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Cyber victimization and adolescent self-esteem: The role of communication with parents

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Internet use has increased rapidly in recent years, and has inevitably led to some negative outcomes, notably cyber bullying and cyber victimization. The purpose of this study was to examine the effects of cyber victimization and parent–adolescent communication on self-esteem, and the moderating role of parent–adolescent communication in the relationship between cyber victimization and self-esteem among Turkish adolescents. The participants were 337 adolescents with a mean age of 16.37, ($SD = 0.89$). The results of hierarchical regression analysis reveal that self-esteem was predicted negatively by cyber victimization, but positively by mother–adolescent communication. Results also indicate the moderating roles of parent–adolescent communication in the links between cyber victimization and self-esteem. The findings indicate a need to consider the parent–adolescent relationship while working with victimized youth, and the implications for research and practice are discussed.

Key words: cyber victimization, parent–adolescent communication, self-esteem.

Introduction

Internet use has grown rapidly in recent years. The continuous development of electronic communication technologies facilitates effective, low-cost communication; however, it has also brought a number of negative consequences, notably cyber bullying and cyber victimization. This new type of media can be used by adolescents to abuse, threaten and bully their peers, and it has been observed that risky online behaviours are common among adolescents (Ybarra, Mitchell, Finkelhor & Wolak, 2007), and as many as one third of adolescents become victims of cyber bullying during online activities (Lenhart, 2007). Thus, a large number of adolescents have become victims of cyber bullies (Arıcak, 2009; Dilmaç, 2009; Kiriakidis & Kavoura, 2010; Kowalski & Limber, 2007; Tokunaga, 2010; Vandebosch & Van Cleemput, 2009; World Health Organization, 2012). This inappropriate use of media inevitably creates negative effects on the psychological, emotional or social state of youth (Gradinger, Strohmeier, Schiller, Stefanek & Spiel, 2012; Juvonen & Gross, 2008; McLoughlin, Meyricke & Burgess, 2009; Mitchell, Ybarra & Finkelhor, 2007; Patchin & Hinduja, 2006; Perren, Dooley, Shaw & Cross, 2010). Because of the salience of this problem, it is important to understand factors that could reduce or mitigate the effects of peer-victimization. In order to limit further potential damage, it is necessary to gain a better understanding of both the effects of cyber bullying on the mental health of victims and the factors that mitigate these effects.

Traditional bullying has been defined as aggressive acts carried out against an undefended person in order to cause intentional and repeated harm (Olweus, 1993). According to Olweus (2012), cyber bullying or cyber victimization is similar to, and often associated with, traditional bullying; those who suffer one type are also likely to be victims of the other. Cyber bullying has been defined as 'an aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself' (Smith *et al*., 2008, p. 376). Other definitions emphasize the persistent sending of electronic messages with the intention to harm others (Kowalski, Limber & Agatston, 2008). Consistent with this, cyber victimization has been considered as consisting of the following aspects: receiving threatening messages and forwarded emails or text messages without permission, the posting of pictures which are intended to cause embarrassment and the spread of unfounded claims in cyberspace about individuals (Lenhart, 2007).

Cyber bullying is a worldwide problem, and affects both the cyber bully and the victim. Existing empirical studies have examined the prevalence of cyber bullying and victimization among students in elementary, middle, high school levels and colleges (Arslan, Savaşer, Hallett & Balcı, 2012; Campbell, 2005; Juvonen & Gross, 2008; Kowalski & Limber, 2007). In an examination of cyber bullying behaviours and cyber victimization among Turkish

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adolescents, Dilmaç (2009) found that, among college students, the rate of individuals cyber bullying others on at least one occasion is 23%, and the rate of being a victim of cyber bullying at least once is 55%. Arıcak (2009) found that the incidence of cyber bullying victimization among college students is 54%, while the perpetration rate is 20%. Other studies also reported high rates of cyber victimization (27%, $n = 372$) among second, third and fourth grade Turkish students (Arslan, Savaşer, Hallett & Balcı, 2012). These studies show that the effects of cyber bullying is a common problem among students.

Victims experience psychological, emotional and social relationship problems (Juvonen & Gross, 2008; McLoughlin *et al*., 2009), greater levels of stress (Dehue, Bolman & Vollink, 2008) and lower academic performance (Beran & Li, 2007; Dehue *et al*., 2008). Studies consistently found that cyber victimization is associated with negative outcomes, such as depressive symptoms and anxiety disorder (Mitchell *et al*., 2007; Tynes & Giang, 2009; Şahin, Aydın & Sarı, 2011), anger and sadness (Beran & Li, 2005). It has also been shown that low self-esteem is frequently the result of both traditional bullying (Estévez, Murgui & Musitu, 2009; Marsh, Parada, Craven & Finger, 2004; Solberg & Olweus, 2003) and cyber bullying (Patchin & Hinduja, 2010). Self-esteem reflects a person's overall emotional evaluation of his or her own worth (Rosenberg, 1965), and is very sensitive to social acceptance and rejection by group members (Leary & Downs, 1995). Because of the extreme importance of peer relations and social acceptance in this age group, adolescents' self-esteem may be affected by cyber bullying victimization, which constitutes receiving threatening messages, having emails or text messages forwarded without permission, and the spreading of rumours in cyberspace by peers (Marsh *et al*., 2004). Previous research has identified victimization as a significant risk factor for those low in self-esteem (Beaty & Alexeyev, 2008; Glover, Gough, Johnson & Cartwright, 2000). The direction of the relationship between bullying and self-esteem is not clear, that is, it is not certain whether being bullied affects self-esteem, or whether individuals with low levels of self-esteem are particularly vunerable to bullying (Egan & Perry, 1998). However, a recent study Patchin and Hinduja (2010) found low self-esteem as a potential outcome of cyber bullying victimization.

Nevertheless cyber victimization experiences do not necessarily influence all victims in the same way (Mckenna & Bargh, 1998; Van der Aa, Overbeek, Engels, Scholte, Meerkerk & van den Eijnden, 2009). The potential negative effect of cyber bullying victimization on adolescents' well-being is less likely among adolescents who have positive parent–adolescent relationships. Strong parent–adolescent relationships can mitigate victimization, or at least reduce its effects, that is, it acts as a resource against the negative impact of victimization or cyber victimization (Kochenderfer-Ladd & Skinner, 2003; Law, Shapka & Olson, 2010). Stadler, Feifel, Rohrmann, Vermeiren and Poustka (2010) showed that parental support moderated the effects of peer-victimization on maladjustment. They highlighted the role of parental support and good family relations in enabling children to talk with their parents after victimization, and thus mitigate its effects. Based on their comprehensive metaanalytic review, Lereya, Samara and Wolke (2013, p. 1102) state that 'high parental involvement and support, and warm and affectionate relationships were more likely to protect children and adolescents against peer victimization followed by good family communication and supervision.' Within a close relationship, adolescents tend to share their media experiences with their parents (Kerr, Stattin & Burk, 2010), and the discussion of incidences of victimization with parents potentially helps adolescents to better cope with these experiences. In addition, adolescents' disclosure of information to parents about their Internet behaviour was found to be negatively associated with both bullying and cyber bullying (Law *et al*., 2010; Marini, Dane & Bosacki, 2006). Studies have also shown that parenting behaviour such as parental monitoring can decrease involvement in risky activities (Livingstone & Helsper, 2008; Stattin & Kerr, 2000).

However, children or adolescents tend not to share negative experiences with their parents. For instance, Yılmaz (2011) found that only 38.4% of students who had been cyber bullied discussed the problem with parents or teachers. It is important at this point to emphasize the coping strategies of victims. Black, Weinles and Washington (2010) found that most of the victimized students (63%) responded aggressively (52%), neglecting discussion with family members (44%) or peers (42%). Additionally, failure to discuss the negative experiences is seen as an ineffective coping strategy (Cassidy, 2009). It has been stated that when the victims do not use appropriate coping methods or lack social support, they are at a higher risk in terms of mental health (Cassidy & Taylor, 2005). This fact highlights the importance of having significant others (e.g. parents) with whom negative experiences (i.e. being a cyber victim) can be shared, and also of having social support to mitigate the effects of negative experiences.

Parenting in general, and parent–child communication in particular, play an important role in the well-being of adolescents. Parent–adolescent relations are among the most important protecting factors against unfavourable circumstances for children (Wallen & Rubin, 1997). Parent–adolescent relationships change quantitatively and qualitatively as a result of the autonomy during adolescence, but a close relationship with parents during this time remains crucial (Simpkins, Bouffard, Dearing, Kreider, Wimer, Caronongan *et al*., 2009; Steinberg & Morris, 2001). Effective parent–child communication helps adolescents to develop the necessary problem-solving skills

(Noller, 1995) and enables them to deal more effectively with the problems and challenges they face. Such communication is therefore more likely to encourage the development of positive self-concepts. Empirical studies have provided evidence for the relationship between parent–adolescent communication and adolescent adjustment (Shek, 1995, 1999). Studies indicated that positive parent–adolescent communication is associated with less compulsive Internet use (Van den Eijnden, Spijkerman, Vermulst, van Rooij & Engels, 2010). Also, parental support was found to be a significant predictor of cyber victimization among high school students (Eroğlu & Peker, 2011). Moreover, positive communication with parents constitutes a protective factor against the development of psychological problems; specifically, positive parent–adolescent communication has been associated with higher levels of adolescent psychological well-being (Lam, Shek, Tang & Lee, 2003). Previous research has also documented how parent–child relationships affect adolescent self-esteem (Lanz, Iafrate, Rosnati & Scabini, 1999). Jiménez, Murgui, Estévez and Musitu (2007) showed that positive communication with parents is positively associated with self-esteem. Correspondingly, difficulties in relationships with parents is an important factor in the development of mental health problems in adolescents (Liu, 2003), and it has been shown, for instance, that negative family relationships are associated with stress, depression and anxiety (Herrero, Estévez & Musitu, 2006).

Previous empirical research has shown that the negative psychological consequences of bullying may be moderated by positive relationships with parents (Baldry, 2004; Rigby, 2000) or by parental support (Fanti, Demetriou & Hawa, 2012). When individuals have the opportunity to discuss incidents of victimization, they are less likely to be affected by these negative events (Matsunaga, 2011; Smith *et al*., 2008). The opportunity to discuss problems with parents buffers against the negative effects of victimization, and thus reduces the effect of the victimization and increases the likelihood of reported well-being. Empirical studies provide support for the beneficial effect of these relationships. For instance, Baldry (2004) found that strong relationships with one or both parents moderates the problems caused by victimization. In other words, adolescents with less strong parental relationships are more likely to internalize problems. In addition, Desjardins and Leadbeater (2011) indicate that supportive relationships with fathers are negatively associated with depressive symptoms. In their review study, Perren, Corcoran, Cowie, Dehue, Garcia, Guckin *et al*. (2012) propose that emotional support from parents was an important preventive or a mitigating factor against the negative impacts of cyber bullying for the victims. All these findings highlight the potential of the parent–adolescent relationship as a mitigating factor in the case of cyber victimization.

The present investigation

Although research on both traditional and cyber bullying have provided a considerable amount of evidence regarding predictors and consequences, there is a gap in the literature specifically on the well-being of cyber victims, and the mitigating factors for cyber victimization. Thus, in line with researchers such as Gradinger *et al*. (2012) in this study we focused solely on cyber victimization. The current study aimed to address the neglected relationship between cyber victimization and self-esteem, and particularly focused on the role of parent–adolescent communication in this relationship among Turkish adolescents. It was hypothesized that self-esteem would be significantly and negatively predicted by cyber victimization, and significantly and positively predicted by parent–adolescent communication. A further hypothesis was that parent–adolescent communication would moderate the association between cyber victimization and self-esteem; in other words, victimized adolescents with higher levels of parental communication would report a greater amount of self-esteem than those with lower levels.

Method

Participants

Participants of the present study were 337 adolescents, aged between 15 and 18, with a mean of 16.37 years ($SD = 0.89$). The sample included $n = 150$ males (44.5%) and $n = 187$ females (55.5%), 89% of whom reported living with both biological parents. Participants were chosen from three high schools, one technical high school (of five) and three general high schools (of 16). Data were collected from 9th through 11th grades. Three classes were chosen randomly from each school (one from each grade level). In the technical school, 125 students completed the surveys (24 students declined to participate or returned incomplete surveys). In the general high schools, 212 surveys were completed (38 students declined to participate or returned incomplete surveys).

Measures

Cyber victimization. In order to measure cyber victimization, the Revised Cyber Bullying Inventory (Topçu & Erdur-Baker, 2010) was used. This scale consists of two parallel forms; one for cyber bullying, and another for cyber victimization. The latter form only was used in the current study. This form consisted of 18 items (e.g. I have been misrepresented in manipulated photographs published on the Internet). Participants were asked to rate themselves on a four-point Likert-type scale according to the frequency: 1 = no occurrences, 2 = one or two occurrences,

3 = three to five occurrences, 4 = more than five occurrences. Cronbach's alpha for the revised scale was reported 0.75 and in the present study it was 0.87.

Frequency of parent–adolescent communication. The instrumental communication subscale of 'Adolescent Family Process (AFP)' measure (Vazsonyi, Hibbert & Snider, 2003) was used to measure the frequency of instrumental parent–adolescent communication. This subscale consists of four items, including 'How often do you talk with your mother/father about problems at school?,' 'How often do you talk with your mother/father about your job plans for the future?,' 'How often do you talk with your mother/father about problems with your friends?' and 'How often do you talk with your mother/father about how well you get along with your teachers?' Items were rated on a scale ranging from 1 (never) to 5 (very often). Validity and reliability studies have indicated that this measure was internally consistent across participants from four different cultures for both males and females, with reliabilities ranging from $\alpha = 0.77$ to $\alpha = 0.82$ (Vazsonyi *et al*., 2003). In the current study, consistent with previous work (Scarpate, Vazsonyi, Burcu, Torrente & Sheu, 2008), Cronbach's alpha was 0.86 and 0.85 for maternal and paternal instrumental communication respectively.

Self-esteem. Participants completed Rosenberg's 10-item self-esteem scale (Rosenberg, 1965) which measures global feelings of self-worth and self-acceptance, using items such as 'In general I am happy with myself.' Participants responded along a four-point continuum from *strongly agree* (4) to *strongly disagree* (1). The scale was adopted into Turkish by Çuhadaroğlu (1986) and the test–retest reliability was reported as 0.75. For the current study, Cronbach's alpha coefficient was 0.80.

Procedures

The data were collected in 2012 after the ethics committee of the Adnan Menderes University had approved the study. Formal permission was also obtained from local education authorities and the school administration, which is the customary process for conducting research in Turkey. The questionnaires were administered by teachers in a group format in the classrooms. The teachers had been informed of the objective of the study before they explained it to the students. The questionnaires were completely anonymously. Participation was entirely voluntary and consent to participate, which could be refused, was obtained from all students and their parents.

Results

Table 1 presents the means, standard deviations and bivariate correlations between cyber victimization, mother–adolescent communication, father–adolescent communication and self-esteem. Consistent with expectations, cyber victimization was significantly and negatively correlated with self-esteem ($r = –0.19$). Maternal communication was negatively correlated with cyber victimization ($r = –0.17$) and positively with self-esteem ($r = 0.18$). However, paternal communication was not significantly correlated with either cyber victimization ($r = –0.08$) or self-esteem ($r = 0.07$).

In order to examine the main effect and the moderator role of perceived frequency of parent–adolescent communication in the relationship between cyber victimization and self-esteem, we conducted a hierarchical regression analysis with self-esteem as the criterion variable. In the regression analysis, age and gender were entered as control variables in Stage 1. To examine main effect, cyber victimization and communication with parents were entered into Stage 2. The interaction of cyber victimization and frequency of communication with parents was entered into Stage 3 to test the interaction effect. The predictor variables were transformed into *z*-standardized scores and the interaction terms were calculated based on standardized scores (Aiken & West, 1991). We used beta weights and changes in R^2 to determine the significant moderating effects (Cohen, Cohen, West & Aiken, 2003).

Table 1 Means, standard deviations and interrelations of the variables

	M	*SD*	1	2	3	4	5
1. Sex	–	–					
2. Age	15.89	0.95	–0.07				
3. Cyber victimization	1.32	0.46	–0.03	0.02			
4. Mother–adolescent communication	3.42	1.04	0.47**	–0.09	–0.17**		
5. Father–adolescent communication	2.38	0.84	0.26**	–0.17**	–0.08	0.47**	
6. Self-esteem	3.66	0.68	–0.02	0.11*	–0.19**	0.18**	0.07

0 = male, 1 = female. *$p < 0.05$. **$p < 0.01$.

Table 2 Hierarchical linear regression models for main and interaction effects of age, sex, cyber victimization, maternal communication and paternal communication predicting self-esteem

Step	Variables	β	*t*	R^2	R^2 change	*F* change
1				0.014	0.014	1.71
	Age	0.11	1.76			
	Sex	–0.03	–0.42			
2				0.077	0.065	5.67***
	Age	0.13	2.08			
	Sex	–0.13	–1.78			
	Cyber victimization	–0.18**	–2.89			
	Maternal communication	0.23**	2.93			
	Paternal communication	–0.04	–0.052			
3				0.118	0.040	5.58**
	Age	0.12	2.03			
	Sex	–0.16	–2.32			
	Cyber victimization	–0.20	–1.73			
	Maternal communication	0.09	0.95			
	Paternal communication	0.08	1.02			
	Cyber victimization × maternal communication	0.33***	2.73			
	Cyber victimization × paternal communication	0.30***	–2.78			

0 = male, 1 = female. **$p < 0.01$, ***$p < 0.001$.

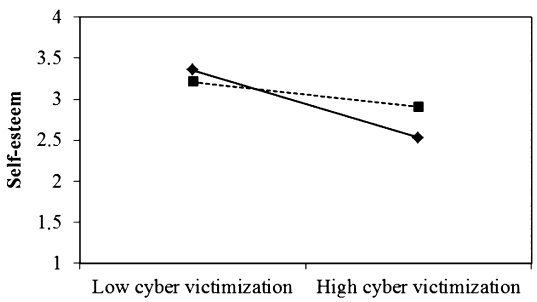

Figure 1 Plot of significant cybervictimization x mother–adolescent communication interaction. –◆–, Low mother adolescent relationship; ··■··, High mother adolescent relationship.

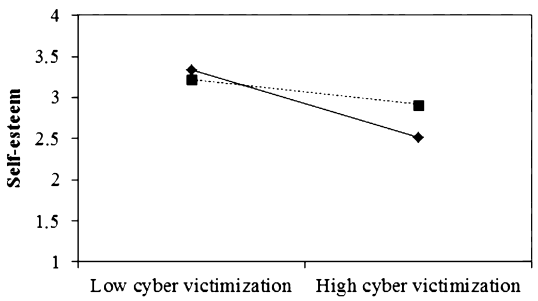

Figure 2 Plot of significant cybervictimization x father–adolescent communication interaction. –◆–, Low father adolescent relationship; ··■··, High father adolescent relationship.

In the first stage, gender and age as control variables were not significantly associated with self-esteem, F (2, 249) = 1.71, $p = 0.182$, $R^2 = 0.014$ (Table 2). The two variables entered into the second stage, cyber victimization and communication with mother and father, were significantly associated with self-esteem F (3, 246) = 5.67, $p = 0.001$, $\Delta R^2 = 0.07$, but only communication with mother (β = 0.23) and cyber victimization (β = 0.18) significantly predicted self-esteem. In the third stage, a significant interaction effect between cyber victimization and maternal and paternal communication was observed F (2, 244) = 5.58, $p = 0.004$, $\Delta R^2 = 0.04$. The interaction of cyber victimization and maternal communication (β = 0.32), and the interaction of cyber victimization and paternal communication (β = 0.30) were significantly associated with self-esteem. This suggests that the frequency of communication with both mother and father affects the relationship between cyber victimization and self-esteem. Figures 1 and 2 show that even when cyber victimization scores were high, self-esteem actually increased where there were high levels of parent–adolescent communication. In contrast, the relationship showed a reverse pattern in cases of low levels of parent–adolescent communication; self-esteem decreased as cyber victimization increased.

Discussion

The current study was conducted in order to examine the relations between cyber victimization, parent–adolescent

communication and self-esteem. We hypothesized that self-esteem would be negatively predicted by cyber victimization and positively by parent–adolescent communication; and also parent–adolescent communication would moderate the association between cyber victimization and self-esteem. As expected, the results of hierarchical regression analyses indicate that cyber victimization and mother–adolescent communication are significant predictors of self-esteem. Furthermore, parent–adolescent communication acted as a significant moderator of the relation between cyber victimization and self-esteem, that is to say, victimized adolescents with higher levels of parental communication report higher levels of self-esteem than those with lower levels.

In the present study we firstly examined the predictive role of cyber victimization and parent–adolescent communication on self-esteem. Cyber bullying was defined as the use of information and communication technologies to harm others repeatedly and intentionally (Patchin & Hinduja, 2006). This conduct damages friendships and self-esteem. Considering the salience of peer relationships and social acceptance for adolescents, difficulties with peers or peer relations negatively affect self-esteem (Marsh *et al*., 2004). As hypothesized, cyber victimization was significantly and negatively associated with self-esteem. This is in line with previous research findings, which provide evidence for the negative relationship between cyber victimization and self-esteem (Estévez *et al*., 2009; Marsh *et al*., 2004). In addition, the findings of the current study show a positive relationship between maternal communication and self-esteem. This is also consistent with the previous findings, which indicate the significant role of mother–adolescent communication on adolescent adjustment (Shek, 1995, 1999; Shek *et al*., 2001) and psychological well-being (Lam *et al*., 2003). Experiences and interactions with others, especially family members, affect the development of a child's self-esteem. Although some studies indicate that parenting process variables, including paternal closeness, support, monitoring and communication are closely related to adolescent self-esteem across cultures (e.g. Topçu & Erdur-Baker, 2010), in the current study, the father–adolescent communication was not found to be a significant predictor of self-esteem. This difference may be due to the Turkish culture, which particularly emphasizes the bond between a child and its mother (Sümer & Güngör, 1999).

The present result supports the view that parent–child communication is a significant moderator of the relation between cyber victimization and self-esteem. More specifically, it was shown that, although cyber victimization is negatively associated with self-esteem, victimized adolescents with high parent–adolescent communication are more likely to have higher levels of self-esteem compared to those with lower levels of communication. In other words, adolescents who have frequent communication with their parents are less affected by cyber victimization experiences. This shows that parent–adolescent communication mitigates the effects of cyber victimization on self-esteem, in line with studies which provided evidence for the moderating role of effective parent–child communication (Baldry, 2004; Kochenderfer-Ladd & Skinner, 2003; Law *et al*., 2010; Lereya *et al*., 2013) and parental support (Fanti *et al*., 2012; Stadler *et al*., 2010). The harmful effects of victimization experiences are therefore considerably reduced by the opportunity to discuss them (Matsunaga, 2011; Smith *et al*., 2008).

Although the relationship between cyber victimization and well-being has been widely documented (Estévez *et al*., 2009; Mitchell *et al*., 2007; Şahin *et al*., 2011; Tynes & Giang, 2009) our findings offer additional support for the role of the parent–adolescent relationship for the link between cyber victimization and well-being. While the observed coefficients were slightly weaker for father–adolescent communication, communication with both parents is important. Although the amount of explaining variance in self-esteem by parent–adolescent communication is low, it remains important to investigate other variables which relate to parenting, as well as personal resources such as resilience.

Despite these contributions, the present study has four main limitations. The most important of these is the sole reliance on adolescent self-report, which should be supplemented by parental report in future studies. A second limitation is the use of cross-sectional data only. In future studies, longitudinal design will enable a more accurate analysis of causal relationships. As a third limitation, we were only able to identify parent–adolescent communication as a parenting construct, while the inclusion of other parenting dimensions, such as parental support, closeness and control would explain more variance. A final limitation was the assessment of only the frequency, and not the quality, of communication with parents. As previous findings have provided evidence for the effect of quality of parental communication in regard to the issues of tobacco and alcohol use (van den Eijnden, van de Mheen, Vet & Vermulst, 2011), future studies should focus on the role of the quality, as well as the frequency of communication as a moderator, between adolescent Internet use and potential outcomes.

The findings of the current study have some implications for intervention. School psychologists and counsellors should monitor young people known to have communication problems with parents. These individuals should be screened, and intervention services which target the improvement of parent–adolescent communication should be provided to counteract the negative effects of cyber victimization, since this group is more likely to be affected by victimization. Findings showing the importance of the parent–child relationship from studies such as this can

contribute to the development of intervention programs and emphasize the role of support systems such as parental support. Since parent–child relations can mitigate the effects of cyber victimization, interventions targeting parent–child relations should be promoted. Moreover, there is a need to increase parents' awareness of their role in reducing the negative consequences of this kind of victimization. Using effective coping strategies after exposure to adverse situations is important for healthy functioning, and remaining silent about such incidents is unlikely to be an appropriate coping strategy (Cassidy, 2009). Also, inappropriate coping methods or lack of social support are the main risk factors for mental health (Cassidy & Taylor, 2005). Considering that cyber victims tend to hide their victimization (Wang, Bianchi & Raley, 2005), parents should be encouraged to discuss cyber victimization with their children (Keith & Martin, 2005; Yılmaz, 2011). Although our study did not include any school- or teacher-related factors, previous studies (e.g. Stadler *et al*., 2010) show that supportive teacher–student relationships may also have a role in mitigating the effects of cyber victimization.

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