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Cyber-Victimization, Perceived Social Support and Interpersonal Trust among University Students

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ABSTRACT

The research aimed to assess the relationship between cyber-victimization, perceived social support and interpersonal trust among university students. This correlational research used a convenient sampling of N=251 university students in Islamabad of ages 18 to 25. Data was collected using Revised Cyberbullying Inventory II (RCBI-II), Multidimensional Scale of Perceived Social Support (MSPSS) and Rotter's Interpersonal Trust Scale. The analysis was employed using IBM SPSS Statistics 25. The results revealed correlation between cyber-victimization and interpersonal trust was positive, when controlling gender. Perceived social support and cyber-victimization were significant predictors of interpersonal trust. Independent sample T-test concluded that females and ages 22 to 25 possess high interpersonal trust as compared to other studied age groups. Implications of the results have relevance to society, public, as well as concerned authorities.

1. INTRODUCTION

Cyber victimization comes from being a victim of cyberbullying, which is a modern adaptation of bullying where the bully harms or coerces the victim through online forums. It is a rapidly expanding, active global affair (Ades, 2021). Cyber victimization is a predominant event in university students. There is an increase in access to the internet among university students, which makes them more vulnerable and provides them an opportunity to experience the events of cyber victimization (Lenhart et al., 2010). With reference to Pakistan, Kemp (2018) highlighted the young adults' preferences of electronic media in the Pakistani community, as the global community 51.5% young adults use mobile internet including 3.29 billion uses social media forums. With the influx of internet use and access, cyberbullying continues to stay on the rise (Israa, 2020). The unlimited access to internet and online services adds to the general concern.

Interpersonal Trust is stated as risk-taking and is supposed to be based on numerous factors (Mayer et al., 1995). Different consequences are drawn from trusting others. Positive consequences are expected to increase a trustee's perceived trustworthiness and overall tendency of trustor to trust, vice versa. Stemming from being a victim of cyberbullying, the individual learns to be less trusting of others. Youth who have been cyberbullied face more social difficulties and stress in comparison to those who have not been bullied (Nixon, 2014). The nature of the relationship between stress and trust is influenced by perceived social support. People who have higher levels of trust viewed

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their family and friends to be more supportive than those who have lower levels of trust (Grace & Schill, 1986).

Perceived Social support is different from received social support. Perceived social support is understood in terms of how an individual appraises their situation, which is not necessarily a true reflection of the support actually received (Eagle et al., 2019). Though cyber victimization experiences may increase the risk of developing low interpersonal trust, various theoretical models identify perceived social support as a primary defensive factor (Cohen & Wills, 1985; Swearer & Doll, 2001). Understanding the role of perceived social support to defend cyber victims from the adverse consequences of the events is vital. Perceived social support buffers the relationship in two ways. Firstly, it can decrease the insight of risk of being harm evaluated in a certain situation. Secondly, it can offer opportunities to individuals to handle and cope with the stressful events effectively (Cohen & Willis, 1985).

To understand the relationship of all three better, Stress-buffering model provides a suitable explanatory theoretical framework. It has been theorized that perceived social support serves as moderator between a stressor (e.g., cyber victimization) and negative outcome (e.g. atypical decrease in interpersonal trust), (Rueger et al., 2016). Perceived social support serves as a buffer that weakens the effect cyber victimization has on interpersonal trust in an individual. The link can also be seen using Social Ecological Theory (Ashiabi & O'Neal, 2015). Social ecological theory proposes that humans progress within a multi-layered "ecosystem" that supports their ability to form connections and develop. According to Bronfenbrenner (1979), individuals have direct interactions with their environments, such as families, schools, and peer groups. The theory states that the interconnected contextual factors encourage or prevent cyber victimization (Hong & Espelage, 2012). Students are more likely to be cyber victimized when they receive less or no social support which leads to behavioral change (e.g. low interpersonal trust). A lack of support from parents and a lack of supervision in online activities (Holt & Espelage, 2007) of students place them at a heightened risk of cyber victimization. Students who interact with supportive teachers and peers are more likely to attain positive progressive outcomes (Forster et al., 2020) such as students develop trust, respect and positive interpersonal relations (Espelage et al., 2014).

Cyber victimization, perceived social support, and interpersonal trust are interlinked with each other as findings from the literature suggested that cyber victimization is associated with both, interpersonal trust (But et al., 2019; Magsi et al., 2017; Pieschl & Porsch, 2017) and perceived social support (Holfeld & Baitz, 2020; Noret et al., 2020; Li et al., 2018; Wright, 2016; Mager, 2015; Tennant et al., 2015; Fredrick, 2015; Martins et al., 2017; Fanti et al., 2012; Dilmac, 2009; Davidson & Demaray, 2007; Williams & Guerra, 2007). Perceived social support is also linked with interpersonal trust (Hamid & Lok, 2000; Grace & Schill, 1986).

Furthermore, literature is also indicative of the moderating effect of the construct of perceived social support (Holfeld & Baitz 2020; Li et al., 2018; Wright, 2016; Tennant et al., 2015; Martins et al., 2017; Davidson & Demaray, 2007). The dynamics of a relationship between cyber victimization and interpersonal trust as well as perceived social support and interpersonal trust have not been examined by existing literature. Hence, determining the effect of these variables among university students is considered a significant area to be explored.

According to Pieschl and Porsch (2017), the relationship between cyber victimization and interpersonal trust is a complex one. To explore this convoluted relationship, a research study between these variables becomes pivotal. Additionally, little attention has been given to the moderating effect of social support on the connections between cyber victimization and difficulties in psychosocial adjustment (Wright, 2017) such as interpersonal trust. Cyberbullying is becoming more common than traditional bullying, and so its effects have a lot of room for research in the Pakistani context, as limited research has been conducted. Perceived Social Support acts as a protective factor. The accumulation of sources of support may be effective to decrease the hostile repercussions of cyber victimization (Li et. al, 2018). This makes it adamant to research this relationship. The aftermath of cyber victimization is a valid concern for the young population and there is an increasing trend, which is why this issue needs to be highlighted. Therefore, based on theories and the literature review, the proposed model for the study is given in Figure 1.

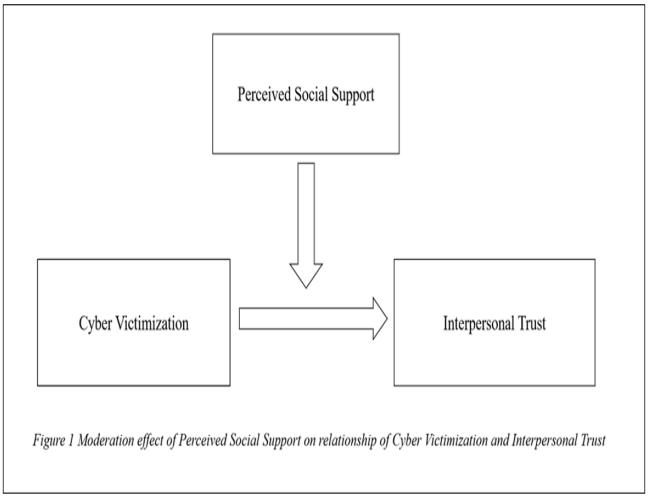

Figure 1 Moderation effect of Perceived Social Support on relationship of Cyber Victimization and Interpersonal Trust

Objectives

- To identify the relationship between cyber victimization and interpersonal trust among university students
- To investigate cyber victimization and perceived social support as predictors of interpersonal trust among university students.
- To explore whether perceived social support moderates relationship between cyber victimization and interpersonal trust
- To investigate which gender faces more cyber victimization
- To investigate which birth order faces more cyber victimization

Hypotheses

- H1 = There is likely be a negative relationship between

cyber victimization, perceived social support and Interpersonal Trust among university students.

- H2 = Gender, cyber victimization, perceived social support will likely to predict interpersonal trust among University Students.
- H3= Perceived Social Support will likely to moderate the relationship between Cyber victimization and Interpersonal Trust among university students.
- H4 = Female university students are more likely to become the victims of cyberbullying as compared to male students of university
- H5 = Students who are the middle child face a significantly higher level of cyber victimization as compared to other birth order

2. METHODOLOGY

Research Design

A Correlational study design was employed for this study.

Sampling Strategy

Convenience sampling was used for this study.

Participants

A sample of 251 students, including 93 men and 158 women, within the age range of 18 to 25 (Mage = 21.3, SD 1.45), were recruited from four universities of Islamabad. They were currently enrolled in Undergraduate degree programs.

Inclusion Criteria.

Individuals who have been cyber victimized at least more than once in the last six months

Exclusion Criteria.

Individuals with physical and mental disability; measured by including a close ended question in the demographic sheet

The following table showed the demographic characteristics of the participants.

Table 1
Frequencies and Percentages of the Demographic characteristics of sample (N=251)

Characteristics of Participant		(f)	(%)	(M)	(SD)
Age				21.3	1.45
	18 to 21	125	51%		
	22 to 25	123	49%		
Gender					
	Male	93	37		
	Female	158	36		
Birth Order					
	First Born	91	36		
	Middle Born	90	90		
	Last Born	66	26		
	Single Child	4	1.6		
Number of Friends					
	I have a lot of friends	73	29		
	I have a few close friends	161	64		
	I don't have close friends	17	6.8		
Relationship with parents					
	Satisfactory	199	79		
	Neutral	46	18		
	Unsatisfactory	6	2.4		
Relationship with friends					
	Satisfactory	187	75		
	Neutral	53	21		
	Unsatisfactory	11	4.4		
Cyberbullied					
	Yes	175	70		
	No	76	30		
Cyberbullied More than once					
	Yes	131	52		
	No	120	48		
Number of Active Social Media Platforms					
	1 to 5	182	73		
	6 to 10	67	27		
	More than 10	2	0.8		
Daily Duration of Social Media					
	Less than 1 hour	11	4.4		
	1 to 2 hours	49	20		
	3 to 4 hours	86	34		
	5 to 6 hours	57	23		
	7 to 8 hours	26	10		
	More than 8 hours	22	8.8		
Social Media Use on Weekly basis					
	All days of the week	197	79		
	Most days of the week	42	17		
	Usually on weekends	12	4.8		
Nature of Social Media Use					
	Alone	211	84		
	In-Group	17	6.8		
	Both	23	9.2		

Note: f = frequency, % = percentage, NUST = National University of Sciences and Technology, NDU = National Defense University

Table 2
Demographic Characteristics on gender (N=251)

		Males		Females	
		f	(%)	f	(%)
Have you ever been a victim of cyberbullying?					
	Yes	64	68.8	111	70.3
	No	29	31.2	47	29.7
Have you ever been cyberbullied on more than one occasion?					
	Yes	50	53.8	81	51.3
	No	43	46.2	77	48.7
Category of Number of Active Social Media Platforms					
	1 to 5	65	69.9	117	47.1
	6 to 10	26	28	41	25.9
	More than 10	2	2.2	0	0
Daily Duration					
	Less than 1 hour	5	5.4	6	3.8
	1 to 2 hours	22	23.7	27	17.1
	3 to 4 hours	25	26.9	61	38.6
	5 to 6 hours	23	24.7	34	21.5
	7 to 8 hours	10	10.8	16	10.1
	More than 8 hours	8	8.6	14	8.9
Weekly Duration					
	All days of the week	68	73.1	129	81.6
	Most days of the week	18	19.4	24	15.2
	Usually on weekends	7	7.5	5	3.2
Nature of use					
	Alone	84. 9	84.9	132	83.5
	Group	6.5	6.5	11	7
	Both	8.6	8.6	15	9.5

Note: f = frequency, % = percentage

Table 3
Demographic Characteristics on Birth Order (N=251)

		First Born		Middle Child		Last Born	
		f	(%)	f	(%)	f	(%)
Have you ever been a victim of cyberbullying?							
	Yes	66	72.5	66	73.5	41	62.1
	No	25	27.5	24	26.7	25	37.9
Have you ever been cyberbullied on more than one occasion?							
	Yes	48	52.7	47	52.2	34	51.5
	No	43	47.3	43	47.8	32	48.5
Category of Number of Active Social Media Platforms							
	1 to 5	67	73.6	67	74.4	46	69.7
	6 to 10	22	24.2	23	25.6	20	30.3
	More than 10	2	2.2	0	0	0	0
Daily Duration							
	Less than 1 hour	4	4.4	5	5.6	2	3
	1 to 2 hours	18	19.8	16	17.8	15	22.7
	3 to 4 hours	30	33	34	37.8	22	33.3
	5 to 6 hours	20	22	16	17.8	18	27.3
	7 to 8 hours	11	12.1	12	13.3	2	3
	More than 8 hours	8	8.8	7	7.8	7	10.6
Weekly Duration							
	All days of the week	68	74.7	71	78.9	55	83.3
	Most days of the week	19	20.9	14	15.6	8	12.1
	Usually on weekends	4	4.4	5	5.6	3	4.5
Nature of use							
	Alone	79	86.8	71	78.9	58	87.9
	Group	7	7.7	9	10	1	1.5
	Both	5	5.5	10	11.1	7	10.6

Note: f = frequency, % = percentage

Measures

Demographic Sheet.

This included Name, Age, Gender, Current Semester and Degree of Education, Current Educational Level, Name of University, Employment Status, Marital Status, Family Income, Family System, Number of family members, Number of friends, Relationship with parents, Relationship with friends, Parents alive or deceased, Parents' education, Parents' employment, and Birth Order. Furthermore, this includes history of cyber victimization, Number of electronic devices, Number of Social Media Platforms, Medium with worst experience, Daily and weekly usage, and nature of use.

Revised CyberBullying Inventory II (RCBI-II).

This scale was developed by Erdur-Baker and Kavşut in 2007 and revised by Topcu and Erdur-Baker in 2018. It consists of two forms, side by side, containing 10 statements. These items are to be responded to by the participant as both, the bully and the victim. This is done with the help of a four-point Likert type scale where 1 = never, 2 = once, 3 = twice or three times, 4 = more than three times. The responses of the participants are added at the end to attain a total score in each form. The Cronbach Alpha reliability coefficient for the cyberbullying form is 0.79 and for the cyber victimization form is 0.80 (Topcu & Erdur-Baker, 2018). In the current study, Cronbach's alpha reliability of cyber victimization scale is 0.79 showing good reliability. In this study, only cyber victimization subscale has been used, as per requirement. The lowest possible score is 10 and the highest possible score is 40, where higher scores stipulate more frequent cyberbullying and cyber victimization. Adding scores for all 10 items is the scoring key. English version of scale was used.

Interpersonal Trust Scale.

Rotter's Interpersonal Trust Scale is used to assess interpersonal trust (Rotter, 1967) and was used in a study on Cyberbullying, Self-Esteem, and Interpersonal Trust in Young Adults by Butt et al. (2019). The scale consists of 25 items in the form of statements. These items have a five-point Likert-type scale response format spanning between 1 "strongly agree" to 5 "strong disagree." A split-half reliability produced a score of r = 0.76 (Rotter, 1967). In this study the reliability of the scale is 0.72 which shows it is a good and reliable tool to measure Interpersonal Trust. In the scoring procedure, responses to the items of scale that worded in a "trustful" direction were reversed. Higher scores on the scale indicate high interpersonal trust. English version of the scale was used.

Perceived Social Support.

"Multidimensional Scale of Perceived Social Support" was developed by Zimet, Dahlem and Farley (1988), and has been used by Chan and Lee in their study on perceived social support and depression among work-related therapists during COVID-19 pandemic (2022) in Hong Kong. MSPSS has been used to measure supportive relationships within three areas: family (α= .82), friends (α= .80), and significant others (α= .87). The scale comprises 12 items including three subscales, consisting of four items for each subscale, which were averaged to yield a composite score of perceived social support. Each of the 12 items was assessed on a 7-point scale, ranging from 1 (very strongly disagree) to 7 (very strongly agree). The Cronbach's α coefficient of the scale was 0.88. The alpha reliability for this scale in the current study is 0.90 and for significant other subscales, family subscale and friend's subscales are 0.90, 0.86 and .77 respectively. This includes an Urdu version, but the research conducted made use of the original English version. For subscales, the respective four items were summated, and the result was divided by four. For the total scale, sum across all 12 items and was then divided by 12. English version of the scale was used.

Procedure

Pilot Study

A pilot study was conducted on a sample of 20 participants to assess language comprehension, feasibility and understandability of the scales. They were asked to rate the scale from 1 to 10, 1 being the most difficult and 10 being the easiest. The participants were satisfied with the scale (M=8.55, S. D=1.932).

Response Rate

A sample of 251 university students, currently enrolled in different universities of Islamabad, were invited to

participate in the research. A total of 300 questionnaires were circulated, out of which 251 were usable. Number of questionnaires given back were 293 and discarded were 40. Furthermore, 2 were incomplete and could not be utilized. The response rate was 97.6% but usable response rate was 83.6% which is favorable.

Main Study

Initially, the formal institutional permission was taken from the department of Professional Psychology in Bahria University Islamabad Campus. Then, permission from authors to use the scales was taken. All the scales were used in the English version. The scales used in the study were Revised Cyberbullying Inventory II (RCBI-II), Multidimensional Perceived Social Support Scale (MSPSS) and Rotter's interpersonal trust scale. Ethical considerations were strictly followed. After securing an informed consent from the participants, questionnaires were provided to be filled out. Participants were guided about the intent of the study and given a brief description about the research. The willingness of the participants was ensured along with their right to withdraw from the research. Problems in understanding the questionnaire and the purpose of the research were thoroughly solved and the participants were requested to provide accurate and honest responses. It was ensured that the participant's privacy and response confidentiality will be maintained. If, at any point, the participant was to feel distress due to reliving the trauma of being cyberbullied, the process was ceased, and therapy was recommended. Total duration of the research study was over the span of 4 months.

Results

Table 4 contains alpha reliability for the subscales and whole scales of RCBI-II, ITS and MSPSS scales. The reliability was in the range of .72 to .90, which is good to high. Reliability for RCBI-II and ITS, both, is reliable (.79 and .72 respectively). The Significant Other Subscale and Family Subscale of MSPSS is highly reliable (.90 and .86 respectively). The Friends Subscale has a good reliability (.77). Overall, the MSPSS Wholescale is highly reliable with (.90).

Table 4

Psychometric properties of study variables of the sample

Scales	No. of Items	α	M	SD	Range	Skewness	Kurtosis
RCBI-II	10	.79	13.94	4.63	10 – 40	1.74	3.23
ITS	25	.72	88.70	9.24	25 – 125	0.21	-0.59
MSPSS	12	.90	5.16	1.24	1 – 7	-0.67	-0.01
Significant Other Subscale	4	.90	5.05	1.73	1 – 7	-0.76	-0.44
Family Subscale	4	.86	5.25	1.44	1 – 7	-0.76	-0.11
Friends Subscale	4	.77	5.03	1.37	1 – 7	-0.63	-0.38

Note: ITS = Interpersonal Trust Scale, MSPSS = Multidimensional Scale of Perceived Social Support, RCBI = Revised Cyberbullying Inventory

The table 5 shows correlation analysis. Pearson Product Moment Partial Correlation when controlling gender was run to find the relationship between the variables in the study. Gender was used as a control variable. The results show that cyber victimization is significantly correlated with interpersonal trust. It has a weak positive correlation (.12) which indicates that more cyber victimization of an individual means higher interpersonal trust in them. Perceived Social Support shows a significant negative correlation with interpersonal trust. The correlation between them is also weak (-.15). The higher the perception of social support, the lower the level of interpersonal trust. The subscales of significant other, family and friends all have weak negative correlation. All subscales have significant correlation with interpersonal trust except friends subscale. Cyber victimization has weak negative correlation with Perceived Social Support (-.09) and it is not significant. For the subscales, it can be observed that all have weak negative correlation with all subscales: significant other, family and friends (-.02, -.11, and -.10 respectively). Relationship between cyber victimization and family subscale is significant. Interpersonal Trust has a weak negative relationship with perceived social support. The correlation is highly significant with family subscale (-.20), significant with significant other subscale (-.11) and not significant with friends subscale (-.04). MSPSS Whole scale has highly significant correlation with all of its subscales.

Table 5

Pearson Product Moment Partial Correlation when controlling gender analysis between the variables of Cyber victimization, Perceived Social Support and Interpersonal Trust (N=251)

Control Variables		1	2	3	4	5	6
Gender of the Participants	1. ITS Whole Scale	-	-.15*	.12*	-.11*	-.20**	-.04
	2. MSPSS Whole Scale		-	-.09	.87**	.75**	.83**
	3. RCBI Whole Scale			-	-.02	-.11*	-.10
	4. MSPSS Significant Other Subscale				-	.44**	.65**
	5. MSPSS Family Subscale					-	.43**
	6. MSPSS Friends Subscale						-

*Note: ITS = Interpersonal Trust Scale, MSPSS = Multidimensional Scale of Perceived Social Support, RCBI = Revised Cyberbullying Inventory, *p<0.05, **p<0.01*

A hierarchical linear regression table 6 was used to find predictors of Interpersonal Trust among university students. In Model 1 i.e. gender was entered as a predictor of interpersonal trust. The emerged regression model proved to be significant. This model predicted a total 3% variance in the outcome. In Model 2 i.e. Cyber Victimization was entered as a predictor of interpersonal trust. The emerged regression model was significant. It predicted a total 4% variance in the outcome. It is a positive predictor of interpersonal trust. Being cyber victimized results in an increase in interpersonal trust. In Model 3 i.e. Perceived Social Support was entered as a predictor of interpersonal trust. The emerged regression model was significant. It predicted a total 8% variance in the outcome. It is a negative predictor of interpersonal trust. Having perceived social support results in decrease in interpersonal trust.

Table 6

Hierarchical Linear Regression analysis with the study variables as predictors of Interpersonal Trust (N=251)

		95% CI							
Variables	B	LL	UL	SE	β	P	R	R^2	ΔR^2	F
Block 1						0.006	0.17	0.03	0.03	7.63
(Constant)	83.74	79.80	87.68	2						
Gender	3.25	0.93	5.57	1.18	0.17					
Block 2						0.004	0.2	0.04	0.01	5.59
(Constant)	80.21	74.80	85.62	2.75						
Gender	3.45	1.14	5.77	1.18	0.18					
RCBI	0.23	-0.01	0.47	0.12	0.12					
Block 3						0.000	0.29	0.08	0.04	4.64
(Constant)	86.55	78.86	94.24	3.91						
Gender	2.98	0.67	5.29	1.17	0.16					
RCBI	0.2	-0.04	0.45	0.12	0.1					
Significant Other Subscale	-0.49	-1.35	0.37	0.43	-0.09					
Family Subscale	-1.26	-2.13	-0.38	0.45	-0.2					
Friends Subscale	0.74	-0.34	1.82	0.55	0.11					

Note: RCBI = Revised Cyberbullying Inventory, MSPSS = Multidimensional Scale of Social Support

The following model showed the emerged model of regression showing the predictors of Interpersonal trust.

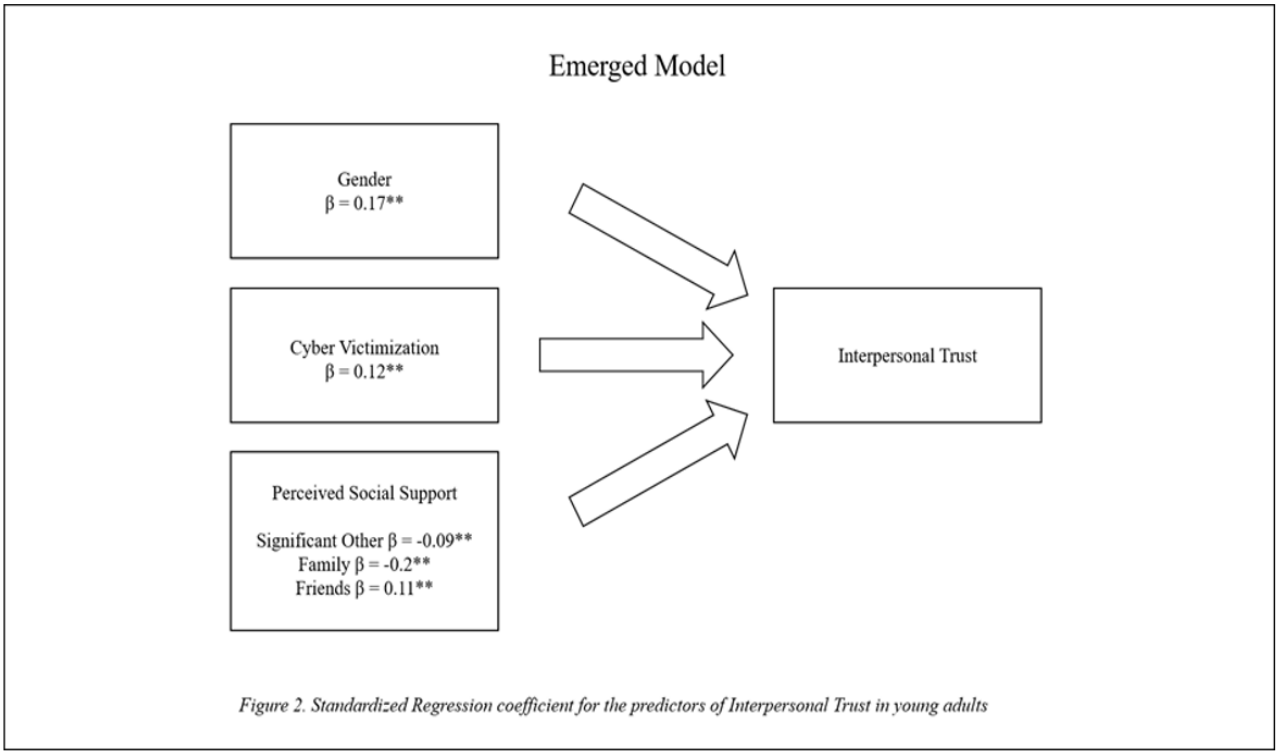

Figure 2. Standardized Regression coefficient for the predictors of Interpersonal Trust in young adults

Table 7 represents an independent sample T-test that was run in order to check gender differences among university students. 93 males and 158 females participated in the study. There was a significant gender difference in Interpersonal Trust. Females (M=90.24) have higher levels of interpersonal trust as compared to Males (M=86.99). 95% confidence interval has been used. Cohen's d value is low, with a magnitude of 0.36.

Table 7

Independent sample T-test showing gender difference (N=251)

	Male (n=93)		Female (n=158)				95% Confidence Interval		
Variables	M	SD	M	SD	t	p	LL	UL	Cohen's d
ITS	86.99	9.31	90.24	8.82	-2.76	0.006	-5.57	-0.93	0.36

Note: ITS = Interpersonal Trust Scale, M= mean, SD = Standard Deviation, LL = Lower Limit, UL = Upper Limit

Table 8 represents an independent sample T-test that was run in order to assess differences in category of age among university students. 128 students from the ages of 18 to 21, and 123 students from ages 22 to 25 participated in the study. There was no significant difference with respect to age, in Interpersonal Trust. Participants of ages 22 to 25 (M=89.64) have higher levels of interpersonal trust as compared to participants of ages 18 to 21 (M=88.45). 95% confidence interval has been used. Cohen's d value is very low, with a magnitude of 0.13.

Table 8
Independent sample T-test showing difference in categories of age (N=251)

	18 to 21 (n=128)		22 to 25 (n=123)				95% Confidence Interval		
Variable	M	SD	M	SD	T	p	LL	UL	Cohen's d
ITS	88.45	9.94	89.64	8.18	-1.04	0.30	-3.45	1.07	0.13

Note: ITS = Interpersonal Trust Scale, M= mean, SD = Standard Deviation, LL = Lower Limit, UL = Upper Limit

Table 9 demonstrates moderation effect. In this model, Perceived Social Support acted as a moderator which influenced the relationship between cyber victimization (IV) and interpersonal trust (DV). $\Delta R^2 = 0$, which means that perceived social support added 0% additional variance in the relationship between the IV and DV of this study. The results show that there was no significant interaction effect of perceived social support and its subscales on the relationship between cyber victimization and interpersonal trust. This further concludes that no moderation was found. There was no emergence of a significant moderator.

Table 9
Moderating effect of Perceived Social Support on the relationship between cyber victimization and interpersonal trust (N=251)

Variables			95% Confidence Interval				
	B	SE	LL	UL	R^2	P	F
					0.3	0.06	2.49
Constant	89.04	0.57	87.91	90.17			
RCBI	0.18	0.13	-0.074	0.43			
MSPSS	-1.03	0.46	-0.194	-0.12			
ITS	0.01	0.09	-0.17	0.19			
Interaction					$\Delta R^2 = 0$	0.91	0.01

Note: ITS = Interpersonal Trust Scale, MSPSS = Multidimensional Scale of Perceived Social Support, RCBI = Revised Cyberbullying Inventory,

Discussion

The present research aims to assess the relationship between cyber victimization, perceived social support, and interpersonal trust among university students. The results showed that there is significant weak positive relationship between cyber victimization and interpersonal trust. This result is consistent with the previous research by Butt et al. (2019) which maintained that as cyber victimization experience among university students increases, interpersonal trust in other people around them also increases, respectively. The result is also in line with the Pakistani cultural context, where the scale used for research was not according to Pakistani culture because these were developed by international authors. In other words, an increase in cyber victimization may be predicted to increase or decrease in interpersonal trust. This complex relationship was supported by research conducted by Pieschl and Porsch (2017) who reported mixed findings and determined a more complex relationship between cyberbullying and trust than expected.

Furthermore, results suggested that there is an insignificant weak negative relationship between cyber victimization and perceived social support. Previous research also indicated that those who experience more cyber victimization, there was a negative weak relationship among perceived social support and depression symptoms. As experiences of cyber victimization increased, the useful effect of perceived social support weakened (Li et al., 2018). In addition, research by Holfeld and Baitz (2020) also supported the result as revealed strong association of more cyber victimization experiences with internalizing symptoms when less peer and family support was reported. Dilmac, (2009) also found that perceived social support negatively predicted cyber-victimization. With respect to the cultural setting of Pakistan, those who have less perceived support from others are viewed as helpless and unprotected, which makes them less secure and more vulnerable to cyber victimization. The results showed that there is a significant weak negative relationship between perceived social support and interpersonal trust. This is a new finding explored in the results, no significant indigenous and international literature is available on it.

Regression results showed that interpersonal trust was significantly positively predicted by cyber victimization. It indicates that students who experience more events of cyber victimization are likely to have more interpersonal trust. These findings are consistent with Pakistan culture as students who suffer from cyber victimization also experience adverse consequences such as depression, so many people trust others and communicate their issue with them to receive social support to cope with stress more effectively. Empirical evidence also suggested that cyber victimization is a significant positive predictor of interpersonal trust (Butt et al., 2019). Furthermore, results also showed that interpersonal trust was negatively predicted by perceived social support which indicated that students receiving more perceived social support had possessed less interpersonal trust. According to the Pakistani cultural, if students get enough support from their family, friends, and significant others, they don't need to gain trust from external sources as they have a strong and reliable support system from people around them. Stress-buffering model strongly supports the results which states that perceived social support serves as the buffer which changes the relationship between two variables.

Findings also indicated that perceived social support did not likely buffer the relationship between cyber victimization and interpersonal trust. Some of the previous studies also indicated the same results as Tennant et al. (2015) showed that the relationship between cyber victimization and depression was not moderated by perceived social support. Similarly, Mager (2015) showed that the moderating effect of social support was not found between direct relationship of cyber-victimization with

depression as well as social anxiety. These findings are also in line with Pakistani culture which shows that perceived social support is not enough to buffer the association between cyber victimization and interpersonal trust. The negative consequence of being cyber victimized can be overcome by enhancing perceived social support. Cyber victimization leads to many negative outcomes in future such as depression, poor mental wellbeing, suicidal intents, etc., so along with strong perceived social support other greater measures need to be taken such as effective therapies, counseling, and awareness sessions to minimize the adverse effects of cyber victimization.

Results also reported that female university students are more likely to be cyber victimized as compared to male university students. In Pakistani culture, females trust more on others than males that is why they are more vulnerable to cyber victimization. Furthermore, women remained quiet and did not report such cyber victimization experiences to their families, friends, and higher authorities because of being considered immoral. This increases the risk for future cyber victimization in female university students. Empirical evidence found that females were more likely to report themselves as victims of cyberbullying than males (Musharraf et al., 2018).

Results indicated that a significantly high level of cyber victimization is experienced by middle born participants as compared to first born or last born. The results are also supported by Tharbe and Harun (2000) that the middle-born individual is the least aggressive than first born and last born and least concerned with having control which suggests that they have an approachable personality type. Therefore, middle born are more likely to be victimized as they are less aggressive, so they do not fight back when experiencing events of cyberbullying. Thus, they are more easily cyber victimized than first and last born.

Strengths

Perceived Social Support does not significantly moderate the relationship between cyber victimization and interpersonal trust. This is a strength because this finding proves that perceived social support in itself is not enough and more interventions are necessary.

Limitations

- Due to data being self-reported, measurement errors as well as boredom effects may affect the results of the study. Furthermore, data was collected in university settings, thus social desirability can also take place where there was presence of peers.
- Since the content of the items of the victimization scale was undisguised, the participants could have faked to look good on their responses.
- Data was collected from four universities located in Islamabad, three of which were in close proximity to one another. People in closer localities might exhibit similar characteristics and behaviors. This limits the study's ability to generalize the results in all areas of Islamabad.

Recommendations

- Research on older young adults; more than 25 years of age.
- Conduct research on more educational institutions located in different cities of Pakistan.
- Conduct qualitative research to gain in-depth and detailed information. And to understand correlation results better.
- New variables (adverse negative effects, personality etc.) may be used.
- Appropriate screening tools may be used in future for determining if a participant has been cyber victimized. Current study solely depends on the integrity of participants.
- Some of the items might be very open, and participants could have responded by faking good. There is a need for indigenous scales that are appropriate according to our culture.
- More research should be conducted to understand the complex relationship between cyber victimization and interpersonal trust since previous research proves that this relationship produces both positive and negative correlation in different circumstances.

Implications

The results of the current study should be communicated to universities students via seminars and workshops to increase awareness about the preventive measures, coping strategies and harmful outcomes of cyberbullying. The findings will contribute to future research and practices in helping teachers at educational institutes, mental health practitioners and policy makers to know about the prevalence and adverse psychological effects. The present study can be used by the teachers in developing programs to identify perpetrators of cyberbullying and to facilitate and deal with victims of cyberbullying. Authorities in educational institutions could take steps to improve the counseling services to ensure the mental health of the students. Parents should ensure open communications, addressing the problems faced by adults, and providing support to the students.

Conflict interests

The authors has declared that no competing interests exist.

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