Psychological Correlates of Cyberbullying and Cyber-Victimization

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Abstract
Technology use is increasing rapidly in today's world. Technological advances created new medium for aggression. Cyber bullying is one type of these behaviors which is defined as bullying via electronic communication tools. Although bullying is not an old issue, cyber bullying is a new concept which has similarities and differences between bullying in real life. Researchers found that cyber bullying and victimization have psycho-social correlates. This research aims to investigate cyberbullying and victimization along with their relationship with anxiety, depression, hostility, negative self-concept, impulsivity, empathy and internet addiction. The sample consists of 198 university students between 18 and 25 years of age. 65% of participants are female and the other 35% are male. In this study, The Turkish version of Short Symptom Inventory is used to measure depression, anxiety, somatization, hostility and negative self-concept. The Barratt Impulsivity Scale is used to measure impulsiveness and Basic Empathy Scale is used to measure empathy. Both cyberbullying and cyber victimization positively correlate with anxiety, depression, somatization, hostility, impulsivity and internet addiction. On the contrary, cyber bullying negatively correlated with empathy. As a result, it was concluded that cyberbullying and cyber victimization go hand in hand. The results showed that both variables show similar correlations with same psychological aspects.

Keywords: cyberbullying, cyber victimization, impulsivity, empathy, internet addiction

1. Introduction

Cyberbullying was first used by Bill Belsey as a new concept of bullying (Belsey, 2004). Ybarra and Mitchell (2004) considered the concept of online harassment as a form of cyber aggression instead of cyberbullying. In a similar way, Willard (2007) defines offline social aggression as a reflection on online.

In addition to the conceptual definition of cyberbullying, it is possible to talk about the components of the phenomenon. As well as having components such as intent, repetition, power inequality of traditional bullying, cyber bullying has different components that are anonymity and publicity (Bauman et al., 2013). As a result of a study carried out in Australia among adolescents, it has been emphasized that cyberbullies commonly manifest their behaviors in two forms which may be covert or explicit (Spears et al., 2009). Nocentini and others (2010) have categorized the cyber bullying behavior into four main themes. According to their classification, these behaviors are oral and written behaviors (text messages, phone calls, chat, blogs, social networks, etc.), visual behaviors (inappropriate visual content, video and photo sharing), exclusion (excluding a

person from online channels) and disclosure (online sharing of personal information of someone without their consent etc.).

As cyberbullying has been becoming a major issue, differences between traditional bullying and cyber bullying come forward. Researchers started to study on cyberbullying and victimization concepts for intervention and prevention. Today results showed that cyberbullying behavior is a complex structure which is associated with various factors. Researchers have found that cyberbullying is associated with alcohol use, delinquent behavior, depression, low self-esteem, relational aggression, peer rejection, and acceptance of aggression. Besides according to recent studies losing emotional traits, excessive exposure to violent images and media, playing violent video games, have all been related with cyberbullying (Lianos, 2017). As it was stated, most of these factors are psychological concepts such as anxiety, depression, somatization, hostility, empathy, impulsivity and internet addiction.

1.1. Anxiety

Anxiety, which may be described as an unpleasant affective state, is one of the problems from which both bullies and victims may suffer (Roy-Byrnr, 2004, p.70; Craig, 1998). Kowalski and Limber (2013) showed that both traditional and cyber victimization correlated with anxiety; likewise a positive correlation was also found for bullies. Meta-analysis results also supported that cyber victims are more likely to suffer from anxiety compared to others who were not bullied (Kowalski, Giuretti, Schroeder & Lattanner, 2014). Besides studies conducted in different cultures also showed that victims are more likely to suffer from anxiety (Price, Chin, Higa-McMillan, Kim & Frueh, 2013; Çetin, Eroğlu, Peker, Akbab & Pepsoy, 2012; Aoyama, Saxon & Fearon, 2011; Tomşa, Jenaro, Campbell & Neacşu, 2013). Although there is currently a small number of research on the underlying mechanism of anxiety resulting from cyberbullying, the number has been increasing for a better comprehension of the issue. One of these research results showed that coping strategies against cyberbullying is one of the predictors of anxiety. Avoidance coping strategies such as internalizing and externalizing are more likely to result in anxiety due to cyber victimization (Na, Dancy & Park, 2015).

1.2. Depression

Studies suggest that cyber victims are more likely to suffer from internalization problems like anxiety. Depression is another internalizing disorder which has proved to be connected with cyberbullying and victimization (Bonanno & Hymel, 2013). The effects of cyberbullying have been examined in the context of mental health of adolescents mostly based upon their tendency of internalizing the problems within an extensive network of communication. Former studies showed that cyberbullying victims are more likely to develop mood disorders; Wigderson and Lynch (2013), Klomek, Marrocco, Kleinman, Schonfeld and Gould (2007) are among the first researchers to discover a significant correlation between depression and cyberbullying victimization in adolescence. Even though face-to-face bullying also generates some negative reactions such as helplessness, loneliness and sadness in the victims, cyberbullying knows no limits. Its victims are attacked in their own houses and rooms which they conceptualize as the safest places in their daily lives and the attackers are mostly unknown (Bauman, 2014) to them. The study of Hinduja and Patchin (2010) demonstrates that middle school students with a cyberbullying experience whether as a victim or a perpetrator, think about or attempt suicide more frequently compared to their peers.

Research on traditional and cyberbullying showed that victims of cyberbullying are more likely to report depression compared to traditional bullying victims (Tennant, Demaray, Caoyle & Molecki, 2015).

1.3. Somatization

Somatization is the physical manifestation of psychological problems and it highly correlates with anxiety and depression. Therefore, like depression and anxiety, somatization is also one of the psychological correlates of cyberbullying (Koh, 2013). Previous studies found that both cyberbullies and victims as well as traditional bullying victims showed psychosomatic symptoms like headaches, sleep problems and abdominal pain (Fekkes, Pijpers, Verloove-Vanharick, 2004).

Though limited in number, there are studies that consider cyberbullying along with its somatic manifestations from the points of both the victim and the perpetrator. Kowalski and Limber (2013) demonstrated that cyberbullying has some psychosomatic consequences such as sleep disorders, headache, poor appetite and skin problems as well as psychological effects. Apart from headache, poor appetite and disorganized sleeping schedule that are in accordance with the depressive mood created by the cyberbullying experience, skin conditions are particularly striking especially from the psychoanalytical point of view. Anzieu (1974) was the first psychoanalyst to describe the skin as an organ that not only serves as a boundary between the inner and outer realities of an individual, but also becomes the very first channel of communication between the baby and mother or caregiver. The term "The Skin-Ego" was formed by Anzieu based upon this crucial mission of skin as an envelope that covers the self, and has been introduced to the psychoanalytical literature. It becomes more meaningful that skin is one of the first channels on which the primary physical manifestations are found and it is affected in the first place by the external threat when the position of it as a border between the individual and the others is taken into consideration.

Somatization is not only a consequence of cyberbullying but it was also found to be a predictor of cyberbullying. Arıcak (2009) showed that somatization is one of the significant predictors of future cyberbullying behavior like hostility and psychoticism.

1.4. Hostility

Similar to somatization, depression and anxiety are correlated and interact with hostility. Besides, hostility and anger are also associated with somatization. Hostility is considered as a general trait which consists of behavioral, cognitive and affective components. Cognitive component involves negative beliefs and attitudes like devaluation of others, mistrust, desire of hurting others (Miller, Smith, Turner, Guijarro & Hallet, 1996).

Hostility is one of the variables that is correlated with cyberbullying and victims owing to the fact that cyberbullying is defined as hostile behavior toward others (Tokunaga, 2010). Like traditional bullies who show verbal and physical aggressiveness and revenge seeking behaviors (Hazler, Carney, Green, Powell & Jolly, 1997), recent studies indicate that cyberbullying behavior is related to aggression and anger (Patchin & Hinduja, 2006; Ybarra, Espelage & Mitchell, 2007). In addition, rule breaking behaviors also correlate positively.

Hostility was found to be both a predictor (Arıcak, 2009) and consequence of cyberbullying behavior. Studies show that some cyberbullying victims can report hostility especially towards the cyberbully and audience of the bullying behavior (Şahin, San, Özer, Er, 2010; Topçu, 2008). Another research, that focused on hostile sexism in relationships, indicate that male participants' hostile sexism is related to cyberbullying their girlfriends (Martinez-Pecino & Duran, 2016).

1.5. Negative Self Concept

Self-concept is defined as one's perception and evaluation of themselves. Negative self-concept is found to be correlated with depressive symptoms (Tarlow & Haaga, 1996). Traditional bullying victims showed higher degree of negative self-evaluation compared to non-victims (Solberg & Olwens, 2003). On the other hand, a study conducted among Irish schools showed traditional

bullies have lower self-concepts compared to cyberbullies (Corcoran, Connolly & O'Moore, 2012).

Another study, however, shows that cyberbullying is associated with negative self-concept (Zezulka, Seigfried- Spellar, 2006). For instance friend networking sites play a crucial role in social self-esteem of users. Negative feedbacks indirectly affect users' self-esteem by decreasing it (Valkenburg, Peter & Schauten, 2006). Another confirming research showed that chatroom victims found to have a lower degree of self-esteem. Besides students with lower self-esteem are more likely to suffer from chatroom bullying (Katzer, Fetchenhauer & Belschak, 2009).

1.6. Impulsivity
Impulsivity is one the variables that are frequently connected with anger and hostility. Pabian and Vankelbosch Model (2014) shows that interaction of anger and impulsivity contributes to cyberbullying. Although there are many researches on impulsivity and traditional bullying, little is known about the relationship between cyberbullying and impulsivity.

For that reason impulsivity among cyberbullies are one of the crucial notions that require future researches. It is assumed that the anonymity and deindividuation along with the easier objectification of the victim due to the fact that the perpetrator and the victim are not physically together, lead to violent impulsive behavior (McKenna & Bargh, 2000). The desire for power and control, impulsivity and dominance used to describe face-to-face bullies, are also valid for cyberbullies (Campfield, 2008). A longitudinal study conducted with children shows that impulsivity predicted cyberbullying behavior after one year (Fanti, Demetriou & Hawa, 2012). Impulsivity also plays a significant role in bystanders help behavior. Another study on bystanders shows that less impulsive students are more likely to help cyberbullying victims (Erreygers, Pabian, Vandebosch & Baillien, 2016).

1.7. Internet Addiction
Internet addiction, which was introduced in 1996 by Kimberly Young, is one of the behavioral addictions. Studies in an increasing number demonstrate that similar to other addictions, internet addicts are also preoccupied with use; continue to use despite harm, tolerance, unsuccessful efforts to control or cut down use (Young, 2004). Literature shows that internet addiction is related to physical complaints, depression, school problems, relationship problems and loneliness (Chen & Peng, 2008; Young, 2004). Although it is not included in DSM 5, it is considered as one of the major problems especially for the young (Ahn, 2007).

According to recent studies, internet addiction is one of the most common types of addiction to such a degree that it was measured to affect 15% of the population (Block, 2008; Bakken et al., 2009). Online sexual acts and following pornographic websites are thought to be directly correlated with this type of addiction (Gönül, 2002).

Cyber bullying and internet use relation is pointed out by researchers (Topçu, 2008; Navarro, Serna, Martínez & Ruiz-Oliva, 2013). Internet addiction and problematic use are related with cyberbullying (Chang et al, 2015). Some studies found that internet addiction is a predictor of cyberbullying.

1.8. Empathy
Empathy is a complex construct which is defined as understanding other people's feelings. As a multidimensional construct, however, empathy also means imagining another's feelings and projecting yourself into his/her reaction (Batson, 2009). Empathy consists of two crucial constructs which are affective empathy and cognitive empathy. Affective empathy involves experiencing other people's feelings whereas understanding others' feelings is defined as cognitive empathy (van Noorden, Haselager, Cillessen & Bukowski, 2014).

Today, the relation between empathy and aggression is incontrovertible as it was proven by many researches. Due in no small part to that reason, many intervention and prevention programs on bullying also include empathy trainings (Farrington & Ttofi, 2009). Studies demonstrate that there is a negative correlation between empathy and aggressive and antisocial behavior whereas it is positively related to prosocial behaviors (Strayer & Roberts, 2004; Richardson, Hammock, Smith, Gardner & Signo, 1994).

Cyberbullies are found to be less empathic than their non-cyberbully counterparts. A research conducted for modeling predictors and consequences of cyberbullying found that empathy is one of the predictors. Although another study conducted in Singapore showed that cognitive empathy plays a crucial role in cyberbullying behavior, it also found that both cognitive and affective empathy play a vital role on cyberbullying (Ang & Goh, 2010).

Empathy is also found to be related to bystander behavior. Research showed that both types of empathy cause a decrease in negative bystander behavior against cyberbullying (Barlińska, Szuter & Winiewsky, 2012).

1.9. Current Study

Cyber form of bullying and victimization is a growing problem as the number of bullies, victims and bystanders is increasing every day. The number of studies on this subject is accordingly increasing at a fast pace. Authors from different areas with different perspectives contribute to the literature. As cyberbullying and victimization is a complex construct correlated with various factors, these are still being investigated especially for the university students population over 18 years of age.

As it's pointed out above; the duration of being online and excessive internet use, directly and indirectly, affect the exposure to cyberbullying as a victim or bully. On the other hand, several possible consequences may include lack of sufficient sleep, having psychosomatic problems, depression and anxiety caused by increased amount of the time spent online.

For that reason this study aims to expand the literature on cyberbullying and cyber victimization from the perspective of psychology by examining seven different variables' correlation with cyberbullying and victimization in one sample. Besides there are few researches on the relation between impulsivity, internet addiction and cyberbullying in the Turkish university sample. This study hypothesises that:

H_1: There is a positive correlation between cyberbullying and anxiety.
H_2: There is a positive correlation between cyberbullying and depression.
H_3: There is a positive correlation between cyberbullying and somatization.
H_4: There is a positive correlation between cyberbullying and hostility.
H_5: There is a positive correlation between cyberbullying and impulsivity.
H_6: There is a positive correlation between cyberbullying and internet addiction.
H_7: There is a positive correlation between cyberbullying and empathy.

2. Method

2.1. Sample

Sample consists of 198 volunteered undergraduate students of Istanbul Arel University. 65% of the participants are female and 35% are male; that is to say 120 females and 64 males participated in the research. Snowball sampling is used as randomly chosen psychology students and their friends on the campus have participated. Participants' age range is between 18 and 25 with mean 20.8.

2.2. Instruments

Present research used five scales for measuring variables. Cyberbullying Scale was developed by Çetin and colleagues to assess cyber victimization and bullying. Turkish version of the Short Symptom Inventory is used to measure depression, anxiety, somatization and hostility. The Barratt Impulsivity Scale is used to measure impulsiveness. Basic Empathy Scale is used to measure empathy. Addiction Profile Index Internet Addiction form is used to measure internet addiction.

2.2.1. Cyberbullying and Cybervictimization Scale

Cyber Victimization and Bullying Inventory was developed by Çetin, Yaman and Peker (2011). The inventory is a self-reported 22 items, five-point Likert Scale. Same items are used for both victimization and bullying. Victimization part consists of 22 items phrased as 'I exposed…' whereas bullying part consists of the same 22 items phrased as 'I exhibit…'. Reliability and validity analyses were conducted for both two scales.

The inventory has three factors that were named as cyber verbal bullying, hiding identity and cyber forgery. Confirmatory factor analysis supported the three factor model. Reliability analysis showed that for cyber victimization scale internal consistency coefficient is .89, split half reliability is .79 and test re-test realiability is .85. Cyberbullying scale internal consistency coefficient, split half reliability and test re-test reliability were found to be .89, .79 and .90 respectively.

2.2.2. Brief Symptom Inventory

Original form was developed by Derogatis as a 53 items, five-point Likert Scale questionnaire with nine subscales. Turkish adaptation was conducted by Şahin and Durak (1994) on university students. In Turkish form factors decreased to five which are depression, anxiety, somatization, hostility and negative self-concept by screen test. Cronbach alpha values for subscales change between .63 and .86. Cronbach alpha is found to be .96 for the whole scale.

2.2.3. Baratt Impulsivity Scale-11

Original scale was developed by Patton, Stanford and Barratt. Turkish version of Baratt Impulsivity Scale- 11 was adopted to Turkish by Güleç et al. (2008). The scale consists of 30 items which are 4-point Likert scale. Cronbach's alpha coefficient for the total scale is found to be 0.78 for undergraduate students. Test-retest correlation is found to be 0.83. An exploratory principal-components analysis found primary six factor which form three second-order factors which are attentional impulsiveness, motor impulsiveness and non-planning impulsiveness. Turkish adaptation of the scale shows a correlation between the Aggression Questionnaire, Eysenck Personlity Questionnaire, Spielberger State-Trait Anger Expression Inventory.

2.2.4. Basic Empathy Scale

Original scale was developed by Jolliffe and Farrington. The scale consists of twenty items, 5-point-Likert. Turkish version of the scale was adopted by Topçu, Erdur-Baker and Çapa-Aydın. Confirmatory factor analysis found a two factors model with GFI value .90, AGFI is .87, RMSEA value .60. Cronbach alpha coefficient was found to be .80, .76 and .79 for cognitive empathy, emotional empathy and for whole scale respectively. Turkish version of the scale negatively correlated with Cyberbullying Inventory and Traditional Bullying Questionnaire (Topcu et al, 2016).

2.2.5. Addiction Profile Index Internet Addiction Form

Addiction Profile Index Internet Addiction Form (APIINT) is developed by Ögel, Evren, Karadağ and Gürol (2012) as 18 questions, 5-point Likert Scale. APIINT consists of five dimensions which are frequency of internet use, diagnostic criteria of addiction, impact of internet use on life, craving for internet use and motivation to reduce internet use. Cronbach alpha coefficient was

found to be differ between 0.64 and 0.77 for sub dimension. For the whole scale Cronbach alpha coefficient was calculated as 0.88. Reliability study results for item total correlation was found to be between 0.44 and 0.68. Test retest validity is 0.85.

Explanatory factor analysis showed that factor loads for sub dimensions are 0.88, 0.84, 0.80, 0.62 and 0.61 for diagnostic criteria, impact on life, craving, internet use characteristics and motivation respectively (Ogel, Karadag, Satgan & Koç, 2015).

2.3. Data Analysis

SPSS 21.0 was used to conduct the analyses. Normality and linearity analysis showed that data did not satisfy assumptions for parametric tests. For that reason; Mann Whitney U which is a non-parametric statistical analysis is used for comparison of cyberbullying and victimization with regarded to gender. Spearman Rho is used for correlation.

3. Findings

There is a significant gender difference for cyberbullying. From data results, it can be concluded that male participants ($Mdn = 32.5$) showed significantly higher involvement in cyberbullying than female counterparts ($Mdn = 24$), $U = 2416.5$, $p = .000$, $r = -.310$. Likewise males ($Mdn = 29.5$) have a significantly higher risk of being victims of cyberbullying compared to females ($Mdn = 26$), $U = 2975.0$, $p = .004$, $r = -.192$.

Research results showed that cyber victimization had a weak positive correlation with sub-factors of Brief Symptom Inventory which are anxiety ($r = .374$, $p < .01$), depression ($r = .298$, $p < .01$), somatization ($r = .300$, $p < .01$) and hostility ($r = .310$, $p < .01$). Likewise cyberbullying positively correlated with anxiety ($r = .254$, $p < .05$), depression ($r = .171$, $p < .05$), somatization ($r = .174$, $p < .05$) and hostility ($r = .262$, $p < .01$) (Table 1).

Table 1: Correlation Between Cyberbullying, Victimization and BSI Subscales

	Anxiety	Depression	Somatisation	Hostility	Negative Self Concept
Cyberbullying	.254*	.171**	.174**	.262**	.276**
Cyber Victimization	.374**	.298**	.300**	.310**	.418**

*p < .05, two tailed. **p < .01, two tailed.

Empathy and bullying relation was also tested through statistical analyses. Cognitive empathy showed negative correlation between cyberbullying ($r = -.278$, $p < .01$) and cyber victimization ($r = -.175$, $p < .05$). Similarly there was a weak negative significant correlation between cyberbullying and affective empathy ($r = -.321$, $p < .01$). Likewise cyber victimization and affective empathy also negatively correlated ($r = -.220$, $p < .05$).

Table 2: Correlation between cyberbullying, victimization and empathy

	Cognitive Empathy	Affective Empathy
Cyberbullying	-.278**	-.321**
Cyber Victimization	-.175*	-.220*

*p < .05, two tailed. **p < .01, two tailed.

All subscales of impulsivity correlated with cyberbullying and victimization. Motor impulsivity showed a higher correlation among other subscales. Analysis results showed that there is a positive correlation between cyberbullying and motor impulsivity (r = .391, p < .05). Moreover cyber victimization and motor impulsivity positively correlated (r = .334, p < .05) (Table 3).

Table 3. Correlation between cyberbullying, victimization and impulsivity

	Attention	Motor	Non Planning	Impulsivity Total
Cyberbullying	.254**	.391**	.160*	.359**
Cyber Victimization	.205*	.334**	.051*	.307**

*p < .05, two tailed. **p < .01, two tailed.

Internet addiction subscales positively correlated with cyberbullying. Internet addiction subscales and cyber victimization positively correlated except for the frequency subscale. A higher correlation was found between internet's impact on one's life and cyberbullying (r = .455, p < .01) (Table 4).

Table 4. Correlation between cyberbullying, victimization and internet addiction

	Frequency	Diagnosis	Impact on Life	Craving	Motivation	Total Score
Cyberbullying	,169*	.336**	.455**	.252**	.324**	.365**
Cyber Victimization	.098	.269**	.360**	.171*	.288**	.275**

*p < .05, two tailed. **p < .01, two tailed.

4. Discussion and Conclusion

Recent research results showed that there is a significant gender difference for both cyberbullying and victimization. Studies found different results in respect to gender and cyberbullying (Tokunaga, 2010). Some of the research in line with these studies showed that males are more likely to be involved in cyberbullying compared to females (Erdur-Baker, 2010; Li, 2006). On the other hand there are some studies found no difference between genders (Hinduja & Patchin, 2008; Ybarra, Mitchell, Wolak & Finkelhor, 2006).

Research results showed that there is a positive association between depression, anxiety, somatization, hostility and cyberbullying and victimization in university students' sample. Literature also indicates results that are similar to the findings of the present study. Although depression, anxiety and somatization are greatly mentioned in literature, researches on hostility are rather few.

Hostility is also found to be correlated with cyberbullying and victimization as previous findings showed that it is a predictor of cyberbullying. As one of the components of hostility includes devaluating others, mistrust towards others, desire of hurting others and to see them hurt (Miller, Smith, Turner & Hallet, 1996), not surprisingly it is associated with bullying behavior. Cyberbullying behavior includes intentional harm toward others (Notar, Padgett & Roden, 2013). Victimization and bullying correlation (Mishna, Khoury-Kassabri, Gadalla & Daciuk, 2012) showed that hostility was indirectly associated with cyberbullying via victimization (Yang, 2013).

Besides, self-concept is another variable that positively correlated with both cyberbullying and victimization. Results showed that a higher degree of correlation is found between cyber

victimization and negative self-concept. Most of the studies investigate self-esteem and its correlation to cyberbullying. On the other hand, previous studies showed that peer victimization and traditional bullying are associated with cyberbullying (Neary & Joseph, 1994). Similarly, few studies on cyberbullying and self-concept also found that cyberbullying is correlated with low self-concept (Hines, 2011).

Impulsivity and aggression association is well known today. Biological based relation of impulsivity and aggression also proved by DNA and neuroscience studies (Lesch & Merschdorf, 2000; Seroczynski, Bergeman & Coccaro, 1999). As a form of aggression cyberbullying and impulsivity relation also shows correlations. Especially some types of cyberbullying are based on impulsive act or perpetrator. One of the sub categories of cyber aggression typology is defined as anonymous, generally impulsive attacks to others as aggression against random victims or random electronic aggression (Pyzalski, 2012). Present study findings showed that there is a positive correlation between impulsivity and cyberbullying. Correspondingly cyber victimization is also correlated with impulsivity. Due to the fact that aggression and bullying behavior are connected, most of the researches concentrate on impulsivity of bullies. Victimization studies, however, also showed that victims also manifest externalizing behaviors like impulsive ones (Li, 2006).

Impulsivity is not only frequently associated with aggression but also one of the main correlates of addictions (Liu & Potenza, 2010). Besides, research results showed that excessive use of internet is also associated with bullying and victimization. In line with previous studies declaring that internet use is related with cyberbullying, results of this study also showed that internet addiction is another factor that is correlated with cyberbullying and victimization. However, today researches are still trying to find out whether internet use or risky internet use predict cyberbullying and victimization (Erdur-Baker, 2010; Guan & Subrahmanyam,2009). Internet addiction is considered as one of the possible causes of bullying (Casas, Del Rey & Ortega-Ruiz, 2013)

Finally yet importantly, empathy is negatively correlated with cyberbullying and victimization. This result is similar to literature findings that mention both cognitive and affective empathy are linked with bullying behavior (Ang & Goh, 2010; Topçu & Erdur-Baker, 2012). While researchers showed that empathy is crucial for preventing bullying behavior in bullies (Jolliffe & Farrington, 2006), empathy and cyberbullying interaction differs from traditional bullying. Several studies emphasized that certain aspects of cyberbullying like anonymity, absence of direct confrontation cause low levels of empathy (Menesini, Nocentini & Camodeca, 2013; Pornari & Wood, 2010). Moreover, empathy and moral judgement relation is also an important factor on cyberbullying. Empathy may indirectly play a role on bullying via moral judgement. Internet serves as a moral disinhibition medium which can be called a 'moral disengagement mechanism'. By this mean cyberbullies are less likely to consider their behaviors morally wrong (Perren & Gutzwiller-Helfenfinger, 2012; Harrison, 2015).

Hostility, impulsivity and empathy are important associating factors of cyberbullying and harming the other. During the last decade, social media and new internet communication channels have become "a vector for youth violence," and created a new space for aggressive behaviors. Young people attempted acts of violence against their peers, such as bullying, harassment, dating aggression, and gang-related crimes. In addition, social media has been used as a vehicle for demonstrating self-harm which is known as cyber-suicide (Patton et al., 2014). Research also shows that youth having aggressive behaviors on social media are more likely to believe that violence against peers is a normative behavior (Hinduja & Patchin, 2013; Sanders, 2017).

In the book of The Transparency Society, Han (2015) argued that because of new internet communication technologies people became more transparent than ever which is defined as post-privacy society. However author added that the psyche needs spaces that can stand on its own

from the other's gaze. Otherwise more visibility of it leads to a kind of mental exhaustion. According to author, only the machines are able to have totally transparency. But again, it is claimed that it's not possible to return from the transparency that social media has already created and mankind has to integrate into this new situation in order to keep up with today's society. In this controversial book, author also divided the post privacy society into sub categories such as society of positivity, society of exhibition, society of pornography and society of unveiling. The evaluation regarding society of positivity is essential to understand how social media and internet effect our state of mind and ability to cope with issues. Author stated that positivity society does not allow any negative emotions. Thus, people lose their ability to struggle with troubles and negative situations and get more and more anxious about being unhappy.

To conclude, cyberbullying and victimization are complex structures that are related to various factors. This research results indicate that both bullying and victimization are correlated with anxiety, depression, somatization, hostility, impulsivity, internet addiction and empathy. Research results are found to be in line with the previous studies in this subject area.

Besides there are certain limitations of present research. First, it was conducted with a limited number of students in a small diversity as they study at the same university and are related to each other. As internet users' ages show diversity, future researches may focus on different age groups especially older age groups using the internet and social media. Moreover, statistical analyses of current study are limited with correlation analysis. For a better understanding in terms of the direction of relation, mediator variables should be determined.

Future studies need to be conducted for prevention and intervention because technology age comes with a brand-new understanding and problems. Although cyberbullying and victimization are measured with a standardized inventory, participants' understandings of bullying and being a victim may differ. For that reason, in depth interviews can be useful for better understanding of bullying behavior and what it means for all parties involved. Prevention and intervention programs will be beneficial for future.

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