The Mediator Effect of Loneliness between Perceived Social Competence and Cyber Bullying in Turkish Adolescents

Hakan Sarıçam[*]
Education Faculty, Dumlupınar University,Turkey

Erkan Yaman[*]
Harington School of Communication and Media, University of Rhode Island,

İsmail Çelik[*]
Education Faculty, Ağrı Ibrahim Cecen University, Turkey

Abstract
The purpose of this research was to examine whether loneliness might play a mediating role between perceived social competence and cyberbullying in Turkish adolescents. The participants were 326 high school students who completed a questionnaire package that included the Cyberbullying Scale, the Perceived Social Competence Scale, and the UCLA Loneliness Scale. Relationships between loneliness, social competence and cyberbullying were tested using Pearson Product Moment Correlation Coefficient and predictions of each variable by the domains of the other were calculated with Linear Regression Analysis (LRA). Findings showed that perceived social competence, cyberbullying and self-efficacy were related to each other's. Hierarchical Regression Analysis results indicated that loneliness partially mediated the relationship between perceived social competence and school burnout.

Key words: Bullying, cyber bullying, social competence, loneliness

[*] Hakan SARIÇAM, PhD, is a psychological counseling specialist, Asst.Prof.Dr. and faculty member at the Faculty of Education, Dumlupinar University. His research interests are psychological well-being and social psychology.

[*] Erkan YAMAN, PhD, is an Educational Administration and Planning specialist, Assoc.Prof.Dr., and faculty member at the Faculty of Education, Sakarya University. His research interests are mobbing, bullying, and cyber bullying.

[*] İsmail ÇELIK, PhD, is a Curriculum and Instruction specialist, Asst.Prof.Dr. and faculty member at the Faculty of Education, Ağrı Ibrahim Çeçen University. His research interests are learning, metacognition, efficacy, and competence.

Correspondence: hakan.saricam@dpu.edu.tr

Introduction

Developing technology brings many dangers with it as it brings many innovations, beauty, and convenience. For example, aggressive behavior has gained a different size with the technological developments and has already gained itself to cyber-bullying case. Studies show that cyber bullying has become a common problem today as the traditional bullying. (Arıcak, 2009; Dilmaç, 2009; Erdur-Baker & Kavşut, 2007; Eroğlu & Peker, 2011, Yaman, Eroğlu, & Peker, 2011). When cyber bullying concept first put forward, authorities claimed that this is a type of traditional bullying, but in theoretical explanations made show that there are many differences as well as the similarities with traditional bullying (Wang, Iannotti, Luk, & Nansel, 2010; Dempsey, Sulkowski, Nichols, & Storch, 2009; Griezel, Craven, Yeung, & Finger, 2009). Arıcak (2011) defined cyber bullying as, "deliberate, repeated, and hostile behavior by a person or group of people using information and communication technologies in order to harm others. Arıcak (2009) in another definition sees cyber bullying as "whole injurious behaviors against an individual or group, or private or legal personalities in technical or relational manner".

Cyber bullying in terms of intimidation of people in target, teasing to them, making fun of them and lowering them show similarities with face-to-face bullying. But on the other hand, bullying made on the internet is likely to have worse effect. In one-to-one bullying a group of people can involve both with perpetrators and audiences, while bullying on the internet makes it possible to send obscene jokes, embarrassing photos or hate mails to a lot of people.

It is seen that individuals exposed to cyber bullying adversely affected in psychological development and academic achievement (Beran & Li, 2007; Hinduja & Patchin, 2007; Li, 2006; Ybarra, 2004). At the same time, increase in depression, anxiety and suicide problems was observed in people under the threat of cyber bullying (Yılmaz, 2010). Especially in adolescents cyber bullying behaviors from peers harm their individualistic, social, emotional and psychological development (Şahin, Aydın & Sarı, 2012). In individuals exposed to cyber bullying important issues are seen such as low self-respect, anti-social characteristics, school phobia, loneliness and absence from school (Campbell, 2005; Ybarra & Mitchell, 2004).

Loneliness

Loneliness which is a universal phenomenon has become a topic experts dwell on since it reached more intense civic and traumatic extent with the effect of change of socio-cultural structure and dynamics in period of progress of mankind up to now. Loneliness which is phenomenon predicts interdisciplinary approach, shows its importance not only scientific area but in philosophy and other art works by its use as theme and meaning attribution. Loneliness is to turn in upon human consciousness and emotions, not getting out of the cocoon of own as a result of severing ties with outside world.

Loneliness defined in different ways by different writers. Some see loneliness as an objective situation, some see it subjective situation and some see as an existential situation. Common side of all is that loneliness emotion is painful for people. Peplau and Perlman (1982) take loneliness in terms of interpersonal relations and define loneliness as an emotion which is a result from that current relations do not meet the expectation in this extent. According to this, individual can feel lonely while being together with many people without any objective reason. On the other side, Mijuskovic (1987) see that every person is lonely existentially and says that avoidance from loneliness is the primary source to motivate human behaviors.

Interaction and communication are adding meaning to human existence by hanging the wall of cocoon and integrating with other consciousness and emotions. Loneliness is the cognitive and sensory strain state which is painful for people, disappointing and destroying hopes of people as a result of interaction of individualistic and environmental factors. For example, risk factors' effects such as self-perception, self-awareness, lack of self-confidence as individualistic factors or death of relatives, divorce, immigration, social pressure, uncertainty and chaos as environmental factors, social interactions and lack of communication trigger each other and cause individual to get alienate and become lonely.

Social Competence

The state of being competent socially, social competence development efforts and researches of individuals in parallel, rapid changes, competition and collaborate work became important in today's world and became focus of interest. Lately, within the concept of prevention devoted to especially for children and young people, early intervention and positive youth development, social competence or social competence development studies are among the primary issues for social researchers (Anderson-Butcher, Stetler, & Midle, 2006; Sarıçam et al., 2013). Social skills are important competences in adolescents as much as in adults. Because, adolescence is a critical period for self-development adolescents enter into social relationships or shape the personality by establishing identification with one /s. Social competence covers a large part in this process. Social competence skills are essential perspective and skills that can be developed through education for living harmoniously together and which individuals should develop (Lewinsohn, Mischel, Chaplin, & Barton, 1980). The concept of social competence is defined as the ability that an individual can start and continue a relationship with others (Anderson-Butcher, Iachini, & Amorose, 2007; Gresham, Sugai, & Horner, 2001). According to another definition, social competence is individual's learned behaviors that cause to get positive feedback and help get away from negative feedback and accepted socially (Gresham & Elliot, 1993). From these definitions, it can be deduced that social competence is the potential ability to use social-communication skills. Social competence perception is consists of believing behaviors to be efficient and social competence behaviors. In development of social competence perception, individual should behave competently and get feedback from others in this direction (Sarıçam et al., 2013; Coleman, 2003).

The Present Study

Cyber bullying victimization in Turkey is recently experienced a lot (Ryan, Kariuki, & Yılmaz, 2011) like the entire world; especially female victims are subjected to be raped because of this and prefers to commit suicide as salvation. It is claimed that lonely individuals become more addicted to the internet (Ayas & Horzum, 2013), and another research claims that individuals without social competence became more lonely (Junttila, Vauras, Niemiand, & Laakkonen, 2012). In other words, as social competence perceived decreases, loneliness and cyber bullying can be related. Since the causes of cyber bullying are important for preventing, remediation and intervention researches, detecting the relationship between social competence and loneliness is expected to form the basis for this study. The aim of this study is to examine that whether loneliness has a mediator role in the relation between social competence perceived and cyber bullying. In direction of this aim, following hypothesis will be tested.

H1: Loneliness is positively associated with cyber bullying.

H2: Loneliness is negatively associated with perceived social competence.

H3: Perceived social competence is negatively associated with cyber bullying.

H4: Loneliness mediates the link between perceived social competence and cyber bullying.

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Method

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Participants

Working group of this study consists of 326 students in high school. 159 participants are male while 167 of them are females. Students' ages changes between 13 and 18 and the average age is 16.24.

Instruments

The Perceived Social Competence Scale: Anderson-Butcher, Iachini, and Amorose (2007) developed this scale which was adapted to Turkish (Sarıçam et al., 2013). Results confirmatory factor analyses demonstrated that 6 items yielded one factor as original form and that the one-dimensional model was well fit (χ^2=7.34, df=7, RMSEA=.010, CFI=1.00, RFI=0.99, IFI=1.00, AGFI=.98, GFI=.99, NFI=.99 and SRMR=.018). Factor loadings ranged from .57 to .80. Cronbach Alfa internal consistency coefficient of the scale was found as .80. In the concurrent validity significant

relationships were found between perceived social competence, internal self-confidence (r= .39) and external self-confidence (r= .39). Corrected item-total correlations ranged from .52 to .66 and according to t-test results differences between each item's means of upper 27% and lower 27% points were significant. For the existent study, the coefficient alpha was .91.

The Cyberbullying Scale: This scale was built up by Arıcak, Kınay, and Tanrıkulu (2012), and it has 24 items and one factor. Likert-type scale regarding the frequency with which the behavior of interest is exhibited where 1 = never, 2 = sometimes, 3 = often, and 4 = always. Higher scores, therefore, indicate greater cyberbullying (range=24–96). Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy of .939 and a significant result on Bartlett's test of Sphericity χ^2= 9197.54 (p<.05). The amount of total variance explained was 50.58% and factor loadings ranged from .49 to .82. Cronbach alpha internal consistency coefficient was found as .95 for scale. Test-retest reliability coefficient was .70. Corrected item-total correlations ranged from .47 to .76. For the current research, the coefficient alpha was .86.

The UCLA Loneliness Scale: The UCLA Loneliness scale was developed by Russell et al. (1980) and was adapted to Turkish by Demir (1989). It is a self-report scale that assesses of loneliness in everyday life. The UCLA Loneliness scale has 10 positive and 10 negative items (total 20 items) ranging from 1 (never) to 4 (always). The total scores range from 20 to 80 and the higher score means that grater loneliness. Russell et al. reported that internal consistency of the scale measure was high (coefficient alpha of .94) in college student populations. Demir (1989) reported that Cronbach's alpha coefficient of the Turkish version of the UCLA Loneliness was .96 and a 5-week test-retest reliability was .94. For the present study, Cronbach's alpha internal consistency coefficient was .84.

Procedure

After discussed with a counselor in a public high school and got all required permissions to apply the study, application form is copied and applied with the counselor after explanation is made to the students in the school. Collected data transferred to computer and with SPSS 17 software package, Pearson Product Moment Correlation Analysis is applied in order to determine relationship between the variables and multiple regression analysis is used to determine mediator role of loneliness on the relationship between cyber bullying and perceived social competence.

For multiple regression analysis, cyber bullying was entered as dependent variable; loneliness, and perceived social competence were entered as independent variables. In order to test mediating role of loneliness on the relationships between cyberbullying and perceived social competence, hierarchical regression procedures were performed as recommended by Sarıçam (2015). According to author, four conditions must be met to show statistically the mediating effect of loneliness on the relation between cyberbullying and perceived social competence: (1) All variables must be associated with each other's, (2) perceived social competence must be predicted by loneliness (this result is also necessary for the Sobel z test), (3) cyberbullying must be predicted by perceived social competence, (4) When loneliness is controlled, there must be a statistically significant reduction in the effect of perceived social competence on cyberbullying. If the relation is reduced to non-significant levels, full mediation is demonstrated. Partial mediation occur when the correlation between perceived social competence and cyberbullying is reduced but still significant (Kenny, Korchmaros, & Bolger, 2003). These analyses were carried out using SPSS.

Results

Correlations between perceived social competence, loneliness, and cyberbullying

Table 1. *Descriptive Statistics, Cronbach's Alpha Coefficients, and Intercorrelations of the Variables*

Variables	1	2	3
1.Perceived social competence	1		
2. Loneliness	-.47**	1	
3. Cyberbullying	-.48**	.46**	1
Mean	14.82	58.15	64.91
Std.dev.	4.30	12.05	12.69
Alpha	.91	.86	.84

** Correlation is significant at the .01 level (2-tailed).

Table 1 show that there are significant correlations between perceived social competence, loneliness, and cyberbullying. Perceived social competence (r=−.46) and loneliness (r=−.48) related negatively to cyberbullying. Moreover, perceived social competence (r=-.47) was found negatively associated with loneliness.

Regression Analysis

Following the steps of the mediation procedure, second, it was verified that loneliness and cyberbullying (dependent variable) were positively related (β= 0.46, t= 9.24, p < 0.001). The results are shown in Table 2.

Table 2. *The regression results of the relationship between loneliness and cyberbullying*

Variables	Unstandardized Coefficients		Standardized Coefficents				
	B	SE$_B$	B	T	R	R^2	F
Loneliness	1.35	1.47	0.46	9.24*	.46	.21	85.46*

*p<.001

For the third and fourth of the mediation procedure, two stepwise multiple regression analysis was applied to assess which variables were the best predictors of cyberbullying. Table 3 showed the results of multiple regression analysis where the independent variables were loneliness and perceived social competence scores; and the dependent variable was cyberbullying. Perceived social competence entered the equation first, accounting for 23% of the variance in predicting cyberbullying. Loneliness entered on the second step accounting for an additional 6% of the variance. This means that loneliness and perceived social competence explain 29% of the variance in predicting cyberbullying. The standardized beta coefficients indicated the relative influence of the variables in the last model with loneliness and perceived social competence statistically significantly related to cyberbullying, and perceived social competence was strongest predictor of cyberbullying.

Table 3. *Mediation of loneliness in relation between perceived social competence and cyberbullying: hierarchical regression analysis with dependent variable cyberbullying*

Variables	Unstandardized Coefficients		Standardized Coefficents					
	B	SE$_B$	B	t	R	R^2	F
Step1 Perceived social competence	-0.50	-0.051	-0.48	-9.74[*]	.48	.23	94.78[*]
Step2 Perceived social competence	-0.35	-0.056	-0.33	-6.34[*]	.54	.29	68.02[*]
Loneliness	0.88	0.156	0.30	5.67[*]			

*p<.001

The results of the hierarchical regression analysis demonstrated that perceived social competence was negatively associated with cyberbullying (β= -0.48, t= -9.74, p = 0.000). However, when perceived social competence and loneliness were taken together in the regression analysis, the significance of the relationship between perceived social competence and cyberbullying (β = -0.33, t= -6.34, p = 0.000) decreased, yet the relationship between social competence and cyberbullying was significant. According to Kenny et al. (2003) and Sarıçam (2015), this result indicated a partial mediation. Therefore, it can be said that loneliness partially explains the relationship between social competence and cyberbullying.

The present model was tested using the Sobel z test. The purpose of this test is to verify whether a mediator carries the influence of an interdependent variable to a dependent variable. The Sobel z test is characterized as being a restrictive test, and as such, assures that the verified results are not derived from collinearity issues. In the current study, the test value verified was Z= 4.22638987; p = 0.000.

Discussion

The general purpose of the current study was to examine relationships between perceived social competence, cyberbullying and loneliness in Turkish adolescents. Firstly, a negative relationship is found between loneliness and perceived social competence. In other words, as social competence increases, loneliness level decreases. According to Junttila, Laakkonen, Niemi, and Ranta (2010), individuals with low social competence refrain from relationships with others they have social anxiety and social fear; therefore remain alone. Similar to this, Most, Ingber, and Heled-Ariam (2012) found relationship between social competence and loneliness. These studies show similarities with our study.

In the second finding of the study, there is a positive relationship between loneliness and cyber bullying. According to Ayas and Horzum (2013) individuals with low self-respect have high level of loneliness. Lonely individuals spend more time on the internet and can make more cyber bullying (Ayas & Horzum, 2013; Şahin, 2012). These findings support study finding.

Thirdly, there is a negative relationship between perceived social competence and cyber bullying. In other words, as social competence is increased, cyber bullying decreases. Malecki and Demary (2002) found in a research they have done that adolescents have problems such as communication, aggression and alienation from the society when level of acceptance by their friends

decreases. In another research, one fourth of the students who face with bullying in school, make cyber bullying by using social network etc. (Li, 2005). Also, in the research carried out by Junttila, Voeten, Kaukiainen, & Vauras (2006) relationship is found between social competence and anti-social behaviors. From these results, individuals who have low level of social competence or who face with bullying show aggressive behaviors or become lonely (Hinduja & Patchin, 2009). According to the result of this research individuals with low social competence, apply to loneliness and to cyber bullying as an alternative. Campfield (2008) determined that 57% of the victims face with bullying in school makes cyber bullying via mobile phone or the internet. In other words, individuals who have low level of social relationships tend to bullying behaviors on virtual platform.

As a result, there are important relationships between loneliness, cyber bullying and perceived social competence. If applications are used to increase individuals' social competence level, level of loneliness will decrease; so the level of cyber bullying levels will fall, too. In the research Eroğlu and Peker (2011) did social support perceived from the family and friends decreases cyber victimization. These results show similarity with this proposal.

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