

Parental Rejection, Depression, and Internet Addiction Among Young Adults

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The present study tested whether relation between parental rejection and internet addiction was mediated through depression. Two hundred and thirty university students, ranging in age from 18 to 25 years, responded to the Adult versions of the Parental Acceptance-Rejection Questionnaire for fathers and for mothers (Uddin & Aktar, 2015), Beck Depression Inventory (Uddin, 2013), and Internet Addiction Test (Uddin & Sultana, 2016), along with a Personal Information Form. Results of independent sample *t*-test indicated significant gender differences in paternal rejection only. Bivariate correlations showed that parental rejection was positively associated with depression and internet addiction. Multiple regression analysis revealed that mother and father rejection jointly explained about 26% variance in depression and 21% variance in internet addiction of both female and male university students. Mediation analysis showed that depression partially mediated the relation between parental rejection and internet addiction.

Keywords. Parental rejection, depression, internet addiction, young adults

Internet has become an inseparable part of modern way of life, bringing numerous benefits in terms of living, doing and working grounds. In recent years, over the world pervasiveness of Internet use has increased strikingly. Accompanying with all the benefits and positive outcomes in our daily life the Internet brings; problems of excessive uses or misuses are also becoming apparent. For better understanding of Internet addicted behaviors, many researchers have attempted in quest of its symptoms, attempted to sketch the characteristics of addicts, conceptualized its qualifications and

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consequences, and suggested measurement items correspondingly (Byun et al., 2009).

In contemporary society approximately 40% of the world population is online (Kuss, Griffiths, Karila, & Billieux, 2014). A background reason for the excessive amount of time people spend using e-mail, discussion forums, chat rooms, blogs, and online games is the capacity of the Internet for socialization. Whenever Internet addicts feel overwhelmed, stressed, depressed, lonely or anxious, they use the Internet to seek solace and escape from depression (Kim & Davis, 2009). Rejection from parents is found to be depressingly associated with various behavioral problems in children. Negative parenting and rejection are major variables that influence the development of children and their mental and psychological health during adolescence and adulthood (Yoshizumi, Murase, Murakami, & Takai, 2007).

Although the Internet is a beneficial tool for youth, some children and adolescents are at risk of being victimized online (Palfrey & Gasser, 2008). Some online users were becoming addicted to the Internet in much the same way that others become addicted to gambling, drugs and alcohol (Leung, 2004). Concerns have been articulated that unwarranted Internet use has been measured problematic, and has been associated with declines in communication with family members and declines in the size of a person's social circle. With so many health risks connected with problematic Internet use, Internet addiction has become a modern syndrome (Leung, 2008).

Parental rejection is a major aspect in the development of Internet addiction in young adults as well as depressive symptoms in adolescents. Researches on Internet addiction have just begun and most of the findings are from western cultures. Especially, data are not available from a collectivistic or conservative society such as from Bangladesh. But the use of the Internet in Bangladesh has increased considerably and brings a great matter about Internet addiction in recent years. Similar to the findings of the previous study that has done in the Western cultures; in Bangladesh, excessive Internet using might be the cause of parental rejection which in turn has a relationship with depression in young adults. It is, therefore, essential to conduct a study to examine Internet addiction in the young adults of Bangladesh. Specifically, the present study is designed to investigate the relationship among parental rejection, depression and Internet addiction of young adults in Bangladesh.

The specific objectives of the present study were, to investigate whether parental rejection, depression, and internet addiction are

associated with one another; to investigate whether parental rejection predicts depression in young adults; to investigate whether parental rejection predicts internet addiction in young adults; and to investigate whether depression mediates the relation between parental rejection and internet addiction.

Hypotheses

The following hypotheses for the current study were formulated:

1. Parental rejection, depression, and internet addiction will be positively associated with one another.
2. Depression will mediate the relationship between parental rejection and internet addiction.

Method

Participants

The present study consisted of 230 young adults comprising of 115 men and women selected from the University of Dhaka. They were selected from different departments through convenience sampling technique. Their ages ranged from 18 through 25 years with a mean age being 20.90 years ($SD = 1.48$). Most of the participants were Muslims (82.6%) and unmarried (97.8%). Majority of the participants (93.9%) identified themselves coming from middle class family background. Their parental education level varied from primary through tertiary level. About 70.9% of the respondents were from nuclear family, and 29.1% were from joint family setup.

Measures

All participants in this research responded to the following four self-report questionnaires along with the demographic form. All questionnaires were translated into Bangla language. The four measures and a demographic form include:

The Adult Version (short form) of Parental Acceptance and Rejection Questionnaire for Mothers and Fathers (Adult PARQ: Mothers and Fathers). Bangla versions (Uddin & Aktar, 2015) of the Adult PARQ: Mothers and Fathers (Rohner, 2005) were used to assess children's perceptions about their maternal and paternal acceptance

and rejection. The mother and father versions of the Adult PARQ short form are self-report measures consisting of 24 items designed to assess adult's perceptions of maternal and paternal acceptance, respectively. The two versions are virtually identical except for reference to mother's behavior versus father's behavior. Both inquire respondents to reflect on their mothers' or fathers' behavior toward them. Both the questionnaires measure adult's perceptions of maternal and paternal warmth/affection, hostility/aggression, indifference/neglect, and undifferentiated/rejection. Examples of scale items on both version of the PARQ short form include, "My mother/father made me feel wanted and needed" (perceived warmth or affection); "My mother/father went out of her/his way to hurt my feelings" (perceived hostility or aggression); "My mother/father paid no attention to me as long as I did nothing to bother her/him" (perceived indifference or neglect); "My mother/father seemed to dislike me" (perceived undifferentiated or rejection). In this study, the alpha coefficient for the Adult PARQ Mother was .83 and that of the Adult PARQ Father was found to be .89.

The sum of the four PARQ scales (with the warmth/affection scale reverse-scored to create a measure of coldness/lack of affection) constitutes a measure of overall perceived maternal and paternal acceptance-rejection. The possible scale score ranged from 24 to 96 with midpoint of 60. Score at or above the scale midpoint indicates more parental rejection than acceptance and below the midpoint indicates more parental acceptance than rejection. The PARQ has been used in over 2000 studies worldwide and is known to have high reliability and validity for use in cross-cultural research (Khaleque & Rohner, 2002a, 2002b; Rohner, 2005).

Beck Depression Inventory (BDI II). The Beck Depression Inventory is a 21-item; self-report rating inventory that measures characteristic attitudes and symptoms of depression (Beck et al., 1961). Bangla version (Uddin, 2013) of the Beck Depression Inventory which was originally developed by Beck et al. (1961) was used in this study. The BDI takes approximately 10 minutes to complete, although respondents require a fifth-sixth grade reading level to adequately understand the questions. Internal consistency for the BDI ranged from .73 to .92 with a mean of .86. Score rated on a 4-point scale ranging from 0 to 3 based on the severity of each item with total score ranging from 0 to 63 where score 0 to 13 indicates minimal depression, 14 to 19 indicates mild depression, 20 to 28 indicates moderate depression, and 29 to 63 indicates severe depression. The BDI demonstrates high internal consistency, with alpha coefficients of

.86 and .81 for psychiatric and non-psychiatric populations, respectively (Beck, Steer, & Garbin, 1988). In this study, alpha coefficient of .76 was acquired for the Beck Depression Inventory.

Internet Addiction Test (IAT). The Bangla Internet Addiction Test (Uddin & Sultana, 2016) which was originally developed by Young (1996) was used. It comprises of 18 items and each of the items is rated on a 5-point response format ranging from 1 (*rarely*) to 5 (*always*). Possible score range was 18-90 with higher score reflect greater level of Internet addiction. Based on the severity of addictive behavior, individuals on the IAT can be classified as minimal users (18-35), moderate users (36-62), or excessive users (63-90). However, in this study, a 6-point response format ranging from 0 (*does not apply*) to 5 (*always*) was used (Young, 1998) with minimum obtainable score was 0 while maximum was 100. In this response format of 18-item IAT, individuals were classified as normal users (0-17), minimal users (18-44), moderate users (45-71), or excessive users (72-100). The internal consistency of the original IAT was .92; while in the present study, an alpha coefficient for the Bangla Internet Addiction Test was found to be .84.

Personal Information Form (PIF). The PIF elicited demographic, personal, and social information about respondent's gender, age, grade in school, academic achievement, number of siblings, birth order, family size, parental education, parental occupation, family socioeconomic status, religious affiliation, and types of family setup.

Procedure

To acquire main data, subjects were recruited from University of Dhaka. The administration was done in group situation. There were two groups, male and female and in data acquisition there were either two or three persons in each group at a time. For taking consent at the beginning, each participant was briefed about the general purpose of the study and assured that their responses would be kept confidential and used only for research purposes. Participants were given general instructions verbally, and were asked to read carefully the standard instructions of how to respond. Also further clarifications were done whenever they faced any problems in understanding the items. After completion of all items they were asked to provide general demographic data. It took 30 minutes on average to complete the

questionnaires. On completion, every respondent was given a token gift with thanks for their participation in the study. Thus, the survey was administered and data were collected over a 6-week period from all the participants.

Results

In order to test the significance of the difference between male and female students in maternal rejection, paternal rejection, depression, and internet addiction, independent sample *t*-tests were calculated. Results of *t* tests show that there are no significant gender differences in maternal rejection ($t = -.88, p > .05$), depression ($t = -.85, p > .05$) and internet addiction ($t = -.44, p > .05$). However, significant gender difference existed on paternal rejection ($t = -2.83, p < .02$). Results also show that both male and female students perceive their parents as accepting, but on average, women perceives their mothers (female: $M = 40.73, SD = 10.79$; male: $M = 41.94, SD = 10.06$) and fathers (female: $M = 38.77, SD = 12.67$; male: $M = 43.39, SD = 12.12$) as more accepting than male students. Likewise, on average male students reported themselves as more depressed (female: $M = 12.55, SD = 5.35$; male: $M = 13.14, SD = 5.26$), and more addicted to internet (female: $M = 20.25, SD = 11.77$; male: $M = 20.89, SD = 10.09$) than female students. Because of non significant gender differences in most of the major variables, all further analyses were performed on the entire sample.

In order to explore the relationships among the variables, Pearson Product Moment correlation was computed.

Table 1

Correlation Matrix for All Study Variables (N = 230)

Variables	Maternal Rejection	Paternal Rejection	Depression	Internet Addiction
Maternal Rejection	-	.36*	.44*	.39*
Paternal Rejection		-	.40*	.37*
Depression			-	.66**
Internet Addiction				-

* $p < .01$. ** $p < .001$.

Results show in Table 1 indicated that maternal rejection was positively correlated with paternal rejection, depression, and internet addiction. Paternal rejection was positively related with depression and internet addiction; while, depression was positively related with internet addiction.

From Table 1, it can be said that, the more rejecting young adults perceive their parents, the more they are depressed and addicted to internet. The result also shows that both male and female students are more depressed and addicted to internet if they perceived their mothers as more rejecting than their fathers.

In order to achieve the second and third objectives, multiple regression analysis is calculated using parental rejection as predictor variable and depression and internet addiction as criterion variables. Results presented in Table 2, shows that parental rejection explain approximately 26% and 21% of the variance in depression and internet addiction, respectively of young adults.

Table 2

Multiple Regression Coefficients of Parental Rejection on Depression and Internet Addiction of Young Adults (N = 230)

Criterion Variables	R	R ²	F	β	SE	p
Depression	.51	.26	39.40	.96	4.59	.001
Internet Addiction	.46	.21	29.96	-1.48	9.78	.001

To explore whether depression mediates the relation between perceived maternal and paternal rejection and internet addiction, we regressed respondents' internet addiction on their remembered maternal and paternal rejection in childhood and depression jointly for young adults.

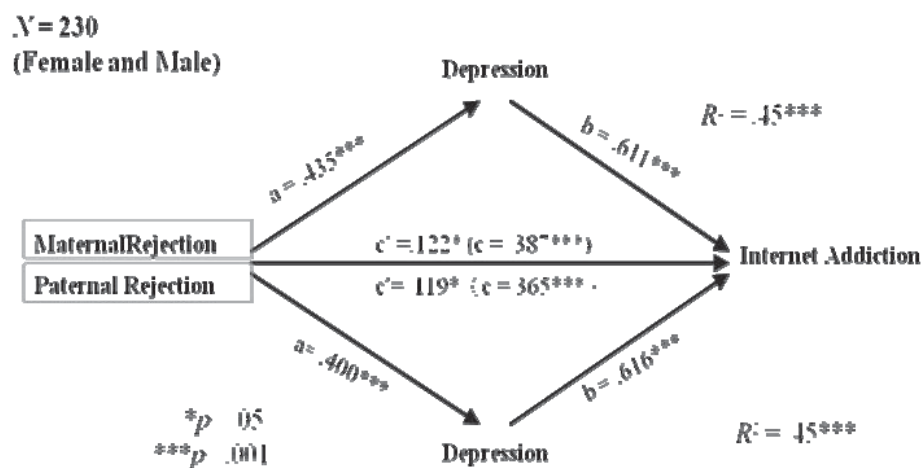


Figure 1. Path diagram showing mediating effect of depression in the relation between parental rejection and internet addiction for young adults.

Figure 1 shows significant independent effects of maternal rejection ($\beta = .387$, $p < .001$) and paternal rejection ($\beta = .365$, $p < .001$) on internet addiction of young adults. When depression was included in regression analysis, the independent effect of maternal rejection reduces to $\beta = .122$ ($p < .05$) and paternal rejection reduces to $\beta = .119$ ($p < .05$). That is, depression partially mediates the relation between maternal and paternal rejection and internet addiction in young adults. The results of Sobel test show the significant mediation effect of depression in the relationship between maternal and paternal rejection and internet addiction of both male and female students. Figure 1 also shows that maternal rejection and depression can significantly explain 45% of the variance in young adults' internet addiction and paternal rejection and depression can significantly explain 45% of the variance in young adults' internet addiction.

To test the significance of mediation effect of depression between parental rejection and internet addiction for both male and female, Sobel test was calculated. For maternal rejection, the test statistics of Sobel, Aroian and Goodman were 6.15 ($p < .01$), 6.13 ($p < .01$), and 6.17 ($p < .01$), respectively. For paternal rejection, the test statistics of Sobel, Aroian, and Goodman were 5.63 ($p < .01$), 5.61 ($p < .01$), and 5.65 ($p < .01$), respectively. All these values indicated that the mediation effect of depression between parental rejection and internet addiction have been significant.

Discussion

The present study was designed to explore four research objectives. The first objective of this study was to explore the relationships among remembered maternal rejection, paternal rejection, depression, and Internet addiction. Results show that there were non significant gender differences among most of the major variables, that is, maternal rejection, depression, and Internet addiction. In case of paternal rejection, significant gender differences were found and results indicating that, more rejecting the young adults perceive their mother and father to be, the more they were depressed. In addition, the more rejecting the young adults perceive their parents to be, the more they were addicted to Internet. Results also show that the more the young adults perceive themselves as depressed the more they were addicted to Internet. The findings about depression can be a cause of parental rejection and internet addiction can be a cause of parental rejection have been consistent with that of few other studies which showed that depression, maternal rejection, paternal rejection,

and Internet addiction were positively correlated with one another (Huang et al., 2010; Lin, Lin, & Wu, 2009; Xiuqin et al., 2010).

The second objective was to explore whether parental rejection can predict depression in young adults. Results showed that parental rejection can significantly predict depression in young adults. These findings are also supported by the previous studies (Robertson & Simons, 1989; Rothbaum & Weiz, 1994; Yoshizumi, Murase, Murakami, & Takai, 2007) which showed that maternal, and paternal rejection were significant predictors of depression of children.

The third objective was to explore whether parental rejection predicts Internet addiction in young adults. Results showed that parental rejection can significantly predict Internet addiction in young adults which are consistent with the previous studies (Ahmadi, Abdolmaleki, Afsardir, & Esmaili, 2010; Shayesteh, 2014) which showed that maternal and paternal rejection were significant predictors of Internet addiction of young adults.

The fourth objective of the present study was to explore whether depression mediates the relation between parental rejection and Internet addiction. There were two different significant findings about this research objective. First, results show that depression partially mediates the relationship between maternal rejection and Internet addiction for young adults. These findings are consistent with the findings of Puig-Antich (1985) asserting that higher rejection from mothers of six to twelve year's old depressed children in comparison with the non-depressed children because mothers play a vital role at this age of their children. Lefkowitz and Tesiny (1984) found positive correlation between maternal rejection and depression as assessed by mother, peer, and self. The researchers also argued that paternal rejection predicted depression in daughters but not in sons.

Further, depression has partial mediating effect in the relationship between paternal rejection and Internet addiction for young adults. These findings are supported by the findings of Najam and Kausar (2012). They found that father's hostility and rejection had significant positive relationship with hostility, depression and conduct problems in adolescents. Father's hostility and lack of involvement emerged as significant predictors of conduct problems in adolescents. Children need fathers' affection along with mothers. If they feel rejected by their father they may feel insecure and because of this feeling they may lead to depression. Baron and MacGillivray (1989) found relationship between perceived rejection from parents and depressive symptoms in adolescents. They found father's rejection as the most powerful predictors of depressive symptoms in the adolescents.

Similarly, Hammen (2005) reported childhood parental rejection as the strongest predictor of depression in adults and adolescents.

Results in this study indicate that, parental rejection in childhood and adolescent cause depression which in turn causes internet addiction among them in their adulthood. These findings are supported by the findings of Agnew (2003) who describes adolescence as a phase of stress, conflict and detachment between parents and a child. During adolescence period, the child wants autonomy and shows rebellious behavior. If they feel rejection from their parents, they develop different maladjusted behaviors resulting in hostility, aggression, negative worldview and depression. Another research conducted by Moazedian (2014) found that parenting style is significantly predictor of problematic Internet use and authoritarian parents' style was associated with problematic Internet use. All these results suggest that less than optimal parenting behaviors can cause depression which in turn increases the probability of adolescents' problematic Internet use.

Supportive studies on parental rejection, depression, and Internet addiction among young adults are not found as no such type of studies took place. There are many researches on parental rejection and depression as well as depression and Internet addiction in young adults, but no such research that supports that depression mediates the relationship between parental rejection and Internet addiction in young adults. This study attempts to shed light on the linkage among the variables that were not studied before.

Limitations and Suggestions

The present study has several limitations. First, the data was based only on self-report questionnaires which may limit the variability in responses. Second, information about early rejection relationships is based only on reminiscence of childhood experiences. Third, the sample was taken from a particular university for which generalization over the whole population might be delimited. Sample size was small and limited only to Dhaka University students. Fourth, samples were selected purposively, but using randomized sampling technique would have increase the generalization power and the sample would be more representative. So, more intensive research involving larger area based sample is necessary for better understanding.

Implications

Despite the above limitations, the findings of the present study can be important in a number of ways. The present study enriches our understanding about the process through which parental rejection causes depression and Internet addiction of young adults. The present findings also may be useful to researchers and practitioners in parental rejection management area. Present research will be helpful for parents and clinicians of Bangladesh to understand the possible links of parental rejection and development of depression and Internet addiction in both boys and girls so that we can see better generation in future. This study also shows that inappropriate parental rearing styles are intimately related to adolescents' level of depression and Internet addiction. This suggests that warm relationship in family decreases the level of Internet addiction, while low kindness in the family structure raises the level of addiction. Thus, this study suggests that parents should provide a supportive and appropriate structure in family to prevent adolescents from the Internet addiction. However, the present study revealed heuristic values for future research and theory development by illustrating the relationship among parental rejection, depression and Internet addiction.

Conclusion

Findings based on independent sample *t*-test indicated significant gender differences in paternal rejection only. Bivariate correlations showed that parental rejection was positively associated with depression and internet addiction. Multiple regression analysis revealed that mother and father rejection jointly explained about 26% variance in depression and 21% variance in internet addiction of both female and male. Mediation analysis showed that depression partially mediated the relation between parental rejection and internet addiction. Results of Sobel test showed that the mediation effect of depression between parental rejection and internet addiction was significant.

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