The Role of Family and Media Environment on Aggressive Behaviour in Bulgarian Schools

Yolanda Zografova * and Ekaterina Evtimova Dimitrova

Department of Psychology, Institute for Population and Human Studies, Bulgarian Academy of Sciences, 1113 Sofia, Bulgaria; keiti_d79@yahoo.com
* Correspondence: yozograf@gmail.com

Abstract: The article examines the influence of two of the main social environments on students’ aggressive behaviours. On the one hand, attention is paid to the general socio-psychological climate in the family environment and the attitude of the parents towards the child; and on the other hand, a less frequently studied aspect related to aggressive manifestations of the children and adolescents towards the parents is addressed. The study explores how watching TV shows and movies, as well as video games, in which aggression and violence predominate, is connected to the frequency and degree of manifestation of types of aggression in adolescents. The survey was conducted at the end of 2017 among 992 students in 18 primary schools, secondary schools, and vocational schools/high schools in six different cities in different regions of Bulgaria. A structured questionnaire for the study of aggression in school was designed and was intended for students. The results of the study generally show that the verbal aggression towards parents (insulting and shouting) is mostly associated with verbal aggression towards both teachers and classmates. Regarding the influence of TV shows and movies containing aggression, it was found that students who watched movies with military, fighting and bloody scenes demonstrated more frequent manifestations of verbal aggression, but the TV contents did not significantly influence the manifestations of indirect aggression and physical aggression. However, the frequency of playing video games with aggressive content has a significant effect on all investigated forms of aggression, with the strongest effect on physical aggression. Aggression in social networks is a significant factor that affects the frequency of manifestation of various forms of aggression. Students who bully others on social networks stand out as the most aggressive (verbally, physically, and indirectly).

Keywords: aggression; family environment; students; school; parents; media; behaviour

1. Introduction

Aggression and violence among children and adolescents in school are phenomena prevalent and growing worldwide. But it would not be possible to put all countries in general statistics—there are different data for different groups of countries due to various factors, including climatic features [1].

Regarding the specific figures for Bulgaria, it would be possible to indicate those with approximate accuracy, as many acts of aggression at school or at home remain unregistered. In 2017/2018, 3520 cases of aggression and harassment were registered at schools, and in 2018/2019, 3717 cases were registered. In 2019/2020, 2600 cases of aggression and harassment were registered at schools. There is a trend of decreasing cases that occur in e-learning during the pandemic and isolation, but increasing cases of vandalism, theft, and encroachment on authority [2]. On the one hand, dynamic modern social development raises similar problems in different countries. On the other hand, high mobility and developed forms of communication in the virtual space, through the Internet and various social networks, facilitate the transfer of patterns of behaviour in children and adolescents. In recent decades, the field of social psychology has paid particular attention to the influence
of video games on adolescent aggression, and there is much evidence of a direct relationship between violent games and aggressive behaviour among adolescents [3,4].

A combination of factors play a role in the formation of aggressiveness in the behaviour of the child and, later, the adolescent—family, friends, school, media, movies, video games, and, in recent years, more and more social networks. For each of these factors, there are different characteristics—for example, in what family is the child and the student formed; with what and how many parents do they live; are there other relatives around them; what is the educational and socio-economic level of this family; in what region do they live, etc. All this complicates the already complex setup of the problem and outlines the need for systematic and periodic research among different types of schools and in different classes.

The effects of the family environment and different types of media environment on adolescent aggressive behavior have been found in a number of studies, e.g. [5–8], but the parallel impact of these factors, as well as the impact of the social context in which adolescents play video games and watch different media shows, still need to be verified [9]. This outlines the need for systematic research among different types of social, cultural, and family contexts in which children and teenagers learn and are brought up.

1.1. Family Environment and Aggressive Behaviour of Children and Adolescents

The problem of aggression is multifaceted. Among the factors that come into the focus of research attention, particular importance is attributed to parental influences and to the family environment. Ineffective parenting, especially in terms of dealing with deviant behaviour, is thought to increase the risks of destructive behaviour [10].

The characteristics of parental styles, especially if they contain aggression and violence, have a significant impact on the formation of aggression in adolescents. In a family environment, there is a direct formation of cognitive models of aggressive behaviour that contain specific forms of reaction in specific situations. Domestic violence is positively linked to adolescent aggression [4]. Children who grow up in a violent family environment are more likely to identify violent behaviour as an acceptable way to resolve conflicts [11].

When children enter adolescence, they develop more complex relationships not only in a family environment, but also in other types of relationships. During puberty, friends and peers play an important role in adolescent life. Learning aggressive behavioural patterns and problem-solving strategies in a social environment also extends to other social spheres of interpersonal interactions. Under the influence of violence in the family, children are more likely to exhibit problematic behaviour outside of it [11].

Children who experience physical violence in the parent-to-child dyad may view violence as a behaviour accepted by social norms and realise it in other contexts or relationships. On the other hand, the practice of imposing physical punishments on adolescents can play a role of legitimising violence as a habitual pattern of behaviour. Confirmation of the role of physical punishment on juvenile violence was measured in samples from 411 three-generation families, where researchers Smith and Farrington (2004) found that severe punishment leads to the emergence of child abuse [12].

In a family environment in which communication between parents and children is negative, there is a lack of cohesion; and parental support has a negative impact and contributes to the development of various behavioural problems in adolescence. As Estévez, Jiménez and Musitu (2008) point out in their detailed analysis: “if the interaction between family members is not a quality one, it can constitute a risk factor of special relevance which may predispose the adolescent to learn violent and socially inappropriate responses.” [13] (p. 16).

The family is the first and highly significant socialising factor for the formation of prosocial, aggressive, or even antisocial forms of behaviour in children. Another factor that has been shown to be closely related to behavioural problems in children and adolescents is parental style, defined as a constellation of attitudes toward the child, creating an emotional environment in which parental behaviour is expressed [14]. In this area, the classic study is that of Baumrind (1978), which lists three types of parenting styles: authoritarian style—
when parents value obedience and limit the autonomy of the child; lenient style—when parents do not exercise control over the child and let them be autonomous, as long as they are not in physical danger; and authoritative style: parents try to control the behaviour of the child by persuasion instead of imposition [14].

Observing aggressive behaviour between the most significant others for the child—parents and peers have an impact on the development of tolerance to violence. Family conflicts, in which anger, hostility, and aggression are often manifested, are considered a risk factor favourable for the formation of aggressive behaviour, especially during childhood and early adolescence [15].

Aggressiveness in adolescents against parents is formed under the influence of various factors. Some affect the behaviour of parents towards their children, the general climate in the family, the relationship between parents, etc. When "boundaries" are crossed and accepted norms of relationships and behaviours in the family are violated, this is often expressed in the form of aggressiveness. As Estevez and Gongora (2009) write, “physical abuse implies hitting, punching, throwing things, and any other kind of physical violence; psychological abuse refers to intimidating and humiliating parents by means on many occasions of verbal violence; emotional abuse involves lies, blackmails and other malicious mind games such as manipulative threats; and financial abuse refers to stealing money from parents, selling their possessions or incurring debts that parents must cover” [16] (p. 144). However, there are very few studies on these aspects, and the negative consequences that this type of behaviour has on the family context and on the physical and psychological health of both children and other family members require both scientific research and the creation, on its basis, of practical recommendations for reducing the manifestations of aggression.

Parents rarely admit when their children are abusive towards them. This fact makes it difficult to know the real number of cases of violence against parents. Usually, mothers and fathers tend to deny the occurrence of aggressive manifestations to “maintain the myth of family harmony” [17] (p. 1290). On the one hand, this is their way of defending their image of parents being able to properly raise their children, and on the other, there is shame and fear of being accused by society of not having performed their socially significant role well.

Personality factors in the study of aggressiveness are typically considered as part of a complex interplay with social environmental factors, school and family socialization, among others. Specific personal traits, including self-confidence, emotional instability, and moral disengagement, are emphasized, as they emerge as crucial predictors of various forms of aggressive behavior [18]. Research is being conducted on the role of important factors such as life satisfaction [19], adolescent reputation enhancement [20] and others. Participation in antisocial activities, smoking, alcohol consumption, and drug use in middle school were associated with subsequent destructive behaviour several years later [21]. As for the manifestations of antisocial and aggressive behaviour, usually, if no timely measures are taken by the authorities, it has an escalating trend—there is a continuity from minor to more serious actions during different stages of development of the child and adolescent [22].

Researchers found that there is a direct correlation between violent behaviour in adolescence and certain characteristics of the family environment. Despite some conflicting data regarding the influence of parental relationships, the family environment is among the most important factors in children’s behaviour [23]. Interesting results were obtained in a research on a complex of factors—it is proven that the quality of communication between children, parents, teachers is related to aggressive behaviour “through the influence in adolescents’ self-concept, sociometric status, and attitude towards formal authority” [24] (p. 789). At the same time, however “parents who use harsh child-rearing techniques are more at risk of being assaulted in comparison to those who use non-aggressive techniques” [16] (p. 148).

There are some basic types of family contexts that can activate adolescent aggression towards parents [25,26]. Prekop (2007) analyses in details leading characteristics of the
family environment that are associated with provoking child aggression come to attention: (1) when parents are not perceived as authoritative figures by children for various reasons—in families with unsatisfactory parental guidance, in which parents do not put any restrictions on children because of poor educational principles, feel guilty in divorce, or are unable to cope with the upbringing of children for financial, social, or health reasons; (2) families with overprotective parents who do not allow any autonomy to adolescents—children become dependent on their parents, fulfilling the parents desires and avoiding any behaviour that could cause them disappointment. Under these conditions, there is a great risk that the requirements of children will increase, and they will become tyrannical [27]. Aggression committed by these adolescents can be understood as a search for autonomy.

Aggression among adolescents in a more severe form, manifested in a family environment, began to be studied several decades ago. The specifics of a particularly destructive family environments with obviously antisocial characteristics influence the subsequent behaviour of adolescents. Some adolescents with deviant behaviours and displays of violence against their parents “have been physically or sexually abused or have been exposed to abuse by an intimate partner” [28] (p.3). As one of the main factors for such behaviors of teenagers, the researchers point to the bad climate in the family [28]. The problems of adolescent aggression towards mothers are particularly serious [29]. Some authors point out that these adolescents exhibit “parenting patterns” [30] (p. 171) in their families, i.e., there is a shift of roles.

Adolescent aggression towards parents has also been linked to problems in school learning—for example, poor adaptation or lack of adaptation, learning difficulties and disruptive behaviour, lower student participation, and less task orientation [31]. Some studies have shown that school failure can be an indicator of low family cohesion. On the other hand, low family cohesion may be a predictor of child-to-parent violence [32]. This means that failure in school has an indirect impact on child–parent violence. On the one hand, failure in school can cause stress for families, creating prerequisites for family conflicts and low cohesion, as it is related to the expectations of parents about the learning achievements of children and their future professional realisation. On the other hand, family cohesion is a positive factor that stops possible child-to-parent violence. In the presence of a negative family environment characterised by conflict, violence between parents, or parent-to-child violence, children and adolescents are more likely to use violence against their parents [33,34].

1.2. Relationship of the Media Environment (Television and Video Games) with the Aggressive Behaviour of the Student

In most scientific studies, a link is sought between exposure to violent media content and subsequent manifestations of antisocial behaviour and aggression in children and adolescents. According to Kronenberger et al., “while many hypotheses have been offered to explain this relationship, leading theories emphasise the role of social learning, cognitive appraisals and beliefs, problem-solving strategies, and desensitisation” [35] (p. 3).

As noted by Anderson and Bushman (2002), “a child who has witnessed several thousand instances of using a gun to settle a dispute on television” [36] (p. 32) is very likely to build and keep the scenarios in his memory and realise them as similar patterns of behaviour in real relationships as well (ibid.).

Some authors even accept that two types of effects exist from exposure to violence projected by media. First are the short-term effects mainly due to primary processes, excitation processes, and immediate modelling of specific behaviours or so-called observation learning. Second are long-term effects and are associated with a longer-term influence of cognition and behavioural scripts and with activation of emotional processes [37]. In teens in Australia, China, Germany, and the United States, exposure to media violence, including television, film, and video games, was positively associated with adolescent aggression, demonstrating intercultural similarity as well [38].
More than two decades ago, innovative modern models were developed in the sociopsychological knowledge of aggressiveness—the information-processual models with leading researchers in this field—Anderson and Bushman [36], Heusmann [39], Dodge [40], and others.

Anderson and Bushman’s General Aggression Model (GAM) covers three main categories—inputs, which are personal and situational factors, channels/routes—cognitive, affective and arousal variables, and outcomes—such as “appraisal and decision processes” and “thoughtful or impulsive actions” [36] (p. 34). The authors place the person in the concrete social situation or case and develop a multi-stage and complex model of aggressiveness.

Based on the GAM information-processing model, violent video games can teach teens different schemes that can be repeated and solidified as models for aggressive behaviour ([41], see also [42] for a detailed analysis). Aggressive beliefs and attitudes, schemes of aggressive perception, schemes of aggressive expectation, scenarios of aggressive behaviour, and desensitisation to aggression are also learned. Thus, the formation of an aggressive personality is encouraged, increasing the possibility of aggressive behaviour. For these individuals, due to the lack of mitigating mechanisms, exposure to violent video games can significantly predict that violence is a good way to solve problems, leading to the establishment of normative beliefs about aggression. In addition, in the theory of social learning of aggression, a direct path to modelling aggressive reactions is made by observing similar patterns [43].

Aggressive content transmitted on the one hand through television shows and on the other hand through video games influences the real aggression of adolescents [44]. “Violent video games could be more harmful in this sense since they are interactive, very engrossing and require the player to feel identified with the aggressor” [16] (p. 143). There is a tendency for parents to rate video games as less violent than the adolescent assessment, which comes to show that parents are less aware of the extent of violence in games. Unlike the ordinary visualisation of violence on television, video games take one more step: the player takes on the role of a “virtual aggressor” [16]. Various studies have shown that children prefer violent video games to violent television or violence on the Internet [45].

Donnerstein (2011) points out the following effects of playing violent video games, which are indicative of increased aggressive behaviour, hostile impact, physiological agitation, aggressive cognitions, and a decrease in prosocial behaviour due to desensitisation [46]. The effects of video games are similar to the effects of television violence, as noted by Gentile and Anderson (2003), but the violent video games probably influence more pronounced aggression in children [47].

2. Research Design, Methods, and Procedure

The main objective of this study is to examine two significant aspects of the influence on adolescent aggression—the family and the media environment, both individually and in close interdependence.

The manifestations of aggression in school are examined and analysed in terms of the impact of the family environment, namely the relationship between parents and their children on aggressive behaviour in school towards teachers and classmates. In addition, a relationship not particularly studied in Bulgaria is sought—aggressive manifestations by students towards their parents. It also explores the influence of the media on the aggressive behaviour of adolescents, specifically in the context of the influence of the family environment.

Hypothesis 1 (H1). It is expected that factors such as deteriorated relationships with parents, negative parenting practices, and particularly aggressive behaviour in the family influence adolescents’ aggression in school.
Hypothesis 2 (H2). It is assumed that frequent viewing of television shows movies with movies with war, fighting, and bloody scenes are directly related to an increase in aggression among students in its various forms.

Hypothesis 3 (H3). It is expected that frequent playing of violent video games will influence higher aggression among students.

Hypothesis 4 (H4). In the case of students with aggressive behaviour and harassment in social networks, it will be transferred to their real manifestations and especially in the verbal form of aggression among students.

2.1. Materials and Methods

The survey was conducted in December 2017 among 992 students in 18 schools in Bulgaria—six vocational schools/high schools, six primary schools, and six secondary schools. The schools were randomly selected in two large, two medium and two small towns from different regions of the country. The total number of subjects studied in the analysis varied (N = 979–992), as not all subjects studied answered all questions. In each vocational school or high school, one class from the 8th and 10th grades was examined, in each primary school—one class from the 4th and 6th grades, and in each secondary schools—one class from 4th, 6th, 8th and 10th grades. The sample consists of 49% (483) boys and 51% (496) girls/total 979 subjects. Randomly, the sample included 31% (301) subjects from primary schools, 43% (420) from high schools, and 26% (258) from professional schools.

For the purposes of the research, a questionnaire was constructed for the study of aggression in school, which was intended for completion by students. The general questionnaire was prepared and distributed for completion in an online version and consisted of 70 questions. They were formulated briefly, clearly, and easily accessible to allow completion within 1 school hour. The factors and sample items included in this analysis are below (see Table 1). The collection of data and the nature of the research is in accordance with the requirements set by the funding institution—the Ministry of Education and Science. Most of the questions/statements are multiple-choice, and many of the questions are of a semi-structured type (with the possibility of free answers in option “other”), which presupposes the use of mostly descriptive statistical methods.

Table 1. Factors and sample items from the student questionnaire.

<table>
<thead>
<tr>
<th>Factors of Influence</th>
<th>Example Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family environment (influence of the family environment on the student)</td>
<td>What is the relationship between you and your parents?</td>
</tr>
<tr>
<td>Family environment/aggression of a student towards a parent/</td>
<td>In which of the following ways did you address your parents?</td>
</tr>
<tr>
<td>Media Influence (TV Shows and Movies)</td>
<td>What type of movies and shows do you prefer the most?</td>
</tr>
<tr>
<td>Media Influence (Video games)</td>
<td>Do you play video games that involve monsters, catastrophes, fires, fighting or killing?</td>
</tr>
<tr>
<td>Media Influence (social networks)</td>
<td>Which of the following has happened to you on social networks (Facebook, Instagram, Twitter, dating sites, etc.)?</td>
</tr>
</tbody>
</table>

2.2. Study Procedure

A well-defined procedure was followed during the conduct of the research: preliminary contact was made with the principals of schools, to whom the subject and objectives of the research were presented; then, informed consent forms were sent by e-mail to the parents of the students who would fill out the online questionnaire. A video briefing (via
Skype, Facebook, etc.) was conducted by members of the scientific team regarding the research procedure among the students. The principals are asked to ensure the presence of the school psychologist during the completion of the questionnaire by the students, so that he can answer any questions that may arise from them, as well as to provide feedback to the scientific team on peculiarities of conducting the research. As a result of the procedure carried out, including 18 coordinated video-instructions, the total number of incomplete questionnaires was reduced to a minimum (only 16 of the 992 studied students did not fill them in completely, which increases the reliability of the data obtained).

The research data were processed using the statistical package SPSS—version 25. The following statistical methods were used for analysis: descriptive statistics, T-test for independent samples (Independent Samples T-test; Paired Samples T-test), Regression Analysis (Linear Regression) and analysis of variance (ANOVA).

3. Results
3.1. Family Relationships, Parental Sanctions, and Aggressive Reactions of Students

Aggressiveness between parents and its influence on the manifestations of various forms of aggression in their children significantly affect the manifestations of verbal, physical, and indirect aggression on the part of the children, regardless of the context. Zografova et al. (2019) prove in their study that students whose parents exhibited aggression in their relationships demonstrated significantly higher levels of general aggression compared to students whose parents did not display aggression see [48].

The results of the regression analysis show that aggression between parents at home has a significant but small effect on boys’ aggression ($R^2 = 0.021; \beta = 0.291, p = 0.000$) with an explained variance of only 2%, as well as on the aggression of girls ($R^2 = 0.83; \beta = 0.153, p = 0.001$) with explained variance above 8%. Furthermore, acts of aggression between parents was most significant for 4th graders ($R^2 = 0.127; \beta = 0.361, p = 0.000$), with nearly 13% of the variance explained, and much less so for those from the 6th grade ($R^2 = 0.036; \beta = 0.198, p = 0.001$), under 4% variance; for those from the 8th ($R^2 = 0.011; \beta = 0.122, p = 0.050$) and 10th grade ($R^2 = 0.011; \beta = 0.126, p = 0.064$), no significant effect was observed.

The results of a correlation analysis of the variables studied in this analysis show that there is a significant, albeit weak, correlation between the manifestations of aggression observed by the student between their parents and all manifestations of aggression in the specific school environment towards teachers and classmates; mostly, it is verbal aggression ($r = 0.205; p = 0.000$).

Regarding the sanctions that parents use and their effect on student behaviour, the results show that in more than half of the students surveyed, parents apply some kind of punishment at home. The most common forms of punishment are related to depriving the child of privileges and preferred activities (depriving them of a phone, television or computer, money, prohibiting them from going out with friends). A small share of responses found that parents use methods of physical, verbal, or psychological aggression as a means of punishment. The share of responses related to verbal aggression and neglect by parents were almost the same, and the cases of punishments involving the use of physical aggression were fewer (see Table 2).

The results of a correlation analysis regarding sanctions imposed by parents and manifestations of aggression in the school environment show that those containing some form of aggression against the student are significantly related to all manifestations of aggression in the school environment, both towards a teacher and towards classmates. This relationship is more pronounced in terms of the manifestations of verbal aggression towards a teacher ($r = 0.118; p = 0.007$) and in the manifestations of psychological aggression towards classmates ($r = 0.198; p = 0.000$). The relationship between punishments at home and the manifestations of aggression towards a teacher is not as clearly outlined as the relationship with the manifestations of aggression towards classmates. It can be observed that there is a trend where the more parents utilise aggressive sanctions (shouting/insulting, ignor-
ing/neglecting, and/or physical abuse), the higher the likelihood of students exhibiting aggression in the school setting, particularly towards their classmates.

Table 2. At home I am punished by? (select between one and seven possible responses).

<table>
<thead>
<tr>
<th>Responses</th>
<th>N/%</th>
</tr>
</thead>
<tbody>
<tr>
<td>taking my phone</td>
<td>300 (31%)</td>
</tr>
<tr>
<td>not letting me watch TV or use the computer</td>
<td>227 (23%)</td>
</tr>
<tr>
<td>not letting me go out with friends</td>
<td>190 (19%)</td>
</tr>
<tr>
<td>not giving me money</td>
<td>94 (10%)</td>
</tr>
<tr>
<td>yelling at me or insulting me</td>
<td>63 (6%)</td>
</tr>
<tr>
<td>not talking to me or not paying attention to me</td>
<td>66 (7%)</td>
</tr>
<tr>
<td>beating me</td>
<td>29 (3%)</td>
</tr>
<tr>
<td>I am not being punished</td>
<td>413 (42%)</td>
</tr>
<tr>
<td>other (please specify what)</td>
<td>32 (3%)</td>
</tr>
<tr>
<td>Total</td>
<td>978</td>
</tr>
</tbody>
</table>

3.2. Aggression towards Parents and Aggressive Behaviour at School

Manifested aggressiveness towards parents of the studied students most often appears in verbal forms and very rarely as a physical one [48]. We assumed that the aggressiveness at home will be transferred to another context—the school environment. A correlation analysis shows that the relationship between aggression towards parents and the aggression in the school environment is significant and up to moderate. Verbal aggression towards parents (insulting and shouting) is mostly associated with verbal aggression towards both teachers and classmates ($r = 0.288; p = 0.000$ and $r = 0.251; p = 0.000$), but also with psychological and physical aggression towards classmates ($r \leq 0.161; p < 0.05$).

There is a tendency, with an increase in cases of various forms of aggression against parents, to increase the manifestations of verbal, psychological, and physical aggression against classmates, as well as verbal and psychological aggression against teachers. This tendency is most pronounced in terms of verbal aggression, both towards teachers ($r = 0.292; p = 0.000$) and towards classmates ($r = 0.268; p = 0.000$).

3.3. Influence of Media (Television, Video Games, and Social Networks) on the Aggressive Behaviour of Students

The influence of media has been studied mainly in relation to the preferences of students and the films they watch, video games with aggressive content, and harassment on social networks. These influences have been studied in relation to various forms of aggression and the manifestations of aggressive behaviour in the school environment.

3.3.1. Television and Aggression

The analysis of the relationship between preferred films/shows and the manifestations of aggression in students includes three genres of films/shows with allegedly aggressive content listed in the table above—films with wars, fighting, bloody scenes, films in which there is a crime and police investigation, and horror films. Independent Samples T-test data showed that students who watched movies with war, fighting, and bloody scenes demonstrated more frequent verbal aggression ($M = 2.455$) compared to students ($M = 2.249$) who claimed not to watch such movies ($t = 2.267, p = 0.024$). Unexpectedly, watching movies/shows with allegedly aggressive content does not significantly affect the manifestations of physical aggression of students ($M = 1.81; M = 1.71; t = 1.09; p > 0.05$). The results are similar for indirect aggression.

As for the manifestations of aggression from student to classmates, it turns out that there is a significant and weak connection only between watching horror movies and the
manifestations of more severe physical aggression ($r = 0.084; p = 0.008$). Watching such films increases the likelihood of manifestations of more severe physical aggression towards students. Dozens of studies in psychology have shown a similar relationship, in which viewing certain aggressive patterns of behaviour is easily learned and provoke behaviour in the field of aggression.

In the frequency analysis, it was found that $1/4$ of the students surveyed indicated that horror films are among their most preferred films, and for $1/5$, films with crimes, wars, fighting, and bloody scenes are the most preferred. Preferences for such films and shows create a prerequisite for identification with aggressive patterns of behaviour (see Table 3).

**Table 3.** What type of shows and movies do you prefer to watch the most? (select between one and three possible responses).

<table>
<thead>
<tr>
<th>Responses</th>
<th>N/%</th>
</tr>
</thead>
<tbody>
<tr>
<td>humour and entertainment movies</td>
<td>679 (69%)</td>
</tr>
<tr>
<td>science movies (Discovery Channel, Animal Planet, National Geographic)</td>
<td>244 (25%)</td>
</tr>
<tr>
<td>romantic movies</td>
<td>178 (18%)</td>
</tr>
<tr>
<td>reality shows (e.g., Big Brother)</td>
<td>175 (18%)</td>
</tr>
<tr>
<td>news</td>
<td>52 (5%)</td>
</tr>
<tr>
<td>movies with wars, bloody scenes, and fighting</td>
<td>156 (16%)</td>
</tr>
<tr>
<td>movies that involve a crime and a police investigation</td>
<td>187 (19%)</td>
</tr>
<tr>
<td>horror movies</td>
<td>240 (25%)</td>
</tr>
<tr>
<td>movies that are restricted for your age</td>
<td>120 (12%)</td>
</tr>
<tr>
<td>other (please specify which)</td>
<td>40 (4%)</td>
</tr>
<tr>
<td>Total</td>
<td>978</td>
</tr>
</tbody>
</table>

**3.3.2. Video Games and Aggression**

The frequency analysis data show a certain proportion of students who play games daily in which there are aggressive patterns of behaviour, which is a prerequisite for a greater likelihood of integrating this type of behaviour by the players (see Table 4).

**Table 4.** Do you play video games that feature monsters, catastrophes, fires, fighting, or killing (such as Counter-Strike; Grand Theft Auto; Hatred; Call of Duty and others)? (select one response).

<table>
<thead>
<tr>
<th>Rate</th>
<th>N/%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I do not play such video games</td>
<td>549 (56%)</td>
</tr>
<tr>
<td>2–3 times per month</td>
<td>111 (11%)</td>
</tr>
<tr>
<td>2–3 times per week</td>
<td>114 (12%)</td>
</tr>
<tr>
<td>I play such games every day</td>
<td>205 (21%)</td>
</tr>
<tr>
<td>Responses</td>
<td>979</td>
</tr>
</tbody>
</table>

The results of a regression analysis showed that the frequency of playing video games with aggressive content had a significant effect on all forms of aggression studied (verbal—$R^2 = 0.033; \beta = 0.181, p = 0.000$; physical—$R^2 = 0.99; \beta = 0.314, p = 0.000$; indirect—$R^2 = 0.09; \beta = 0.094, p = 0.003$). The results showed almost 10% of explained variance in physical aggression and more than 3% of explained variance in verbal aggressiveness. The goal is to see the concrete influence of video games on behaviour. Considering the complexity of factors affecting adolescent aggressiveness, this is a serious influence of
games on behaviour. The strongest effect is on the manifestations of physical aggression, followed by the manifestations of verbal aggression, and, finally, the manifestations of indirect aggression. Playing video games with aggressive content is a relatively good predictor of the manifestations of physical aggression in students’ daily lives.

Dispersion analysis results showed significant differences in verbal (F = 12.43, \( p = 0 \)), physical (F = 35.82, \( p = 0 \)), and indirect (F = 4.95, \( p = 0.02 \)) aggression between students who did not play video games with aggressive content (M = 2.13, SD = 1.06) and students who played frequently (M = 2.26, SD = 0.94) or every day (M = 2.64, SD = 0.95). In general, with the increase in the frequency of playing, the manifestations of the studied forms of aggression in everyday life also increase.

Correlation analysis results showed a significant and weak correlation between the frequency of playing video games with aggressive content and the manifestations of verbal aggression from student to teacher (r = 0.099; \( p = 0.002 \)). With an increase in the frequency of playing such games, the manifestations of verbal aggression towards a teacher increase. There is no association with other forms of aggression (physical and psychological—\( p > 0.05 \)). There is a significant and weak correlation between playing games with aggressive content and all manifestations of aggression towards classmates (milder form of physical aggression—r = 0.163, \( p = 0.000 \); more severe form of physical aggression—r = 0.125, \( p = 0.000 \); psychological—r = 0.112, \( p = 0.000 \); verbal—r = 0.072, \( p = 0.024 \)). With an increase in the frequency of playing such games, the likelihood of manifestations of various forms of aggression towards a classmate increases, primarily of physical aggression.

3.3.3. Social Networks and Aggression

The aggregated data show that students who use social networks claim to be object to various forms of virtual aggression more often than a subject to them. The analysis shows that direct verbal aggression is most common in both directions, followed by direct psychological and indirect aggression (see Table 5).

Table 5. Which of the following has happened to you on social networks (Facebook, Instagram, Twitter, dating sites, etc.)? (select between one and eight possible responses).

<table>
<thead>
<tr>
<th>Responses</th>
<th>N/%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I was insulted in a private message</td>
<td>231 (24%)</td>
</tr>
<tr>
<td>I have insulted others in a personal message</td>
<td>130 (13%)</td>
</tr>
<tr>
<td>I was embarrassed in front of others</td>
<td>79 (8%)</td>
</tr>
<tr>
<td>I have embarrassed someone else in front of others</td>
<td>41 (4%)</td>
</tr>
<tr>
<td>I have received a threat</td>
<td>126 (13%)</td>
</tr>
<tr>
<td>I have threatened</td>
<td>64 (7%)</td>
</tr>
<tr>
<td>I have been harassed</td>
<td>74 (8%)</td>
</tr>
<tr>
<td>I have harassed someone else</td>
<td>42 (4%)</td>
</tr>
<tr>
<td>None</td>
<td>583 (58%)</td>
</tr>
<tr>
<td>I do not use social networks</td>
<td>124 (13%)</td>
</tr>
<tr>
<td>Total</td>
<td>978</td>
</tr>
</tbody>
</table>

A dispersion analysis was performed to verify the impact of bullying on social networks as a factor in the manifestations of verbal, physical, and indirect aggression in students. The results showed that there were significant differences in verbal aggression between students who harassed others on social networks who had already been harassed and students who had not experienced either (F = 77.399; \( p = 0.000 \)). Logically, students who harass others on social networks (M = 3.09) have higher verbal aggression than those...
who are subject to virtual harassment (M = 2.40), as well as compared to students who have not experienced either (M = 2.05).

The results were similar in terms of physical aggression (F = 40.329; p = 0.000). It was found that students who harassed others on social networks (M = 2.25) were also more physically aggressive than those who were victims of virtual harassment (M = 1.81), as well as those who were not in either role (M = 1.55).

In indirect aggression, significant differences were observed (F = 30.74; p = 0.000). It turned out that students who harassed others (M = 1.84) had higher indirect aggressiveness compared to those who were subjected to virtual harassment (M = 1.45), as well as compared to students who had not experienced either (M = 1.41).

It can be summarised that aggression in social networks is a powerful factor that affects the frequency of manifestation of various forms of aggression. Students who harass others on social networks are the most aggressive (verbally, physically, and indirectly). Students who have been harassed on social networks are less aggressive. Students who have neither harassed nor been victims of virtual harassment are the least aggressive. This is proof of the strong connection between virtual aggression and all forms of real aggression, regardless of the cause and effect.

The results of a correlation analysis showed a significant correlation between harassment on social networks and aggression by students towards teachers and classmates. This correlation is strongest in terms of verbal aggression (r = 0.34; p = 0.000 and r = 0.33; p = 0.000, respectively). In other manifestations of aggression (psychological and physical), the relationship between harassment on social networks and aggression towards teachers is not as pronounced (r ≤ 0.193, p = 0.000) as that towards classmates (0.304 ≥ r ≥ 0.243; p = 0.000). The more often students are the initiators and/or the victims of harassment on social networks, the more likely they are to exert some form of aggression, especially verbal and mostly towards classmates.

4. Discussion

4.1. Family Relationships and Children’s Aggressive Behaviour

The main focus of our study is the relationship between deteriorated or tense relationships and misunderstandings between parents, on the one hand, and the aggressiveness of the student in a school environment in various behavioural forms. Manifestations of aggression in adolescents increase when chronic misunderstandings between parents are established. In these cases, its verbal form is particularly enhanced. The poor social mental climate in the family, as well as the excessive daily punishment of children, also have a significant impact on the mood and behaviour of the student in the school environment—there is higher verbal aggression towards teachers, as well as physical and verbal aggression directed at classmates. Deepening problems in family relationships directly affect the psyche of adolescents, which is also directly reflected in specific behaviours. The inability to positively resolve the situation leads to various undesirable behaviours in the school environment, some of which are associated with frequent manifestations of aggression, various destructive actions, vandalism, etc.

At the same time, when adolescents observe aggression in the family, poor relationships at home also affect the relatively more frequent manifestation of aggression in school, although not to the highest degree. In these cases, the classical model of Albert Bandura [49] on social learning is applicable, where the observed pattern of aggressive behaviour in the family environment is transferred in some form and manifests itself in the school environment. Often, the patterns of behaviour that students adopt are permanently memorised and become part of their own behavioural repertoire, which can be reproduced many times over the years [50]. Of course, not only the family environment is a factor in learning aggression or another behavioural pattern from students. The influences of the school, relationships with classmates, friends of adolescents, media violence, tolerance in society towards aggressiveness are also among the significant factors for the formation of aggressive behaviour.
The data show that the negative relationships between parents and children lead to an increase in the levels of individual aggression in students, which begins to manifest itself against teachers and classmates. To confirm these scientific findings, more longitudinal studies related to the factors of the family environment, the relationship between parents, and the relationship between parents and students are needed to study all aspects and mechanisms of this influence and the overall impact it has in the stages of adolescent development.

One of the main components of the educational practices that parents resort to is the way they treat the negative manifestations of their children and the punishments that they consider necessary to apply to them. The most popular penalties that parents apply are a ban on watching TV, using a computer, or taking away the phone. There are also a lot of cases related to a ban of going out with friends. Part of the students (40%) say that parents do not punish them, and only a small part say that they beat them.

Parenting practices are dominated by punishments that most often affect the withdrawal of the most desirable activities—contact with electronic media or contact with friends. The analysis of the data shows that there is a certain influence on the behaviour of students from parental sanctions, primarily in increasing the degree of verbal and indirect aggression. However, they do not affect physical aggression, in which there are no significant differences. Imposing punishments is a too uncertain way out as their results are often not positive and do not impact “correctively” to the student. The problem is probably mostly in the communication between parents and children, as well as between the parents themselves—not infrequently related only to the success in school, ignoring the mood of the adolescents, their own aspirations, and views. In cases of real attempts to harmonise the relations at home, a balance would also be achieved in the student’s relations to school and classmates. It is exactly in the family that there is the greatest opportunity, due to the closest human connections and closeness, to use much more communication skills, conversations, joint solving of problems between parent and child.

In this regard, the manifestations of aggression by parents directly affect the manifestations of aggression by the student in a school environment. The use of verbal aggression by parents in the form of screams and insults affects the behaviour of adolescents outside the home, and this analysis proves it. Aggression towards classmates increases due to aggressive actions of parents towards their children. This aggression is less manifested towards teachers. The phenomenon of shifting aggressiveness, well known in psychology, occurs when there are obstacles, barriers to its manifestation to the root cause, in this case to the parents [51]. Something else should be borne in mind—our study has the limitations of correlative quasi-experimental studies, i.e., it is very likely that not every student who has endured physical aggression from a parent will share it in a questionnaire. Such an experience is associated with the adolescent’s self-esteem and with their pride and desire to avoid self-abasement through recognition, regardless of the anonymity of the study.

The analysis of the data shows that about 28% of students use aggression against their parents mainly in the form of verbal aggression—shouting or insulting them. Very rarely, severe physical aggression occurs. In any case, the students themselves are clearly aware of their actions towards their parents and precisely point out their manifestations such as insults and raising the tone above the normal and accepted behaviour of children towards parents. But the majority of students say that they do not perform the actions listed in the question towards their parents.

The study found a direct link to the fact that verbal aggression towards parents is also manifested towards teachers and classmates. With daily use of verbal aggression and sometimes other types of aggression towards parents in school, the range widens, and students use both psychological and physical aggression towards their peers. The transfer of behavioural styles from one situation to another and from one context to another is observed in still-forming personalities who have not built a mature personality structure and in relation to accepted social and moral norms. The socialisation of the individual is a complex and multifaceted process, but it provides opportunities for the personality to
adopt attitudes and specific behavioural forms for specific social situations. Especially in the case of problems with aggressive manifestations or aggressive personalities in school, a complex system is needed, working in each school to prevent and reduce aggression and violence, including all subjects related to it—parents, teachers, students, psychologies. Often, in more serious cases, specialised psychological work is needed based on which new methods and models for non-aggressive coping with the situations that have arisen are implemented.

4.2. The Media Environment as a Factor for Increasing Aggressive Manifestations

The great importance and influence of the media, including so-called “television violence”, has been proven in numerous studies in the world psychology, which is actually gradually replaced by the activities occupying a large part of the time of teenagers, playing computer and video games, e.g., [52]. Social networks are another powerful factor in the development of various behavioural trends, as well as relationships with other subjects involved in this ever-evolving virtual field of the modern world.

As can be seen from the data, there was a great variety of responses, with humour and entertainment films having the largest share; in this question, students also had the opportunity to mark several responses. Therefore, the rates for other responses are also not low. Horror movies are more associated with opportunities to emulate models of aggressive behaviour and even violence, and they are preferred by \( \frac{1}{4} \) of respondents. Many prefer crime movies and police investigations, movies with fighting, and bloody scenes. The positive fact is that popular science movies are indicated by \( \frac{1}{4} \) of the students.

The specific statistical analysis of the influence of movies containing aggression and violence on the performances of students shows that some of them mainly affect verbal aggression. The result that they do not affect the physical aggression of the students measured in this study is not enough to draw definite conclusions. Such influence of violent movies can be measured directly in an experimental situation where students would have the opportunity to exhibit aggressive or non-aggressive behaviour soon after viewing. In this case, we can only use the data as guidance and as exploratory for further research.

Video games occupy a particularly significant place in psychological studies since they lead to widespread learning of aggressive behaviour patterns. In the study, there was a large number of students who played games containing aggressive patterns of behaviour on a daily basis. Most of the psychological experiments prove the direct link between video games and aggressive behaviour and violence [53]. In this study, this relationship is convincingly confirmed—frequent play is associated with all kinds of aggressive manifestations among students. The results in terms of the effect of games on increasing physical aggression are eloquent, but there is also an effect on other forms—verbal and indirect. The fact is that students who do not play this type of games containing fighting, violence, etc., also demonstrate lower levels of aggressive behaviour. It would be very useful if teachers, e.g., those who teach computer technology, would also focus on other creative activities such as interactive games containing cognitive components, but choose activities without violence, in order to reduce the time spent on games containing aggression. This requires genuine motivation on the part of teachers for a more comprehensive approach to teaching. The frequent play of video games with aggressive content somewhat affects the manifestation of verbal aggression towards teachers, but also all forms of aggression towards classmates, especially physical aggression. So, despite some discussion and new research suggesting that games do not specifically affect aggression, this confirms their traditionally proven role in adolescent behaviour. This once again supports the above conclusions and recommendation.

Various aggressive attacks have happened to a number of social network users: insults, harassment, and threats. Moreover, virtual aggression has also been manifested by those who have suffered similar harassment, insults, etc.; that is, in the network, aggression easily becomes reactive through the forms of verbal, indirect, and other forms of aggression. Although we expected higher verbal aggression, it turned out that aggressive behaviour
in social networks affects all types of aggression in real life of students. This could also be the unfolding of an interpersonal conflict in which another, so to speak, third party may intervene. The analysis of this correlation points to conclusions about the likely development in part of the students in the research of personal aggressiveness, which is usually transsituatively manifested; therefore, its behavioural implementations in social networks are a continuation of those of real life and everyday life.

5. Some Limitations of the Study

As with most studies using self-assessment tools such as questionnaires and tests, there are limitations to consider in the interpretation of the data and conclusions. In children and adolescents, another risk is added—the possibility of inaccurately assessing or a lack of awareness for the nature of one’s own reactions and the behaviours of others, both in a real environment and even more so in media content, in the content of virtual and video games. Another limitation is related to the remote conduct of the study—in case of personal contact with an interviewer, the results would probably be more accurate. In this regard, mixed research, quantitative, and qualitative methods would contribute to a more complete picture and broader data on the phenomena studied.

6. Conclusions

The presented study draws attention to one of the most significant factors for the development of children—the family environment. This is the initial world in which the child meets significant people, significant values, and views in this microenvironment, which also reflect the influences of society in their own specific way. Despite some negative trends outlined by the results and the discussion, it is still important to emphasize that among Bulgarian students, cases of severe physical aggression are very rare. A positive trend is that parental aggressiveness is also rarely expressed in physical form. However, the problem of aggressiveness at school remains very serious and requires practical measures to reduce destructive manifestations.

In modern life in recent decades, the other factor whose influences we discussed in the article is increasingly important—the media environment in a broad sense—television, video games, and social networks. The issue of the influence of video games has been seriously debated by scholars and practitioners around the world. Recent studies point to a differentiated approach. In a longitudinal study, it appears that video games with aggressive content affect different adolescents in different ways [54]. Clearly, more detailed and systematic studies of the effects of video games are needed.

However, the inclusion of different types of contexts—family, media, learning environment—provides more relevance to the observed behaviour and more precise conclusions by the researchers.

The data and conclusions of the study prove to be particularly useful for pedagogues, school psychologists, to direct them to effective programs and strategies to deal with growing child aggression. Of course, longitudinal studies would be even more extensive, covering the development of children during the teenage period in the context of family and school and what we hope to conduct in the near future. In fact, based on the wider research conducted by our team, part of which we present here, a comprehensive Program for Prevention and Intervention of Aggression and Violence in School was prepared, which is being studied by school psychologists and is expected to enter the curriculum of Bulgarian schools in the near future.

Author Contributions: Conceptualization, Y.Z. and E.E.D.; Methodology, E.E.D.; Results, Y.Z. and E.E.D.; Discussion, Y.Z.; Conclusions, E.E.D. and Y.Z.; References, E.E.D.; writing—original draft preparation, E.E.D. and Y.Z.; writing—review and editing, Y.Z. and E.E.D. All authors have read and agreed to the published version of the manuscript.

Funding: The study was conducted by a team, led by prof. Yolanda Zografova, of the Institute for Population and Human Studies at the Bulgarian Academy of Sciences and is part of a study under the project “Study of the Manifestations of Aggression and Violence in School—Forms, Factors, and
Bulgarian secondary schools are of different types: vocational high schools offer training to high school students (from 8th to 13th grade) who, after graduation, earn the so-called qualification degree in a given profession—e.g., in areas such as fine mechanics and optics, textile industry, banking, etc. Secondary general education schools are the other main type—they train students from the 1st to 12th grade according to general training programs. Primary schools only educate students from the 1st to 7th grade, again without a special profile.

**References**


**Disclaimer/Publisher’s Note:** The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.