ability to perform or focus in games or practice, we believe that trauma-informed coaching could help these athletes cope with their trauma and potentially improve performance.

A number of mental health conditions and symptoms have been identified as secondary or associated responses to trauma, including depression, aggression, low self-esteem, identity confusion, relationship difficulties, and guilt or shame (Carlson and Dalenberg 2000). Many of these conditions or symptoms were mentioned explicitly by athletes in their responses. Our findings are therefore consistent with previous literature and allow athletes to express these experiences in their own words. However, our findings also indicate that trauma impacts athletes in ways that are more unique to the athlete experience, like making athletes want to quit their sport or have strained relationships with coaches or teammates.

A notable minority of sampled athletes reported that their trauma did not affect them at all or that it affected them positively through increased motivation or resilience. There is a widespread belief that hardship is the best way to build hardiness or resilience. This belief is prevalent in sports culture and reflected in literature like Collins and MacNamara's (2012) paper, which argues that youth athletes benefit from or need to overcome adversity to become successful in their adult lives. Upon a brief inspection, it would seem that our qualitative data somewhat supports this position, with four athletes describing how their traumatic experiences motivated them and pushed them to come back stronger. However, only seven athletes out of 33 athletes described their trauma as not impacting them or impacting them positively. The vast majority of athletes described severe, negative results of their trauma, indicating that even if trauma is a site of motivation or resilience for some athletes, it is the opposite for most. While Collins and MacNamara (2012) may be right that overcoming adversity helps build resourcefulness or resilience, there is a

difference between moderate adversity and a traumatic experience, and it would be false and potentially dangerous to believe that any type of trauma, without necessary support or coping mechanisms, is beneficial.

4.1. Limitations

The main barrier researchers faced when conducting this study was the unwillingness of universities to participate, resulting in a small sample size. Numerous higher education institutions were contacted all over the country via their athletic director's email. Yet most institutions did not respond or declined to participate. While we received enough participation for this pilot study, a larger sample would have been desirable. Additionally, both of the colleges at which the survey was distributed were small, DIII, liberal arts institutions. This context must be considered when interpreting the results of this study. If the study included data from DI or DII sports programs, it would be possible that the willingness to use trauma-informed coaching would have been very different given the greater influence of athletic scholarships and sport-based revenue for the university on the athletic environment. It must also be considered that the trauma-informed coaching techniques referenced throughout this paper were created with youth in mind (Bergholz et al. 2016). While we believe these techniques are a good starting point, in order to ascertain the effectiveness of these or other practices, applied research must take place in a collegiate setting.

Lastly, this research relies on definitions and tools based on the DSM, such as the Brief Trauma Questionnaire. The questions within the BTQ largely focus on individual events that are considered traumatic and do not contain questions about experiences that are unique to people of color or touch on historical trauma or systemic oppression. The negative physical and mental health outcomes from trauma associated with experiencing systemic racism are well documented in research conducted with African American and Indigenous communities (Borrell et al. 2006; Kaholokula et al. 2012). Yet commonly used measures to assess and diagnose trauma, like the DSM or BTQ, do not contain questions about these kinds of trauma because these measures were created and are used in ways that center whiteness (Riquino et al. 2021). We acknowledge that our reliance on the DSM and BTQ in our research limits it because of these flaws and the DSM's allowance for and encouragement of racial bias (Riquino et al. 2021). It is beyond the scope of the current paper to construct a new way of assessing racial trauma in sport; however, the results indicate that an awareness of social identities such as race, gender, and sexual orientation should be taken into account. This paper provides evidence that collegiate athletes have experienced trauma and are open to trauma-informed coaching practices. To conduct this research, we worked with the tools and within conventions that are currently available, namely the DSM-V and the BTQ.

4.2. Recommendations for Future Research

Future research should assess trauma prevalence and willingness to implement trauma-informed coaching with a more diverse athlete sample in terms of race, school size, and NCAA Division level. Potential future research with such populations as well as the findings in this study can act as justification for the creation of trauma-informed coach training or pilot trials using the techniques outlined by Bergholz et al. (2016) in college sports programs.

Additionally, future research that seeks to assess trauma prevalence should attempt to break from these conventions set in the DSM-V and find or create new tools to assess trauma in sport that do not center whiteness and are actively anti-racist.

Lastly, given the established relationship between trauma exposure and other mental health conditions like anxiety and depression (Carlson and Dalenberg 2000), which are prevalent among collegiate athletes (Brown et al. 2014), future research could investigate if trauma-informed coaching is beneficial for athletes with depression and anxiety symptoms and whether or not these symptoms are secondary conditions caused by trauma exposure.

4.3. Recommendations for Applied Practice

We recommend the entire sporting community learn and implement the recommendations given in *The IOC Consensus Statement: Harassment and Abuse (non-accidental violence) in Sport* (Mountjoy et al. 2016) and continue to otherwise work to fundamentally change sport to become a safe, enriching, and accessible place for all.

5. Conclusions

The present study found high levels of exposure to at least one potentially traumatic event (52.7%) among undergraduate student-athletes. Additionally, 50.5% of athletes reported experiencing sport-based harassment and abuse, with 21.7% of impacted athletes reporting that this harassment or abuse occurred in the collegiate setting. These results provide sufficient evidence to argue that trauma-informed coaching is needed at the collegiate level. Furthermore, a vast majority of athletes and coaches thought trauma-informed coaching techniques were already implemented in their programs or wanted to see them implemented. These findings show that DIII coaches and athletes from small liberal arts colleges are open to the implementation of trauma-informed coaching and already use some of the suggested techniques in their programs. If all the techniques were intentionally and thoughtfully implemented together, coaches would be doing trauma-informed coaching as described by previous research (Bergholz et al. 2016). Lastly, qualitative analysis of athlete statements about the impacts of their traumatic experiences revealed that athletes experience a diverse range of impacts from their trauma, with the two most frequently reported effects being negative psychological and performance effects. Almost all athletes experienced negative repercussions after their traumatic event exposure, with a minority of seven participants not being impacted by their trauma or being impacted positively. These results show that trauma has a detrimental impact on student-athletes. We believe trauma-informed coaching could help mitigate some of these impacts. In summary, trauma-informed coaching at the collegiate level is both necessary and desired.

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Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available to protect the privacy of participants.

Conflicts of Interest: The authors declare no conflict of interest.

Notes

1 Although official admissions policies vary across Historically Women's Colleges and definitions of womanhood and inclusion vs. exclusion are constantly being debated (Nanney and Brunsma 2017), students with many gender identities attend Historically Women's Colleges and these institutions are significantly more supportive environments for transgender students than coed colleges (Freitas 2017).

2 Due to a data collection error, data on whether or not athletes experienced racial trauma in the collegiate setting was not collected.

3 Due to a data collection error these responses were not recorded. The researchers believe that the data which was recorded regarding racial trauma was essential to include despite this error.

4 Not all athletes answered all questions regarding the trauma-informed practices. Percentages are calculated based on the number of athletes who responded. Response rates ranged from 69 to 73. The informed consent form advised athletes they could stop answering questions whenever they felt the need to. Therefore, some participants skipped some questions but continued to answer others.

5 Not all coaches answered all questions regarding the trauma-informed practices. Percentages are calculated based on the number of coaches who responded. Response rates ranged from 14 to 18. The informed consent form advised participants they could stop answering questions whenever they felt the need to. Therefore, some participants skipped some questions but continued to answer others.

6 LGBTQ+ youth are used for comparison here because college students have spent most of their lifetime as youth.

7 Percentages calculated after removing responses which indicated a practice was already implemented.

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Article

Rio 2016 Olympic Legacy for Residents of Favelas: Revisiting the Case of Vila Autódromo Five Years Later

Claudio M. Rocha

Faculty of Health Sciences and Sport, University of Stirling, Stirling FK9 4LA, UK; claudio.rocha@stir.ac.uk

Abstract: The aim of this research was to explore and describe the long-term social impact the Rio 2016 Olympic gentrification had in Vila Autódromo from the perspective of former and current residents. Vila Autódromo is a small favela located next to the Rio 2016 Olympic Park. It was almost totally removed during the process of preparing the area to host the Games. In this research, I interviewed 13 residents who passed through the process of eviction threats and displacement. Five still live in Vila Autódromo, whilst eight moved to social apartments provided by the city hall. Interviews revealed that the legacy of Rio 2016 for Vila Autódromo residents can be understood from three broad themes: (1) disempowerment of the community, (2) resistance and resilience during the process, and (3) life after the Games. The residents see the city hall as the main culprit of their displacement, as they were denied their right to the city. However, they also mention the catalytic role of the Olympic Games during the process. They conclude that the legacy of Rio 2016 for them is a very sad story.

Keywords: gentrification; human rights; social impact; sport mega-events; sustainable development

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1. Introduction

Legacy has become an omnipresent discourse in contemporary Olympic affairs (MacAloon 2008). Candidate cities have used the discourse of positive legacy to legitimatise bids to host the Olympic Games. Bid winners maintain such discourse during the preparation-to-host process (Hiller 2014). The International Olympic Committee (IOC) shapes the discourse of legacy on the idea of universal positivity, where legacies are best represented by the benefits left for the host cities (MacAloon 2008; Talbot 2021). The mediatic power of the Olympic "brand" legitimatises that discourse, reinforcing that the Games represent a unique opportunity for a long-term positive social legacy, inclusive to all economic strata in in host communities (Gaffney 2019; Minnaert 2012). The legacy discourse has become quite similar among bidders and hosts. The discourse tries to highlight the long-term benefits for local communities, whilst minimising the negative impacts of hosting. When local communities are negatively affected by event preparation, organisers and event owners are fast to point out that those are short-lived impacts, and that positive legacy takes time to materialise.

The focus of the current research is on the long-term social legacy of Rio 2016 Olympic and Paralympic Games (hereinafter, Rio 2016) for favela residents. I waited until five years after Rio 2016 to revisit the case of Vila Autódromo, a small favela located next to the Rio 2016 Olympic Park. From 2009, when Rio was chosen to host the 2016 Games, until the eve of the event, the city hall tried to remove Vila Autódromo altogether to create space for new constructions in the gentrified area of the Olympic Park (Sánchez et al. 2016). There are reports about what happened with Vila Autódromo before and immediately after the Games (Faulhaber and Azevedo 2015; Ivester 2017; Talbot and Carter 2018). However, when the Games passed, the interest in Rio faded away, moving quickly to the next hosts. Considering the concerns with long-term legacy and sustainable development of host communities (Leopkey and Parent 2012), revisiting the case is important to advance the knowledge about social impacts of hosting the Olympic Games.

Some research has described how forced evictions have happened and have focused on resistance and resilience of residents of Vila Autódromo (Sánchez et al. 2016; Talbot and Carter 2018; Williamson 2017). Experiences of those residents are still fundamental to inform other communities facing the same type of eviction threats. Nevertheless, in the current research, I go one step further and add the perspectives of those who left Vila Autódromo after facing eviction and other types of threats. Some studies have shown that, during the Olympic gentrification, authorities use false information and subversion of facts to threat and persuade residents to agree to leave their houses (Donaghy 2015; Wang et al. 2015). During the preparation for Rio 2016, research has shown that the then-mayor of Rio, Eduardo Paes, used similar strategies. For example, based on the argument that Vila Autódromo was aesthetically and environmentally damaging the area, Paes threatened to remove residents without any compensation (Freire 2013; de Oliveira et al. 2018). Later, the city hall said that the type of ground where the community was settled did not allow infrastructure development[1], thus proposing the relocation of residents to social housing (de Oliveira et al. 2018). Fearing evictions with no compensation, between 2013 and 2014, three-hundred and forty-one families agreed to move to a social housing complex, where the mayor promised excellent infrastructure, leisure, and safety[2] for their families (RioOnWatch 2016; Williamson 2017).

In 2015, with Rio 2016 fast approaching and half of the families refusing to negotiate their leave, the mayor issued a decree that legalised the demolition of many houses under the argument of "public interest" (Sánchez et al. 2016). By March 2016, most of the residents had been either forcibly removed or displaced by fear to social houses. Out of about 700 families, only 20 resisted the multiple attempts of eviction and stayed in Vila Autódromo after the Olympic Games (Williamson 2017). In the current research, I explore the perspective of both groups, those residents who resisted and stayed and those residents who left Vila Autódromo after the actions and pressures from the city hall. The aim of this research was to explore and describe the long-term social impact Rio 2016 Olympic gentrification had in Vila Autódromo from the perspective of former and current residents.

1.1. Theoretical Framework: Right to the City

I draw upon the 'right to the city' framework (Lefebvre 1967) to analyse experiences of residents of Vila Autódromo during the process of preparation to host the Rio 2016 and afterwards. Right to the city ("droit à la ville") is characterized by the right of citizens to enjoy urban life and to participate in decisions regarding urban spaces (Lefebvre and Nicholson-Smith 1991). The right to the city involves two principal rights of urban residents: the right to participation (residents play a central role in decisions that contribute to the production of urban space) and the right to appropriation (residents have the right to access, occupy, and use urban space) (Marcuse 2009; Masuda and Bookman 2018; Purcell 2002). The current research produces new knowledge related to the right to participation by directly hearing from residents about their participation in the process of urban generation triggered by the Olympic Games in their neighbourhood. The research also explores the right to appropriation as it investigates how such residents have negotiated the right to stay in their community when gentrification and political forces tried to displace them from their area.

Drawing upon the right to the city, some research in the context of the Olympic Games has proposed that urban regeneration has superficially integrated and directly oppressed marginalised residents of the host cities (Horne 2018; Kennelly and Watt 2011; Watt 2013). I argue that residents of favelas in Rio were not integrated at all, rather they faced constant threats of eviction. To support my argument, I refer to conceptual articles that have proposed that the Olympic-led urban regeneration reinforces the principle of neoliberalism and denies the right to the city to marginalised groups (Hall 2006; Maiello and Pasquinelli 2015). Few empirical articles have applied the concept of the right to the city to marginalised residents (Ivester 2017; Kennelly and Watt 2011). In the current study,

I explored the case of urban regeneration in the specific site where the Rio 2016 Olympic Park was constructed and how this has affected the right to the city of long-term residents.

1.2. Context: Olympic Gentrification in Rio

State-led gentrification is at the core of Olympic development projects, which have had impressively similar social, spatial, and financial expressions in host cities as diverse as Beijing, London, Vancouver, and Rio de Janeiro (Broudehoux 2007; Gaffney 2019; Kennelly and Watt 2011; Sánchez and Broudehoux 2013). Neoliberalism has been the institutional rule guiding the gentrification process in Olympic cities (Hall 2006; Rocha and Xiao 2022). Governments have used hosting opportunities to regenerate deprived areas of cities, using neoliberalism to favour capital development, which has led to displacement of poor residents from such areas (Hall 2006; Rocha and Cao 2022; Watt 2013). Displacement of residents to create space for real estate constructions has happened in association with the Olympic Games at least since Seoul 1988 (Rocha and Xiao 2022). Rio 2016 was the most recent example of how governments use the Olympic Games to justify large-scale eviction to create space for new constructions and richer residents (Williamson 2017).

At the beginning of the preparation to host process (2009–2010), the municipal housing secretariat of the Rio city hall listed 119 favelas that must be totally removed by the end of 2012 (Bastos and Schmidt 2010). Favelas are informal settlements that have become the main form of affordable housing in large Brazilian cities such as Rio (Williamson 2017). In Brazil, Rio is the city with the highest number of people living in favelas, with about 1.39 million people (Salles 2021). During the seven-year preparation time (2009–2016), Rio city hall displaced more than 77,000 people from their houses in favelas or poor communities, arguing for the necessity of making space for infrastructural projects that were somehow related to Rio 2016 (Faulhaber and Azevedo 2015; Zimbalist 2017).

1.3. Vila Autódromo

Among those favelas threatened to be fully removed, Vila Autódromo became a special case because of its location (less than 300 meters from the entrance to the Olympic Park) and the resistance of its residents. The location may explain the interest of the city hall to remove the community. There was an estimation that new properties in the area of the Olympic Park would cost 200% more after the Games (Cerqueira and Pessoa 2017). Therefore, the area of Vila Autódromo became of great interest for private real estate companies. However, despite multiple attempts to the community, some of their residents were not willing to leave their community and resisted eviction. Some facts about Vila Autódromo explain such resistance.

Vila Autódromo was a fishermen settlement established in 1967, close to the Jacarepaguá lagoon in Rio de Janeiro. Since then, the settlement grew from a few families to about 700 families. Despite the growth, the community created a history of strong social bonds and became a peaceful place (Williamson 2017). Vila Autódromo was not an illegal settlement and residents were not "invaders", as part of the media and the city hall used to refer to them. Most residents have bought their houses and had titles of possession, issued in 1998, by the Rio de Janeiro State Department of Land Affairs; the titles gave them the legal right to occupy the land for a period of 99 years, renewable for more 99 (Williamson 2017). Additionally, in 2005 Vila Autódromo was declared an Area of Special Social Interest by the Municipal Law 74, which established the area as a site for affordable housing construction (Williamson 2017). Some areas of Vila Autódromo did suffer from infrastructural problems, such as lack of integrated sewage, precarious electricity system and lack of road paving. Some authors have asserted that the main cause of the infrastructural problems was the abandonment from the city government, which historically refused to respond to the basic needs of the community (Faulhaber and Azevedo 2015). Despite such infrastructural problems, most of the residents loved to live there because of the sense of community they developed over the years (Faulhaber and Azevedo 2015; Williamson 2017).

As part of Rio 2016 hosting preparation, attempts to remove Vila Autódromo started in 2009, when the proposal was to construct the Olympic media centre in the area. When the media centre was moved to another site, the city hall said that the community still needed to be removed because of the security perimeter of the Olympic Park (Coaffee 2015; Williamson 2017). The security perimeter argument was not sustained because a large number of new apartment buildings were constructed in the area as part of the gentrification plan. Additionally, the British architecture company AECOM, the bid winner responsible for designing the Olympic Park, proposed a project to urbanise the community as part of the Rio 2016 legacy (Comitê Popular do Rio 2013). Despite that, the city hall made multiple attempts to remove Vila Autódromo during the process of preparation to host.

The city hall had a neoliberal agenda, which created benefits for private real estate companies. Some of those companies were against having favelas in the new gentrified areas, affirming that that would be detrimental for their businesses. There are media reports where real estate owners expressed their views on how poor communities did not "fit" well in the new gentrified area of the Olympic Park (for example, see Puff 2015). To explain what was going on in Rio, some authors proposed that the city government had created a "state of exception" (Agamben 2005), where laws were adapted and human rights were ignored to promote the interest of private capital (Aaron Richmond and Garmany 2016; de Oliveira et al. 2018). Vainer (2011) asserted that, during the preparation for Rio 2016, Rio was a "city of exception", where everything was permitted to support a neoliberal agenda.

1.4. From Favelas to Social Housing

During later stages of the preparation to host the Olympic Games (2013–2016), the case of Vila Autódromo increasingly gained international notoriety. Stories of human rights abuse started to appear in United Nations reports and more frequently in international media (Rolnik 2015; Wilkson 2016). Therefore, to manage international pressure and avoid political loss, Rio authorities changed their strategies from accusing residents of being invaders of the area to trying to persuade them to agree to leave their houses, which would be exchanged by money compensation or apartments in social housing complexes (Donaghy 2015; de Oliveira et al. 2018). Based on this strategy, the construction of a close-by social apartment complex named Parque Carioca, to where residents could opt to move in, was the single most important fact to convince residents to leave Vila Autódromo.

Parque Carioca was part of the federal government housing programme "Minha Casa, Minha Vida" (my house, my life), which provided affordable opportunities for low-income people to buy their first property. Parque Carioca was the only known case where houses/apartments from "Minha Casa, Minha Vida" were offered to people who already had houses, breaking a fundamental rule of the programme (de Oliveira et al. 2018). During the preparation for Rio 2016, the political parties of the Rio city mayor (Eduardo Paes) and the president of Brazil (Dilma Rousseff) were allies, facilitating the use of a federal programme to support the mayor's agenda. The political use of that federal programme was clear and it has been criticised by other authors (de Oliveira et al. 2018; Williamson 2017).

Parque Carioca was strategically located to tackle the criticism that displaced residents are moved to houses very far away from their communities and jobs (Faulhaber and Azevedo 2015; Sánchez and Broudehoux 2013). It was offered to residents with many attractive features, such as a swimming pool and playground areas for children (Robertson 2016). The argument of the government was that they were offering a much better way of living for favela residents, in a very close-by area, which would not disrupt their lives. Considering the context—a vulnerable community, tired of years of threats of eviction and lack of infrastructure—it is not difficult to understand why many residents accepted the city offer and moved to the Parque Carioca. In 2015, there was an estimation that 75% of the Vila Autódromo residents had agreed to move out, either by taking a money compensation or by accepting another place to live; among those, 32% of the residents had moved to Parque Carioca (Faulhaber and Azevedo 2015; de Oliveira et al. 2018). In this research, I

aimed to hear from those former residents who agreed to move to Parque Carioca, in order to understand their thoughts and perspectives about what happened during the process and their current situation.

Despite the government pressures and incentives, by 2015, about 25% of the families were still not willing to leave the community (de Oliveira et al. 2018). Therefore, a year before the Olympic Games, the Rio government escalated their actions to persuade residents to agree to move. Such actions included daily visits from government officials saying that everybody would have to leave and the last ones would leave with no compensation at all (de Oliveira et al. 2018). The demolition of the houses of those residents who agreed to move was another strategy of the government. Lastly the government started promoting forced evictions of those who had not yet agreed to leave (Williamson 2017). In that context, most of the residents that had resisted up to that point agreed to take the government's compensation and left the community (Faulhaber and Azevedo 2015). By March 2016, with the Olympic Games around the corner, the city hall had no more time to implement additional tactics to remove them; then, the Rio mayor agreed that the 20 families that were still in Vila Autódromo could stay and the city hall would provide the urbanisation of the area to settle them (Williamson 2017). It was a victory for those families, representing a victory for the community. In this research, I also aimed to hear from those who stayed, in order to understand the process that they passed through and what created such resilience and determination to stay.

2. Method

I collected data in June/July 2021, five years after Rio 2016, using semi-structured interviews. After getting ethics approval, I started contacting some potential interviewees. I have been part of the Sustainable Favela Network, which is an initiative of the Catalytic Communities, a local non-governmental organisation whose mission is to generate opportunities for community-led development in Rio favelas. After finding the first residents/former residents interested in participating, I used a snow-ball sampling strategy, where some participants indicated the next ones. At the time of data collection, Brazil was encouraging social distance due to the COVID-19 pandemic. Therefore, rather than face-to-face, I conducted the interviews online. To define the number of interviews, I applied the principle of theoretical saturation (Guest et al. 2006). The interviews were conducted with 13 people, eight former residents and five residents of Vila Autódromo. The inclusion criteria were that the resident must be at least 26 years old (or 21 years old in 2016, during the Games) and have lived in Vila Autódromo for at least eight years (enough time to create social ties). Table 1 shows some demographic information about interviewees and the time they had lived in Vila Autódromo when the interviews were conducted. The interview scripts had questions that allowed participants to express their thoughts and perspectives about what happened with them during the time of preparation to host Rio 2016 and what long-term social legacy they have perceived the event has left to them.

To analyse the data, interviews were voice recorded and fully transcribed in Portuguese; then, quotations that were used in the article were translated to English. I used NVivo 12 to undertake an iterative coding exercise and identify key themes, following six steps of thematic analysis (Braun and Clarke 2006): (1) immersion in the data through intensive reading; (2) generation of initial codes; (3) search for themes; (4) revision of themes; (5) definition and naming of themes, and (6) report writing.

Table 1. Characteristics of participants.

Participant	Gender	Residence	Years in Vila Autódromo
Resident 1_PC	Female	Parque Carioca	20
Resident 2_PC	Female	Parque Carioca	19
Resident 3_PC	Female	Parque Carioca	21
Resident 4_PC	Male	Parque Carioca	22
Resident 5_PC	Male	Parque Carioca	15
Resident 6_PC	Female	Parque Carioca	16
Resident 7_PC	Female	Parque Carioca	26
Resident 8_PC	Female	Parque Carioca	26
Resident 1_VA	Female	Vila Autódromo	21
Resident 2_VA	Male	Vila Autódromo	21
Resident 3_VA	Female	Vila Autódromo	21
Resident 4_VA	Female	Vila Autódromo	30
Resident 5_VA	Female	Vila Autódromo	20

3. Results and Discussion

The aim of this research was to explore and describe the long-term social impact Rio 2016 Olympic gentrification had in Vila Autódromo from the perspective of former and current residents. Interviews revealed that the legacy of Rio 2016 for Vila Autódromo residents can be understood from three broad themes: (1) disempowerment of the community, (2) resistance and resilience during the process, and (3) life after the Games. Residents also discussed the role of Olympic Games and their owners, the IOC, during the process.

3.1. Disempowerment of the Community

The fact the Olympic Park had an agenda and was about to be built in the area close to Vila Autódromo created an urgency from Rio city hall. To fulfil the agenda, the city hall applied strategies that can, according to reports of residents, be divided in three groups: psychological pressures (based on arguments of public interest and intense gentrification in the area—to create feelings of not belonging), money compensation (through offers of "better" places for residents to live and/or cash in exchange of their houses), and violence (using the law and establishing a frequent police presence in the favela, carrying out forced evictions). The aim of the strategies was to disempower the community to carry out the total removal of Vila Autódromo.

Residents told me that the psychological pressures were quite intense during the preparation-to-host period. At the beginning of that period, residents were told that they must leave to create space for the Olympic venues. A former resident reported that, "They told us that we must leave because they would build the Olympic Park in the area; then, we must leave, no option" (Resident 7_PC). At that point, they suffered eviction threats based on the argument of "public interest". A former resident exemplified the type of pressure they were exposed to:

We suffered a very intense psychological pressure. When everything started, we got a letter from the city hall saying that the place where our house was located was a place of public interest. Then . . . the psychological pressure started. They put down some houses around us, that shook our structure (Resident 6_PC).

Public interest is a broad, diffuse, and fuzzy concept that can be used by governments to impose their interests over individuals' interests (Lewis 2006). The concept has been one of the main arguments to evict low-income residents from areas where the government has economic interest in different parts of the world, such as Africa (Ocheje 2007), Latin America (Santoro 2019), and South Asia (Bhan 2009). Ocheje (2007) defends that the public interest rationale is flawed and proposes that evictions of marginalised residents are better explained by inappropriate urban planning and government corruption. In Rio, the area of Vila Autódromo became an area of "public interest" for the city hall because of the Olympic Park and all real estate speculation that was generated around it. The government used the argument of public interest to impose a psychological pressure under residents, who were

told that they were blocking progress and preventing the city to create a "greater good" for more people. Apparently working in the best interest of all, the government was actually defending the capital interest and trying to create a new zone to be explored by private real estate companies (Gaffney 2016; Sánchez et al. 2016).

The gentrification itself was a form of psychological pressure to lead residents out of the area. It sent a message to the residents that they did not belong to that region anymore. A resident from Vila Autódromo nicely summarises the idea of gentrification as a strategy to remove:

When a place is abandoned, the poor can stay. They can go there and create a favela, build some shacks . . . the city hall does not care at all. However, when the place starts to improve, when the city hall starts to improve the infrastructure of the place, then you cannot stay there anymore. You feel like you do not belong there. But you have arrived there much earlier . . . (Resident 5_VA).

The same feeling has been reported from residents in other Olympic cities. For instance, Watt (2013) reported how gentrification of the London borough of Newham (to host London 2012) created a feeling of not-belonging among long-term residents. This idea is linked to Marcuse's (1985) indirect displacement or displacement pressure, which occurs when people see their neighbourhood changing dramatically—friends leaving the region, new ways of access, local shops closing, new unfamiliar shops opening. Such changes create a feeling of not belonging where you had once belonged. The ultimate impact of such feeling is to push long-term, marginalised residents away, to create space for new, richer residents that are supposed to occupy the gentrified area (Marcuse 1985).

Psychological pressures were accompanied by money offers for residents to leave their houses. Money compensation happened in two forms: The city hall offered an apartment in Parque Carioca in exchange for their houses or cash in their bank accounts for them to buy a new place where they preferred. When the Games were far away, the city hall offered an exchange between their houses in Vila Autódromo and an apartment in Parque Carioca. A resident told me that, "They wanted the vast majority to go to the apartments that they had built as part of the 'Minha Casa, Minha Vida' programme" (Resident 5_VA). At this stage, the city hall used different strategies to convince residents to accept the exchange. For instance, "They used to take families to visit the apartments by van. They furnished the apartments with very expensive furniture [. . .] showed the swimming pool, sporting courts for kids [. . .] it was the fantasy land for favela residents" (Resident 5_VA). Considering the lack of structure those families had in Vila Autódromo, it is not difficult to understand why 32% residents (or about 200 families) agreed to move to Parque Carioca (Faulhaber and Azevedo 2015; de Oliveira et al. 2018). Although this migration was very positive for the government plans, that was not so positive for those residents who moved out. Below I present the view of those who accepted to move into Parque Carioca.

At this stage, the government also offered cash in exchange for their houses, because some people did not want to move to apartments. Some people took the cash and moved to other areas of the city. Despite different strategies adopted by the city hall, many families still refused to leave their homes in Vila Autódromo. Then, with the Olympic Games fast approaching, the city hall adopted a new strategy. As a resident remembered, "From 3 June 2015, the city hall started a new process. They started offering both an apartment *and* cash compensation" (Resident 1_VA, emphasis in her speech). Another one said, "But when they started offering apartment and cash compensation, many people decided to go. Each one with their reasons. Whether we agree or not, we have to respect and understand" (Resident 8_PC). Using this strategy, the city hall managed to remove many more families. At the same time, large parts of the community were, at this point, in ruins because the city hall was fast to destroy the houses of those who agreed to leave. However, as Williamson (2017) noted, not everyone in Vila Autódromo had a price. About 25% of the residents were still not willing to leave their community (de Oliveira et al. 2018).

From psychological pressures and money compensation the government escalated the strategies and started to adopt a more violent approach to force residents to leave.

This transition was perceived by a resident who said, "Then, the harassment was getting worse. They started demolishing the houses of those who left. They brought the city police. That was terrifying for us because the community was a peaceful and calm community" (Resident 5_VA). To legitimise the use of violence to remove, the government started the process of land expropriation. Still in 2015, supported by a federal decree-law from 1941[3], the city hall carried out land expropriation of an area where 58 houses were located in Vila Autódromo, claiming to that the area was a zone of "public interest". Some people who were part of the process claim that it was not by chance that the houses of some of the leaders of the resistance movement were included among the ones to be removed (Williamson 2017). This illustrates the final stage of disempowerment of the community. To remove families that had refused to leave, the city hall used the decree-law to implement forced evictions.

The use of force pushed more residents out of Vila Autódromo. A former resident told me how it made her decide to move out: "There was no need of so many police in a such small community. It was a form of intimidation. I felt highly intimidated. I was extremely afraid. The fear made me to move out" (Resident 2_PC). Another person who also moved out reported her experience:

I was not physically assaulted, but my son was. He got a lot of rubber bullets. [. . .] That was on the day when they tried to evict an elderly man from his house in the community [. . .]. He got injured. A friend of mine [. . .] suffered a very serious injury when a police officer broke her nose [. . .] It was an extremely difficult moment. Everything was very impactful and aggressive (Resident 2_PC).

3.2. Resistance and Resilience during the Process

Despite psychological pressures, money compensation and violence, some residents kept resisting the idea of moving out of Vila Autódromo. Residents described some factors and agents that motivated them to resist and develop resilience during the battle to stay in their community. Some mentioned that long-term feelings of social injustice have given them motivation to resist the displacement attempts during the preparation for Rio 2016. A resident said, "What made me fight to stay was my conscience, the need to fight against that type of social injustice" (Resident 4_VA). Another one added that, "I started realising the injustice [. . .] we have lived here for more than 20 years, I grew up here, I raised my family here [. . .] why do I need to leave my home for an event that lasts 17 days?" (Resident 5_VA).

Those feelings of injustice seem to bind them tightly and increase the sense of community. A former resident, who resisted for a long time before leaving, said that her strength to fight came from social bonds created within the community: "My strength to fight came from living there [. . .] when you have people that you can count on at the worst moments, you found a treasure" (Resident 8_PC). Another one said, "We were like a big family [. . .] The friendship was excellent over there" (Resident 4_PC). This sense of community was also found in other communities who resisted evictions and displacements. For instance, Watt (2013) described a similar sense of community among residents of Carpenters Estate, in the borough of Newham, during the preparation of the site to host the London 2012 Olympic Games. Although the cultures of Brazil and the UK are very different, the similarities between Vila Autódromo and the Carpenters, in the way that community ties had fostered resilience, are remarkable.

Being aware of the strong positive ties of the community, according to some residents, the city hall used some strategies to destroy such ties. A resident said, "They [the city government] bought some residents, whose job was to try to convince others to go to Parque Carioca" (Resident 2_VA). Another one said, "A very cruel thing that happened during that time was that they split the community. [. . .] They recruited some people to convince others that everybody would have to leave. [. . .] That was very sad because they were our neighbours [. . .]" (Resident 5_VA).

Despite the existence of those internal problems, residents also mentioned some internal and external agents who helped them to be resilient during the process. Initially, they remembered the support from internal agents. Vila Autódromo has a catholic church—Parish "São José Operário"—that was mentioned by many interviewees as a great point of support during the fight to stay. A former resident said, "The catholic church offered much support. People who had their houses demolished after the decree stayed at the church, living there. That was a major support we had within the community" (Resident 6_PC). The man who was leader of the church for part of the process, Father Fabio Guimarães, was also mentioned by many residents as a fundamental agent for community resilience. For instance, a former resident informed that:

Father Fabio was on our side at all the times. He used to say for us not to leave, because it was our right to stay [. . .] He was very intelligent. He explained everything to us, in a very clear manner. Many times, people came and said things that we did not understand, trying to shuffle our ideas. But then Father Fabio came and explained the things to us (Resident 2_PC).

It was impressive how many residents spontaneously mentioned the figure of Father Fabio as a point of support within the community. He seemed to have played a very important role during the resistance to stay. Therefore, a fact that undermined the resilience of the community was the transfer of Father Fabio to Rome, Italy. A former resident remembered, "When they took him, it was a shock for me and for the whole community. Wow, how come Father Fabio will abandon us! Everything was very fast, very dark. I felt abandoned" (Resident 2_PC). Another one said, "We thought very strange that he was transferred to Rome. We still do not know the reasons, but he was with us in the fight [. . .] We stayed like orphans. Everything happened very fast" (Resident 3_PC). Some residents speculated that Father Fabio might have been transferred because of his community activism, as he had been encouraging residents to stay. The activism created additional hindrances for the plans of the city hall of removing the community altogether. In interviews, residents agreed that his transfer was a heavy blow to the community, affecting their resilience.

When discussing resilience, residents also mentioned support from external agents. A resident summarised this by saying that "We had support from many people, from public attorneys to universities, researchers [. . .] to international media. Then, we felt empowered and said to ourselves, let's keep going" (Resident 4_VA). The role of local universities was mentioned by some residents. They remembered with gratitude what a group of faculty members from two public universities in Rio did to increase their resilience: "We had the 'Popular Plan for Urbanisation of Vila Autódromo', developed by Fluminense Federal University and Federal University of Rio de Janeiro in collaboration with local residents" (Resident 1_VA). The Popular Plan for Urbanisation of Vila Autódromo was a scientific report where both universities detailed how Vila Autódromo could be upgraded (including sewage, lighting, road paving, leisure areas, and affordable houses) under a modest budget (Vainer and Oliveira 2018; Williamson 2017). Residents felt supported by the universities and empowered by the plan because it gave them a document that was saying that the eviction of the community was not necessary. The quality of the plan was recognised by external organisations (e.g., the London School of Economics) and it won an international award sponsored by the Deutsche Bank (Ivester 2017). Despite that, the city hall refused to put the plan in action.

Public attorneys also received multiple mentions when residents talked about the support they received. A resident said, "Some public attorneys defended our legal rights. [. . .] Their commitment was extremely important for us. [. . .] We had highly committed attorneys by our side" (Resident 5_VA). Another one complemented this, saying that, "They [the public attorneys] kept saying that the law was on our side and that, at any moment, if someone tried to remove us, we should call them immediately" (Resident 2_PC). The support of external agents to help communities to develop resilience to face tragedies and disasters is not unique to Vila Autódromo. However, it is worth noting that the literature

usually places the government as one of the main external agents that support community resilience (Imon Chowdhooree 2020; Platts-Fowler and Robinson 2016). In the case of Vila Autódromo, the government was on the other side. Therefore, other external agents assumed the role of external supporters. Beyond local universities and public attorneys, residents also mentioned other external agents, such as non-governmental organisations (NGOs) and the media. Some NGOs were nominated in the interviews (e.g., Catalytic Communities and "A Pública") and were acknowledged as great source of support for resilience development during the process.

Regarding the media, during the preparation for Rio 2016, the mainstream media had a narrative that described favelas as a "hindrance" for the city to materialise the full potential of the Olympic "legacy" (Bastos and Schmidt 2010). Therefore, it was somehow surprising when residents described the media as a source of support for their resilience. However, residents distinguished between the mainstream media and alternative media. A resident said, "The mainstream media used to destroy us, they used call us 'of invaders' [. . .] but the alternative media, neighbourhood newspapers, internet sites, small channels, they supported us. Through them we had a counter narrative against the big media" (Resident 5_VA). When talking about the mainstream (big) media, residents were referring to open TV channels and popular newspapers, which have regularly reported favelas through the lenses of stigmatised stereotypes of poverty, drugs, and violence—and a stumbling block for the "success" of the Olympics. A better understanding about favelas show that that is a big mistake based on clear prejudice (Romero 2015; Santiago 2017). For example, data inform us that only a small percentage (about 2%) of favela residents are involved with drug dealers; whilst it is true that some drug cartels have been able to flourish in some favelas, that has been caused mainly by the abandonment that the state impose to favelas (Romero 2015). Scholars argue that favelas are not the problem, rather, for decades, they have been the solution to provide affordable houses for low income workers (Williamson 2017).

Beyond the role of the mainstream media, residents cited other facts that show how the city hall tried to undermine the resilience of the community. A resident said, "The mayor went to extreme measures, such as suspending the delivery of mail and cutting trash collection. We were living in the middle of debris. We also used to stay without electricity and water [. . .]" (Resident 4_VA). This created a sequence of shocks in the community, fitting well the concept of "shock therapy" as described by Klein (2007). Shock therapy is a sequence of brutal tactics with the aim of disorienting people and ultimately advancing neoliberal agendas. Examples of "shocks" have included wars, terrorist attacks, market crashes, and natural disasters (Klein 2007). In Vila Autódromo, shocks included the use of not only direct and illegal tactics, such as cutting electricity and trash collection, but also indirect (and sometimes not so obvious) ones, such as disempowerment of leaders, splitting the community, and the use of mainstream media to damage their image. Creating shocks was the tool to destabilise the order of the community and create a dire need of change (Klein 2007). That was the Rio city hall tactic in Vila Autódromo. Klein calls this "disaster capitalism", where shock therapy is used to promote neo-liberal agendas. This is not new in the context of preparation for hosting the Olympic Games (Boykoff 2014; Lenskyj 2008; Watt 2013), although I would argue that, in the context of Rio 2016, the shock therapy reached another stage when compared to previous Games. The facts described by Vila Autódromo's residents provide support for my argument.

Hayes and Horne (2011) suggested that sport mega-events are "the apparently benign twin of disaster capitalism's shock therapy" (p. 752). Because of the celebratory nature of sport events, Boykoff (2014) suggested that instead of disaster capitalism, the Olympic Games have pushed forward the "celebration capitalism", which he identifies as "the affable cousin" of disaster capitalism (p. 3). Boykoff proposes that celebration capitalism succeeds on social euphoria, not on shock therapy. The Olympic Games represent the most successful case of celebration capitalism because of social euphoria and festival atmosphere that hosting the Games is able to create (Boykoff 2014). Results of the current study show that, in the case of Vila Autódromo, there are elements of both disaster (through shock

therapy) and celebration capitalism (through social euphoria). Eviction and destruction of houses created a "war" atmosphere in the community, indicating a shock therapy. "Then, you see only emptiness and a lot of debris. It was very hard. We felt like in a war zone. I do not want to compare, but ... We were terrified" (Resident 8_PC). Meanwhile, in a few meters of distance, the main stage for the spectacle of the 2016 Olympic Games was being constructed, feeding the social euphoria about hosting the most visible sport event in the world for the first time in the Global South. In this context, the fight to stay in Vila Autódromo became a unique case of resistance against both disaster and celebration capitalism.

3.3. Life after the Games

The literature has provided evidences for the relationship between hosting the Olympic Games and displacement of marginalised residents (for a review, see Rocha and Xiao 2022). However, studies in the literature are limited to report impacts in short periods before or after the event (e.g., Kennelly and Watt 2011; Shin and Li 2013). I have not found studies reporting long-term impacts. This is an important gap in the literature about social legacies. In this section, I present how those who left and those who stayed in Vila Autódromo describe life a long period after the Games.

Most of the former residents of Vila Autódromo reported some regret for having moved out. Complaints appeared multiple times in different interviews. They are related to three major issues: loss of community interaction, broken promises, and financial burden. Some described how they have lost and missed community interaction. A resident said:

I miss it [Vila Autódromo] a lot. Sometimes I even cry. Now I live alone in an apartment. You know, when you live in an apartment, you do not have the same interaction with your neighbours [...] you cannot sit at the door, offer a coffee, chat [...] In apartments, everyone enters, closes the door [...] you rarely see other people (Resident 2_PC).

Although Vila Autódromo and Parque Carioca are relatively close to each, the lifestyle changed dramatically for those who moved to Parque Carioca. Previously, the literature has criticised the fact that displaced people are usually sent to locations that are far away from their original places, creating problems to have access to their jobs and/or schools and to keep social ties (Greene 2003; Zheng and Kahn 2013). In the case of Vila Autódromo, the city hall sent people to a close-by social apartment complex. Whilst this may not have created problems for residents to have access to their jobs and schools, this has created problems for them to keep their social ties.

There was also some disappointment with broken promises. For instance, a former resident says that "they said that they would build a creche and a family clinic here [in Parque Carioca], but nothing was actually made" (Resident 4_PC). Most of the residents told me that many of the promises of the city hall were not kept. Some mentioned promises related to help with the maintenance of the apartments. Others said that there were even promises of helping with condominium fees. The fact is that residents have struggled moving from a place where they paid their own utility bills to a condominium-like apartment complex, where on top of their own bills they still have other taxes to pay.

The financial burden gets worse when the city hall created a mortgage in the name of people who moved into Parque Carioca. This appears in multiple interviews as a major issue of regret and resentment. A resident explains what happened:

Some people have mortgage arrears here in Parque Carioca. I am one of those. This is frustrating because we did not buy this apartment, we exchanged it by our house. That was the deal. However, they [the city hall] created a mortgage in our name. Now, when they do not pay, our names go down to debtor lists[4] (Resident 1_PC).

Another resident confirmed the problem: "The mortgage is in arrears. [...] The name of my wife is in the debtor lists" (Resident 4_PC). Residents have raised this issue with the city hall, which says that the mortgage has been paid. Then, they tried to argue with other institutions, but this has only created more frustration because those institutions seem not to have instruments to help. For instance, a resident said: "Suddenly they stop paying.

Then, I receive a letter from the bank. I went there and said, *I am not responsible for paying this, the city hall is*. Then, the bank says, *but the mortgage is under your name*". (Resident 5_PC). Some residents told me the city hall eventually pays the mortgage in arrears. However, the delay in the payment has already created troubles for credit scores of people who have not requested any mortgage.

Other residents still raised the problems created by the fact that the apartment has not been fully paid by the city. A resident summarises this quite well:

It was not an exchange, there is a mortgage. [. . .] I did not enter in any programme to get a new house. I received a letter saying that I must leave my house [. . .] the mayor said that it would be an exchange, that we would be able to sell or do whatever we wanted with our apartment. [. . .] The reality is that we cannot do anything because we have a mortgage. [. . .] I try to argue with the city hall [. . .] but they always sound like they have done a big favour for us, taking us out of a community that had no pavement, no sewage, to place us here in this apartment complex (Resident 6_PC).

In the sport mega-event literature, I have not found reports about what happened to residents who were displaced from their houses in the long run. However, the feelings of frustration and resentment that former residents of Vila Autódromo reported seem to be similar to those found in internally displaced persons by wars, disasters, and economic crises (Crisp et al. 2012; Kett 2005). In the case of these extreme events, people move out of their houses after uncontrollable events. Despite the fact these events are usually unpredictable, this still creates feelings of frustration and resentment. In the current study, there was no uncontrollable or unpredictable extreme event forcing residents out of their houses. Hosting of sport mega-events is planned years ahead, so are the urban transformations necessary to host. Participants in this study were quite aware of this. Therefore, it is not surprising that they demonstrate an increased feeling of frustration and resentment, five years after moving, when the broken promises and the financial burden still persist.

There are also losses for those who resisted and stayed in Vila Autódromo. A resident provided an excellent summary of these losses:

The poor is the one that loses the most. In that event, only 20 families stayed in the community. Only 20 families [pause to breathe]. In my point of view, it was a big victory for those 20 families, we won our permanence. We stayed in the same territory. But the community and the place changed a lot. They cut many, many trees. We used to have many streets, today we have only two streets. All this is very hard. We lost almost the whole community—from 700 to 20 families (Resident 2_VA).

Residents who stayed do not hide the pain of having lost the close contact with family members, friends, and neighbours. All of them expressed tones of nostalgia in their comments. They all talk about the good moments in the past, when the whole community was still there. Despite the losses, a former resident noted that those who stayed and even some who moved out share a feeling of victory: "I am happy that the community survived. Even though only 20 houses are part of the community now, the community resisted and survived. We won the battle. I was also part of this fight" (Resident 6_PC).

3.4. IOC Turns a Blind Eye

The residents recognised the Rio city government as the main culprit by the displacement they suffered. However, an interesting finding of the current study is related to how some interviewees understand the role of the Olympic Games in that process. Many interviewees reported that the proximity of the event created an urgency for evictions and displacements. For instance, a resident said, "the evictions effectively started during the period [of preparation] for the Olympic Games. The Olympics Games made it possible" (Resident 4_VA). Other residents acknowledged the value of the Games, but they still see that the benefits are not for all. "The Games are a cool thing. It brings visibility to the country. However, unfortunately, they are not used to the benefit of all. They benefit some and harm many" (Resident 3_PC).

A resident associated the problem of evictions and displacement not only with the event, but also with owners and organisers. She said:

In the case of the Olympic Games [. . .] the IOC and the organisers, they knew about the situation. They are not innocent. They were conniving. [. . .] They are as oppressive as the city hall, maybe even more. They pretend to be blind. [. . .] Are you going to tell me that they did not know that there was a community near to the Olympic Park with more than 700 families?" (Resident 3_VA)

There are reports saying that IOC was informed about the situation. For example, Williamson (2017) informs that the Land and Housing Department[5] of the state of Rio de Janeiro sent an eighty-page document to the IOC, describing human rights violations that were happening in Vila Autódromo. Williamson says that, at the end of 2010, the IOC asked the Rio de Janeiro State then-governor, Sérgio Cabral, about the situation. The governor replied saying that problem was resolved. To resolve the problem, the governor shut down the department and sent the public attorneys who prepared the document to other posts (Williamson 2017). The IOC has not followed up on the situation.

Years later a journalist wrote to the IOC asking about the evictions and displacements that had happened in Vila Autódromo during the preparation to host Rio 2020 (Donahue 2020). He received back a written statement that says, "The displacement was not dictated by the needs related to the hosting of the Olympic Games. This was a decision of the city [of Rio] itself and the IOC made it clear at the time that these displacements were not needed for the Games to take place" (Donahue 2020, p. 22).

The IOC seems to have a missed a unique opportunity to show that Olympic Games can deliver a real social legacy for local communities. They could have supported the maintenance and urbanisation of Vila Autodromo and shown to the world that they actually care about human rights and are against evictions and displacement of marginalised citizens. Unfortunately, this has not been the legacy for Vila Autódromo. As a resident summarises, "The legacy that the Olympic Games left for us, in Vila Autódromo, was a very bad legacy. It was a legacy of disgrace, of stories of lives that were destroyed [. . .] [For us] The history of the Olympic Games is very sad" (Resident 2_PC).

4. Conclusions

Results show that the social legacy of Rio 2016 for Vila Autódromo's residents was negative for both groups—those who stayed and those who left. Residents who stayed reported that they lost their community and close contact with friends and family. The geography of the area was also totally modified, green areas were destroyed, and new houses for those who stayed were built. Although they stayed in the territory, the community and the space were certainly not the same. Residents who left reported a feeling of deep regret for having accepted to exchange their homes for apartments, which have created financial and social distress for them. They live in a place with a better infrastructure when compared to their previous houses in the favela. However, they show regret and resentment for having accepted the exchange. They report isolation, frustration, and resentment due to the loss of community interaction. Whilst they point to the city hall as the main culprit of the destruction of the community, they also report that the Olympic Games created a momentum to disempower them to the point of being evicted or displaced. Therefore, they consider their situation as a legacy of the Rio 2016 Olympic Games.

Results of the current research confirm conceptual articles that have proposed that the Olympic-led urban regeneration reinforces the principles of neoliberalism and denies the right to the city to marginalised groups in the city (Hall 2006; Maiello and Pasquinelli 2015). Residents of Vila Autódromo reported that they have not had the right to participate in decisions about the urban space where they lived, nor have they had the right to keeping occupying a space that was already theirs. They had scientific and professional support from universities and public attorneys to claim that their permanence in the area was legal, safe, economically viable, and sustainable. Despite such support, the city hall denied their right to the city.

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Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data is available upon request, respecting the data Protection legislation in the UK, governed by two main pieces of legislation, the UK General Data Protection Regulation (UK GDPR) and the Data Protection Act 2018 (DPA 2018).

Conflicts of Interest: The author declares no conflict of interest.

Notes

1 The mayor's argument was contested by experts in urbanism from two local universities—"Universidade Federal do Rio de Janeiro" and "Universidade Federal Fluminense", which developed an urban plan showing how infrastructure improvement of Vila Autódromo would be possible in that type of ground, without affecting the environment. This plan had direct contribution of residents. For more information about this plan, see (de Oliveira et al. 2018).

2 Safety was not an issue in Vila Autódromo, as participants of the current study confirmed in their interviews. Despite the stereotypes that associate favelas with lack of safety, other authors have also affirmed that Vila Autódromo was a safe place, with no drug cartels or armed militias (Faulhaber and Azevedo 2015; Talbot and Carter 2018; Williamson 2017).

3 The federal Decree-Law 3365 (from 21 June 1941) allowed any level of the Brazilian government to expropriate any land or house for public interest. Based on this decree, the mayor emitted a municipal decree (39,853 from 18 March 2015) expropriating some of the houses in Vila Autódromo.

4 In Brazil, there are two organisations that provide credit scores. These are "Serviço de Proteção ao Crédito" (SPC) and Serasa Experian. These are the names residents mentioned when talking about going to lists of debtors.

5 Land and Housing Department is a free translation for "Núcleo de Terras e Habitação" (NUTH).

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