

The role of e-victimization/bullying and self-efficacy on anxiety sensitivity in a school based sample

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Abstract

The aim of present study was to investigate the relationships among self-efficacy, e-victimization, e-bullying and anxiety sensitivity in adolescents. To achieve research aims, two different researches were conducted. The research group in study 1, designed as a correlational research, consisted of 225 adolescents ranged in age between 11 and 17 with a mean age of 12.32 (SD = 1.10), 114 female (50.7%) and 111 male (49.3%). Additionally, study 2 was carried with 237 adolescents ranged in age between 14 and 18 with a mean age of 15.86 (SD = .89), 181 female (76.4%) and 56 (23.6%). The Self-Efficacy Scale for Children (SES-C), The Anxiety Sensitivity Index (ASI), The E-Victimization Scale (E-VS) and The E-Bullying Scale (E-BS) were used to as measures. Pearson's product-moment correlation coefficient and simple linear regression analyses were used in the data analysis. The results show that anxiety sensitivity was not correlated with academic self-efficacy, social self-efficacy, emotional self-efficacy and e-victimization (Study 1). In study 2, it was found that anxiety sensitivity was negatively correlated with emotional self-efficacy. Moreover, anxiety sensitivity was not associated with academic self-efficacy, social self-

efficacy and e-bullying. Overall, emotional self-efficacy accounted for 5% of total variance of anxiety sensitivity.

Key words: Anxiety Sensitivity, Self-Efficacy, E-Victimization, E-Bullying, Adolescent

Introduction

Bullying, which is defined as an intentional behaviour performed deliberately to lacerate or to leave under stress (Tattum & Tattum, 1992), have become apparent in cyberspaces with the improvement of information technologies. As a result of this, the terms of “E-Bullying” and “E-Victimisation” have been developed (Patchin & Hinduja, 2006). E-Bullying is defined as the threatening, frightening and damaging behaviours that target other people through cyber tools such as internet and e-mail, short message and social networks (Kowalski, Limber, & Agatston, 2008; Lam & Li, 2013). As a result of the quick development of technology and increase in its reachability, it is seen that especially adolescents use social networks intensely and may spread their personal information in an uncontrolled manner. In consequence of these reported tendencies, the negative behaviours of cyber experiences are increasing in adolescents (Arıcak, Kınay, & Tanrikulu, 2012).

Social Learning Theory enables theoretically founding cyber bullying in the context of causality. Social learning theory focuses on the internal cognitive processes, in which the thinking behaviours affecting other people are evaluated, and the effects of behaviours (Slavin, 2003). Bandura (1977) lays emphasis of modelling and observational learning on learning processes. He touches on the effect of individual’s imitation of behaviours of people in neighbourhood over learning. It is thought that the social learning theory could be a resource to be referred in explaining the cyber bullying. As adolescents repeatedly observe the bullying behaviours exhibited by bully individuals around, it is more possible for them to imitate these behaviours and exhibit bullying figures against similar experiences. On the other hand, it is predicted that the individual, who observes the kind and respectful behaviours that his peers exhibit against

other people, will exhibit these positive behaviours instead of bullying behaviours (Anderson, 2012).

Self-efficacy is indicated as the most important explanatory aspect of social cognitive theory when evaluated in terms of victimisation. It is reported that the cognitive systems in which the reactions against cyber bullying behaviours are given in the focus of the social cognitive theory are in relation with self-efficacy perception of individual. The adolescents and adults who developed a high level self-efficacy perception believe that they can have the control conveniently without getting anxious. The victims with undeveloped self-efficacy perception think that they cannot cope with the potential threats related with cyber bullying behaviours (Rivituso, 2012). Therefore, as a result of this situation, stress, anxiety and depression may appear at a high level. For this reason, the victim adolescents with low self-efficacy tend to harp on lack of coping skills and perceive many elements around as perilous (Bandura, 1989). Due to these ideas, the cyber victims with low self-efficacy restrain themselves into a continuous sad mood. Moreover, these attitudes negatively affect the functionality of cyber victims (Lazarus & Folkman, 1984).

As the bully with low self-efficacy perception cannot develop skills that solve the relation with his victim well and generally finalises his problems with bullying, he may reflect this attitude also in the cyberspace. E-victim may be stronger or weaker than the individual engaged in bullying. As known, the strength and control relation between individuals plays a significant role in e-bullying behaviours. E-bully tries to establish strength and control over individuals he assumes as weaker than himself in cyberspace. Besides, e-bully, who perceives cyberspace as a perfect shelter for him, may also attack people stronger than him (Strom and Strom, 2005). Especially in children and adolescents, the e-bully and e-victim roles may often change. A victim of e-bullying may be the e-bully of another individual (Patchin & Hinduja, 2006).

Some psychological and physiological disorders can be observed in adolescents exposed to bullying with the victimisation they experience (Arseneault, Bowes, & Shakoor, 2010; McMahon, Reulbach, Keeley, Perry, & Arensman, 2010). It is reported that the effects of victimisation

experienced in childhood and adolescents years may take long and they affect the life quality negatively (Allison, Roeger, & Reinfeld-Kirkman, 2009). Likewise, it is reported that e-victimisation has negative effects on the mental structure of e-victims who have a quite vulnerable and fragile psychology (Hinduja & Patchin, 2007; Lam & Li, 2013). In the studies in which the relation between e-victimisation and psychological, psychological and psychosocial disorders, significant relations were determined between e-victimisation and depression (Fitzpatrick, Dulin, & Piko, 2010), physical health (Luukkonen, Räsänen, Hakko, & Riala, 2010), psychotic symptoms (Arseneault et al., 2010), self-harm (McMahon et al., 2010), anxiety (Menesini, Modena, & Tani, 2009), loneliness (Olenik-Shemesh, Heiman, & Eden, 2012), drug use (Tharp-Taylor, Haviland, & D'Amico, 2009), social anxiety (Dempsey, Sulkowski, Nichols, & Storch, 2009), school problems and peer aggression (Hinduja & Patchin, 2007), sadness (Beran & Li, 2005), low optimism (Jackson & Cohen, 2012), low empathy (Wong, Chan, & Cheng, 2014), non-satisfaction with friendship relations and low psychological goodness (Leung & McBride-Chang, 2013), worse subjective health (Låftman, Modin, & Östberg, 2013), dangerous sexual behaviours (Litwiller & Brausch, 2013), negative affect (Peker, 2015), and low self-respect (Patchin & Hinduja, 2010).

In current study, anxiety sensitivity will be examined as a diverse psychological variable that may be in relation with e-bullying/e-victimisation and self-efficacy. Anxiety sensitivity is defined as an individual and cognitive variable involving beliefs about the experiences that may cause disorders, humiliation (embarrassment) and more anxiety due to anxiety or fear (Reiss, Peterson, Gursky, & McNally, 1986). Reiss (1991) defines anxiety sensitivity as “fear of fear” or “fear of anxiety”. It is reported that the possibility of prevailing many negative somatic, social and psychological incidences related with anxiety in the individuals indicating high

level anxiety sensitivity is high. For this reason, the individuals with high level anxiety sensitivity have a tendency to avoid incidences that may reveal perceptions related to anxiety. On the other hand, the individuals

with low level anxiety sensitivity think that anxiety symptoms are not pleasing, however they are not harmful either (Reiss, 1991). Reiss and McNally (1985) explained anxiety sensitivity at first according to the expectancy model of fear they developed. In this model, it is tried to be explained why and how the anxiety sensitivity cause fear, anxiety, panic and avoidance. It is reported that expectancies and sensitivity provide the basis of human fear (Reiss, 1991). In other words, the basis of individuals' avoidance of any event or incidence they fear consists of anxiety expectancy and anxiety sensitivity (Reiss & McNally, 1985). The anxiety expectancy is an expectancy of an individual about the anxiety he will face in an incidence (Taylor, Jang, Stewart, & Stein, 2008). The anxiety sensitivity a basic fear regarding that the symptom related with anxiety which has a characteristic specific to individual and shows continuity may have physically and socially harmful results (Erözkan, 2012; Reiss & McNally, 1985). As a result of such behaviour, individual makes decision with his relatively doomsayer beliefs and reacts with fear towards the incidences that may cause anxiety for him (Taylor, Koch, Woody, & McLeon, 1996).

In line with the theoretical statements mentioned above and supported by studies, it can be stated that e-bullying and e-victimisation are located in a central position in shaping human behaviours. It can be concluded that self-efficacy perceptions could be effective in the occurrence of e-bullying and e-victimisation experiences. In addition to this, it can be deduced that e-bullying and e-victimisation, which are as the reason of many psychopathological symptoms, may cause the generation of anxiety sensitivity in adolescents. Consequently, it is assumed that e-bullying and e-victimisation and self-efficacy may have effects on anxiety sensitivity. In the light of these deductions, this study aims to test the hypotheses stated below:

Hypothesis 1: Self-efficacy and e-victimization are predictors of anxiety sensitivity.

Hypothesis 2: Self-efficacy and e-bullying are predictors of anxiety sensitivity.

Study 1

Method

Research Design. The current study was carried out based on the correlational research. Explaining or comprehending complications of existent phenomenon is aimed in correlational researches (McMillan & Schumacher, 2006).

Participants. The study group was composed of secondary school and high school students in the 2015-2016 academic years. The study group selected from population by convenience sampling. The study group consisted of 225 adolescence, 114 (50.7%) female and 111 (49.3%) male. Students ages ranged between 11 and 17, with a mean age of 12.32 (SD = 1.10).

Measures

The Self-Efficacy Scale for Children (SES-C). The SES-C (Muris, 2001) is a 21-item self-report scale developed to evaluate academic, social and emotional self-efficacy among adolescence. The measure consists of three latent subscales: (a) academic self-efficacy (e.g. "How well can you study a chapter for a test?"), (b) social self-efficacy (e.g. "How well can you become friends with other children?"), and (c) emotional self-efficacy (e.g. "How well can you control your feeling?"). Each item was rated on a five point likert scale (1=not at all, ..., 5= very well). The original form of SES-C has strong internal reliability. The Cronbach's Alpha for whole scale was found to be .88. As for the subscales, the internal consistencies of academic self-efficacy, social self-efficacy and emotional self-efficacy was .88, .85, .88, respectively (Muris, 2002). Telef and Karaca (2012) carried out the adaptation study of SES-C into Turkish. The factorial structure of measure showed sufficient fit in Turkish sample (RMSEA= .04, CFI=.96, GFI=.94). Moreover, the internal consistency coefficient of SES-C was found as .86. Additionally, the Cronbach's Alpha values were .84 for academic self-efficacy, .64 for social self-efficacy, and .78 for emotional self-efficacy.

The Anxiety Sensitivity Index (ASI). The Anxiety Sensitivity Index (ASI) was first developed by Silverman, Fleisig, Rabian and Peterson (1991) and revised by Jurin, Jokic-Begic, and Korajlija (2012). The ASI was a five point likert type scale consisting of eighteen items. Additionally, the ASI has three subscales: (a) psychological sensitivity (e.g. “In scares me when I feel shaky.”), (b) physical sensitivity (e.g. “It scares me when I feel faint.”), (c) social sensitivity (e.g. “ It is important to me to stay in control of my emotion.”). The ASI had strong reliability ($\alpha = .86$). Test-retest reliability ($r=.84$) provided strong support for determination of the temporal stability. The factorial structure of ASI confirmed by means of CFA. CFA results showed sufficient fit to the data (RMSEA= .07, CFI=.90). The adaptation study of ASI into Turkish was conducted by Seer and Glbahe (2013). As three items having low factor loadings, those were excluded from the pool. As a result of CFA for ASI, it was determined that the Turkish version of ASI was applicable (RMSEA= .02, CFI= .99, GFI= .92, AGFI=.90). The internal consistency coefficient of ASI was .87.

The E-Victimization Scale (E-VS). E-VS is a 5-item self-report scale developed by Lam and Li (2013) to examine e-victimisation among adolescents. Each item (e. g. “How many times did someone tease you using emails, texting, short messages, on a website such as Renren*, etc.?”). was rated on a 7-point likert scale ranging from 0 (0 times) to 6 (6 times or more). High scores mean a high level of e-victimisation. Coefficient of internal consistency for scale was found as .92. Confirmatory factor analysis results indicated a satisfactory model fit for single model (RMSR = .03; GFI = .91; AGFI = .75). Gencdogan and Cikrikci (2015) was carried out the adaptation study of E-VS into Turkish. Results of CFA analysis indicated that the single model was excellent fit to the data: RMSEA = .00; CFI = 1.00; GFI = 1.00; AGFI = .98). Cronbach’s Alpha coefficient for the whole scale was found as .79.

CFA for measures within the study 1. The measurement of Self-Efficacy Scale for children consisted of 21 items and three latent variables (academic self-efficacy, social self-efficacy, and emotional self-efficacy). Confirmatory factor analysis (CFA) showed satisfactory fit indices as follow: $\chi^2 = 283.45$ (N=225, df =186), RMSEA= .04, CFI=.90, GFI= .89,

AGFI=.87, 90% CI of RMSEA= .03, .05). The internal reliability of measure was examined via Cronbach's Alpha coefficient. The internal consistencies were .79 for academic self-efficacy, .67 for social self-efficacy and .73 for emotional self-efficacy.

The factorial structure analysis of Anxiety Sensitivity Scale revealed acceptable fit indices: $\chi^2= 179.28$ (N=225, df=84), RMSEA= .07, CFI=.85, GFI= .90, AGFI=.86, 90% CI of RMSEA= .05, .08. Cronbach's Alpha for total scale was .80. The last CFA analysis for the measures was on E-Victimization Scale (E-VS). Results of CFA indicated that the model was acceptable fit to the data: scales $\chi^2= 32.23$ (N=225, df=5), RMSEA= .15, CFI=.96, GFI= .95, AGFI=.84, 90% CI of RMSEA= .11, .21. The Cronbach's Alpha coefficient for E-VS was found as .87, for the present sample. According to the validity and reliability analysis, it could be concluded that results were satisfactory.

Data Analysis. To carry out the research, the requisite permission was granted from teachers who were familiar with research process after a short presentation. Students were asked to fill the questionnaires. In addition, the instruments were administered to students in groups. It took approximately 40 minutes to complete. To determine the correlations among variables, Pearson correlation coefficient was used. Overall, these analyses were conducted via SPSS 22.0.

Results (Study 1)

Relations among anxiety sensitivity, self-efficacy (academic, social and emotional) and e-victimization

The relations among academic, social and emotional self-efficacy, anxiety sensitivity and e-victimization were calculated to test hypothesis 1. The means, standard deviations and Pearson Product Moment Correlation Coefficients of the main variables are given in Table 1. According to the

correlation analysis, anxiety sensitivity was not correlated with academic self-efficacy ($r = -.02$, $p > .05$; 95% CI [-.20, .05]), social self-efficacy ($r = -.02$, $p > .05$; 95% CI [-.12, .13]), emotional self-efficacy ($r = -.12$, $p > .05$; 95% CI [-.11, .11]), and e-victimization ($r = .06$, $p > .05$; 95% CI [-.10, .23]).

Table 1. Means, standard deviations and Pearson Product Moment Correlation Coefficients of variables for study 1

Variables	1	2	3	4	5
E-V	1				
ASE	-.06	1			
SSE	.00	.50**	1		
ESE	.00	.39**	.56**	1	
AS	.06	-.02	-.02	-.12	1
Mean	1.71	25.36	25.34	22.62	38.83
SD	4.39	5.41	5.17	5.63	11.17

** $p < .01$, $N = 225$; SD: Standard Deviations; E-V: E-Victimization, ASE: Academic Self-Efficacy, SSE: Social Self-Efficacy, ESE: Emotional Self-Efficacy, AS: Anxiety Sensitivity.

Study 2

Method

Similar to the study 1, study 2 was conducted with correlational research. In this study, relationships among self-efficacy (academic, social and emotional self-efficacy), anxiety sensitivity and e-bullying were investigated.

Participants. The study 2 was conducted with a new study group diverse from study 1. The study group was composed of secondary school and high school students in the 2015-2016 academic years. The study group selected from population by convenience sampling. The study group consisted of 237 adolescence, 181 (76.4%) female and 56 (23.6%) male. Students ages ranged between 14 and 18, with a mean age of 15.86 (SD = .89).

Measures. Self-Efficacy Scale, Anxiety Sensitivity Index and E-Bullying Scale (E-BS) were used to gather data in study 2. As distinct from study 1,

E-Bullying Scale (E-BS) was used instead of E-Victimization Scale (E-VS). Therefore, reliability and validity results of E-BS were only reported in this section.

E-Bullying Scale (E-BS). E-BS is a 6-item self-report scale was developed by Lam and Li (2013) in order to investigate e-bullying among adolescents. Each item was rated on a 7-point likert scale ranging from 0 (0 times) to 6 (6 times or more). Coefficient of internal consistency for total scale was found as .96. Confirmatory factor analysis results showed a sufficient model fit for two factor model (RMSR = .00; GFI = .96; AGFI = .90). Gencdogan and Cikrikci (2015) was carried out the adaptation study of E-BS into Turkish. Results of CFA analysis indicated that two factor model was excellent fit to the data: RMSEA = .05; CFI = .99; GFI = .98; AGFI = .93). Cronbach's Alpha coefficient for the whole scale was found as .75.

CFA for measures within the study 2. As a result of confirmatory factor analysis (CFA), three factor model of SES-C showed satisfactory fit indices as follow: $\chi^2 = 293.33$ (N=237, df=167), RMSEA= .05, CFI=.89, GFI= .89, AGFI=.86, 90% CI of RMSEA= .04, .06). The internal consistencies were .82 for academic self-efficacy, .73 for social self-efficacy and .77 for emotional self-efficacy.

The factorial structure analysis of Anxiety Sensitivity Scale revealed acceptable fit indices: $\chi^2 = 233.42$ (N=237, df=84), RMSEA= .08, CFI=.84, GFI= .88, AGFI=.83, 90% CI of RMSEA= .07, .10. Cronbach's Alpha for total scale was .82. Results of CFA on E-BS indicated that the model was sufficient fit to the data: scaled $\chi^2 = 26.27$ (N=237, df=8), RMSEA= .09, CFI=.90, GFI= .96, AGFI=.91, 90% CI of RMSEA= .05, .14. The Cronbach's Alpha coefficient for E-BS was found as .65, for the present sample. According to the validity and reliability analysis, it could be concluded that results were satisfactory.

Data Analysis

To determine the correlations among variables and predictors of anxiety sensitivity, Pearson correlation coefficient and basic regression analysis were used. Overall, these analyses were conducted via SPSS 22.0.

Results (Study 2)

Relations among self-efficacy (academic, social and emotional), anxiety sensitivity and e-bullying. The means, standard deviations and Pearson Product Moment Correlation Coefficients calculated to test hypothesis 2 are presented in Table 2. It was found that anxiety sensitivity was negatively correlated with emotional self-efficacy ($r = -.22, p < .01$; 95% CI [-.36, -.09]). Moreover, anxiety sensitivity was not associated with academic self-efficacy ($r = -.07, p > .05$; 95% CI [-.23, .05]), social self-efficacy ($r = -.09, p > .05$; 95% CI [-.21, .07]) and e-bullying ($r = .01, p > .05$; 95% CI [-.13, .16]).

Table 2. Means, standard deviations and Pearson Product Moment Correlation Coefficients of variables for study 2

Variables	1	2	3	4	5
E-B	1				
ASE	-.23**	1			
SSE	-.05	.38**	1		
ESE	-.13*	.39**	.52**	1	
AS	.01	-.07	-.09	-.22**	1
Mean	1.83	23.80	25.05	20.95	42.39
SD	3.55	5.19	5.13	5.51	10.77

* $p < .05$, ** $p < .01$, $N = 237$; SD: Standard Deviations; E-B: E-Bullying, ASE: Academic Self-Efficacy, SSE: Social Self-Efficacy, ESE: Emotional Self-Efficacy, AS: Anxiety Sensitivity

The Predictors of Anxiety Sensitivity

To determine the predictors of anxiety sensitivity, simple linear regression analysis was conducted. The predictive strength of emotional self-efficacy on anxiety sensitivity was explored (Table 3). Emotional self-efficacy accounted for 5% of total variance of anxiety sensitivity ($F(1, 2354) =$

12.76, $p < .001$). The contribution of emotional self-efficacy to the model was significant ($\beta = -.23$, $p < .001$; 95% CI [-.66, -.18]).

Table 3. Results of Multiple Linear Regression Analysis

Variables	B	Std. Error	β	t	p
Constant	51.68	2.69		19.22	.001
ESE	-.44	.12	-.23	-3.57	.001

R= .22, R² = .05; ESE: Emotional Self-Efficacy

Discussion

The aim of this study was to research markers of sensitivity to anxiety in adolescents. In light of this aim, based on theoretical results, the effects of self-efficacy, e-victimization and e-bullying on anxiety sensitivity were investigated. To achieve the aim of the research, two hypotheses were tested. These hypotheses were assessed in two different studies.

Hypothesis 1 assumed that e-victimization and self-efficacy were each significant predictors of anxiety sensitivity in adolescents. According to the results obtained from study 1, hypothesis 1 was rejected. Accordingly there was no significant correlation between anxiety sensitivity of adolescents and e-victimization and self-efficacy. Hypothesis 2 assumed that e-bullying and self-efficacy were each significant predictors of anxiety sensitivity in adolescents. The obtained results show that only emotional self-efficacy was a predictor of anxiety sensitivity in adolescents. As a result, hypothesis 2 was partially confirmed. The results obtained from both research studies will be discussed holistically. The importance of social learning, individual differences and learning experiences has been a focus in studies of formation of susceptibility to anxiety (Reiss et al., 1986). As a result, the interaction between anxiety sensitivity and self-efficacy is expected. However, in both studies there was no correlation determined between self-efficacy (apart from emotional self-efficacy) and anxiety levels. The obtained results were a little surprising. In related literature there are limited studies investigating the correlation between anxiety sensitivity and self-efficacy. Ruiz (2014) determined a negative correlation between anxiety sensitivity and self-efficacy and stated that

individuals with high perception of self-efficacy had lower susceptibility to anxiety. Due to the limited number of studies in the literature, an attempt is made to discuss the findings in terms of outcomes from past literature. Susceptibility to anxiety forms the basis for many psychological disorders led by anxiety disorders (Killgore, Sonis, Rosso, & Rauch, 2016; Yılmaz, Bilgiç, Akça, Türkoğlu, & Hergüner, 2016), and followed by stress (Zerach & Magal, 2016) and depression (Allan, Albanese, Norr, Zvolensky, & Schmidt, 2015). When past studies are investigated, it appears that perception of self-efficacy is effective on psychological structures (Glasofer et al., 2013; Odacı, Berber-Çelik, & Çikrikci, 2013). Self-efficacy is mentioned as a cognitive regulator in the process of exposure to stress and anxiety (Bandura, Blanchard, & Ritter, 1969). Faced with possible threats that may cause anxiety, the individual displays their efficacy first to defeat the feeling of insufficiency and later to prevent formation of anxiety. As loss of cognitive control is frequently observed, the feeling of sufficiency is accepted as being very important in the formation of anxiety (Richards, Richardson, & Pier, 2002). In the second study, emotional self-efficacy was determined to be a significant predictor of anxiety sensitivity. This result may be interpreted as a sign that variations in the study groups primarily may be effective. The increase in emotional self-efficacy observed in adolescents may be said to reduce the possibility of exposure to sensitivity to anxiety. This result supports the recommendation by Bandura (1988) that emotional efficacy affects emotional arousal levels. Kumar and Lal (2006) determined that self-efficacy beliefs directly affect emotional response in adolescents.

The second dimension of the discussion is about susceptibility to anxiety and e-victimization and e-bullying. According to the results obtained in both studies, there was no significant correlation between susceptibility to anxiety and e-victimization and e-bullying. There is no study in the related literature investigating the correlation between the stated variables. Observation of the destructive results of bullying among adolescents (Arseneault et al., 2010; Hinduja & Patchin, 2007; McMahon et al., 2010) may be interpreted as a sign that bullying behavior affects preservation of emotional balance. However, cyber bullying experienced by adolescents is reported to negatively affect their cognitive and affective gains (Hinduja &

Patchin, 2007; Landoll, La Greca, Lai, Chan, & Herge, 2015; Nixon, 2014). Landoll et al. (2015) stated that cyber bullying behavior may play a significant role in development of depressive symptoms in adolescents. Together with this, exposure to cyber bullying is known to cause negative psychological results among adolescents and those who have not been exposed to bullying (Patchin & Hinduha, 2006). While evaluating the effect of cyber bullying on adolescent health, it is said that personal differences must be noted (Nixon, 2014). Moving from this point, it may be concluded that the adolescents in the research group (both bullies and victims) did not attach much importance to the negative experiences of displayed or exposed behavior in the virtual environment. Or that the amount of possible negative experiences was very few. Experiences that adolescents live or are exposed to in the virtual environment are thought to cause more destructive results when included in their real lives.

Limitations and Strengths

The most important limitation of this study is the cross-sectional design. Due to the nature of the research, the development of anxiety sensitivity in adolescents along the axis of self-efficacy and e-victimization and e-bullying could not be examined. As a result, to determine how adolescent anxiety sensitivity changes based on cyber activity and social cognitive development, it is recommended that longitudinal studies be carried out. The second limitation of the study is that data was collected using self-report style scale tools. Self-report scale tools are based on subjective evaluation due to their nature. In this way peer and parent assessments may be effective and it is recommended that future studies use these types of evaluation. Another limitation of the research is that the determination of individuals in the study group used the convenient sample method. As a result, the generalizability of the results of the research is low. In this situation, it is recommended that the research be repeated again with similar study groups. It may be said that the results of the two studies investigating the correlation between anxiety sensitivity and self-efficacy are consistent. However, with the aim of increasing generalizability of the results, it may be beneficial to complete similar studies using different study groups and in different cultures. It is thought that studies on adolescents living in metropolises may produce more striking results.

The devastating effects of e-bullying and e-victimization on adolescent mental health should not be overlooked. Empirical studies show that the variables discussed in this study are related to many psychopathological problems. And these problems affect adolescents' lives negatively. This negative interaction can negatively affect not only the present life but also the future life of the adolescent. One of the risk factors, which might correlate with self-efficacy, anxiety sensitivity and e-bullying/victimisation, is childhood abuse. Kelleher et al. (2008) reported that early life traumatic experiences cause a tendency being a bully. Additionally, substance use can be considered as another determinant of the victimisation and bullying among adolescents. Tharp-Taylor et al. (2009) stated that there is an association between bullying/victimisation and substance use. Moreover, being a bully or victim makes adolescents prone to substance use. Trotta et al. (2013) suggest that psychotic cases are more common amongst them. Consequently, there are several risk factors affecting adolescents' mental health. It is necessary to present social support for adolescents in order to combat the experiences that lead to being bully or victim.

In spite of these limitations, there are some strengths to this study. This study used scale tools with validity and reliability proven by scientific studies. At the same time, care was taken that appropriate statistical techniques be used to investigate data. Most importantly it is thought that this study will be a guide for future studies on indicators of anxiety sensitivity. Results were determined that showed the correlation between anxiety sensitivity and self-efficacy vary. Finally it was found that bullies and victims in the cyber environment always have high psychological sensitivity.

Recommendations and Future Studies

I think the most important recommendation is that "life should be lived without refuge in virtual realities". Primarily the most important duty is considered to belong to parents. As adolescence is viewed as a lifetime guide, the attitudes displayed by parents at home are among the most important determinants of adolescent behavior. When the research variables are considered, the behavior displayed by parents in the family

environment and their guidance to their children are thought to form the most important foundation stone of adolescent self-efficacy. In this way, parents may each be an effective role model for adolescents.

When the second variables of e-victimization and e-bullying are considered, it is known that what parents do is very important. It is necessary that parents supervise their children's virtual habits. It is necessary to check the behavior displayed by and duration spent in the virtual environment by adolescents with certain rules. Adolescents should be informed especially about victimization that may be experienced (physical threats, sexual abuse, verbal threats, etc.). If adolescents are exposed to bullying in the virtual environment they should be able to easily share this with parents. Parents should create family environments where these types of exchanges can occur. After parents the greatest importance belongs perhaps to school management. School management should act carefully on cyber victimization and bullying and inform their students. Additionally it is thought that cyber bullying, especially, is more dangerous in the school environment. Victimization in the cyber environment may transform to physical bullying in the school environment. In this situation the rules of the school management should be very open and clear. Thus, students exposed to this situation should be told what they can do by the school guidance service. When generally assessed to prevent the simple form of anxiety sensitivity and even the most advance form of suicide attempts, we should do what we can without leaving the responsibility to others.

It is recommended that future studies focus on the etiology of many mental problems led by anxiety sensitivity. If the causes of anxiety sensitivity can be determined clearly, more effective psychological aid programs may be organized to reduce anxiety sensitivity in adolescents and adults. At the same time, longitudinal studies will be helpful to determine how anxiety sensitivity develops.

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