The Relationship Between Loneliness, Malicious Envy, and Cyberbullying in Emerging Adults

La relación entre la soledad, la envidia maliciosa y el ciberacoso en adultos emergentes

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ABSTRACT

The primary purpose of this study is to investigate the relationship between loneliness, malicious envy and cyberbullying perpetration of emerging adults. The research group was conducted by 580 emerging adults, aged between 18 and 25. Data was collected with Demographical Information Form, Revised Cyberbullying Inventory, Social and Emotional Loneliness Scale, Virtual Environment Loneliness Scale, Benign and Malicious Envy Scale. Results showed that there are only significant relationships between family loneliness, virtual loneliness, malicious envy, and cyberbullying. Only family loneliness and malicious envy significantly predicted cyberbullying positively. The results indicated that the cyberbullying level of males was higher than the cyberbullying level of females. Moreover, according to their parents' marital status, the results showed that cyberbullying level of emerging adults whose parents had been divorced was higher than emerging adults having intact families. There were no significant differences between the cyberbullying level of emerging adults regarding their demographical facilities such as having a sibling, income level of their family, their living space, relationship status and employment status.

RESUMEN

El propósito principal de este estudio es investigar la relación entre la soledad, la envidia maliciosa y la perpetración del ciberacoso de adultos emergentes. El grupo de investigación se dirigió a 580 adultos emergentes, de entre 18 y 25 años. Los datos se recopilaron con el Formulario de Información Demográfica, el Inventario Revisado de Ciberacoso, la Escala de Soledad Social y Emocional, la Escala de Soledad del Entorno Virtual, la Escala de Envidia Benigna y Maliciosa. Los resultados mostraron que solo hay relaciones significativas entre la soledad familiar, la soledad virtual, la envidia maliciosa y el ciberacoso. Solamente la soledad de la familia y la envidia maliciosa predijeron el ciberacoso de manera significativa. Los resultados indicaron que el nivel de ciberacoso de los hombres es *más alto que el nivel de ciberacoso de las mujeres. Además, según el estado civil de sus padres, los resultados mostraron que el nivel de ciberacoso de los adultos emergentes cuyos padres se habían divorciado* es mayor que el de los adultos emergentes con familias intactas. No hubo diferencias significativas entre el nivel de ciberacoso de los adultos emergentes con respecto a sus facilidades demográficas como tener un hermano, el nivel de ingresos de su familia, su espacio de vida, su estado de relación y su estado de empleo.

1. Introduction

Today according to technological and economic developments (Lesáková et al., 2017) and in addition to having easy access to internet many people regard it as an essential part of their daily lives. It becomes obvious that

communication is effective and necessary in all fields of daily life (Hursen, Ozcinar, Ozdamli, & Uzunboylu, 2011) and the virtual environment may enhance the interpersonal communication. People can communicate with one another at any time through online messages, sharing videos, photographs, playing online games, using social network websites and etc. (Ozden & Icellioglu, 2014). Although online technologies have numerous benefits, on the other hand they may have harmful effects those cannot be denied (Icellioglu & Ozden, 2014). One of the most important harmful effect is called "cyberbullying", which can be exposed at any time on virtual environment (Kavuk, Bulu, & Keser, 2016). Cyberbullying is a complex and disturbing 21st century phenomena (Burnham, Wright, & Houser, 2011). It is also known as electronic bullying or online social cruelty refers to bullying other people through e-mail, instant messaging, chat rooms, web pages, video gaming and digital messages sent via cellular phones (Kowalski, Limber, & Agatston, 2008). Internet harassment is an important public mental health issue affecting youth today (Aricak, 2009). Like all other mental health issues, it needs to be investigated the possible reasons and contributor factors for preventing the harmful effects of cyberbullying (Icellioglu & Ozden, 2014).

Human is a social being and his healthy existence depends on interpersonal relations and socialization. But loneliness can be related to the quality of the relationships and it can be the result of lack of intimacy, rapport and sharing in social relationships (Ilhan, 2012; Çelik & Birand, 2018). Loneliness is a common phenomenon that occurs with not having strong communications and interactions neither with family members nor with friends. Loneliness is the perception of an individual to feel lonely (Topaloglu, 2017). Students, experienced higher levels of emotional loneliness that has been emphasized with weak family and romantic relationships, have reported lower life satisfaction (Cecen, 2007a). Life satisfaction is a positive assessment of the whole life of a person in accordance with his personal living conditions (Veenhoven, 1996; Kaya & Gokler, 2017; Örselli, Bayrakçı, & Kahraman, 2017). There is a negative correlation between life satisfaction and the level of loneliness in social, romantic and family dimensions (Kaya & Gokler, 2017). It is known that being apart from family can have a negative impact on social and emotional development (Durualp & Cicekoglu, 2013). Living with intact family protect individuals from feeling loneliness much more than members of separated families (Topaloglu, 2017). Also, family involvement plays an important role in preventing and reducing bullying behaviours (Uzunboylu, Baglama, Ozer, Kucuktamer, & Kuimova, 2017). Feeling alone in real life causes people to spend much more time on virtual environment but it is like a vicious circle that causes people to feel much lonelier. Previous research findings indicated the importance of loneliness on online behaviour. For example, online communications reduce loneliness by providing more opportunities for connecting with other people (Valkenburg, Peter, 2011). This loneliness may cause malicious envy or benign envy about others shared on virtual environment. Everyday people share billions of contents on virtual environment and envy could be one of the most common negative consequence of following information of others on social networking sites such as Facebook, Instagram and etc. (Krasnova, Wenninger, Widjaja, & Buxmann, 2013).

Envy is defined as a negative emotional response to another person's quality or achievement and the envier either desires the advantage or wishes that the envied person lacks it (Parrott & Smith, 1993; Smith & Kim, 2007). It has two dimensions, one of them is malicious dimension which is the negative dimension and the hostile form of envy that can lead to harming envied person. The other one is motivating and positive dimension of envy which is called as benign and it can lead to motivation, learning and better performance (Krasnova, Wenninger, Widjaja, & Buxmann, 2013; Cirpan & Ozdogru, 2017). The malicious envy can cause the envier to try to level the envied person down or to denigrate the advantage of him (Lange & Crusius, 2015). Nowadays, virtual environment can be the comfort place for the enviers to show their negative performance on envied ones. Cyberbullying is the one of the strongest harmful method for them.

Social relations are important for maintaining psychological well-being, decreasing the feeling of loneliness and providing the adaptation to society (Topaloglu, 2017). Today most of the people spend their time on virtual environment and it causes a virtual social life for them but also it brings the virtual loneliness to their lives. Previous research findings assess the importance of loneliness on online behaviour, especially the harmful behaviours (Boz, 2018). The variables that affect cyberbullying should be well understood for taking precautions. Thus, the main purpose of this study is to investigate the relationship between loneliness, malicious envy and cyberbullying perpetration of emerging adults. The research model of the study is presented in Figure 1.
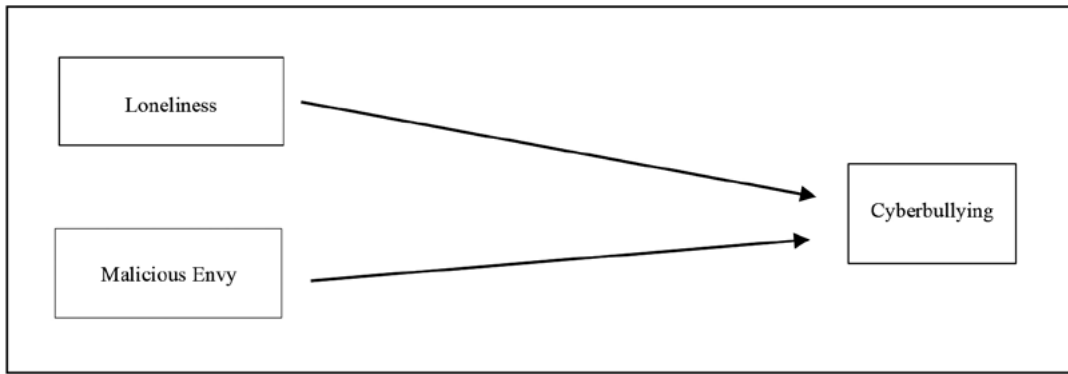
Figure 1. The research model of the study.

Based on the main purpose, this study poses the main hypotheses stated below:

H1: There is a correlation between loneliness and cyberbullying in emerging adults.
H2: There is a correlation between malicious envy and cyberbullying in emerging adults.
H3: Loneliness and malicious envy have a predicting role on cyberbullying in emerging adults.

By the way this study also examined the following problem statements depending on these main hypotheses:

– Is there a difference between cyberbullying level of emerging adults according to gender?
– Is there a difference between cyberbullying level of emerging adults according to marital status of their parents?
– Is there a difference between cyberbullying level of emerging adults according to income level of their family?
– Is there a difference between cyberbullying level of emerging adults according to their living space?
– Is there a difference between cyberbullying level of emerging adults according to having a sibling?
– Is there a difference between cyberbullying level of emerging adults according to their relationship status?

2. Methodology

2.1. Sample

The research group consists of 580 emerging adults who were selected randomly including 291 females and 289 males (see Table 1) in the range of 18-24 ages with the mean of 19,93 (SD 1,77).

Gender	f	%
Female	291	50.2
Male	289	49.8
Total	580	100.0

Table 1. Descriptive statistics of participants according to gender.

59.7 % of the sample group living with their parents, 40.3 % was living alone or living with friends (see Table 2).

Living Space	f	%
Living with parents	346	59.7
Living alone or with friends	234	40.3
Total	580	100.0

Table 2. Descriptive statistics of participants according to living space.

88.4% of the parents of the sample group were divorced, 11.6% of the parents were not divorced or separated (see Table 3).

Marital Status of Parents	f	%
Intact	513	88.4
Divorced	67	11.6
Total	580	100.0

Table 3. Descriptive statistics of marital status of participants' parents.

30.7% of the participants were in a romantic relationship, 69.3% were not in a romantic relationship (see Table 4).

Romantic Relationship Status	f	%
In a relationship	178	30.7
No relationship	402	69.3
Total	580	100.0

Table 4. Descriptive statistics of romantic relationship status.

4.5% of the participants had low level of monthly income, 52.2% had medium level and 43.3% had high level (see Table 5).

Economic Status	f	%
Low	26	4.5
Medium	303	52.2
High	251	43.3
Total	580	100.0

Table 5. Descriptive statistics of economic status.

13.4% of the participants were only child, 47.4% had one sibling, 39.1% had two or more siblings (see Table 6).

Sibling Status	f	%
No Sibling	78	13.4
1 Sibling	275	47.4
2 or More Siblings	227	39.1
Total	580	100.0

Table 6. Descriptive statistics of sibling status.

14,8% of the participants were working, 85,2% were not working (see Table 7).

Employment Status	f	%
Working	86	14.8
Non-working	494	85.2
Total	580	100.0

Table 7. Descriptive statistics of employment status.

2.2. Data collection tools

Demographical Information Form, Revised Cyberbullying Inventory, Social and Emotional Loneliness Scale, Virtual Environment Loneliness Scale, Benign and Malicious Envy Scale were used for collecting data from emerging adults.

2.2.1. Demographical Information Form

Demographical Information Form was developed by researchers and it was used in order to get information about participants' personal information's such as gender, age, sibling status, economic status and etc.

2.2.2. Revised Cyberbullying Inventory

Revised Cyberbullying Inventory was improved by Topcu and Erdur-Baker (2017). It consists of two parallel forms; measuring both cyberbullying and cybervictimization during the previous six months. It was developed in 2007 by Erdur-Baker, revised in 2010 and re-revised in 2017. It is a 4-point Likert scale with 10 items, measuring participants' personal experience of the activities during the previous six months by using a 4-point Likert type scale (1 = never, 2 = once, 3 = twice to three times and 4 = more than three times). In this study cyberbullying subscale was used for collecting the data. The Cronbach's Alpha internal consistency coefficient of the cyberbullying form is 0.82 (Topcu & Erdur-Baker, 2017). In this study the internal consistency coefficient was 0.75.

2.2.3. Social and Emotional Loneliness Scale

Social and Emotional Loneliness Scale was developed by DiTommaso, Brannen and Best (2004) and it was adapted to Turkish by Cecen (2007b). It is a 7-point Likert type scale that has 15 items involving three loneliness subscales; social, family and romantic. Scores for each subscale range from 7 to 35. Higher score of the subscale demonstrates a higher level of loneliness in that domain. The Cronbach's Alpha internal consistency coefficient of the social loneliness subscale is 0.74, family loneliness subscale is ,76 and romantic loneliness subscale is 0.83 (Cecen, 2007b). In this study the internal consistency coefficients were 0.77, 0.82 and 0.85 respectively.

2.2.4. Virtual Environment Loneliness Scale

Virtual Environment Loneliness Scale was developed by Korkmaz, Usta and Kurt (2014). It was a 5-point Likert type scale, including 20 items with three subscales; virtual socialization, virtual sharing and virtual loneliness. In this study only virtual loneliness subscale was used. The Cronbach's Alpha internal consistency coefficient of the virtual loneliness subscale is 0.61. In current study the internal consistency coefficient was 0.60.

2.2.5. Benign and Malicious Envy Scale

Benign and Malicious Envy Scale was developed by Lange and Crusius (2015) for measuring envy both with its positive and negative dimensions. Malicious is the negative dimension of envy and benign is the motivating and positive dimension of the envy. It was translated and adapted to Turkish by Cirpan and Ozdogru (2017). The Cronbach's Alpha internal consistency coefficient of the malicious envy subscale is 0.89 and it is 0.85 for the benign subscale. In current study it was 0.84 and 0.78 respectively.

3. Analysis and Findings

The analysis of data was performed on SPSS version 23.0 packaged software. Pearson Correlation, Independent Samples t-Test, One Way ANOVA and Hierarchical Regression Analysis were used to investigate the relationship between loneliness, benign and malicious envy, cyberbullying. For all these analyses, the results for $p < 0.05$ were deemed as statistically significant.

Table 8 shows the means and standard deviations of subdimensions loneliness, benign and malicious envy, and cyberbullying.

	$\overline{\mathrm{X}}$	ss
Romantic loneliness	20.69	9.49
Family loneliness	12.3	6.82
Social loneliness	11.56	6.17
Virtual loneliness	12.24	3.73
Benign	16.95	6.37
Malicious envy	9.29	5.49
Cyberbullying	14.38	4.78

Table 8. Descriptive Statistics of Variables (n=580).

The correlations between subdimensions of loneliness, benign and malicious envy and cyberbullying were analysed with Pearson Correlation. Cyberbullying perpetration was positively related to family loneliness (r=0.168, p<0.01), virtual loneliness (r=0.082, p<0.05) and malicious envy (r=0.274, p<0.01) (see Table 9).

	1	2	3	4	5	6	7
1. Romantic loneliness	1	.007	.102*	.014	-.037	.023	-.021
2. Family loneliness	.007	1	.348**	.072	.003	.223**	.168**
3. Social loneliness	.102*	.348**	1	.112**	-.003	.217**	-.006
4. Virtual loneliness	.014	.072	.112**	1	-.043	.053	.082*
5. Benign	-.037	.003	-.003	-.043	1	.303**	.050
6. Malicious envy	.023	.223**	.217**	.053	.303**	1	.274**
7. Cyberbullying	-.021	.168**	-.006	.082*	.274**	.274**	1

*p< .05 **p<.01

Table 9. Pearson correlation analysis between subdimensions of loneliness, benign and malicious envy and cyberbullying.

According to the results of the multiple regression analysis, summarized in Table 10, family loneliness entered the equation first, accounting for 3% of the variance in predicting cyberbullying. Malicious envy entered on the second step accounting for an additional 6% variance. Virtual loneliness entered last, but it did not predict cyberbullying significantly. It was found that only family loneliness ($\beta=0.11$, $p<0.05$) and malicious envy ($\beta=0.25$, $p<0.001$) predicted cyberbullying significantly but they are not strong predictors.

	Variables	B	SE_B	β	t	R	R^2	Adjusted R^2	F	p
Model 1	Constant	12.941	.401		32.238	.168	.028	.027	16.85	.000
	Family loneliness	.117	.029	.168	4.105					.000
Model 2	Constant	11.413	.463		24.663	.296	.087	.084	27.61	.000
	Family loneliness	.078	.028	.113	2.761					.006
	Malicious envy	.216	.035	.249	6.109					.000
Model 3	Constant	10.517	.747		14.075	.302	.091	.086	19.23	.000
	Family loneliness	.076	.028	.109	2.665					.008
	Malicious envy	.214	.035	.247	6.053					.000
	Virtual loneliness	.077	.051	.061	1.527					.127

Dependent Variable: Cyberbullying

Table 10. Multiple regression analysis for variables predicting cyberbullying.

There was a significant difference between level of cyberbullying of females and males (t(578)=-2.02; p<.05). The results showed that cyberbullying level of males ($\overline{x}=14.78$) was higher than females ($\overline{x}=13.99$) (see Table 11).

	Gender	N	$\overline{x}$	s	t Test		
					t	8	p
Cyberbullying	Female	291	13.99	4.69	-2.02	578	.04*
	Male	289	14.78	4.77			

*p < .05

Table 11. Independent sample t test analysis of cyberbullying according to gender.

There was a significant difference between cyberbullying level of university students according to their parents' marital status (t(79.04)=-2.87; p<.01). The results showed that cyberbullying level of students whose parents had been divorced ($\overline{x}=16.13$) was higher than students having intact families ($\overline{x}=14.15$) (see Table 12).

	Marital Status of Parents	N	$\overline{x}$	s	t Test		
					t	8	p
Cyberbullying	Intact	513	14.15	4.61	-2.87	79.04	.005*
	Divorced	67	16.13	5.41			

*p < .01

Table 12. Independent sample t test analysis of cyberbullying of participants according to their parents' marital status.

Furthermore, there were no significant differences between the cyberbullying level of emerging adults regarding to their demographical facilities such as having a sibling ($F_{(577,2)}$=0.69, p>0.05), income level of their family ($F_{(577,2)}$=2.24, p>0.05), their living space (t(578)=0.67; p>0.05), relationship status (t(578)=1.65; p>0.05) and employment status (t(578)=0.96; p>0.05).

4. Results and Discussion

In this study it was aimed to examine the relationship between loneliness, malicious envy and cyberbullying. The second goal of this study is to investigate the predictive role of loneliness and malicious envy on cyberbullying. Results showed that there are only significant relationships between family loneliness, virtual loneliness, malicious envy and cyberbullying. On the other hand, only family loneliness and malicious envy significantly predicted cyberbullying positively. These results indicated that family is one of the most important factors as providing the first interpersonal relationship that will prepare the individual to the social life. Moreover, cyber human values differentiates with respect to family environment (Kilicer, Ozeke, & Coklar, 2018). Not having effective relationships in the family may cause person to keep himself away from other people out of the family, too. Weak interpersonal relations in real life and spending much more time in cyber life may increase the fact of loneliness. Today one of the most important problem for the human being is feeling alone in the crowd. And being a follower of the other people's active and happy lives on social media may cause the fact of "envy". Feeling family loneliness, romantic loneliness or social loneliness bring on lower social support. Lower social support may mean more hostility or more sensitivity during social interaction and it is easy for these individuals to experience malicious envy which can be seen with hostile attitudes and behaviours (Xiang, Chao, & Ye, 2018). Being alone may cause envy feelings about other people's lives and it can be so rampant that can cause the person to harm other people. The most recent hostile behaviour in virtual environment is "cyberbullying" and though few studies have specially addressed the relationship between loneliness and cyberbullying, but it was reported that there is a relationship between loneliness and cybervictimization but neither with cyberbullying perpetration (Sahin, 2012). Despite of this evidence, Srabstein and Piazza (2008) asserted that lonely people often seek and rely on social report because they might feel lonely and rejected. And as a result of it they might be aggressive against those perceived to have rejected their advances. In accordance with these findings, it was found that the loneliness in romantic relations and in family relations predicted the social network use but loneliness in social relations did not (Dogan & Karakus, 2016).

First, as hypothesized, there was a significant correlation between two subdimensions of loneliness; family and virtual loneliness and cyberbullying. According to the findings of the research, promoting the first hypothesis, when either family loneliness or virtual loneliness level increases the cyberbullying level also increases. Providing large opportunities of eliminating the loneliness or maintaining the relationships, internet comes across as an important support for lonely people but on the other hand it can create a pathological phenomenon if not used so (Dogan & Karakus, 2016).

In conclusion, the results of this study indicated that there was a relationship between family loneliness, virtual loneliness and malicious envy with cyberbullying. The findings of the current study are in line with other studies about cyberbullying partially. It was found that loneliness in romantic relations and loneliness in family relations predicted the social network use but loneliness in social relations did not (Dogan & Karakus, 2016).

Therefore, cyberbullying is one of the highest incidence problematics in virtual environment both as cyberbullying perpetration and as cybervictimization, so that the current findings of the research provide contributions to the literature by studying loneliness and malicious envy as the parameters of cyberbullying. The results indicated that the cyberbullying level of males was higher than the cyberbullying level of females. And according to their parents' marital status, the results showed that cyberbullying level of emerging adults whose parents had been divorced was higher than emerging adults having intact families. There were no significant differences between the cyberbullying level of emerging adults regarding to their demographical facilities such as having a sibling, income level of their family, their living space, relationship status and employment status.

There are several limitations of this study that should be considered when evaluating the findings. First of all, the participants of the study were university students, in order to generate the results, the population can be extended to other age groups, because generalization of the results is somewhat limited. Second, the data collected from the scales was limited to self-reported data, and particularly the participants, as might be expected, were in tendency to hide the realities about their behaviours related to cyberbullying perpetration. And in addition to that, the study did not include any observations of behaviour.

Consequently, the present research provides important information about the predictors of cyberbullying in terms of loneliness.

These might include education about communication, use of body language, awareness of emotions, anger management, and self-awareness. School counsellors should encourage students to report any bullying behaviours they observe or experience. If students can easily report when they are exposed to bullying behaviours, this might also be a preventive factor, decreasing the possible risks of bullying.

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