Research Paper

Internet Addiction, Attachment Styles, Achievement Goal Motivation & PWB In Students: A Covid-19 Context

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ABSTRACT

The rapid digitalization brought about by the Covid-19 pandemic has had various detrimental effects on the student population. According to previous literature, internet addiction is negatively correlated to psychological well-being, although studies measuring the correlation of these factors with achievement goal motivation and adult attachment styles from a Covid-19 context have been scarce. Present study aims towards assessing the relationship between Internet Addiction, Attachment Styles and Achievement Goal Motivation in Students; and its subsequent effect on Psychological Well-Being, from a Covid-19 Context. Data were collected in the year 2021, from 204 students (Mean age=22.23, SD=2.12; 50%females), by administering (a) Internet Addiction Scale by Young (1998), (b) Revised Adult Attachment Scale by Collins (1996), (c) Achievement Goal Questionnaire-Revised by Elliot et al. (2008), (d) Ryff's Psychological Well-Being Scale (2010, 1995). Correlation analysis shows a significant positive relationship between Internet Addiction and Adult Attachment while a significant negative relationship between Internet Addiction and Achievement Goal. Moreover, Multiple Regression Analysis shows that Internet Addiction, Attachment level and Achievement Goal Orientation of students significantly predicts their Psychological Well-Being (Adjusted R square=.74; F=191.83, p<.001).

Keywords: *Internet-Addiction, Psychological Well-Being, Attachment Styles, Achievement-Goal Motivation*

The widespread outbreak of SARS-Cov 2 causing a worldwide pandemic, has resulted in governments implementing disease containment measures such as school closures, social distancing, and home quarantine. A direct negative impact of these actions is being faced by children and adolescents, especially students, who are being forced to stay in prolonged state of physical isolation from their peers, teachers, extended families, and community networks. A significant effect of the Covid-19 pandemic has been the rapid digitization in the field of education in the form of online classes. Students have been forced to remain online for prolonged periods of time, which has led to a spike in rates of internet addiction, since the internet has proved to be the only mode of communication too. In order to efficiently cope with Internet Addiction in students, certain factors need to be taken into consideration for development of intervention modules. Here, an individual's attachment

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styles and their achievement goal motivation are promising factors. Along with these psychological well-being helps one to gain an insight into the overall state of contentment.

Internet Addiction in Students

Internet Addiction (IA), refers to the compulsive use of the internet that significantly affects an individual's functioning throughout their life. Young people are at particular risk of developing internet addiction disorder (Solecki et al., 2019). Some also suffer health consequences from loss of sleep (Moskalenko et al., 2021) as they stay up later and later to chat online, check for social network status updates or to reach the next game levels (Wallace, 2014). A longitudinal study done by Peng, where they studied Chinese high school students shows that individuals with moderate to severe risk of IA are 2.5 times more likely to develop symptoms of depression than their IAD-free counterparts (Peng, 2010). A longitudinal study of high school students from Helsinki found that IA and depression work together in forming a loop of positive feedback. Internet Addiction Disorder also finds associations with alcohol and substance abuse (Lejtenyi, 2021). Strategies that are currently being used to counter with IA are often stemming from the interventions used to deal with substance abuse disorders. Psychosocial treatment is the approach most often applied (Lejoyeuxet al., 2010). In practice, rehab centers usually devise a combination of multiple therapies (Tao et al., 2007).

Attachment Styles

One of the most important milestones of development in children is the need to form attachments with parents. The theory was formulated by psychiatrist and psychoanalyst John Bowlby (Cassidy, 1999). Within attachment theory, the behaviour of the child usually associated with attachment is primarily the seeking of proximity to any figure (generally the care-givers) whom they feel an attachment with, during times of stress. The toddlers get attached to adults who tend to them sensitively, and act responsive in social situations, and remain as consistent caregivers for some months during the period from about six months to twenty-four months. The ways in which parents respond and react to their child's thoughts and behaviours, shapes the latter for life by influencing the attachment styles they eventually develop (Munholland et al., 1999). Four styles of attachment have been identified by Phillip et al. (1990) are listed below.

   a. *Securely Attached:* Securely attached adults have a high need for achievement and a low fear of failure in relationships. (Elliot & Reis, 2003). They are high in self-esteem and interpersonal trust.
   b. *Anxious-Preoccupied:* Anxious-preoccupied adults are high in interpersonal trust and low in self-esteem. They tend to quickly form attachments with anyone who comes their way and seek high levels of intimacy, validation and responsiveness from their partners.
   c. *Dismissive-Avoidant:* Dismissive-avoidant adults are high in self-esteem and low in interpersonal trust. They tend to feel that they are worthy of forming healthy attachments but nobody else is good enough for them.
   d. *Fearful-Avoidant:* Fearful-avoidant adults are low in both self-esteem and interpersonal trust. They tend to not form attachments as they think they are not worthy of good people in their lives. (Shaver et al., 1994).

Achievement Goal

Achievement Goal Motivation deals with what students are motivated to learn, why they want to learn that certain thing, and how they are processed with the process of learning

(Senko, Hulleman and Harackiewicz, 2011). Major research on this area focuses on two specific orientations: mastery and performance approaches (Ames, 1992). This is known as a trichotomous model where it highlights the differences between mastery and performance goals through their approaches and avoidances.

  a. ***Mastery-Approach Goals:*** Students focus on the development of competence just for mastering that particular topic (Elliot and McGregor, 2001).
  b. ***Mastery-Avoidance Goals:*** Students with mastery-avoidance goals are motivated to avoid situations where they are unable to learn, they worry about their inability to master the task.
  c. ***Performance-Approach Goals:*** Students with performance-approach goals are focused on performing better than others (Elliot and McGregor, 2001).
  d. ***Performance-Avoidance Goals:*** Students with performance-avoidance goals are motivated to not fail in front of others.

Psychological Well-Being

Psychological well-being consists of positive relationships with others, personal mastery, autonomy, a feeling of purpose and meaning in life, and personal growth and development (Ryff, 1989). Psychological well-being is attained by achieving a state of balance affected by both challenging and rewarding life events (Lalage, 2012). Positive psychological well-being may emerge from numerous sources. A happy marriage is contributing, for example, as is a satisfying job or a meaningful relationship with another person (Diener, 1994). A propensity to unrealistic optimism and over-exaggerated self-evaluations can be useful. Social interaction has a strong effect on well-being as negative social outcomes are more strongly related to well-being than are positive social outcomes (Karen et al., 1984).

In a 2012 study by Khosroshahi and Nosrat Abad, on the relationships of attachment styles, coping strategies, and mental health to internet addiction, internet addiction correlated negatively with secure attachment styles, and positively with ambivalent and avoidant insecure attachment styles; and the attachment styles, coping strategies and mental health predicted internet addiction. Previous literature suggests that attachment styles is a critical factor that affects IA (Shin, Kim, and Jang, 2011; Zhu, Zhang, Yu, and Bao, 2015). It is seen that people who tend to feel uncomfortable, unwanted, or awkward in real-life attachments, seek solace and fulfil their attachment needs through an online environ (Papacharissi& Rubin, 2000). Greenield (1999) stated that individuals with low perceptions of self-efficacy who display shy, fearful, and anxious behaviours use online environs more frequently. Israelashvili, Kim, and Bukobza (2012) explained the relationship between IA in adolescents and their identity orientations through the fact that as opportunities to go online increase, adolescents tend to explore their personas through the window of the internet. Internet usage in adolescents increases each day in order to avoid actual social relationships, conceal actual identities, do research on identity styles, and get feedback about one's own identity style.

Even though the relationship between IA and academic achievement has been widely observed in adolescents, research based on how IA works and its adverse effects on academics is scarce. By using a short-term longitudinal design, Ren et al. in 2018, indicated that the negative effect of Internet addiction on adolescents' later academic achievement was mediated by academic engagement and disaffection at the individual level. Furthermore, classroom achievement norm moderated the relationship, with a significant indirect effect in the high classroom achievement norm classes and a non-significant effect in the low

classroom achievement norm classes. Mustafa et al. in 2018 found that internet addiction effects academic goal motivation in the negative direction.

A 2018 study by Sharma et al. revealed that internet addiction was significantly and negatively associated with PWB, at $r = -0.572$, and $P < 0.01$. High levels of IA in students lead to low levels of PWB. Mehmat and Cardak in 2013 found that students with higher levels of Internet addiction are more likely to be low in psychological well-being. Karreman et al. in their 2021 study into the associations between attachment styles and psychological well-being, by testing the possible mediating roles of emotion regulation (i.e., reappraisal and suppression) and resilience, found secure and dismissing attachment styles to be associated with higher well-being, while preoccupied attachment was the attachment style with the most adverse outcome. It was found that attachment was a significant predictor of well-being by Murdock et al. in 2004.

The rapid digitalization brought about by the Covid-19 pandemic has had various detrimental effects on the student population, namely, a significant spike in internet addiction, and decreased levels of psychological well-being. Previous literature suggests that internet addiction is negatively correlated to psychological well-being, although studies measuring the correlation of these factors with achievement goal motivation and adult attachment styles from a Covid-19 context have been scarce.

Present study therefore aims towards assessing the relationship between Internet Addiction, Attachment Styles and Achievement Goal Motivation in Students; and its subsequent effect on Psychological Well-Being, from a Covid-19 Context.

METHODS

Participants
Data were collected from 204 students (Mean age=22.23, SD=2.12; 50% of whom were females) attending both online and offline classes. The sample consisted of high school students, undergraduate students, post-graduate students, Ph.D. students, and Post Doctorate students; majority of whom were undergraduates (56%). A total of 79% of the entire sample was attending online classes, and the rest were either attending classes offline, or in a blended mode.

Tools Used:
i. Internet Addiction Test (IAT)
The Internet Addiction Test (IAT) by Young (1998), has 20 items that measure whether the individuals are suffering from IA and to what extent they are depending on the internet. IAT is a self-reported measure to assess IA in both adults and adolescents. IAT views IA as a compulsive disorder where the individuals suffering, can't control their impulses regarding internet usage. It also assesses how IA is affecting their personal, professional and social lives. Questions are randomized and each statement is measures on Likert-scale ranging from 0 = less extreme behavior to 5 = most extreme behavior for each item.

ii. Revised Adult Attachment Scale (RAAS)
Revised Adult Attachment Scale (RAAS), (Collins, 1996) is an 18-item scale that asks participants to self-report their measures of attachments, how likely they are to form attachments, with whom, under what situations, and to what extents. It asks their degree of agreement statements using the 5-point Likert scale (where, 1- not at all characteristic of me,

5 - very characteristic of me). This scale consists of three dimensions; Close, Depend and Anxiety, which are used to identify the 4 attachment styles given by Bartholomew and Horowitz, viz. Secure, Fearful, Preoccupied and Dismissive).

iii. Achievement Goal Questionnaire-Revised (AGQ-R)
In the Achievement Goal Questionnaire-Revised (Elliot & Murayama, 2008) students have to answer a 12-item self-report measure where they express their degree of agreement with each item on a scale of 1 (strongly disagree) to 5 (strongly agree). Subscales and internal consistency original values are: mastery-approach, $\alpha = .84$, mastery-avoidance, $\alpha = .88$, performance-approach, $\alpha = .92$ and performance-avoidance, $\alpha = .94$. It has 6 items assessing the mastery approaches, and another 6 for performance approaches.

iv. Ryff's Psychological Well-Being Scale (SPWB)
The Scales of Psychological Well-being (SPWB, Ryff, 2010, 1995) is an 18-item scale, where participants have to self-report in order to measure their degrees of psychological well-being. The instrument consists of six sub-scales: (a) Autonomy, (b) Environmental mastery, (c) Personal growth, (d) Positive relationships with others, (e) Purpose in life, and (f) Self-acceptance. Each sub-scale consists of items divided approximately equally between positive and negative items. Participants respond on a 7-point scale that ranges from "strongly disagree" (1) to "strongly disagree" (7). Some of the items are reverse scored. Higher scores indicate higher psychological well-being.

Procedure
Data were collected in an online survey method using Google Forms. Convenience sampling procedure was followed. Informed consent was obtained from each participant before collecting data. The information schedule contained information asking about the participants' name (in initials), age, sex, academic qualification, and mode of study adopted by their respective institution. After data collection, data were cleaned and then analysed using appropriate statistical methods.

Statistical Analysis
Descriptive Statistics was done to summarize the data. Correlation Analysis & Multiple Regression Analysis were done to explore the relationship among the variables.

RESULTS
Association among Internet Addiction, Achievement Goal, Attachment level and Psychological Well-being:
Correlation analysis shows significant positive relationship between Internet Addiction and Adult Attachment while a significant negative relationship between Internet Addiction and Achievement Goal (Table 1). Moreover, Psychological well-being is strongly negatively related to Internet Addition, and a positive relation with Achievement goal and Adult attachment, all coefficients significant ($p<.001$).

Table 1. Descriptive statistics and Correlation coefficient showing the association among the variables.

	Mean	Std. Deviation	1	2	3	4
1. Internet Addiction	56.47	27.85	1.00			
2. Adult Attachment	58.99	10.60	-.73**	1.00		
3, Achievement Goal	41.70	7.13	-.20**	-.10	1.00	
4.Psychological Well-being	67.14	29.45	-.85**	.70**	.18**	1.00

**p<.001

Internet addiction, Attachment level and Achievement goal orientation predicting psychological well-being:

Multiple Regression Analysis shows that Internet Addiction, Attachment level and Achievement Goal Orientation of students significantly predicts their Psychological Well-being (Adjusted R square=.74; F=191.83, p<.001). Beta coefficients for Internet addiction and adult achievement predicting psychological well-being were found to be significant at .001 level. However, the coefficient for Achievement Goal Orientation was not significant, indicating the fact that psychological well-being is not predicted by achievement goal orientation. Hence, the same model when run without including achievement goal orientation, the model fit is increased (F=288.67, p<.001), although the adjusted R-square remained the same (Table 2).

Table 2. Multiple regression analysis with Psychological Well-being as dependent variable

Model	Independent variables considered	Adjusted R Square	B coefficient	p-value	F-Value
Model 1	Internet Addiction,	.74	-.74	.001	191.33
	Adult attachment,		-.14	.007	
	Achievement Goal Orientation		.02	.61	
Model 2	Internet Addiction,	.74	-.75	.001	288.67**
	Adult attachment		-.14	.008	

*_**p<.001_*

DISCUSSION

The study intended to look into the relationship among Internet addiction, adult attachment styles, Achievement Goal Orientation and Psychological Well-being (PWB). Our findings showed negative correlation among PWB and Internet Addiction. This finding is supported by previous findings suggesting that higher level of internet addiction is likely to reduce psychological well-being (Sharma et al., 2018), this can be explained by the fact that IA leads to extreme isolation from the real world and dependence on virtual reality, which has proved to be dubious for the individual's well-being by several researchers, as living a life full of virtual accomplishments makes a person highly delusional. Additionally, the negative association among internet addiction and achievement goal orientation and adult attachment is also supported by previous findings, this can be explained by the fact that an online environ permits individuals to hide their true self, leading to lower levels of self-esteem; and

lower levels of motivation to achieve goals, (be it intrinsic or extrinsic) (Shin, Kim, and Jang, 2011; Lin, Ko, & Wu, 2011; Morsunbul, 2014a).

Moreover, the regression analysis revealed significant negative prediction of PWB by internet addiction and a weakly negative prediction by adult attachment. This finding is also supported by previous studies. The findings therefore suggest that addiction to internet and internet overuse affects mental health to a large extent. The present pandemic situation leading to online classes is often associated with internet overuse. This has certainly a negative impact on the psychological well-being of the participants.

Findings will have implications in developing intervention modules and Individual Educational Plans for students suffering from Internet Addiction. Findings will also have implications in Adolescent Mental Health and Student Counselling since Internet Addiction, Attachment Level and Achievement Goal Orientation of students is predicting their Psychological Well-Being. Effective Strategies for increasing levels of well-being in students with Internet Addiction can be taken up as a new variant of Covid is coming into existence and online classes might continue as a direct result of that. Interpersonal trust and self-esteem of students can also be studied in order to enhance their psychological well-being.

A significant limitation of the research relates to the chosen sampling method. Convenience sampling method was used due to time and money constrictions, which might have decreased the statistical validity. Another limitation is the distribution of sample as it predominantly consisted of Indian undergraduates, which might be overshadowing the variations in responses (if any) by school students, postgraduates or Ph.D. students.

Although present research analysed variables like internet addiction, achievement goal orientation and attachment styles as predictors of psychological well-being in students, future studies could incorporate variables like academic stress, self-efficacy, parental pressure, and coping strategies. Future studies could also study the relationship between internet addiction and binge-watching, video-game addiction, and social media usage to better understand the factors predicting IA. Longitudinal studies in a full-fledged offline environment will show how the mode of study is affecting the time periods of internet usage in students. It is also recommended that future research be carried out to further investigate the variation in responses by school and college students; and online versus offline learning.

CONCLUSION

Present study shows that a significant positive relationship exists between Internet Addiction and Adult Attachment while a significant negative relationship exists between Internet Addiction and Achievement Goal Orientation. Moreover, Internet Addiction, Attachment level and Achievement Goal Orientation of students significantly predicts their Psychological Well-Being.

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