

Attachment Styles, Facebook Addiction, Dissociation and Alexithymia in University Students; A Mediational Model

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Abstract

Background: Attachment theories of Bowlby (1969); and Ainsworth (1979) are broadly applied approaches for comprehending emotional attachment and dissociation, as well as alexithymia in people. These frameworks have also been used multiple times to explain social media addiction. However, aside from theoretical suggestions and recommendations, there was a lack of empirical studies on aforementioned subject. Therefore, the purpose of the current investigation was to examine the mediating role of alexithymia and dissociation in the relationship between attachment styles and Facebook addiction in university students of Pakistan. Furthermore, the study aimed to evaluate the association between attachments styles, alexithymia, dissociation and Facebook addiction.

Methods: Purposive sampling technique was used bases on cross-sectional study design. The Toronto Alexithymia Scale-20, Facebook Addiction Scale, Dissociative Experience Scale, and The Revised Adult Attachment Scale were applied using a survey method to a sample of 300 university students who used Facebook (Male, $n=162$, female, $n=148$) with age range between 18 to 25 ($M=22.43$, $SD=1.04$) years from different universities of Rawalpindi and Islamabad, Pakistan.

Results: The study findings revealed that secure attachment style was negatively related to alexithymia and Facebook addiction but it was positively associated with dissociation in university students. Furthermore, intimacy attachment style was negatively related to alexithymia but was positively associated with Facebook addiction and dissociation in university students. However, alexithymia was observed to be positively associated with dissociation in university students. Additionally, the results demonstrated that both alexithymia and dissociation partially mediated the relationship between secure attachment style and facebook addiction in university students. Mediation analysis suggested that secure attachment style was associated with higher level of Facebook addiction as dissociation and alexithymia enhanced the Facebook addiction in university students.

Conclusions: This study's results findings recommended that secure attachment style is negatively related to Facebook addiction and influence dissociation and alexithymia in the sample of university students.

Keywords: Dissociation, alexithymia, attachment style, and face book addiction.

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Background

There has been found the association between Facebook addiction and attachment styles, alexithymia, and dissociation in different sample of alcohol use disorder inpatients, and internet user globally (Blackwell et al., 2017; Demircioglu & Kose, 2020; Lyvers et al., 2020; Mohebi et al., 2020; Remondi et al., 2020; Tavakoli, Jamhari, & Noor, 2015; Thorberg et al., 2009, 2011; Tobin & Graham, 2020; Zdankiewicz-Ścigała & Ścigała, 2018). Alexithymia is referred as a trouble in communicating and identifying feelings, problems in distinguishing feeling, thoughts and somatic emotional arousal's sensations, a decrease of imagination and fantasy, and an outwardly oriented intellectual ability (Nemiah, 1976). More than 50% of persons with alcohol use disorders and any other addiction also have symptoms of alexithymia. An assumption developed base on a personality theories that is associated alexithymia with attachment difficulties or emotional regulation in adults (Thorberg et al., 2009, 2011). Prior studies found that alexithymia has linked to higher level of alcohol problems and addiction in adults (Thorberg et al., 2009).

The attachment theories are a broadly applied approach for comprehending emotions' regulation and attachment (Ainsworth, 1979; Bowlby, 1988; Bowlby, 1969, 1988; John Bowlby, 1973), alexithymia, and dissociation (Zdankiewicz-Ścigała & Ścigała, 2018), as well as this frame work has also been used to comprehend Facebook addiction in Facebook user University Students. Attachment theories explained that early attachment and experiences with authority figure are vital for the growth and help out to comprehend emotion's regulation, communication, and dealing with social and family situations (Bowlby, 1988; Bowlby, 1969, 1988; John Bowlby, 1973; Cassidy, 1994; Cooper et al., 1998; Laible et al., 2000; Mikulincer & Shaver, 2007; Sroufe & Fleeson, 1986; Zdankiewicz-Ścigała & Ścigała, 2018). Attachment styles developed in early age are linked to those which are displayed by individuals in adolescents and old age in close romantic affairs. Attachments in adulthood are comparatively stable and constant, as well as they impact or influence emotions, attitudes, feelings, behavioral planning in romantic relationship, and emotion's self-regulation processes (Hazan & Shaver, 1987; Mikulincer & Shaver, 2007).

Previous studies indicated an association between difficulties pertaining to regulating and understanding emotions in individual brought up in alexithymia and insecure attachment in adults (Bekker et al., 2007; De Rick & Vanheule, 2006, 2007; Hexel, 2003), as well as there is positive association between a secure attachment style and an ability to develop close relationships, higher level of competence, empathy, and self and emotional-awareness (Laible et al., 2000). On the other hand, insecure attachment style is linked to Facebook addiction and alexithymia (Finzi-Dottan et al., 2003). Furthermore, Facebook addiction was hypothesized to be an outcome of attachment styles, alexithymia, and dissociation in adults (Thorberg et al., 2009, 2011; Zdankiewicz-Ścigała & Ścigała, 2018).

People by means of insecure attachment are

anxious about elimination and being released by others. They do not consider themselves as creditable of attention and thoughtfulness, and have slight satisfaction in social relationships. Therefore, for these people, Internet and social network such as Facebook can be approached to get away from real life. This person, by engaging to the social aspects of the Internet, lessens their psychological needs and fear of refusal in the course of the accessibility of the Internet and the ease of dealings with others (Ershad & Aghajani, 2017). There is still a lack of researches that have considered the concurrent impact of attachment styles, alexithymia, on the tendency to face book addiction in adulthood. For this reason, the aim of the current study is to investigate the direct impact of attachment styles on Face book addiction with regard to indirect effects of alexithymia and dissociation. The present study endeavored in evaluating the mediating role of alexithymia and dissociation in the relationship between attachment styles and face book addiction in Pakistani university students. Furthermore, it aimed to evaluate the association between attachments styles, alexithymia, dissociation and Facebook addiction.

Method

Design

Purposive sampling technique was used bases on cross-sectional study design.

Objectives

1. To investigate the association between attachments styles, alexithymia, dissociation and face book addiction among university students.
2. To examine the mediating role of alexithymia and dissociation in the relationship between attachment styles and face book addiction in university students.

Hypotheses

1. Attachment styles will be associated with face book addiction, dissociation and alexithymia among university students.
2. Face book addiction will be positively associated with dissociation and alexithymia among university students.
3. Alexithymia moderates the relationship between attachment styles and face book addiction among university students.
4. Dissociation moderates the relationship between attachment styles and face book addiction among university students.

Participants

Purposive sampling technique was employed based on a cross sectional design for the current research. A sample of three hundred university students who were Facebook user (Male, $n=162$, female, $n=148$) with ranged between 18 to 25 ($M=22.43$, $SD=1.04$) were included from different Universities of Rawalpindi and Islamabad, Pakistan in the present study. Inclusion criteria included participants who regularly used Facebook for almost 8 hours or more. Whereas those students were excluded

who 1) used Facebook for lesser number of hours; 2) had any psychological problem, they were excluded from current sample. The criteria for eight hours minimum was used as it is indicated by several studies as the baseline threshold for addictive behavior (Cash et al., 2012; Rajesh & Rangaiah, 2020).

Table 1.

Demographic characteristics of the study sample.

<i>Characteristics</i>	<i>f</i>	<i>%</i>
Gender		
Male	162	59.5
Female	148	40.5
Age		
Early adolescents	155	53.9
Middle adolescents	145	46.1

In Table 1, displays the demographic description of present study sample. The variables include gender, age, and class. The males (n = 162), and female (n = 148) with a percentage of 59.5% and 40.5% respectively.

Measures

The Toronto Alexithymia Scale-20 (TAS-20). The Toronto Alexithymia scale-20 (Parker et al., 1993) is used to measure difficulty describing feelings, difficulty identifying feelings, and externally oriented style of thinking in adult and adolescents. It consists of 20 items. Response are rated on a five-point rating scale from (1-strongly disagree) to (5-strongly agree). Low scores on this scale indicate lower pervenceance of difficulty in describing, identify and externally oriented style of thinking. However, high scores reveal higher level of difficulty in describing, identify and externally oriented style of thinking. The TAS has revealed adequate reliability and validity (Parker et al., 1993). In current study, the Cronbach alphas was 0.91.

Facebook Addiction Scale (BFAS). Facebook Addiction scale (BFAS; Andreassen et al., 2012) is widely used to measure addiction to Facebook in adults. it consists of 18 items. It comprises of five subscales: mood modification, tolerance, withdrawal, conflict, and silence and relapse. Low scores on each dimension reveal lower level of Facebook addiction in particular domain. However, high scores on each dimension indicate higher level of Facebook addiction in particular domain. The BFAS has revealed adequate reliability and validity (Andreassen et al., 2012). In current study, the overall scale Cronbach alphas was 0.84.

Dissociative Experiences Scale (DES). Dissociative experience scale (DES; Armstrong, et al., 1997) is used to assess different variate of dissociative experiences and trauma- related symptoms. It consists of 28 items self-reported instruments. Responses are rated on a five Likert scale from strongly agree to strongly

disagree. Low scores on scale reveal lower level of dissociative experiences and trauma- related symptoms. However, high scores on scale indicate higher level of dissociative experiences and trauma- related symptoms. The DES has revealed adequate reliability and validity (Armstrong et al., 1997). In current study, the overall scale Cronbach alphas was 0.81.

The Revised Adult Attachment Scale (TRAS). This scale (TRAS; Collins & Read, 1990) is used to evaluate of adult attachment style. It comprises of an 18-items. It comprises of three sub-domains: Close, Anxiety, and Depend. Low scores on the Anxiety and High scores on Depend and Close subscales reveal a secure attachment style in adults (Collins & Read, 1990). Response are scored on a five-point Likert scale from strongly agree to strongly disagree. The TRAS has revealed adequate reliability and validity (Collins & Read, 1990). In current study, the overall scale Cronbach alphas was 0.91.

Procedure

This present study was performed after an official approval from the ethical review committee of Department of Psychology, Foundation University Islamabad. Three hundred University students were recruited from different University of Rawalpindi and Islamabad, Pakistan between August, 2019 to January, 2020. Permission from relevant Universities was taken from authorities before data collection. Written inform consent was taken from volunteer participants. Participants were ensured that information collected would be kept confidential and is only for research purpose. Four standardized instruments were applied to examine the association between Facebook addiction, attachments styles, alexithymia, and dissociation. The participants' age, gender, class were collected as demographic along with consent form. Participants were given the option to leave the study at any time they want to or when felt uncomfortable. The questionnaire were all in English language and took about 15- 20 minutes to complete. The researcher also noted the comments made by participants about booklet and has used the feedback points in result explanation and discussion.

Data Analysis

SPSS-21 statistical software is used to analyze thee hypotheses and objective of the present study. The internal consistency of four aforementioned scales was determined by Cronbach's alpha reliability coefficient. Pearson correlations was calculated to determine the relationship between attachment styles, alexithymia, dissociation and Facebook addiction. Regression analysis was applied to determine mediating role of alexithymia and dissociation between attachment styles and Facebook addiction in university students.

Results

Table 2

Cronbach's alpha and descriptive statistics for study variables (N = 300)

Measures	No. of items	Alpha	M	SD	Range		Skewness	Kurtosis
					Potential	Actual		
AS	18	.91	152.23	30.21	18-90	23-81	.43	.64
INT	14	.87	144.41	25.97	0-56	8-49	.56	.41
FB	18	.84	82.32	12.33	18-90	21-88	.51	.54
DES	28	.81	134.85	25.61	-	-	.50	.48
AIDA	59	.91	227.73	36.06	0-236	14-221	.52	.45
ALE	20	.87	83.37	12.33	20-100	26-95	.65	.52

Note. AS = Attachment scale, INT = intimacy scale, FB = face book scale, DES = dissociative experience scale, AIDA = assessment of identity development in adolescence.

Table 3

Correlation matrix attachment styles, alexithymia, dissociation and Facebook addiction in Facebook user University Students (N=300)

Variables	1	2	3	4	5
1. Secure attachment style	-				
2. Intimacy attachment style	.97**	-			
3.Face book addiction	-.86**	.71**	-		
4.Dissociation	.54**	.52**	.47**	-	
5.Alexithymia	-.65**	-.32**	.85**	*.78	-

Note. SA = Secure attachment style; Int = Intimacy attachment style.

* $p < .05$, ** $p < 0.1$.

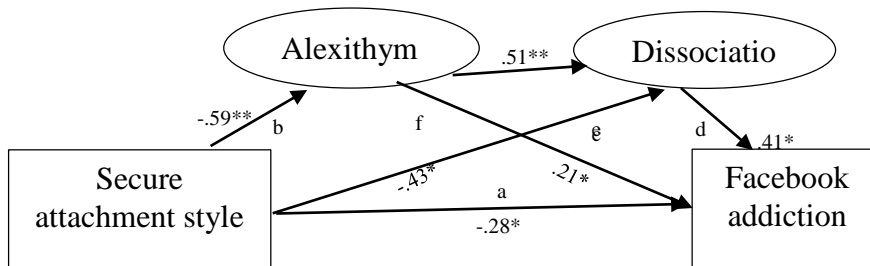


Figure 1. Alexithymia and Dissociation were fully mediating in the relationship between secure attachment style and Facebook addiction in University students. The multiple mediational models in the association between secure attachment style and Facebook addiction, where dissociation and alexithymia constitute mediators. $p < 0.01$, $p < 0.05$; (a) A direct effect of the impact of Secure attachment style on the Facebook addiction. (b, c, d) An indirect effect of the impact of secure attachment style on the Facebook addiction, including dissociation (f, d), alexithymia. (b, e) combine an indirect effect of the Secure attachment style on the Facebook addiction, including dissociation. (a, b, c, d, e, f) A direct effect of the impact of secure attachment style on the Facebook addiction, taking explanation of the influence of multiple mediators.

Results

Reliability and Descriptive Analysis of the Measures

Cronbach's alpha reliability coefficients were computed for every scale and their subscales to measure the internal consistency and established the applicability of the scales on the sample ($N = 300$) and the descriptive statistics of the constructs (see Table 2).

In Table 2, the results illustrates the results of mean, standard deviation, range reliability, skewness and kurtosis. It is observed that all the scales used have their skewness and kurtosis within the desired range of -1 to +1 and -3 to +3 respectively. Additionally, all the instruments showed high reliability indicating all of them as valid instruments.

In Table 3, findings demonstrated that secure attachment style is negatively related to alexithymia and Facebook addiction but is positively associated with dissociation in university students. Furthermore, intimacy attachment style is negatively related to alexithymia but is positively associated with Facebook addiction and dissociation in university students. Facebook addiction is significantly positively associated with dissociation in university students but Facebook addiction is significantly negatively associated with alexithymia. However, alexithymia is positively associated with dissociation in Facebook user University Students.

A multiple Mediation Analysis: Multiple Mediator Models

Figure 1 revealed the results for the model investigating the mediating role of alexithymia and dissociation between the relationship between secure attachment style and Facebook addiction in university students. The study results illustrated that Facebook addiction was predicted by secure attachment style ($\beta = -.28$, $p < .05$), Alexithymia ($\beta = .21$, $p < .05$), and Dissociation ($\beta = .41$, $p < .05$) in university students. However, Dissociation was predicted by Alexithymia ($\beta = .51$, $p < .01$), secure attachment style ($\beta = -.43$, $p < .05$) in Facebook user University Students. On the other hand, Alexithymia was predicted by Secure style ($\beta = -.59$, $p < .01$) in university students. These results demonstrate that Alexithymia partial mediated in the relationship between secure attachment style, dissociation and Facebook addiction in university students. Moreover,

dissociation partially mediated in the association between secure attachment style, dissociation and Facebook addiction in university student's sample.

Discussion

The present study evaluated the mediating role of alexithymia and dissociation in the relationship between attachment styles and face book addiction in university students. Furthermore, it aimed to evaluate the association between attachments styles, alexithymia, and dissociation and face book addiction. The current study's results demonstrated that secure attachment style is negatively related to alexithymia and Facebook addiction but it is positively associated with dissociation in university students. Furthermore, intimacy attachment style is negatively related to alexithymia but it is positively associated with Facebook addiction and dissociation in university students. Facebook addiction is significantly positively associated with dissociation but Facebook addiction is significantly negatively associated with alexithymia. However, alexithymia is positively associated with dissociation in university students.

These results are consistent and supported present study's first objective as well as first and second hypotheses. Moreover, the findings of current results illustrated that both alexithymia and dissociation fully mediated in the association between secure attachment style and Facebook addiction in university students. The current study's findings clarified and supported our study first objective, or third and fourth hypothesis. These results are consistent with findings of prior similar investigation (Ainsworth & Bell, 1970; Ainsworth, 1979; Boltz et al., 2013; Bowlby, 1988; Bowlby, 1969, 1988; Zdankiewicz-Ścigala & Ścigala, 2018).

Attachment theories explained that early attachment and experiences with authority figure are vital for the growth and help out to comprehend emotion's regulation, communication, and dealing with social and family situations (Bowlby, 1988; Bowlby, 1969, 1988; John Bowlby, 1973; Cassidy, 1994; Cooper et al., 1998; Laible et al., 2000; Mikulincer & Shaver, 2007; Sroufe & Fleeson, 1986). Attachment styles developed in early age are linked to those which are displayed by individuals in adolescents and old age in close romantic affairs. Attachments in adulthood are comparatively stable and constant, as well as they impact or influence emotions, attitudes, feelings, behavioral planning

in romantic relationship, and emotion's self-regulation processes (Hazan & Shaver, 1987; Mikulincer & Shaver, 2007).

Implications

The current study provides some more directional data to better understand and add to the above-mentioned gap in the literature related to dissociation and alexithymia. The current study has practical implications for educational purpose and results suggested that face book addiction have effects on attachment styles and cause alexithymia and dissociation. This study also supports the previous literature on attachment styles and Facebook addiction. It means this study also have theoretical implications, as one of the aims of study was to explore the role of alexithymia and dissociation as an explanatory mechanism between attachment styles and Facebook addiction. The core strength of the current study was that the researcher did research on Face book addiction which is a growing concern globally. This can help to design interventions and programs that can enhance positive attachment styles and reduce Facebook addiction in students.

Recommendations

Following are the few suggestions that the researcher would like to make future studies to enhance, improve and continue the work on understanding the topic of attachment styles:

1. To go for a bigger sample size in terms of the numbers of participants as well as gathering the sample from multiple Universities across the city for better generalizability. Hence, increasing the reach-out margin for the researcher to incorporate individuals from diverse socioeconomic statuses to understand the population through a multifaceted social stratification.
2. Translating and adapting the scales used in the current study to make the instruments more indigenous for further enhancing the reliability and validity of measure.
3. Adding demographics for attachment styles, face book addiction and alexithymia.
4. A cross-cultural study could be conducted to examine the differences between societies.

Conclusion

This study's results support widely attachment theory recommending that secure attachment style is related to and influence dissociation and alexithymia in the sample of Facebook user University Students. Dissociation and alexithymia, by impeding the processes of emotions' verbalization and identification, reason that language does not help for the process of changing and modifying self and others, for example both the communication and emotional attachment are distorted. Absent-mind are mutual meanings or accurate common insight in a relationship of individual. The current study revealed that although, attachment styles results in face book addiction, the interplay of dissociation and alexithymia in this relationship act as mediator and reducing the effect of face book addiction. Two components i.e., alexithymia and dissociation gave possible reason that why attachment styles affect face book addiction. The current study has added to understudied phenomena in a literature in the form of seminal literatures but sizeable amount of

additional investigations will be required to understand the reasons of relationship of attachment styles and Facebook addiction. Survey method was used in this study. The results conclude that there is a negative relation between attachment styles and Facebook addiction. Alexithymia and dissociation have mediating the relationship between attachment styles and face book addiction. The current study has practical and theoretical implications.

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Ethical Consideration

The study was approved by the Foundation University Islamabad. Consent Form was taken before taking data and participants were asked to take voluntary participation. It was also informed to the participants that there is no harm and their data will be kept confidential.

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Availability of data and materials

The data sets used and analyzed during the current study are available from the corresponding author on reasonable request.

Authors' contributions/Author details

Miss Samia Toqeer performed the main study under the supervision of Muhammad Aqeel. Samia Toqeer and Muhammad Aqeel wrote the article under the guidelines of Nature-Nurture Journal of Psychology.

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Ethics declarations

Ethics approval and consent to participate

This study was approved by the Institutional Review Board (Foundation University Islamabad). A written informed consent was obtained from all participants.

Consent for publication

Not applicable.

Competing interests

The authors declare to have no competing interests.

Additional Information

Not applicable.

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