



Cyber bullying and its effects on the adolescent and youth health: A huge problem behind tiny keys

Cyber bullying and health

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Abstract

Bullying is defined as the repeated act of violence toward victims on the basis of power imbalance. A new type of bullying is derived with the development of digital communication technologies such as the internet and mobile phones which is called "cyber bullying". Today being a victim of cyber bullying has become a major public health problem among adolescents and young people. While the act of cyber bullying is more common among boys, girls are reported to be usually the victim. Being a part of an ethnic minority, gender other than heterosexuality is a risk factor for cyber bullying victimization. There is a relation between eating behavior disorders, anxiety, depression, suicidal tendencies, anger, aggression, non-alcohol-addiction with mental health problems and cyber bullying victimization. Quality of life seems to be low in both victims and bullies. Also, disturbances among parents, siblings' relationships, and academic underperformance are associated with cyber bullying. It can be said that all subjects related to social and mental health can be affected by cyber bullying. The purpose of this review is to reveal what cyber bullying is, its risk factors, and its relationship on adolescents and young adults physical and mental health.

Keywords

Bullying; Victimization; Violence; Psychological Problems; School

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Introduction

Bullying is defined as an act of violence repeated over time in which there is a power imbalance between the victims and those who bully [1,2]. In traditional bullying, the victim and the bully are face-to-face. Traditional bullying can be categorized as physical like hitting-kicking, verbal like ridicule and threat, and relational like exclusion and spreading rumor. A new kind of bullying came into existence with the development of digital communication technologies such as the internet and mobile phone and is called "Cyber bullying" [3]. Cyber bullying is defined as deliberately and repeatedly damaging someone using digital technologies [4]. Cyber bullying is most commonly performed in the form of annoying messages and social attacks by unidentified messages through e-mail, instant messaging, chat rooms, and websites. The target audience in bullying / cyber bullying studies is categorized as the bullies, the victims, those who are both the bully and the victim, and those who are neither the bully nor the victim [1,2].

Modecki and colleagues report in the meta-analysis study of the results of eighty studies that traditional bullying is seen twice as much as cyber bullying, and that traditional and cyber bullying are highly correlated [3]. For this reason, it is seen that most of the studies related to the subject are handled together with traditional and cyber bullying.

The purpose of this review is to reveal what cyber bullying is, its risk groups, and its effects on the physical and mental health of adolescents and young adults.

LITERATURE REVIEW

1. Risk groups

Adolescents and young adults: Almost all studies on cyber bullying are carried out on adolescents and young adults. Many studies in primary school and middle school children, high school and college youth show that cyber bullying is one of the most important problems in the field of school health. In adolescents and young adults, it has been reported that being a victim of a physical and psychological bully and bullying, and being a cyber-bully and being a victim are concurrent [4].

Gender: It is reported in many studies conducted in both Turkey and various countries around the world that male adolescents/young adults bully more often than girls [5,6]. On the contrary, in cyber bullying victimization, no difference is found between the genders in some studies, and girls are found more likely to be victims in some other studies [7,8]. The results of a meta-analysis of studies on the topic can be summarized as follows: "Although cyber bullying is more common in boys than girls, the gap is closing as the date of publication of research articles get closer to the present day.". This can be interpreted as follows: cyber bullying among girls tend to get to similar frequency levels to boys [9].

It is also necessary to address identities such as lesbian, gay, bisexual and transsexuals belonging to the social gender. According to the results of some research studies on bullying/cyber bullying and sexual identity relationships especially in the United States of America (USA), the students who constitute the sexual minorities are more at risk than heterosexuals in terms of bullying victimization, and the security vulnerability is increasing day by day [10]. Considering that the social-sexual identities may be kept confidential in Turkey, it is especially advisable for school administrators to take precautions against cyber victimization.

Ethnicity/race/migration: According to the results of a study in

which Canadian adolescents are divided into two groups of East Asian and European origin, East Asian origins are motivated by proactive, whereas European origins by reactive reasons to do cyber bullying. In East Asian origins, cyber bullying is seen less frequently than European origins. For the cause of this result, it was discussed on Confucian doctrine and Far East philosophies such as Taoism [11]. For our country, the results of this study require us to consider the causes of cyber bullying based on reactive causes. It is also necessary to look at the studies done in the United States (US), where ethnicity and racism are still important discrimination elements. It is reported that school-aged young adults who migrate to the US are high-level cyber bullying victims. Over 10,245 urban youth in the US, African Americans have been shown to be more cyber bullying victims [12]. It is also reported that, in American secondary school students, whites experience "racial bullying" three times more than the African Americans, whereas the African Americans are twice as "racially based bullying victims" compared to whites [13]. These results were obtained after the confounding effects of the differences between the schools were removed. These studies that we present as examples can be regarded as evidence that the negative effects of racism in the United States are reflected in cyber bullying.

2. Some predictors of victimization with cyber bullying:

It is necessary to give priority to the personality and self-esteem of the adolescent person if it is deemed appropriate to follow a sequence in the presentation of many research results that examine the predictors of cyber bullying and cyber bullying victims. The main factors that may influence the mental health and self-development in the adolescent's past are the socioeconomic and socio-cultural characteristics of the family the adolescent grew up in, parental attitudes, and peer relations. Key factors for the future of the adolescent include the school performance, the social environment of the school and the future concerns. If the adolescent leaves school, he or she faces the difficulties of early life and work environment. After that, sexual identities, social gender, sexuality, first sexual experience, religious attitudes, and political attitudes affect the adolescent. During this period, health-related factors such as body image, obesity, eating habits, and physical activity affect the self-esteem of the adolescent. Faced with these situations, significant public health problems that can affect youth and later years of his or her life are awaiting the adolescent. The most important of these are anxiety, depression, hopelessness, smoking-alcohol-substance addictions and eating disorders such as anorexia nervosa and bulimia nervosa.

Many of these factors that affect adolescent/young adult health have also been examined in the literature regarding cyber bullying.

Personality structure:

The definition of personality is the whole of innate characteristics that are shaped by interacting with the environment and do not easily change. Tang and Fox have reported high levels of sexual harassment behaviors such as sexual harassment and hostile sexism, including jokes about sexist commentary and rape in online video games, among men with a tendency to social dominance [14]. However, no literature has been found in the literature in which the personality structure is classified, and the cyber bullying relationship is directly explored.

Self-respect:

Self-esteem is a state of appreciation that comes from the endorsement of the concept of self that the individual has reached at the end of self-evaluation, and is a concept that expresses whether or not the individual finds himself or herself valuable or how valuable he or she finds it. When recent articles on cyber bullying are examined, it is seen that low self-esteem is reported among the main determinants of cyber bullying. In a study of middle school students in Olinda, Brazil, self-esteem in victim/aggressive and aggressive groups were reported to be associated with bullying, depending on sex. In the same study, it was reported that self-esteem was higher in males than females, while in females there was a higher frequency of victim/aggressive and aggressiveness than males. Thus, the results are presented that low self-esteem is related to bullying [15]. Evaluation of self-esteem during the acceptance and periodically afterwards will be an important preventive health measure in terms of cyber bullying/victimization.

Parent-family-sibling-peer relationships:

The adolescent improves self-esteem with the positive attitude and social support of family and friends and feels safe. In a study examining the relationship between parental attitudes and cyber bullying, it is reported that parental control is more common in Canadians of East Asian origin, where cyber bullying is less visible than in Canadians of European origin [11]. This suggests a positive parental attitude toward the control of cyber bullying. Another study from Australia was on bullying siblings and peers [16]. Four hundred seventy seven (477) adolescents from 5th to 12th graders participated in the study, and it was reported that the traditional and cyber bullying directed towards the sibling had a higher frequency than the bullying directed against the peer. The healthy family atmosphere is obvious in fighting with cyber bullying. However, the good observation of children who do not live in such environment, especially in the school environment, and the evaluation of their friendship will be examples of good school administration.

Socioeconomic level:

A study showing that cyber bullying has an indirect relationship with the socioeconomic level of the family was conducted in Taiwan. There are study results reporting that poorness in girls is associated with low self-esteem and depression, which is related to cyber bullying victimization [17]. The literature on socioeconomic level and cyber bullying has been found to be inadequate. Investigations should be encouraged in this regard.

Academic performance:

It has been reported in many studies that the emotional distress, anxiety and depression symptoms of victims of bullying/cyber bullying, together with psychological conditions such as social isolation and loneliness and in association with them, show an increase in school absenteeism and a decrease in academic performance [2,18]. The results of a study carried out on 400 high school students from Turkey show that cyber bullying has an adverse effect on academic achievement. Also, the empathic tendency with cyber bullying is predicting academic success [19].

School social environment perception:

This subject was studied in 1,263 middle school students in a study from Turkey. In the study, it was shown that those who

were not involved in bullying tended to perceive schools and teachers more positively. Cyber victims compared to cyber bullies also evaluated their teachers more positively. However, those who are bullying and who are not involved in bullying perceive their peers more positively than victims [20]. We also see similar results reported from abroad.

Romantic relationships:

The results of a study from abroad can be suggestive in this regard [21]. The cyber-attack on the anxious and withdrawn partner was assessed on 600 adolescents. At the end of study, the anxious partner was found to be related with the direct attack performed later on the partner. However, the adolescent's insecure relationship with his or her mother was positively related to the insecure relationship with the partner, which was indirectly found to be effective in the attack against the partner. It is thought that the results of the study done in the west cannot be adapted for the countries like Turkey where extramarital affairs are not open. In our country, the relation of romantic relationships to cyber bullying should be considered in further studies.

Beliefs-moral values:

In a study of 390 high school students from Italy, it is reported that moral values play a central role in cyber or traditional bullying [22]. According to the results of this study, independently of gender, self-improvement and self-transcendentalism are moderate predictors of bullying. Immoral behaviors and separation behaviors are predictors. Self-development and openness to change were found effective on bullying indirectly through immoral behavior. It is necessary to acknowledge that this study offers regional implications, that the moral values for different civilizations and cultures may be different and the relationship with bullying may be different.

In addition to the fact that there is no study on this issue in Turkey, there are also insufficient publications in the literature. In a study on university students, the participants consisted of white, African American, Spanish, and Asian ethnic groups. The study examines the relationship between normative beliefs about cyber aggression and aggression. At the end of the study, it was reported that social cognitive and behavioral mechanisms are closely related to cyber aggression [23]. The relationship between moral/religious values and bullying is yet to appear as an open research area for researchers.

Body image-obesity-eating habits-eating attitude disorders-physical activity:

The body image is the subjective and individual perception of the body, and body dysmorphic disorder is the name of the perception of this image in a pathological way. Body dysmorphic disorder is a person's overwork with a bodily defect that does not exist in reality or a slight bodily defect that exists. For adolescents, body image is a very important issue, while negative body image perception is associated with many mental health problems. We can count obesity, eating habits, eating attitude disorders, and sedentary life among the health-related conditions and disturbances affecting the body image. In a topic related to adolescents such as bullying/cyber bullying, it was unexpected that the relationships with the above-mentioned health-related conditions and discomforts were not researched. We can summarize some research results about the subject as follows:

In a Brazilian study, it was reported that adolescents living in urban centers had a low incidence of bullying/cyber bullying victims with positive body images [24]. Again, in a study of obesity-related to body image, 10,587 adolescents from China were studied. It was reported that obese girls were more vulnerable to bullying than non-obese. There was no relationship between obesity and bullying victimization in males. However, obese males are more likely to fall into the victim/bully class. It was also reported that weight-related bullying in China was not as widespread as in western countries. However, it should not be noted that the subject of this study was bullying in general, not the cyber bullying [25].

In a study from Canada-Ontario, the relationship between skipping breakfast and bullying was discussed [26]. Both in males and in females, a positive relationship between the victim of cyber/traditional bullying and the skipping of breakfast meal was shown. In the Great Smoky Mountains Study from the US, eating attitudes and bullying relationships in adolescents were examined [27]. The results of the study showed us that the bulimia nervosa risk increases in the bullies and the anorexia nervosa risk in the bullies/victims. These studies provide insight into the coexistence of eating habits, eating disorders and some mental disorders. It can be said that coexistence between cyber bullying and eating habits or eating disorders is the matter rather than a direct relationship.

It was reported that physical activity has a positive psychological effect as well as it reduces many physical health risks, and it decreases the risk of anxiety and depression. For this reason, physical activity may be indirectly related to cyber bullying. Indeed, this indirect effect in the sample of 6,191 Danish students in the 11-15 age group was shown as follows: the risk of physical inactivity increases in the students of low social class, which indirectly increases the risk of exposure to bullying. There is a combined effect on physical inactivity of the low social class and the bully. However, cyber bullying is not handled separately from bullying as a result of this study [28].

3. Mental disorders and cyber bullying:

In addition to eating disorders, the relationship between bullying/cyber bullying and mental disorders such as anxiety, depression, anger-aggression, suicide ideation, and smoking-alcohol-substance addiction is also included in the literature.

Anxiety-depression-suicide ideation:

It has been reported that the tendency to anxiety, depression and suicide ideation in the cyber bully/victim group is high [1]. In a study on adolescents, the relationship between bullying and social anxiety was examined. The direction of this relationship was addressed rather than the existence of a relationship. It has been reported that only in those who bully in a traditional way (not in cyber bullying), social anxiety is seen to be more prominent in the future [29].

It is known that psychosomatic complaints are found in cyber bullying victims with high frequency. It has been reported that depressive symptoms appear less in the bully/victim group than in the victim group. In a study, students who showed frequent bullying behaviors were assessed for risk after 4 years in terms of depression and suicide ideation. It was seen that young adults who showed only bullying at the beginning often did not develop more depression or suicidal ideation than young adults who had risk for suicide. However, the psychological state of those with bullying behavior and depression or suicidal ideation

at the beginning were more disturbed than those who had only thought of depression or suicide at the end of four years [30]. There are studies also considering rumination as a concept related to cyber bullying. Rumination is defined as the state of feeling (especially depressive state) in which one persistently is, constantly thinking about the symptoms, possible causes and/or consequences of this emotional state, but not acting to solve the problem. Especially in women, it is said that rumination can be a mechanism that affects mental problems through cyber victimization. In a study, it was reported that rumination increased in women who had been victimized by cyber bullying and their relationship with depressive symptoms was detected [31].

A comprehensive study investigating the relationship between suicidal tendency and bullying is the 2011 Youth Risk Behavior Survey, where the data of 15,425 high school students are used [32]. According to this study, cyber bullying is more prevalent in girls and school bullying in males. All types of bullying, including cyber bullying, and victimization are reported as high-risk factors for sadness and suicidal tendencies.

The Youth Risk Behavior Survey-2009 reported that the relationship between traditional bullying victims and suicide attempts in connection with depression showed similarities between genders. However, the relationship between cyber bullying victimization and suicide attempt in connection with depression was shown only in girls. Again, the relationship between traditional bullying and suicide attempt in connection with depression was only found in girls [33].

In a study on middle school students, both traditional and cyber bullying victimization were associated with mental health problems in girls. Nevertheless, while traditional bullying victimization is associated with suicidal ideation, this relationship has not been demonstrated in cyber bullying victimization [34].

Anger-aggression and cyber bullying:

It has been reported that the explosive expression of the anger is very common in cyber bully and victim adolescents. However, the relationships between situational anger and cyber bullying/victimization have been shown in studies on adolescents. In a study conducted on middle school students, it was found that indirect and physical aggression predicted cyber bullying at a significant level, and verbal anger and hostility aggression did not predict cyber bullying [35].

Alcohol-cigarette-substance addiction:

It has been reported that excessive alcohol consumption, which is an adolescent problem, is also related to cyber bullying/victimization [36]. Again, it has been shown in a study on Latin youths that bullying victims have a high risk for smoking [37]. Drug addiction is also considered among the factors associated with cyber bullying. Substance addiction and violence have been shown to be associated with both types of bullying and suicide attempt in high school students in the US [38,39].

4. Quality of life and cyber bullying:

The quality of life is defined by the World Health Organization (WHO) as the way in which individuals perceive their positions in life, within the system of culture and values they live in, in terms of their aims, expectations, interests and living standards. The quality of life reported to be inversely related to mental health problems such as anxiety and depression would also be expected to be related to cyber bullying. In a study from

China, the quality of life and bullying relationship was studied. In high school students, the quality of life was assessed by the Health-Related Quality of Life Scale (HRQOL). In this study, it is reported that there is a relationship between the environmental dimension of the Quality of Life scale and cyber bullying victimization, and a relationship mediated by depression between the psychological domain of the scale and exposure to verbal and relational types of traditional bullying. In a Brazilian urban study, cyber bullying was also found to be related to dissatisfaction in life [24].

Conclusion

In the scope of this study, the relationships and risks of adolescents/young adults who are cyber bullies and cyber bullying victims have been tried to be evaluated in relation to the health conditions, especially in psychological terms. Beginning with the primary reasons affecting the self, self-esteem, and personality formation of the individual, it has been seen that the social environment influences bullying/cyber bullying act in a wide dimension. In summary, it can be said that boys in adolescence/young adults are more likely to cyber bully than girls. However, this gap seems to be closing. Being a member of socially disadvantaged groups such as being an ethnic minority and having heterosexual identity, pose a risk to cyber bullying victimization. The literature shows that there is a direct or indirect link between cyber bullying/victimization and each of the health problems that are important for adolescent/young adult health. These problems mainly are eating attitude disorders, anxiety, depression, suicide tendency, anger, aggression, alcohol-smoking-substance addiction. Low life satisfaction and low quality of life draw attention among both of those who cyber bully and who are the victims. In addition to parental, sibling, peer-related disorders, and poor academic performance is also associated with bullying/cyber bullying. In the light of all this information, it would not be wrong to say that the relationships between all events related to psychological, social and mental health and bullying/cyber bullying in the adolescent/young adult show a co-occurrence rather than a cause and effect relationship.

Scientific Responsibility Statement

The authors declare that they are responsible for the article's scientific content including study design, data collection, analysis and interpretation, writing, some of the main line, or all of the preparation and scientific review of the contents and approval of the final version of the article.

Animal and human rights statement

All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. No animal or human studies were carried out by the authors for this article.

Conflict of interest

None of the authors received any type of financial support that could be considered potential conflict of interest regarding the manuscript or its submission.

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