

Article

# (Re)constructing Conceptualizations of Health and Resilience among Native Hawaiians

Mapuana C. K. Antonio <sup>1,2,\*</sup>, Samantha Keaulana <sup>1,3,4</sup>, Jane J. Chung-Do <sup>1,3,4</sup> and Ilima Ho-Lastimosa <sup>3,4,5</sup>

<sup>1</sup> Office of Public Health Studies, University of Hawai'i at Mānoa, Honolulu, HI 96822, USA

<sup>2</sup> Department of Human Nutrition, Food and Animal Sciences, University of Hawai'i at Mānoa, Honolulu, HI 96822, USA

<sup>3</sup> God's Country Waimānalo, Waimānalo, HI 96795, USA

<sup>4</sup> Ke Kula Nui O Waimānalo, Waimānalo, HI 96795, USA

<sup>5</sup> College of Tropical Agriculture and Human Resources, University of Hawai'i at Mānoa, Honolulu, HI 96822, USA

\* Correspondence: antoniom@hawaii.edu; Tel.: +1-808-956-2334

Received: 1 December 2019; Accepted: 2 January 2020; Published: 5 January 2020



**Abstract:** Biomedical definitions of health have conventionally taken problem-based approaches to health, which may disregard indigenous perspectives of health that take a holistic approach and emphasize the importance of maintaining balance between physical, mental, and spiritual health and relationships maintained with others, the land, and the spiritual realm. Resilience-based approaches to health have been shown to foster strengths in indigenous communities, including the Native Hawaiian community, which leads to more positive health outcomes. The research questions of this paper asked, “how do Native Hawaiians conceptualize health and the concept of resilience specific to health?”. Qualitative methods were employed to explore the concept of resilience from the perspective of 12 Native Hawaiian adults. Community leaders and key stakeholders aided in the purposive recruitment process. The themes of this study include: (1) health maintained through balance, (2) being unhealthy vs. being ill, (3) the concept of colonialism and resulting adversities, and (4) protective and resilience factors that foster health. Cultural values and cultural practices may address concerns related to health disparities that stem from cultural and historical trauma, determinants of health, and environmental changes. Health interventions that are culturally-, family-, spiritually-, and land-based may particularly aid in responsiveness to health programs.

**Keywords:** Native Hawaiian; indigenous; health; wellbeing; resilience; qualitative

## 1. Introduction

Biomedical definitions of health have conventionally taken a problem-based approach with an emphasis on the absence of disease (Brüssow 2013). The belief that health is merely the absence of disease disregards other factors important to health (Baker et al. 2005; McGregor et al. 2003). To demonstrate, many indigenous peoples take a holistic approach to health and emphasize the importance of maintaining a harmonious balance between physical, mental, and spiritual health, while emphasizing the importance of engaging with others, the environment or land, and the spiritual realm (Hinton et al. 2015; King et al. 2009; Mau et al. 2010; Wexler 2014). Strengths-based approaches to health represent a shift from the usual deficit-based approach by taking a holistic approach and focusing on personal strengths and community resources to promote health (Kia-Keating et al. 2011; Pulla 2012; Zimmerman 2013). Strengths-based approaches foster resilience, a concept referring to an individual's ability to overcome adversity through protective factors, which in turn leads to better health outcomes (Pulla 2012).

While differences exist in cultural identities within and among indigenous peoples, indigenous peoples generally experience poorer health compared to non-indigenous groups across societies (Gracey and King 2009; Stephens et al. 2006). Although lifestyle characteristics influence health, determinants of health must also be acknowledged in how they impact the health status of indigenous peoples (Macdonald et al. 2013). Historical trauma is a social determinant of health of indigenous peoples as a result of colonization (Evans-Campbell 2008; Mohatt et al. 2014) and is linked to profound adversities and health disparities (Gracey and King 2009; Sotero 2006). Indigenous peoples have also experienced cultural genocide, racism, forced assimilation, and unethical research in the past, which have led to a mistrust and suspicion toward outside researchers (Brave Heart et al. 2011; Evans-Campbell 2008). Despite these adversities, indigenous peoples demonstrate a long history of resilience (Macdonald et al. 2013; Wexler 2014) and continue to survive and thrive while enduring these long-standing impacts of historical trauma. Recent research focusing on indigenous communities emphasizes the importance of viewing adversity of indigenous communities from a resilience or strengths-based approach, which changes the narrative of indigenous people from a lens that focuses on loss and deficits to one of resilience and community strengths (Rasmus et al. 2014). Identifying strengths and ways to stimulate and maintain resilience is pertinent to overall wellbeing of indigenous peoples (Davydov et al. 2010; Durie 2011).

Like other indigenous communities, the health status of Kānaka Maoli, or Native Hawaiians, demonstrates a pressing need to address health disparities (Kaholokula et al. 2019; Office of Hawaiian Affairs 2018). Literature focusing on epistemological beliefs of health from a Native Hawaiian perspective offers a different view of health by focusing on pono, loosely translated as goodness, uprightness, or moral qualities, and lōkahi, loosely translated as the balance between different domains of health and wellbeing, including biological, psychological, and spiritual aspects, which are interconnected through the individual's body, mind, spirit, and world (Mokuau 2011; Kaholokula et al. 2019). Being pono and maintaining lōkahi may serve as protective factors for Native Hawaiians by increasing their sense of physical, spiritual, social, and emotional sense of wellbeing. Health and healing may also be maintained through unity among the body, surrounding environment, and relationships with others, including ancestors, family members, and spiritual beings.

Native Hawaiians have other strengths that may help to mediate pressing health concerns. Like other indigenous groups, cultural identity may serve as a coping resource by helping individuals (a) have an increased sense of belonging, (b) find meaning within their cultural context, and (c) approach challenges based on values and viewpoints that align with cultural beliefs (Wexler 2014). Indigenized approaches to research help to promote resilience by uplifting indigenous peoples and prioritize community strengths, capacity, and practices that enhance indigenous knowledge and healing (Walters et al. 2009). This kind of research redistributes power to indigenous peoples and offers a narrative of health grounded in the lens of indigenous peoples. Exploring resilience among Native Hawaiians is important in understanding the way these individuals overcome adversity and health risk factors.

This study was conducted in partnership with Hawaiian homestead communities throughout Hawai'i (i.e., on the islands of O'ahu, Moloka'i, and Hawai'i Island). The Hawaiian Homes Commission Act of 1920 set aside 200,000 acres across the six major Hawaiian Islands for the creation of Hawaiian homestead communities. This government-protected land is available for a 99-year lease for \$1 per year to individuals of at least 50% Native Hawaiian ancestry. Approximately 30,855 Native Hawaiians currently reside in homestead communities (Department of Hawaiian Home Lands 2019). Based on data available for Native Hawaiians living on Hawaiian homestead lands, these individuals experience lower levels of socioeconomic status compared with other Native Hawaiians and general communities in Hawai'i, which may increase experiences of adversity (SMS Research and Marketing Services, Inc. 2008). Despite structural issues faced by Hawaiian homestead residents, Hawaiian homestead communities serve as kīpuka, or pockets of protected spaces, where cultural practices and values are perpetuated and kept intact in spite of forced assimilation and cultural genocide (Keaulana et al. in press).

The primary research questions of this study include: “how do Native Hawaiians residing on Hawaiian homestead lands view the concept of health” and “how do Native Hawaiians residing on Hawaiian homestead lands view the concept of resilience specific to health?”. Answers to these questions may help to shed light on ways Native Hawaiians endure adversity through resilience, which may inform future research and interventions that strengthen resilience and holistic health outcomes.

## 2. Materials and Methods

Qualitative methods were used to explore concepts related to health and resilience. This method may serve as a form of resilience, especially for indigenous peoples like Native Hawaiians, whose narratives have been silenced in sciences and history and devalued among Western societies. Qualitative methods, such as storytelling, may especially offer an authentic experience and exploration of resilience by allowing the participant to express, articulate, and understand experiences that are understood by a researcher who is of the same membership of the same community (Johnson and Beamer 2013; Ramirez and Hammack 2014). Qualitative methods and storytelling also align with traditional Hawaiian values and epistemological beliefs, which emphasize the transmission of knowledge orally, by allowing Native Hawaiians to share their knowledge and experiences (Johnson and Beamer 2013).

As such, the researchers of this study encouraged interviewees to engage in storytelling during the qualitative interviews to increase an authentic experience and the oral transmission of knowledge. Among the researchers, the lead researcher, secondary researcher, and community mentor of this project are Kānaka Maoli (Native Hawaiian). All of the authors have long-standing relationships with Kānaka Maoli communities and are advocates of community-based participatory research and social justice. The community mentor played a critical role in recruiting interviewees, providing additional interpretation of data, and involving community throughout the research stages. Themes were also validated through a report back that was shared with the community and community leaders.

### 2.1. Participants

Interviews were conducted in November 2016 to January 2017 with 12 Native Hawaiian residents of urban and rural Hawaiian homesteads. The participants represented seven different Hawaiian homestead communities from the islands of O‘ahu, Moloka‘i, and Hawai‘i Island. Community leaders and key stakeholders aided in the purposive recruitment process (Palys 2008). Purposive sampling was used to enhance maximum variation (Palinkas et al. 2015) based on the following characteristics: Gender, age, marital status, and location of homestead. After assisting with the piloting of interview questions, community leaders contacted residents of Hawaiian homestead lands by phone or social media to solicit participation in the study. Community leaders recruited residents with whom they had strong rapport or residents who had participated in community-sponsored health activities in the past.

### 2.2. Interview Questions

Interview questions were created based on the literature (McMullin 2005; Ramirez and Hammack 2014), conference workshops presented by experts in the field of indigenous health and resilience (Walters 2014), and consultation with community and university partners. The interview guide was piloted with three community leaders. The semi-structure guide consisted of the following questions: (1) “can you please tell me about yourself?”, (2) “how would you describe a person with excellent health?” and “what do you consider poor health?”, (3) “to what extent do you experience stress?” followed by “what challenges have you experienced that cause a large degree of stress?” (4) “I want you to think back to the last time you or a family member were ill. Please describe that experience” followed by “how did you overcome any challenges related to this experience?”. After pilot testing interview questions with three community leaders, the community leaders suggested that the interviewer conclude by asking interviewees what they would want to see changed in the current world for their children and future generations and if they had any words of advice they would want to share with

future generations. These questions allowed for additional insight on resilience factors and hopes for the future.

### 2.3. Procedures

This study was approved by the University of Hawai'i Institutional Review Board. Interviewees consented to participate in this study and to being audio recorded prior to the interview. Interviews ranged from 30 min to 1 h and 15 min and took place at a community site or at a location convenient to the interviewee. Following the interviews, the interviewee was thanked and provided a \$10 gift to show our appreciation of their time.

### 2.4. Qualitative Analysis

Interviews were audio recorded to allow narrative analysis using a grounded theory approach. Grounded theory methods are iterative and cyclical, requiring researchers to continually collect and analyze data to allow constant comparisons and until reaching theoretical saturation (Charmaz 2014; De Chesnay 2015). Audio recordings were transcribed, which allowed for the creation of a codebook. Audio recordings and transcriptions were reviewed by the lead and second author to allow for mapping of themes. The third or fourth author were consulted if there was disagreement during the coding process. Interview recordings were reviewed and mapped based on relevant data and the existing codebook, while themes and quotes were added as they emerged. Similar codes were grouped into categories, which were then placed into larger themes. Themes were restructured to account for new information provided in the additional interviews.

## 3. Results

### 3.1. Characteristics of Participants

Of the 12 interviewees, 7 (58%) were female. Half were 55 years or older. A little less than half (42%) of the interviewees were married, with most having some college education. Residence of Hawaiian homestead lands were either classified as an urban location or a rural location, with 58% from urban homesteads. A summary of key informant characteristics are shown in Table 1.

**Table 1.** Characteristics of participants.

Characteristics	N (%)
Gender	
Male	5 (42%)
Female	7 (58%)
Ages	
18–34 years	3 (25%)
35–54 years	3 (25%)
55 or more years	6 (50%)
Marital Status	
Single or in a relationship but not married	4 (33%)
Married	5 (42%)
Divorced, separated, or widowed	3 (25%)
Residence	
Urban homestead	7 (58%)
Rural homestead	5 (42%)

### 3.2. Summary of Themes

Four key themes from this study include: (1) health is maintained through balance and other Native Hawaiian values, (2) the distinction between being unhealthy vs. being ill, (3) the concept of colonialism and resulting adversities to health, and (4) protective and resilience enhancing factors that foster health. Table 2 provides a list of the four themes with a codebook definition and a direct quote to highlight each theme.

Table 2. Summary of themes.

Theme	Definition	Examples (Quotes)
1: Health maintained through balance and other Native Hawaiian values	<ol style="list-style-type: none"> <li>Someone who is physically fit and has balance with diet and physical activity</li> <li>Maintaining health through physical, mental, emotional, and spiritual balance</li> <li>Sense of balance among oneself, the spiritual realm, other people (through relational ties), and the environment (or the 'āina, land).</li> </ol>	<p>"You know, it's so funny. When you're young, the picture of excellent health is more like physically fit, right. But when you're getting older, like, people I feel that are pretty healthy overall, they seem to be more balanced . . . Really be able to balance all aspects of their life in a healthy manner. So yeah, so like basically, you know, cognizant and aware, paying attention. What they're eating. How they're moving. That kind of stuff. But also, like being able to allocate time and energy to their family. Being able to allocate time and energy to work. And, I just see that as being more, like mental, emotional, physical balance would be my definition of an overall healthy person."</p> <p>-Native Hawaiian Female, 35–54 years, rural location</p>
2: The distinction between being unhealthy vs. being ill	<ol style="list-style-type: none"> <li>Unhealthy: Someone who is not experiencing balance either physically, mentally, spiritually, or emotionally</li> <li>Illness: Someone experiencing a medical condition, such as a chronic health condition</li> </ol>	<p>Unhealthy: "Someone who is chronically deficient in any one of those areas."</p> <p>-Native Hawaiian Female, 35–54 years, rural location</p> <p>Illness: "The last two of my siblings that passed away had pancreatic cancer. And the thing about that one was that they were both diagnosed at the same time. That was the first time someone in the immediate family had cancer. I'm not sure if my parents or other family members were starting to develop cancer because they died from other things . . . But that's something I still don't understand—pancreatic cancer"</p> <p>-Native Hawaiian female, 55 or more years, urban location</p>
3: The concept of colonialism and resulting health adversities	<ol style="list-style-type: none"> <li>Negative consequences of colonialism and poverty</li> <li>Changes in cultural identity</li> <li>Changes in the environment</li> </ol>	<p>"I feel that [Hawaiians] lack a good sense of identity that is rooted in their culture. Majority of the Hawaiians are displaced because of colonialism and colonization that they had to go through. And then also the poverty that we all live in as Hawaiians. That kind of affects us a lot. And it affects our families and it affects other things. It branches out from there. It stresses out the kids, nephews, nieces. That in and of itself can hinder their grades and health and creates addictive mentalities."</p> <p>-Native Hawaiian male, 18—4 years, urban location</p>
4: Protective and resilience enhancing factors that foster health	<ol style="list-style-type: none"> <li>Internal behaviors, attitudes, and coping strategies that serve as protective factors including taking time to oneself, humor, and finding purpose in life</li> <li>Social support</li> <li>Community and/or cultural beliefs and activities</li> </ol>	<p>"How we going heal our kids? . . . We need cultural-based, spiritual-based, family-based, and land-based."</p> <p>-Native Hawaiian male, 55 or more years old, rural location</p> <p>"In a perfect world, I envision a healthy community that has a really good relationship with their environment that protects, nurtures, and sustains. Very harmonious if that makes sense. So, I don't see any work, just people living off of the land and helping each other. Very community-oriented. But also spiritually connected"</p> <p>-Native Hawaiian female, 18–34 years, rural location</p>

### 3.2.1. Theme 1: Health is Maintained through Balance and Other Native Hawaiian Values

When asked for their definition of health, the interviewees most commonly focused on a person's maintenance of balance through physical, mental, emotional, and spiritual health. This belief of holism extended to include a sense of balance within oneself, with the spiritual realm, with other people (through relational ties), and with the environment (or with 'āina, land or that which feeds). The majority of definitions provided by interviewees also aligned with conceptualizations of lōkahi. Interviewees also emphasized the importance of maintaining health through Native Hawaiian values (with loose translations provided by interviewees) including aloha (love, affection) and the importance of the na'au (gut level feelings and intuition). All of the interviewees highlighted the importance of 'ohana (family) and kuleana (responsibility that came as a right or privilege that held the person accountable for responsibility) in health. Interviewees who reflected on aloha emphasized the love that people shared for their family, Akua (loosely translated as god, higher being, spirit), and 'āina. Values related to 'ohana often referred to the importance of maintaining positive relationships with family members and friends.

Interviewees also highlighted the importance of spirituality in health. In particular, most of the interviewees described the importance of maintaining a relationship with Akua and often turned to Akua to help with health needs. The majority of interviewees who highlighted the importance of spirituality often communicated with the spiritual realm through pule (prayer). An interviewee pointed out that one of the greatest ways that we can "help our people heal" is to teach them to become healers themselves because ultimately, "only Akua can heal" (Native Hawaiian male, rural location). Interviewees also explained that when they neglected their spiritual domain of health, they noticed other aspects of health being impacted. One interviewee noticed that she often neglected her spiritual health needs in times of stress and noticed changes in her mood that would often result in her sending negative energy to other people (Native Hawaiian female, urban location).

### 3.2.2. Theme 2: The Distinction between Being Unhealthy vs. Being Ill

The interviewees stated that being unhealthy reflected a lack of balance in their physical, mental, spiritual, or emotional health. One of the interviewees described an unhealthy person as "someone who is chronically deficient in any one of those areas." (Native Hawaiian female, rural location). When considering their own health, most interviewees described difficulty in maintaining their health due to various stressors in their life, including competing priorities and financial burdens. A summary of these stressors are summarized in Section 3.2.3.

According to the interviewees, their perceptions of someone being unhealthy differed from a person who was viewed as being ill. When interviewees were asked to reflect on the last time they or a family member were ill, the majority of interviewees referenced stories of a close family member being ill due to a chronic illness. The most common illnesses included cancer, followed by cardiovascular problems, and kidney or renal failure. Interviewees highlighted the loss of independence and the inability for the person to care for themselves as one of the biggest challenges that resulted from the illnesses. Most of the chronic illnesses were also reported as being in a severe stage, resulting in hospitalization and/or a family member passing away.

### 3.2.3. Theme 3: The Concept of Colonialism and Resulting Health Adversities

Interviewees reflected on the current health status of Native Hawaiians and described changes in overall health over time that resulted from colonialism, such as, changes in the environment, changes in identity, and financial stressors including poverty. Changes in the environment and cultural identity appeared to be a prominent theme. When interviewees were asked about words of wisdom they would want to share with future generations or changes they would want to see for future generations, the majority of interviewees identified a reconnection with the land as the primary change they would

want to see. Interviewees specifically hoped for increased sense of Native Hawaiian identities and stronger ties between the Native Hawaiian people and 'āina.

Current external stressors and barriers to health were often related to financial stressors and competing priorities. One of the interviewees described the way finances are related to colonialism and not only affect an individual but also serve as an adversity on the interpersonal and community level. The interviewee also described the way financial burdens may serve as a cyclical process by not only affecting adults but manifesting and affecting children who may not have as many resources or feel less prepared compared with those who do not experience financial burden. Competing priorities were also identified as a prominent stressor experienced by most of the interviewees who described their multiple roles as a substantial stressor. Common multiple roles would often require interviewees to find a balance between various kuleana, or responsibilities, including parenting or caretaking responsibilities, fulfilling responsibilities for friends and family, attending church, and participating in or helping with Hawaiian organized activities.

#### 3.2.4. Theme 4: Protective and Resilience Enhancing Factors That Foster Health

Internal behaviors and attitudes referred to the way a person managed and coped with difficult situations. Coping strategies were most commonly described as a person's internal ability to cope with stress and other barriers to health. The most commonly cited coping skills included an individual's ability to take time to oneself, use humor, and find purpose in life. Social support, cultural beliefs, and community and/or cultural activities were also identified as facilitators of health.

All of the interviewees listed social support as the most common resource available to them during times of stress. Family members were highlighted as the most common source of social support. Seeking social support from a significant other appeared to be a common theme among individuals who were married for long periods of time. Recent or single parents identified individuals who helped with parenting responsibilities as important sources of social support. A few individuals highlighted the importance of seeking advice from mentors and kūpuna, or elders, in the community. Interviewees described the act of reciprocity as an important facilitator of resilience, with a strong sense of kuleana to care for their communities or close family members (i.e., parents and grandparents), especially during times of stress or illness.

Community and/or cultural beliefs and activities were also identified as important resilience enhancing factors of health. Community and culturally organized events varied to include culturally based activities, events within the community, and spiritual or religious based activities. For instance, one interviewee identified participating in 'awa or kava (a medicinal root used widely in ceremonies and social settings in the Pacific) practices during the weekends as a way of socializing with others and unwinding from a busy work week (Native Hawaiian female, rural location). Another interviewee described his community involvement through aquaponics, lā'au gardens, and additional organized community events as a way of giving back to his community (Native Hawaiian male, rural location). When one of the interviewees was asked about intervention efforts to promote health and well-being among Native Hawaiians, the interviewee emphasized four main components important for health interventions: "We need cultural-based. We need spiritual-based. Family-based and land-based" (Native Hawaiian male, rural location).

A connection with 'āina was particularly identified as a prominent factor of health and resilience. One of the interviewees highlighted the importance of mālama 'āina (caring for the land) as a way of maintaining health and wellbeing: "We gotta mālama not only ourselves but the people around us. The 'āina around us. The thing going come back for us. No worry about that" (Native Hawaiian male, rural location). Findings from interviewees highlighted the importance of exploring 'āina connectedness as a resilience factor of health based on Native Hawaiian practices and ways of knowing. Interviewees also emphasized the importance of 'āina-based interventions as important mechanisms of health.

#### 4. Discussion

The overall purpose of this study was to explore Native Hawaiian conceptualizations of health and resilience. Theoretical saturation was achieved due to consistencies in responses across age, gender, and location of the homestead (i.e., rural versus urban and across different islands). Findings from this study also aligned with previous research with and by Native Hawaiian and indigenous communities, which suggest that indigenous peoples' definition of health goes beyond physical health (Kara et al. 2011; Kaholokula et al. 2019; Mau et al. 2010). This emphasizes the importance of holistic health through physical, mental, emotional, and spiritual health, which may be maintained by relationships the individual has with others, the natural environment, and the spiritual realm. Being unhealthy was often characterized by a lack of balance between any of these identified domains. This study also emphasizes the way perspectives of poor health may vary from illness. When interviewees described illnesses, they often described chronic diseases that had been quite severe and either led to hospitalization or mortality. Many of the interviewees highlighted the role of colonialism as a contributing factor to poor health in addition to other indicators or risk factors of health.

Consistent with perceptions of health, perceptions of resilience were often presented in a holistic manner. Resilience factors were identified as internal factors that were utilized by the individual in addition to community and cultural resources that were externally available to the interviewee. These findings align with other research that has addressed social determinants of health, and thus, health disparities through multilevel and community-level approaches and interventions (Blue Bird Jernigan et al. 2018). In support of previous literature that has cited social support as a pertinent factor of health and resilience (Macdonald et al. 2013; McMullin 2005), relational ties through social support, specifically from close friends and family members, were identified as important factors of health and thus, resilience. Findings from this study also demonstrate the importance of exploring 'āina connectedness as a resilience factor of health based on Native Hawaiian practices and ways of knowing (Ho-Lastimosa et al. 2019; Morelli and Mataira 2010). Providing the opportunity to address health using indigenous perspectives of health may enhance the overall wellbeing of Native Hawaiians. Moving in the direction of providing culturally-based health interventions and healthcare services that are family-, spiritual-, and 'āina-based may increase the effectiveness of health programs.

Native Hawaiian cultural values appeared in all of the themes relating to health and resilience, which highlights the importance of integrating cultural values in health programs geared toward Native Hawaiians. Findings from this study support the need to develop culturally-based and culturally-grounded programs that address health. These findings align with other research that demonstrates the positive effects of culturally-based and culturally-grounded health interventions (Kaholokula et al. 2018; Walters et al. 2018). Although recent interventions have implemented culturally-based programs to address chronic illnesses, continued efforts are needed to address concerns related to promoting holistic health. Consideration of Hawaiian values and lifestyle practices may also address concerns related to health conditions that have resulted from environmental changes by fostering stronger ties to the environment and cultural identity. This may also address changes in the health of Native Hawaiians that have resulted from colonization, while addressing feelings of displacement.

Health interventions and public policies geared toward Native Hawaiian health should also emphasize a holistic and strengths-based approach to health through the lens of Native Hawaiians. Findings from this study acknowledge the importance of honoring values important to indigenous peoples, including the sacred and reciprocal relationship between people, land, and the spiritual realm. Health policies that privilege culturally-, spiritually-, family-, and land-based interventions will particularly play an important role in addressing health disparities. Recommendations for these health policies continue to be timely given the ongoing need for indigenous peoples to resist policies and structural forces that threaten their access to indigenous lands, as demonstrated through movements such as Standing Rock, protection of Mauna Kea, and protection of Ihumātao, to name a few.



Although this study provides a better understanding of Native Hawaiian viewpoints on health, adversity, and resiliency, this study has limitations that are similar to other studies that have utilized qualitative research methods. This study sample is not representative of the entire Native Hawaiian population, and thus, one of the greatest limitations of this study is generalizability. Another limitation of this study is the sample size and the potential for bias as result of the small sample size of 12 interviewees. To address these limitations, future studies may expand on this study by broadening the inclusion of interviewees to ensure theoretical saturation is met with the general Native Hawaiian community. Furthermore, while grounded theory approaches were employed, the questions were guided by the literature and likely influenced the interviewees' responses and thus, the outcomes of this study. To address this concern, interview questions were piloted with key stakeholders in the community, with interview questions evolving after each interview that was conducted in this study.

Despite these limitations, this study has implications for future research, practice, and policies that focus on health and resilience. Increased attention should be given to holistic research and practice that align with community and cultural values, beliefs, and worldviews. Health care policies that honor these worldviews may help to establish trust among indigenous communities, which may serve as a preventative measure for severe chronic health conditions. Findings from this study also demand inclusion of broader definitions of health in public health research and program decisions, more indigenized research efforts, and indigenized collaborative decision-making for program design and evaluation.

Future studies may expand on this research by addressing the limitations of this study. Expanding the inclusion criteria may shed light on some of the similarities and differences that may exist between subgroups of Native Hawaiians. It is possible that resources and identification with the Native Hawaiian culture may differ by island and thus, exploring the implications of how this may impact findings of future studies and policies must also be considered. Future research may also focus on evolving topics relating to health such as changes in the environment, the impact of colonization and historical trauma, and perceptions of cultural identity.

## 5. Conclusions

Given the pressing need to address health disparities of Native Hawaiians using strengths-based approaches, this study aimed to explore perceptions of health and resilience, which shed light on the ways Native Hawaiians endure adversity through resilience. Findings emphasize the importance of maintaining *lōkahi* (balance), through physical, mental, emotional, and spiritual domains of health, and through relationships with others, *ʻāina* (land), and *Akua* (spiritual realm). Resilience factors also include internal attitudes and behaviors, including coping strategies supplemented with community and cultural resources externally available to an individual. Consideration of Hawaiian values and lifestyle practices may also address concerns related to health disparities that stem from historical trauma, determinants of health, and environmental changes. These findings may help to inform future research, policies, and other interventions that strengthen resilience and address health of Native Hawaiians.

**Author Contributions:** Conceptualization, M.C.K.A., S.K., J.J.C.-D., and I.H.-L.; methodology, M.C.K.A., S.K., J.J.C.-D., and I.H.-L.; software, M.C.K.A. and S.K.; validation, M.C.K.A., S.K., J.J.C.-D., and I.H.-L.; formal analysis, M.C.K.A., S.K., J.J.C.-D., and I.H.-L.; writing—original draft preparation, review, and editing, M.C.K.A., S.K., J.J.C.-D., and I.H.-L. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research received no external funding.

**Acknowledgments:** We would like to extend our gratitude to all of the interviewees who helped make this study possible. We would also like to thank the various organizations and individuals who helped to make this study a success. The stories that are shared in this research article belong to the various communities, organizations, and individuals who are represented in this paper.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

- Baker, Elizabeth A., Marilyn M. Metzler, and Sandro Galea. 2005. Addressing social determinants of health inequities: Learning from doing. *American Journal of Public Health* 95: 553–55. [CrossRef]
- Blue Bird Jernigan, Valarie, Elizabeth J. D'Amico, Bonnie Duran, and Dedra Buchwald. 2018. Multilevel and Community-Level Interventions with Native Americans: Challenges and Opportunities. *Prevention Science*. [CrossRef]
- Brave Heart, Maria Yellow Horse, Josephine Chase, Jennifer Elkins, and Deborah B. Altschul. 2011. Historical Trauma among Indigenous Peoples of the Americas: Concepts, Research, and Clinical Considerations. *Journal of Psychoactive Drugs* 43: 282–90. [CrossRef] [PubMed]
- Brüssow, Harald. 2013. What Is Health? *Microbial Biotechnology* 6: 341–48. [CrossRef] [PubMed]
- Charmaz, Kathy. 2014. *Constructing Grounded Theory*. Los Angeles: SAGE.
- Davydov, Dmitry M., Robert Stewart, Karen Ritchie, and Isabelle Chaudieu. 2010. Resilience and mental health. *Clinical Psychology Review* 30: 479–95. [CrossRef] [PubMed]
- De Chesnay, Mary. 2015. *Nursing Research Using Data Analysis: Qualitative Designs and Methods in Nursing*. New York: Springer Publishing Company.
- Department of Hawaiian Home Lands. 2019. Established by Prince Kūhiō & the U.S. Congress: Department of Hawaiian Home Lands. Available online: <http://dhhhl.hawaii.gov/> (accessed on 1 November 2019).
- Durie, Mason. 2011. Indigenous Mental Health 2035: Future Takers, Future Makers and Transformational Potential. *Australasian Psychiatry* 19: S8–S11. [CrossRef] [PubMed]
- Evans-Campbell, T. 2008. Historical trauma in American Indian/Native Alaska communities: A multilevel framework for exploring impacts on individuals, families, and communities. *Journal Interpers Violence* 23: 316–38. [CrossRef] [PubMed]
- Gracey, Michael, and Malcolm King. 2009. Indigenous health part 1: Determinants and disease patterns. *The Lancet* 374: 65–75. [CrossRef]
- Hinton, Rachael, David J. Kavanagh, Lesley Barclay, Richard Chenhall, and Tricia Nagel. 2015. Developing a best practice pathway to support improvements in Indigenous Australians' mental health and well-being: A qualitative study. *BMJ Open* 5. [CrossRef]
- Ho-Lastimosa, Ilima, Jane J. Chung-Do, Phoebe W. Hwang, Theodore Radovich, Ikaika Rogerson, Kenneth Ho, Samantha Keaulana, Joseph Keawe'aimoku Kaholokula, and Michael S. Spencer. 2019. Integrating Native Hawaiian tradition with the modern technology of aquaponics. *Global Health Promotion* 26: 87–92. [CrossRef]
- Johnson, Jeannette L., and Keola Beamer. 2013. Chapter 8. An Indigenous Narrative of Resilience: Malama ko Aloha. *Substance Use & Misuse* 48: 1369–76. [CrossRef]
- Kaholokula, Joseph Keawe'aimoku, Claire Townsend Ing, Mele A. Look, Rebecca Delafield, and Ka'imi Sinclair. 2018. Culturally responsive approaches to health promotion for Native Hawaiians and Pacific Islanders. *Annals of Human Biology* 45: 249–63. [CrossRef] [PubMed]
- Kaholokula, Joseph Keawe'aimoku, Andrea H. Hermosura, and Mapuana C. K. Antonio. 2019. Physical Wellbeing of Native Hawaiians, the Indigenous People of Hawai'i. In *Routledge Handbook of Indigenous Wellbeing*, 6th ed. Edited by Christopher Fleming and Matthew Manning. London: Routledge.
- Kara, Erena, Veronique Gibbons, Jacquie Kidd, Rawiri Blundell, Kingi Turner, and Wayne Johnstone. 2011. Developing a Kaupapa Māori Framework for Whānau Ora. *AlterNative* 7: 100–10. [CrossRef]
- Kia-Keating, Maryam, Erin Dowdy, Melissa L. Morgan, and Gil G. Noam. 2011. Protecting and Promoting: An Integrative Conceptual Model for Healthy Development of Adolescents. *Journal of Adolescent Health* 48: 220–28. [CrossRef] [PubMed]
- King, Malcolm, Alexandra Smith, and Michael Gracey. 2009. Indigenous Health Part 2: The Underlying Causes of the Health Gap. *The Lancet* 374: 76–85. [CrossRef]
- Macdonald, Joanna Petrusek, James D. Ford, Ashlee Cunsolo Willox, and Nancy A. Ross. 2013. A review of protective factors and causal mechanisms that enhance the mental health of Indigenous Circumpolar youth. *International Journal of Circumpolar Health* 72. [CrossRef]
- Mau, Marjorie K., Patricia Blanchette, Dee-Ann Carpenter, Martina Kamaka, and Erin Saito. 2010. Lōkahi Triangle in: Health and Health Care of Native Hawaiian and Other Pacific Islander Older Adults. Available online: [http://geriatrics.stanford.edu/ethnomed/hawaiian\\_pacific\\_islander/](http://geriatrics.stanford.edu/ethnomed/hawaiian_pacific_islander/) (accessed on 1 November 2019).

- McGregor, Davianna Pomaika'i, Paula T. Morelli, Jon K. Matsuoka, Rona Rodenhurst, Noella Kong, and Michael S. Spencer. 2003. An ecological model of Native Hawaiian well-being. *Pacific Health Dialog* 10: 106.
- McMullin, Juliet. 2005. The call to life: Revitalizing a healthy Hawaiian identity. *Social Science & Medicine* 61: 809–20. [CrossRef]
- Mohatt, Nathaniel Vincent, Azure B. Thompson, Nghi D. Thai, and Jacob Kraemer Tebes. 2014. Historical trauma as public narrative: A conceptual review of how history impacts present-day health. *Social Science & Medicine* 106: 128–36. [CrossRef]
- Mokuau, Noreen. 2011. Culturally Based Solutions to Preserve the Health of Native Hawaiians. *Journal of Ethnic & Cultural Diversity in Social Work* 20: 98–113. [CrossRef]
- Morelli, Paula T., and Peter J. Mataira. 2010. Indigenizing Evaluation Research: A Long-Awaited Paradigm Shift. *Journal of Indigenous Voices in Social Work* 1.
- Office of Hawaiian Affairs. 2018. Haumea: Transforming the Health of Native Hawaiian Women and Empowering Wāhine Well-Being. Available online: <https://www.oha.org/wahinehealth/> (accessed on 1 November 2019).
- Palinkas, Lawrence A, Sarah M Horwitz, Carla A Green, Jennifer P Wisdom, Naihua Duan, and Kimberly Hoagwood. 2015. Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research. *Administration and Policy in Mental Health and Mental Health Services Research* 42: 533–44. [CrossRef]
- Palys, Ted. 2008. Purposive sampling. In *The Sage Encyclopedia of Qualitative Research Methods*. 2 vols. Edited by Lisa M. Given. Los Angeles: Sage, pp. 697–98.
- Pulla, Venkat Rao. 2012. What are Strengths based Practices all about? In *Papers in Strength Based Practice*. Edited by Pulla Venkat, Lesley Chenoweth, Abraham Francis and Stefan Bakaj. New Delhi: Allied Publishers, pp. 51–68.
- Ramirez, Lucio Cloud, and Phillip L. Hammack. 2014. Surviving colonization and the quest for healing: Narrative and resilience among California Indian tribal leaders. *Transcultural Psychiatry* 51: 112–33. [CrossRef] [PubMed]
- Rasmus, Stacy M., James Allen, and Tara Ford. 2014. Where I have to learn the ways how to live: Youth resilience in a Yup'ik village in Alaska. *Transcultural Psychiatry* 51: 713–34. [CrossRef] [PubMed]
- SMS Research and Marketing Services, Inc. 2008. *DHHL Lessee Survey*. Honolulu: SMS Research Marketing Services, Inc.
- Sotero, Michelle. 2006. A conceptual model of historical trauma: Implications for public health practice and research. *Journal of Health Disparities Research and Practice* 1: 93–108.
- Stephens, Carolyn, John Porter, Clive Nettleton, and Ruth Willis. 2006. Disappearing, displaced, and undervalued: A call to action for Indigenous health worldwide. *The Lancet* 367: 2019–28. [CrossRef]
- Walters, Karina. 2014. In Community-Academic Partnerships for Pacific Health Equity: Community Based Participatory Research to develop the Yappalli: Chactaw Road to Health intervention. Paper presented at the He Huliau Conference, PILI 'Ohana Workshop, Honolulu, HI, USA, September 18; Available online: [http://www2.jabsom.hawaii.edu/native/docs/conferences/He\\_Huliau\\_Conference\\_Info\\_2014.pdf](http://www2.jabsom.hawaii.edu/native/docs/conferences/He_Huliau_Conference_Info_2014.pdf) (accessed on 1 November 2019).
- Walters, Karina L., Antony Stately, Teresa Evans-Campbell, Jane M. Simoni, Bonnie Duran, Katie Schultz, Erin C. Stanley, Chris Charles, and Deborah Guerrero. 2009. *"Indigenist" Collaborative Research Efforts in Native American Communities*. Oxford: Oxford University Press.
- Walters, Karina L., Michelle Johnson-Jennings, Sandra Stroud, Stacy Rasmus, Billy Charles, Simeon John, James Allen, Joseph Keawe'aimoku Kaholokula, Mele A. Look, Māpuana de Silva, and et al. 2018. Growing from Our Roots: Strategies for Developing Culturally Grounded Health Promotion Interventions in American Indian, Alaska Native, and Native Hawaiian Communities. *Prevention Science*. [CrossRef]
- Wexler, Lisa. 2014. Looking across three generations of Alaska Natives to explore how culture fosters indigenous resilience. *Transcultural Psychiatry* 51: 73–92. [CrossRef]
- Zimmerman, Marc A. 2013. Resiliency Theory: A Strengths-Based Approach to Research and Practice for Adolescent Health. *Health Education & Behavior* 40: 381–83.

