Associations Between Independent Self-Construal, Gender-Role Orientation, and Cyberbullying / Cybervictimization: Findings from a University Student Sample in North Cyprus

Bağımsız Benlik Anlamladırması, Toplumsal Cinsiyet Rollerine dair Yönelimler ve Siberzorbalık / Siberzorbalığa Maruz Kalma Arasındaki İlişkiler: Kuzey Kıbrıs'tan bir Üniversite Öğrencisi Örneklemine İlişkin Bulgular

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Abstract

The major aim of this study was to test the associations among independent self-contrual, femininity-masculinity and cyberbullying/cybervictimization among a university student sample. Atotal of 393 participants (56.2% females, 44.8% males) between the ages of 19 and 35 (M= 24.25, SD =2.51) were enrolled in three North Cyprus universities. The sample included the students from various national and cultural backgrounds. Following the empirical evidence and indirect/interaction models of risk and resilience proposed by Masten (2001), we hypothesized that independent self-construal would mediate and moderate the association between femininity-masculinity and cyberbullying / cybervictimization. Specifically, independent self-construal was operationalized as a protective factor and femininity-masculinity dimensions were defined as risk factors when cyberbullying and cybervictimization was into account. The findings partly supported our hypotheses. The proposed mediator and moderator roles were not significant for the models which included masculinity and cyberbullying. However, the results revealed that higher independent self-construal orientation mediated and moderated significantly between femininity and cybervictimization. In other words, independent self-construal has been found as a protective factor against cybervictimization when the participants had feminine tendencies as a risk factor. The findings might have implications especially for practitioners who are working with vulnerable populations like victims of cyberbullying.

Keywords: *Self-construal; Femininity; Masculinity; Cyberbullying; Cybervictimization; Emerging adulthood*

Özet

Bu araştırmanın temel amacı bir grup üniversite öğrencisinde bağımsız benlik anlamlandırması, kadınsılık-erkeksilik ve siberzorbalık-siberzorbalığa maruz kalma arasındaki ilişkilerin incelenmesidir. Araştırmaya üç farklı Kuzey Kıbrıs üniversitesinde öğrenim gören ve yaşları 19 ile 35 arasında değişen (Ort.= 24.25, S=2.51) toplam 393 öğrenci (%56.2 kadın, %44.8 erkek) katılmıştır. Örneklem farklı etnik ve kültürel kökenlerden gelen öğrencilerden oluşmuştur. Görgül kanıtları ve Masten'in (2001) risk ve dayanıklılığa ilişkin dolaylı ilişki/etkileşim modellerini takip ederek, bağımsız benlik anlamlandırmasının, kadınsılık-erkeksilik ve siberzorbalık-siberzorbalığa maruz kalma arasında aracı ve düzenleyici değişken olarak rol alacağı düşünülmüştür. Daha spesifik biçimde belirtmek gerekirse, bağımsız benlik anlamlandırması koruyucu bir etmen, siberzorbalık ve siberzorbalığa maruz kalma durumlarında ise hem kadınsılık hem de erkeksilik birer risk etmeni olarak tanımlanmıştır. Bulgular hipotezimizi kısmen desteklemiştir. Önerilen aracı ve düzenleyici roller, siberzorbalık ve erkeksiliğin yer aldığı modeller için anlamlı sonuçlar ortaya çıkarmamıştır. Ancak bağımsız benlik anlamlandırmasına yönelik eğilimlerin kadınsılıkla siberzorbalığa maruz kalma arasında hem aracı hem de düzenleyici değişken olarak yer aldığı belirlenmiştir. Diğer bir deyişle bağımsız benlik anlamlandırmasının, bireylerin bir risk etmeni olarak kadınsı özellikler gösterdiği durumlarda siberzorbalığa karşı koruyucu bir etmen olduğu bulunmuştur. Araştırma bulgularının özellikle siberzorbalığa maruz kalan duyarlı popülasyonlarla çalışan uygulamacılara yol gösterici olabileceği düşünülmektedir.

Anahtar Kelimeler: *Benlik anlamlandırması; Kadınsılık; Erkeksilik; Siberzorbalık; Siberzorbalığa maruz kalma; Beliren yetişkinlik*

Introduction

Traditional bullying is a long-standing problem among children and adolescents. It is a subset of aggressive behavior which intends to inflict injury or discomfort upon another individual (Olweus, 2012). Rapid development of information and communication technologies such as the Internet and cell phones has enabled the expansion of this behavior into cyberspace. This form of bullying is called cyberbullying and can be defined as "...the use of information and communication technologies such as e-mail, cell phone and text messages, instant messaging, defamatory personal websites, and defamatory online personal polling websites, to support deliberate, repeated, and hostile behavior by an individual or group that is intended to harm others" (Belsey, 2005).

Cyberbullying is often described as the online continuum of traditional bullying (Gradinger, Strohmeier, & Spiel, 2009; Hinduja & Patchin, 2008; Macháčková, Dedkova, Sevcikova & Cerna, 2013; Olweus, 2012; Riebel, Jager, & Fischer, 2009; Wade & Beran, 2011), or as a specific form of indirect bullying that involves the use of electronic devices to carry out bullying (Hemphill et al., 2012; Li, Smith, & Cross, 2012) . Due to this connection between both phenomena, findings related to traditional bullying can provide important hints for research on cyberbullying. Table 1 shows some of the similarities and differences between traditional bullying and cyberbullying. As can be seen from the table, traditional bullying and cyberbullying share a lot of common features. Both behaviors are aggressive/hostile; there is power imbalance between bully and victim; bullying behavior is intentional and repetitive (Dooley, Pyzalsky, & Cross, 2009; Li, 2007; Slonje & Smith, 2008). On the other hand, in case of cyberbullying a degree of technological expertise is required; cyberbullies are much more invisible or anonymous compared to traditional bullies, and the act of bullying in cyberspace typically happens when the bully and victim are physically distant (Cowie, 2009; Li et al., 2012). But it should be noted that traditional bullies who use indirect

and relational ways of bullying can be anonymous and distant, as well (Bjorkqvist, Osterman, & Kaukiainen, 1992; Garandeau, & Cillesen, 2006; Xie, Swift, Cairns, & Cairns, 2002).

Despite these similarities, cyberbullying has been discussed as being more severe in its consequences than traditional bullying (Campbell, 2005; Dooley et al., 2009; Tokunaga, 2010). For example, Bonanno and Hymel (2013) found that the impact of cyberbullying on depression and suicidal ideation was higher than the impact of traditional bullying. Similarly, compared to traditional bullying, cyberbullying has been identified as an additional risk factor for the development of depressive and psychosomatic symptoms (Gradinger, Strohmeier, & Spiel, 2009; Juvonen & Gross 2008; Perren, Dooley, Shaw, & Cross 2010; Sourander et al., 2010).

The amount of research on cyberbullying has increased dramatically in recent years, answering some basic questions concerning this phenomenon. But there remains a need for additional research to contribute to an understanding of the dynamics of cyber-bullying. One gap in the literature is the association between self-construals (i.e. independent vs. interdependent), gender-role orientation (i.e. femininity vs. masculinity) and cyberbullying/cybervictimization. The cultural level of this problem has already been acknowledged (e.g Cross, Li, Smith, & Monks, 2012; Walrave, & Heirman, 2010). But, we still lack research examining this dynamic on the individual level, which should also contribute to current knowledge.

After the seminal study by Markus and Kitayama (1991), culture and self started to be described as two interrelated constructs. For example, Gudykunst et. al (1996) stated that "members of individualistic cultures are socialized to rely predominantly on their independent self-construal, and members of collectivistic cultures are socialized to rely predominantly on their interdependent self-construals" (p. 516). Also, Yoshihisa et. al (1995) mentioned that anyone who has individualistic tendencies in any society may have independent, agentic, and separate self-construals. Accordingly, a lot of researchers (e.g. Gardner, Gabriel, & Lee, 1999; Lu, & Gilmour, 2007; Singelis, 1994) measured independent vs. interdependent self-construals as the abstractions of higher-level constructs (i.e. individualism vs. collectivism). Similarly, masculinity and femininity (M-F) can be seen as cultural-level variables (Hofstede, 1994; Spector, Cooper & Sparks, 2001) but at the same time can be measured as individual-level variables (e.g. Bem, 1981; Gini, & Pozzoli, 2006; Ross, 1983). Therefore, the major aim of this study was to test the association among independent self-construal, M-F, and cyber-bullying/cyber-victimization on the individual level.

Emerging adults and university students are particularly vulnerable to cyberbullying because of their more sophisticated and frequent use of new online technologies (Aricak, 2009). Accordingly, some studies have found that cyberbullying increases with age (e.g. Hinduja & Patchin, 2008; Ybarra & Mitchell, 2004). Although cyberbullying may emerge in any age group, the majority of research has focused on children and adolescents (Tokunaga, 2010). To our best knowledge, few studies included university students as participants (e.g.. Akbulut & Eristi, 2011; Aricak, 2009; Dilmac, 2009; Zhang, Lang, & Dick, 2010). Therefore, the secondary aim of this research was to contribute to the literature on cyberbullying by examining cyberbullying/cybervictimization among a group of university students in North Cyprus. The following sections provide a literature review on how independent vs. interdependent self-construals and M-F are related to cyberbullying/cybervictimization.

Independent vs. Interdependent Self-Construals and Masculinity-Femininity

The independent/interdependent self-construal model focuses on the relationship between the individuals and the group with which they are identified (Singelis, 1994). Markus and Kitayama (1991) defined independent self-construal as an independent view of the self (e.g. being unique, autonomous, and separate from the social context).

Interdependent self-construal, on the other hand, was defined as an interdependent image of self (e.g. conforming to group norms, others' expectations, and group-related goals).

Masculinity and femininity are concepts describing characteristics that are considered typical for males and females. While masculinity is characterized by instrumental personality traits such as self-affirmation, social dominance, independence, and aggressiveness; femininity is characterized by expressive traits such as warmth, sensitivity, nurturing and interdependence (Maccoby, 1998; Young, & Sweeting, 2004). Constantinople (1973) was the first scholar who challenged the classical polarization of masculinity and femininity conceptualized by Terman and Miles (1936). Accordingly, Bem (1974) added the concepts of androgynous (people who have high levels of both femininity and masculinity) and undifferentiated (people who have low levels of both femininity and masculinity) identity. Following Constantinople (1973) and Bem (1974), Lippa and Connely (1990) developed the Gender Diagnosticity Approach, which states that masculinity and femininity can exist within both sexes and any individual can be labeled as masculine or feminine based on gender-related indicators. Accordingly, in our study, we don't focus on gender differences but on varying levels of M-F in an individual and their relation to cyber bullying and cyber victimization.

The aforementioned characteristics of M-F might indicate the link between independent-interdependent self-construal and gender role orientations. Empirical evidence has shown that people with independent self-construal are more prone to having masculine features, and on the other hand, people with interdependent self-construal are more prone to having feminine features (Cross & Madson, 1997a, 1997b; Kim, 1994; Nyman, 1997; Oetzel, 1998).

Cyberbullying and Self-Construal

The link between individual self-construal and cyber bullying is mostly unknown. Thus far, only one study, to our knowledge, has examined the link between independent vs. interdependent self-construal and cyberbullying/cybervictimization directly (i.e. Cetin, Eroglu, Peker, Akbaba, & Pepsoy, 2012). This study found a negative correlation between relational interdependent self-construal and cyberbullying. Relational interdependent self-construal is defined as constructing self in relation to close interpersonal relationships but not in relation to a group or society (Cross, Bacon, & Morris, 2000). It is important to mention that relational interdependent self-construal is more common in individualistic cultures and at this point may coexist with independent self-construal (Cross et al., 2000; Cross & Madson, 1997; Kashima, Yamaguchi, Kim,Choi, Gelfand, & Yuki, 1995).

However, we can hypothesize some associations by summing up some findings on cultural levels. Taking into account the close connection between bullying and cyberbullying, we review the literature on traditional as well as cyber bullying. For example, Craig et al. (2009) found cross-national differences in traditional bullying between children in 40 countries; specifically, adolescents in Baltic countries reported higher rates of bullying and victimization, whereas northern European countries reported the lowest rates. Nansel, Craig, Overpeck, Saluja and Ruan (2004) found similar results from samples in 25 European countries which indicated that students in Lithuania (one of the Baltic countries) reported more bullying and victimization; on the other hand, Sweden (one of the northern European countries) had the lowest self-reported prevalence for bullying and victimization.

In the EU Kids Online (EUKO) project, utilizing a representative sample of children from 25 European countries, 14% of Estonian children aged 9-16 reported being cyberbullied, while only 2% of Italian children had had the same experience (Livingstone, Haddon, Görzig, & Ólafsson, 2011). Estonia is characterized as a collectivistic country (Realo, 1998; Suh, et al., 1998), whereas Italy is an individualistic country (Green, Deschamps,

& Paez, 2005; Suh et al., 1998), suggesting that the children in more individualistic states are less involved in cybervictimization. Similarly, in a recent research, d'Haenens (2012) clustered the same 25 European countries by using Hofstede's cultural values and found that the children and adolescents living in more individualistic countries showed less online risk. Although these findings include cross-national comparisons, we suggest that people with more independent self-construals would be less prone to cyberbullying/cybervictimization following the aforementioned link between self and culture (Gudykunst et al., 1996; Markus & Kitayama, 1991, Singelis, 1994; Yoshihisa et al., 1995) and conceptualization of self-construal as the abstractions of higher-level tendencies in the culture. But whether this dynamic applies similarly on an individual level remains one of the questions of this study.

Cyberbullying and Femininity-Masculinity

In the existing cyber-bullying research, we found mostly findings explaining the link with gender, but not with F-M. Moreover, findings related to gender differences in cyberbullying/cybervictimization are contradictory. Some studies showed that males tend to be more involved in cyber-bullying, while females to be cybervictimized (Aricak et al., 2008; Dilmac, 2009; Li, 2007; Slonje & Smith, 2008); other studies indicate the reverse (Bauman, 2012; Kowalski & Limber, 2007), and yet other research found no difference (Ortega, Calmaestra, & Mora-Merchán, 2008; Smith et al, 2008; Wolak, Mitchell, & Finkelhor, 2007). These mixed results can suggest it may not be 'femaleness' or 'maleness' but M-F that is related to cyberbullying/cybervictimization. But considering the trouble with varying definitions of cyberbullying in the studies that might underlie these contradictions (Tokunaga, 2010), we also assessed this link in traditional bullying. The literature indicates that overt bullying, which involves the intent to harm others directly (physically or emotionally), was found to be related to masculinity. Furthermore, relational bullying, which intends to harm an individual's social relations or status, was related to femininity (see Card, Stucky, Sawalani, & Little, 2008 for a wide literature review). Moreover, in a recent longitudinal study, social exclusion—a subtype of relational victimization—was found to be positively related with femininity (Lee & Troop-Gordon, 2011). Studies examining bullying more generally (i.e. total scores instead of bullying sub-types) found that more masculine people tended to bully others (Craig & Peppler, 1995; Gini & Pozzoli, 2006; Phillips, 2007; Salmivalli, Lagerspetz, Bjorkqvist, Osterman, & Kaukianien, 1996). In contrast, more feminine people tended to be bullied (Breslau, Chilcoat, Kessler, Peterson, & Lucia, 1999; Genta et al., 2012; Gini, & Pozzoli, 2006). It seems that independence, self-affirmation, social dominance, aggressiveness, and other masculine features may increase the risk of being involved in bullying; on the other side, warmth, sensitivity, interdependence, and other feminine features may increase the risk of being victimized.

Therefore, following the literature on traditional bullying and victimization, we may suggest that cybervictimization is positively related with femininity and cyberbullying is positively related with masculinity.

Associating Independent Self-Construal, Masculinity-Femininity, and Cyberbullying/Cybervictimization: Mediation and Moderation Effects

The literature review indicated that independent self-construal might be negatively related with cyberbullying/cybervictimization; on the other hand, feminine tendencies might increase the likelihood of being bullied while masculine tendencies might increase the likelihood of bullying others in cyberspace. In other words, independent self-construal might be a protective factor against cyberbullying, masculinity might be a risk factor for engaging in cyberbullying and femininity might be a risk factor for engaging in cybervictimization.

Following Masten (2001), variable-focused studies of resilience (i.e. *Indirect Model of Risk and Resilience and Interaction Model*) can be used as two models to examine the protective role of independent self-construal and M-F as risk factors. There is ample empirical data supporting these models and their application to the risk and protective factors of specific variables such as family economic hardship and adolescent academic performance; stress and competence; marital transitions and adjustment; (Conger, Conger, & Elder, 1997; Garmezy, Masten, & Tellegen, 1984; Hetherington, Bridges, & Glendessa, 1998; Masten, & Coatsworth, 1998). Also, Luthar, Cicchetti, and Becker (2000) recommended these models and the application to risks in their review article. The Indirect Model of Risk and Resilience has suggested a protective variable which mediated the relationship between a risk factor and a dependent variable. In our case, independent self-construal was expected to mediate as the protective variable the association between M-F (as risk factors) and cyberbullying/cybervictimization (as dependent variables) in a negative direction. Interaction Model of Risk and Resilience has suggested a protective variable which acts as a moderator between a risk factor and a dependent variable. In our study, it was hypothesized that higher independent self-construal scores as the protective variable would have a moderator role in the relationship between M-F (as risk factors) and cyberbullying/cybervictimization (as dependent variables).In sum, the research question is; "How are independent self-construal, masculinity-femininity, and cyberbullying/cybervictimization associated with each other?" The related hypotheses are as follows:

H1. Independent self-construal as a protective variable will mediate and moderate the relationship between masculinity and cyberbullying.

H2. Independent self-construal as a protective variable will mediate and moderate the relationship between femininity and cybervictimization.

Method

Participants

A total of 393 university students (56 % females) between the ages of 19 and 28 (*M= 24.25, SD = 2.51*) were enrolled in three universities from the main regions of North Cyprus. The participants were from various national and cultural backgrounds (40 % Cypriot, 39 % Turkish, 21 % African, 6 % European, and 4 % Asian). Gender distribution and average socio-economic status of each university is presented in Table 1.

Table 1. Distribution of gender and average socio-economic status of participants for each university.

	N of females (%)	N of males (%)	Socio-Economic Status M (SD)
University 1-Nicosia Region	72(57.6%)	53(42.4%)	3.41(0.61)
University 2-Famagusta Region	78(55.3%)	63(44.7%)	3.39(0.71)

Notes: Universities are coded for ethical consideration. The range of Socio-Economic Status isbetween 1-5 (1: Low SES, 2: Lower Middle, 3: Middle, 4: Upper Middle, 5: High SES).

Measures

The Revised Cyberbullying Inventory (RCBI):

This inventory was developed by Topcu and Erdur-Baker (2010) by reanalyzing the original Cyberbullying Inventory (Erdur-Baker & Kavşut, 2007). The inventory consisted of two parallel forms; 13 items for cyberbullying (*e.g.: I have sent threatening, embarrassing and harsh messages via e-mail*) and 13 items for cybervictimization (e.g.: I have received threatening, embarrassing and harsh messages via e-mail). Participants were asked to rate themselves on a 4-point Likert type scale (*0 = It has never happened to me, 1 = It happened once or twice, 2 = It happened three-five times, 3 = It happened more than five times*). In current study, Cronbach Alpha coefficients were .81 for cyberbullying form (*M=2.75; SD=4.51*) and .79 for cybervictimization form (*M=3.29; SD=4.56*). Scale scores were calculated by summing up item scores; higher score indicates more involvement in cyberbullying and cybervictimization.

BEM Sex Role Inventory (BSRI):

This self-reported inventory was developed by Bem (1981) and revised by Wong, McCreary, and Duffy (1990) to investigate masculine and feminine personality characteristics. The participants are asked to rate themselves on 40 items (20 items for masculinity, 20 items for femininity) on 1-7 scale (*1 = Never or almost never true, 7 = Always or almost always true*). The inventory includes two main dimensions; Masculinity (*e.g.: self-reliant*), Femininity (*e.g.: soft-spoken*). The inventory was adapted to Turkish by Dökmen (1999) with acceptable Cronbach Alpha values (.75 for masculinity dimension and .73 for femininity dimension). Dökmen (1999) compared femininity and masculinity scores across genders to examine the validity of the inventory and found that women had significantly higher femininity scores than men and men had significantly higher masculinity scores than women. Following Dökmen (1999) masculinity and femininity scores are calculated as means for each dimension in our study (Cronbach Alpha = .82; *M=.13*; *SD=.34* for masculinity, Cronbach Alpha = *.78*; *M=.35; SD=.48* for femininity). Higher scores indicate stronger gender role orientation.

Independent and Interdependent Self Scale (IISS):

This scale was developed by Lu and Gilmour (2007) to measure independent and interdependent self-construal in two separate studies. In Study 1, the items measuring key elements of independent and interdependent self-construal were developed and the two-dimensional structure of the scale was tested in exploratory factor analyses in a large sample of Chinese students and adults. In Study 2, the construct validity of the scale was examined in four samples of Chinese and British students and adults. The authors found that IISS showed content adequacy, reliability, convergent and divergent validity, and invariance of the two-dimension factor structure across samples and cultures. IISS includes 21 items to measure independent self (*e.g. I believe that people should be unique and different from others*) and 21 items to measure interdependent self (*e.g. I believe that the success of the group is more important than the success of the individual*) on a seven point scale (1- Certainly Incorrect, 7- Certainly Correct). The scale was adapted to Turkish by the first author. The translated measure was back-translated to control whether Turkish speaking and non-Turkish speaking participants would understand the items similarly. Confirmatory Factor Analysis showed that the two-factor model had an adequate fit to the data [χ^2 *(67, N = 393) =135.8, p < .001,* RMSEA = .05, CFI = .97). For the purposes of this study, the mean score of items loaded under the Independent Self sub-scale were used (Cronbach Alpha = .89; *M=125.11; SD=14.01*). Higher scores showed higher independent self-construal orientation.

Procedure and Analysis

The study was approved by Eastern Mediterranean University Psychology Department Ethical Review Board.

Two trained research assistants collected the data by distributing the questionnaires in the lecture hours by the approval of the departmental chairs and deans of the faculties. Participation was voluntary, and the participants were told they could withdraw from the study whenever they wanted. The surveys were filled out in university classrooms after lecture hours. Credits were given by the instructors as incentives if the filled-out surveys were returned.

The mediation models for cyber-bullying and cyber-victimization were tested with LISREL 8.80 (Joreskog & Sorbom, 1993) by using a maximum likelihood and covariance matrix. Model fit was decided upon χ^2/df ratio, CFI, NNFI, GFI, AGFI and RMSEA. A value less than 1/5 for χ^2/df ratio indicated the goodness of fit. The values above .90 for CFI, NNFI, GFI, AGFI and the value less than .10 for RMSEA was evaluated as an adequate model fit (Browne & Cudeck, 1992).

The items of cyberbullying and cyber-victimization subscales of RCBI, M-F sub-scales of BSRI, and independent self sub-scale of IISS were aggregated into two indicators by using random assignment parceling method. "A parcel can be defined as an aggregate-level indicator comprised of the sum (or average) of two or more items, responses, or behaviors" (Little, Cunningham, Shahar, & Widaman, 2002, p. 152). Parceling can be used to reduce random errors, to keep the variance of the original construct, to decrease skewness and kurtosis in the items, to have more efficient analyses, and finally to get better Goodness of Fit Indexes (Bandalos, 2002; Bandalos & Finney, 2001; Gribbons & Hocevar, 1998; Little et al., 2002; Takahashi & Nasser, 1996; Thomson & Melancon, 1996). Beyond of these advantages, we had three specific reasons to prefer the parceling method; a) to decrease the expected skewness and kurtosis especially in cyberbullying/cybervictimization measures, b) to create theoretically related constructs in a relatively small sample size following Bagozzi and Heatherton's (1994) suggestions, and c) because of the multi-dimensional character of the psychological constructs in our study, which was mentioned as an a priori requirement for parceling by Bagozzi and Heatherton (1994), also by Bandalos and Finney (2001).

The mediation (indirect effect) was provided by LISREL results, and also by using the Sobel Test, which indicated whether the decrease in the power of association between two variables was significant or not (z-value between 1.96-2.50 indicated that the decrease is significant at the level of p =.05, and a z-value above 2.51 indicated that the decrease is significant at the level of p = .01).

Multiple regression analysis was conducted to measure the moderator role of independent self-construal between M-F and cyber-bullying/cyber-victimization. Centered scores were entered into the analysis in the first step, and two-way interactions in the second step following Aiken and West (1991). The moderator effect of a variable is confirmed when interactions are significant.

Results

Descriptive Statistics

Two independent samples t-test analyses were conducted to test whether males' and females' cyberbullying/cybervictimization and M-F scores were significantly different from each other. The first independent samples t-test analysis indicated that males (M = 3.79, SD = 5.53) had higher cyberbullying scores than females (M = 1.98, SD = 3.42); t(353) = -3.82, p < .0001. Similarly, males (M = 4.07, SD = 5.54) had higher cybervictimization scores than females (M = 2.73, SD = 3.61); t(331) = -2.67, p < .0001.). Next analysis indicated that males (M = 5.05, SD = 0.69) had higher masculinity scores than females (M = 4.68, SD = 0.65); t(265) = -4.52, p < .0001 and accordingly, females (M = 5.32, SD = 0.56) had higher femininity scores than males (M = 4.87, SD = 0,58); t(320) = 7.16, p < .0001.)

The Incidence of Cyberbullying and Cybervictimization among University Students

The results revealed that 6.1% of our sample engaged in cyberbullying behaviors at least once in the last 6 months and 8.2% were cybervictimized at least once in the same time gap. Table 2 shows the frequencies and percentages of university students' answers to the items relating to who had bullied others/ been bullied by others in cyberspace in the last 6 months. According to self-reports, the highest frequency among cyber-bullying items was for item 8 "*Teasing about information or comments written on a forum site*" and the highest frequency among cyber-victimization items was for item 1 "*Taking information from a personal computer (documents, photos, messenger conversations…etc.) without permission*".

The Correlations between M-F, Independent Self-Construal, and Cyberbullying/Cybervictimization

The Pearson Correlation Coefficients showed that femininity and independent self-construal were weakly but still significantly related to cyber-victimization (r = .14, $p < .01$; r = -.16, $p < .01$ respectively). The correlations among masculinity, independent self-construal, and cyber-bullying were not significant (See Table 2).

Table 2. The Pearson Correlation Coefficients among Variables

	Independent Self Construal	Femininity	Masculinity	Cyber-bullying	Cyber-victimization
Femininity	-.18**	-			
Masculinity	.05	-.29**	-		
Cyber-bullying	.04	-.14*	.06	-	
Cyber-victimization	-.16*	.14*	.12*	.49**	-

Note: **p < .001 (2-tailed), *p< .01 (2-tailed)

Mediator Role of Independent Self-Construal between M-F and Cyberbullying/Cybervictimization

The model which tested the mediator role of independent self-construal between masculinity and cyber-bullying didn't show a good model fit even after revisions depending on modification indexes (χ^2 (8, N = 393) = 92.34, p< .001, *RMSEA* = .12, GFI = .89, AGFI = .88, *CFI* = .76, *NNFI* = .81). On the other hand, the Goodness of Fit Indexes of the mediation model which tested the mediator role of independent self-construal between femininity and cybervictimization were adequate (χ^2 (6, N = 393) = 7.37, p = .28, *RMSEA* = .03, *GFI* = .99, *AGFI* = .98, *CFI* = 1.00, *NNFI* = .99). LISREL results showed that independent self-construal significantly mediated between femininity and cyber-victimization (standardized coefficient for indirect effect = .06, $p < .01$). The results of the Sobel Test also indicated that the decrease in the power of association between femininity and cyber-victimization was significant when independent self-construal mediated the association (z = 2.43, p = .02). (Fig. 1) shows the standardized coefficients in the model.

Moderator Role of Independent Self-Construal between M-F and Cyberbullying/Cybervictimization

The moderator model of independent self-construal between masculinity and cyberbullying didn't reveal significant results. On the other hand, independent self-construal moderated the association between femininity and cyber-victimization (F = 3.91, $p < .001$, R^2 = .04; β = -.14, t = -2.43, $p < .01$). The interaction showed that participants with the highest level of independent self-construal and lowest level of

femininity scores had the lowest cybervictimization scores, while the participants who had the lowest level of independent self-construal and highest level of femininity scores had highest cyber-victimization scores (Fig. 2).

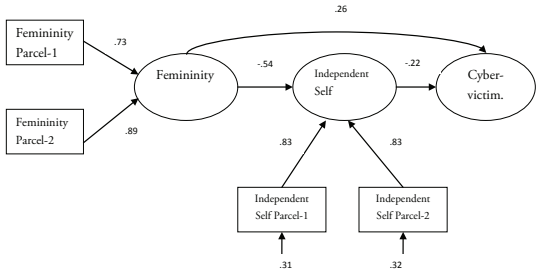

Figure 1. The Mediator Role of Independent Self-Construal between Femininity and Cybervictimization (Note: All standardized coefficients were significant; p<.01)

Note: All standardized coefficients were significant (p<.01)

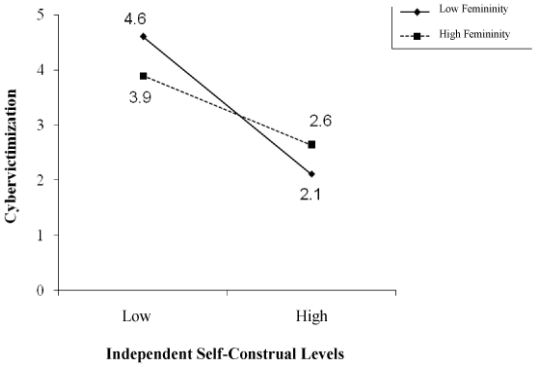

Figure 2. The Moderator Role of Independent Self-Contrual Between Femininity and Cybervictimization

Discussion

The main aims of this study were to investigate cyberbullying and cybervictimization among a university student sample and to analyze the mediator and moderator role of independent self-construal between masculinity and femininity and cyberbullying/cybervictimization. The descriptive findings indicated that males were more involved both in cyberbullying and cybervictimization. This finding conflicted with some of the results in the existing literature, which showed that males were more involved in cyberbullying and females were more involved in cybervictimization (Aricak et al., 2008; Dilmac, 2009; Li, 2007; Slonje & Smith, 2008). However, it must be mentioned that these studies included mostly adolescent samples. Few studies have examined these differences among university students, and those that did showed similar findings, indicating that males are more likely to be involved in cyberbullying as victims and perpetrators when compared to females (e.g. Akbulut & Eristi, 2011). This result might be explained by the relatively higher digital literacy among the merging adult males. Li et al. (2012) stated that cyber-bullying needs some degree of technological expertise. Even with the 'digital divide' narrowing for males and females (Shaw & Gant, 2002), males are much more involved in the use of technology and have more advanced digital skills (Barron, 2004; Palfrey & Gasser, 2008; Van Dijk, 2006).

The descriptive findings related to gender differences in M-F were consistent with previous findings, indicating that males were more involved in masculine activities and females were more involved in feminine activities (Maccoby, 1998; Martin, et al., 1999). However, this doesn't mean that males do not show feminine characteristics or vice versa. As we mentioned above, the Gender Diagnosticity Approach (Lippa & Connely, 1990) states that M-F can exist within the sexes and any individual can be named as masculine or feminine based on gender-related indicators. Therefore, our findings related with femininity should not be perceived as 'femaleness'.

The experience of cyberbullying and cybervictimization among university students in North Cyprus was not rare. According to self-reports, the highest frequency among cyber-bullying items was "*Teasing about information or comments written on a forum site*" and the highest frequency among cyber-victimization items was "*Taking information from a personal computer (documents, photos, messenger*

conversations...etc.) without permission". We suggest that the cyberbullies in our sample used more direct/overt aggression towards the victims. This result can be related to the fact that, in our study, males were more involved in cyberbullying/cybervictimization. As mentioned before, there is a large body of literature relating to gender differences in direct vs. indirect forms of aggression which consistently shows that males engage in more direct aggression than females (Card et al., 2008).

Following *Indirect* and Interaction *Models of Risk and Resilience* (Masten, 2001), mediation and moderation analyses were conducted to test the protective role of independent self-construal between M-F and cyberbullying/cybervictimization. The results revealed that mediator and moderator role of independent self-construal between masculinity and cyberbullying was not significant. This result can arise from the link between independent self-construal and masculinity (Cross & Madson, 1997a; Kim, 1994; Nyman, 1997). In other words, independent self-construal was not found to be a protective factor between masculinity and cyberbullying because the association between the protective factor (i.e. independent self-construal) and the risk factor (i.e. masculinity) was positive.

On the other hand, independent self-construal had a significant mediator and moderator role between femininity and cybervictimization. In other words, people with stronger independent self-construal were cyberbullied less, even when they had feminine tendencies. As mentioned before, independent self-construal is an independent view of self as being unique, autonomous, and separate from the social context (Markus & Kitayama, 1991). On the other hand, femininity is characterized by warmth, sensitivity, nurturing, and interdependence (Maccoby, 1998; Young, & Sweeting, 2004). Considering these traits in individuals, according to our results, it seems that independent self-construal can be a protective factor while femininity is a risk factor for cybervictimization. The explanation for this finding may be in the previous findings indicating that Independent self-construal was related to higher self-competence and self-esteem (Diener & Diener, 2009; Oyserman, Coon, & Kemmelmeier, 2002; Tafarodi & Swann, 1996), and these constructs are negatively correlated with both traditional and cybervictimization (Patchin & Hinduja, 2010; Salmivalli, Kaukiainen, Kaistaniemi, & Lagerspetz, 1999; Wild, Flisher, Bhana, & Carl, 2004). Therefore, independent self-construal can be related to cybervictimization via psychological constructs such as self-esteem and self-competence, which decrease the effect of femininity as a risk factor. Similarly, coping strategies can be another potential mediator between independent self-construal and cybervictimization (Perren, Corcoran, Cowie, Dehue, Garcia, McGuckin et al., 2012). However, these suggestions need further empirical evidence to support them, and future research may consider examining the mediator roles of self-esteem, self-competence and coping strategies between independent self-construal and cybervictimization.

Moreover, independent self-construal could be associated with cybervictimization via communication behaviors. Namely, low-context communication, which involves the use of overt and direct messages, and high-context communication, which involves the use of implicit and indirect messages, can be used by individuals to different degrees (Hall, 1976). Gudykunst and Ting-Toomey (1998), and also Gudykunst et al. (1996) found that people with higher independent self-construal preferred to use more low-context communication. This communication style includes showing power, striving for one's own goals, expressing oneself, and being direct and precise, and is typically associated with independent self-construal (Markus & Kitayama, 1991; Schwartz, 1992). This self-construal can protect a person against victimization both in real and virtual contexts via low-context communication. However, empirical evidence is needed to support this suggestion.

Both mediation and moderation models indicated that higher scores in femininity were

correlated with increased cybervictimization. This result didn't indicate that females were more vulnerable to victimization the cyberspace. As mentioned before, the association between femininity and cybervictimization does not refer to gender differences, but to the characteristics of more feminine individuals. For example, keeping in mind that males were more often cyberbullied than females in our sample, we may suggest that males who have more feminine characteristics were more vulnerable to cybervictimization. There is growing empirical evidence indicating that males who show gender-atypical behaviors are more at risk to be victimized both in the real and in the virtual world (e.g. Hinduja & Patchin. 2011; Kumpulainen, Rasanen, & Henttonen, 2001; Young & Sweeting, 2004).

Another possible explanation for the femininity cybervictimization association is that females with higher feminine characteristics reported more victimization of cyberbullying than males (Hoff & Mitchell, 2009; 2010). The authors interpreted this skewed response as a result of gender socialization; that for females, being fragile and vulnerable is a normative feature and this normalization could make feminine females report victimization cases more easily than masculine males. Following these studies, we may suppose that "feminine" females in our sample might report higher cyber-victimization rates.

In sum, higher levels of femininity might be related to cybervictimization differently across genders. For males, atypical gender socialization might increase cybervictimization; on the other hand, typical gender socialization might facilitate females' reporting of cases of cyber-victimization. However, these suggestions need further empirical evidence.

This research has contributed to the literature in a number of ways. However, it was not free of limitations. First, all results depended on self-report data, and all the disadvantages of this method apply to our study, as well. For example, the incidence of reported cyberbullying and cybervictimization can be skewed because of social desirability. Yet Cook, Williams, Guerra and Kim (2012) reported in their review that self-report approaches result in higher reported prevalence rates of bullying than peer nominations. Second, the sample was relatively small and the majority was made up of Turkish-speaking students, which might have affected the results. Third, the design of the study was cross-sectional, making it difficult to draw casual lines. Next, although there is a growing literature focusing on positive aspects of femininity (e.g. Lazar, 2006; Walkerdine, 1989), most of the scales measuring femininity (including BEM Sex Inventory which we used in this research) still use the characteristics which stress vulnerability rather than resiliency. In other words, the association between femininity and cybervictimization may stem from the measurement tool we used. Therefore, this association must be retested by using other scales which focus on more positive features of femininity.

Lastly, this study didn't focus on the mediator-moderator role of interdependent self-construal and the associations between masculinity and cybervictimization and femininity and cyberbullying simply for practical reasons. Femininity and cyberbullying, in particular, can be associated via the well-known connection between relational bullying and femininity (Card et al., 2008) and the conceptualization of cyberbullying as a specific form of indirect bullying (Hemphill, et al., 2012; Li, et al. 2012). Future studies must examine these untested models to enrich the literature.

Conclusion and Implications

Research on cyberbullying as a relatively new form of traditional bullying has started only recently. There is now a considerable amount of literature about cyberbullying among adolescents. However, there is still very little research relating to this issue among university students and emerging adults. This research contributes to the literature by analyzing cyberbullying/cybervictimization among a group of university students in North Cyprus

and by testing the protective role of independent self-construal between masculinity-femininity and cyberbullying/cybervictimization. Our results might have some implications, especially for practitioners (i.e. psychologists, social workers, school counselors) who are working with vulnerable populations like victims of cyberbullying. Specifically, independent self-construals may be reinforced while relatively negative characteristics related to the concept of femininity might be diminished. These results can be used for prevention programs aiming to decrease victimization in cyberspace.

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Otobiyografik Öz

Fatih Bayraktar Doğu Akdeniz Üniversitesi Fen ve Edebiyat Fakültesi'ne bağlı Psikoloji Bölümü'nde Gelişim Psikolojisi alanında Yardımcı Doçent olarak görev yapmaktadır. Ayrıca Masaryk Üniversitesi'ne bağlı Çocuk, Genç ve Aile Araştırmaları Enstitüsü'yle işbirliğini sürdürmektedir. Araştırma alanlarından bazıları geleneksel ve siberzorbalık,ergenlerde olumlu ve olumsuz sosyal davranışlar ve medya psikolojisidir.

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