The International Journal of
INDIAN PSYCHOLOGY

Research Paper

The Relationship Between Internet Addiction and Psychological Well-Being Among University Students

Mahadevaswamy M.[1]*, Vikas Singh Rawat[2]

ABSTRACT

In today's digital age, the prevalence of internet addiction and its potential impact on the psychological well-being of university students is a growing concern. Thus, this study explores the relationship between internet addiction and psychological well-being among university students in Jaipur District. **Method & Tools**: It was a cross sectional study which included a sample of 63 university students, selected thorough random sampling based on predetermined criteria. The study employed Ryff's Psychological Well-Being Scales (PWB), 42 Item version, and Internet Addiction (IA) Test as tools. **Results**: The t-test revealed no significant difference between male and female students on both IA (t= -0.174, p= 0.862) and PWB (t= -0.648, p= 0.521). The Pearson Correlation analysis revealed that IA was significantly negatively correlated to PWB (r= -0.467, p<0.01) and dimensions of PWB, indicating that higher levels of IA are linked to lower levels of PWB among university students. Additionally simple linear regression showed that IA was a significant negative predictor of PWB (R^2= 0.218, F= 17.047, p<0.000) and its dimensions. **Conclusion**: These results highlight the need for targeted interventions aimed at reducing internet addiction among university students to enhance their Psychological well-being.

Keywords: Psychological Well-Being, Internet Addiction, University Students

The student life is often likened to a golden era, a time of immense importance that can profoundly influence one's mental well-being, positively as well as negatively. Blanc et al (1983) and Gerdes and Mallinckrodt (1994) observed the reason reported by post-secondary students why they drop out from institutions ranges from including academic pressure, leaving home or residing away from parents, transitioning from college to universities, establishing new acquaintances, managing financial difficulties, new learning study habits for the new academic environment, interpersonal relationship issues and learn to function as independent adults (e.g., budgeting time and money). The aforementioned challenges have the potential to cause significant psychological distress for students, which may have adverse effects on their emotional state. This, in turn, could lead to difficulties in identifying, expressing, and managing their emotions, ultimately impacting their overall

[1]M. Phil Clinical Psychology trainee, Department of Clinical Psychology, Mahatma Gandhi Medical College and Hospital, Jaipur, Rajasthan
[2]Assistant Professor, Department of Clinical Psychology, Mahatma Gandhi Medical College and Hospital, Jaipur, Rajasthan
*Corresponding Author

psychological well-being. Additionally, students may be more susceptible to engaging in maladaptive behaviors, such as internet addiction or substance use in order to cope with emotional suffering.

INTERNET ADDICTION

In the current dynamic digital landscape, the Internet has emerged as an essential element of our daily lives, revolutionizing the manner in which we engage, collaborate, learn, and connect with others. The Internet's accessibility and ease of use have resulted in numerous advantages, particularly in the field of education, empowering students to access extensive information, collaborate on assignments, and engage with online resources. Nevertheless, despite its benefits, the widespread adoption of the Internet has raised apprehensions regarding its potential for addiction, particularly among university students. It has been observed that individuals between the ages of 18 and 24 may be more susceptible to developing internet addiction compared to their older counterparts. This phenomenon has been recognized as a potential mental health issue and addiction, akin to alcoholism and compulsive gambling, since the mid-1990s (Gedam et al., 2017).

Internet Addiction is defined as difficulties of individuals to regulate control over their internet usage, leading to compulsive online behaviours that result in significant distress and impaired functioning in daily life (Daniel et al, 2013). The notion of Internet Addiction was originally introduced by Young, who characterized it as a disorder of impulse control that does not depend on intoxication (Young, 2020). Nevertheless, the formal acknowledgement of Internet addiction as a disorder was initially suggested by Griffith in 2018. Griffith classified it as a subtype of behavioral addiction, encompassing the six fundamental aspects of addiction: mood alteration, tolerance, salience, withdrawal, relapse and conflict (Griffith, 2018). This phenomenon has been identified as a significant global behavioral addiction challenge (Christakis, 2010). According to research, Internet addiction is not a uniform phenomenon, but rather, individuals develop addictions to specific online activities. This differentiation has resulted in the identification of three subtypes of Internet addiction, namely online sexual preoccupation, excessive gaming and e-mailing/texting (Griffiths, 1999; Young, 2018). Additionally, the study has identified multiple types of Internet-related addictions, such as cyber-relationship addiction, cyber-sexual addiction, net compulsions, computer addiction and information overload.

Reports have emphasized the prevalence of Internet usage in India, with approximately 137 million users recorded in 2013. India is expected to emerge as one of the leading nations in terms of Internet usage, with a user base that is projected to be second only to China. As per the findings of the Internet and Mobile Association of India, in partnership with the Indian Market Research Bureau, a considerable proportion of the urban Internet users, approximately 72% or 58 million individuals, actively participated in social networking activities in 2013. It is anticipated that this number will witness a significant surge and reach approximately 420 million by June 2017 (Agarwal & Bureau, 2017). Numerous research studies have brought to light the significant health implications of Internet Addiction (IA). These implications include impaired work function, diminished academic performance, sleep disturbances, unhealthy dietary patterns, headaches, eye strain, social seclusion, and interpersonal relationship challenges (Guan & Subrahmanyam, 2009; Brenner, 1994; Young, 1998). Frangos et al. (2010) have established a correlation between negative psychological outcomes and Internet Addiction (IA) such as anxiety, stress and depression. It has come to the attention that students who have developed a strong affinity for the Internet may sometimes place greater emphasis

on their online pursuits rather than their academic obligations, resulting in suboptimal academic performance. In study conducted by Paul et al. (2015) involving 596 students, the results indicated that 41.3% (246 students) exhibited mild addiction to the Internet, 15.2% (91 students) displayed moderate addiction, and 43.5% (259 students) did not exhibit addiction to Internet usage (Kumar & Mondal, 2018). According to a recent study conducted by Nagaur (2020), it has been found that the incidence of Internet addiction among university students in India varies from 1.975% to 34.7%. It has been observed that college students may be more susceptible to the development of Internet dependency compared to other segments of society. This susceptibility can be attributed to various factors, including the abundance of available time, user-friendly interface, unrestricted Internet access, developmental traits specific to young adulthood, reduced parental oversight, academic reliance on the Internet for tasks ranging from coursework to peer and mentor interactions, and the Internet's potential as an outlet for escaping exam-related stress. These factors collectively heighten the concern of excessive Internet usage among students, necessitating attention from both parents and faculty (Kandell, 1998).

PSYCHOLOGICAL WELLBEING
Psychological well-being (PWB) is a concept which has recently garnered increasing attention as academic institutions recognized the importance of student's well-being and to foster holistic development during higher education. The academic demands can significantly impact the overall quality of life of students and shaping their future trajectories. In Ryff's (1989) perspective, psychological well-being encompasses the degree to which individuals perceive themselves as having meaningful control over their lives and activities. Ryff's framework highlights six fundamental dimensions that collectively define psychological well-being; Self-acceptance, Autonomy, Environmental Mastery, Personal Growth, Purpose in Life and Positive Relations.

The World Health Organization's definition of mental health encompasses a state of overall well-being in which individuals are able to recognize and utilize their own abilities, manage typical life stressors, maintain productivity and contribute positively to their communities (Galderisi et al., 2015). Molina-Garcia et al. (2011) highlight that psychological well-being holds particular significance across various life stages, including younger age groups. Acknowledging its role in fostering a holistic and robust life, psychological well-being assumes a pivotal role in supporting individuals, regardless of their age, to lead healthy and fulfilling lives. Yang (2010) underscores that issues tied to psychological well-being are increasingly prevalent among college students, making them susceptible to psychological challenges. Studies have shed light on the pronounced significance of compromised psychological well-being, particularly among postgraduate students. This subgroup faces a critical juncture as they transition from a structured academic setting, characterized by coursework, to a less regimented environment marked by autonomous research pursuits. The trajectory of a student's academic journey entails encounters with intellectual, social, and psychological shifts. These transitions are not solely about education but are perceived as profound processes of personal growth and maturation (Sharma et al., 2022). As a result, postgraduate students often encounter obstacles and difficulties that hinder the successful completion of their academic pursuits (Lessing & Schulze, 2002). Furthermore, the need to prevent heightened stress has become increasingly urgent, given the concerning trend of mounting psychological challenges and their intensification among the student demographic (Sherina et al, 2004; Regehr et al, 2013; Byrd & MaKinney, 2012). These challenges encompass a range of concerns, including financial constraints (Lange & Byrd, 1998).

Additionally, the time constraints imposed by work commitments, class attendance, and familial responsibilities further impede the time allocated for completing assignments and research papers (Abiddin & Ismail, 2011).

According to the research conducted by Punia and Malaviya (2015), a considerable proportion of students demonstrated a moderate level of well-being, along with an absence of depression and an average level of self-evaluated academic performance. The study also revealed that students who achieved moderate to high levels of academic performance exhibited elevated indices of well-being, purpose in life, and personal growth, as per the applied scale. Furthermore, students who adopted a task-oriented coping strategy displayed elevated indices of well-being and personal growth on the same scale. A study conducted by Zulkifly and Baharudin (2010) at the University Putra Malaysia (UPM) sheds light on the psychological challenges faced by students. The study revealed that a significant 47.1% of UPM students reported a low level of psychological well-being, indicating a substantial proportion of students being vulnerable to psychological issues. The pursuit of academic excellence assumes a pivotal role in shaping students' career trajectories. However, this pursuit can also lead to heightened stress levels, which can precipitate a range of mental health issues; including anxiety (88.4%), depression (76%), stress (84.4%), and other forms of mental disorders (45.5%) (Ryan &Deci, 2008; Diener, 2009), substance misuse, aggression, sleep disturbances, thoughts of self-harm, and other behavioral challenges can be prevalent among students (Yang, 2010; Abiddin & Ismail, 2011; Lessing & Schulze, 2002; Sherina et al, 2004). These factors are intricately intertwined and collectively shape the emotional and psychological landscape of students' educational journeys.

REVIEW OF LIETERATURE

A comprehensive analysis of the literature pertaining to Internet Addiction and Psychological well-being, among university students highlights the potential implications for the mental health and overall functioning of the students.

Research carried out by Cardak (2013) discovered a significant correlation, suggesting that students who had greater Internet addiction tendencies were prone to having diminished psychological well-being. These results underscore how Internet addiction can detrimentally affect an individual's psychological well-being, offering insights into the intricate relationship between these variables. Consequently, bolstering the levels of psychological well-being in students could potentially function as a preventive strategy against Internet addiction.

In a study conducted by King Storm (1996), it was discovered that individuals who experience Internet addiction tend to exhibit feelings of solitude and shyness, often accompanied by depression. Kubey et al. (2001) also emphasized in their research that using the Internet primarily for entertainment purposes can lead to significant negative consequences on an individual's well-being. These consequences include academic difficulties, social isolation, and sleep disturbances.

Furthermore, Qasemzadeh et al. (2007) found that 3.8% of high school students in Tehran are addicted to the Internet, and Nasiri et al. (2011) conducted a study revealing that a substantial 13.8% of students suffer from severe Internet addiction, which has a profound impact on their lives. Additionally, they posit that the emergence of severe Internet addiction can be attributed to subpar academic achievements and limited social engagement. Furthermore, they suggested that alterations in one's social context can lead to the development of severe Internet addiction.

According to Suler (1999), the lack of emotional awareness is a probable factor in increased engagement in online activities. This is due to the Internet serving as a refuge for relaxation and a means of escaping the pressures of real life. For individuals experiencing alexithymia, this virtual space can function comparably to substance abuse or alcohol, serving as a means of alleviating the distress caused by emotional turmoil and effectively managing the difficulties of daily life.

As per the research conducted by Leahy et al. (2011), it has been observed that emotions play a vital role in maintaining both physical and psychological well-being. Individuals who face challenges in accurately identifying, comprehending, and expressing their emotions may face obstacles in effectively navigating their surroundings and adapting to them. This may hinder their ability to enhance personal well-being and make the most of their environment.

Akhtar (2015) investigated gender differences in the psychological well-being of students. The study's results indicated noteworthy variations in the levels of psychological well-being among the student participants. Siddiqui (2015) conducted a study focusing on assertiveness and psychological well-being among university students, specifically examining gender differences. The research findings highlighted significant disparities in psychological well-being between male and female students. Whereas, Bano (2014) explored the influence of life experiences on psychological well-being and stress in university students. The results of this study demonstrated that there were no substantial differences between men and women regarding the variable of finding meaning in life. Another study by Hasan (2019) conducted research among undergraduate students to assess psychological well-being. The findings from this study indicated that there were no significant gender differences concerning psychological well-being among the undergraduate student participants.

METHODOLOGY

Significance of the study

Considering the varying outcomes observed in previous studies, the objective of the current research is to investigate gender disparities and examine the correlation between Internet addiction and psychological well-being among university students. Understanding this relationship can help educational institutions, and parents develop targeted interventions and support systems to address internet addiction issues and promote the mental health and well-being of students. Additionally, in an increasingly digital world, the study's findings may have broader implications for society's overall understanding of the impact of internet use on mental health.

Operational definitions

Psychological Well-Being: According to Ryff's (1989) viewpoint, psychological well-being pertains to the extent to which individuals perceive themselves as possessing significant control over their lives and pursuits. The six essential dimensions that collectively constitute psychological well-being are Self-Acceptance, Autonomy, Personal Growth, Environmental Mastery, Purpose in Life, Positive Relations.

Internet Addiction: Internet addiction is typified by an individual's incapacity to exert control over their internet usage, culminating in compulsive online behaviors that engender noteworthy distress and hindered functioning in everyday life (Daniel et al, 2013).

Objectives:

- To measure and compare the levels of Psychological Well-Being among Male and Female university students.
- To investigate and compare the levels of Internet Addiction among Male and Female university students.
- To explore the relationship between Internet Addiction and Psychological Well-Being among university students.
- To assess the extent to which Internet Addiction can predict the level of Psychological Well-Being among university students.

Hypotheses:

- There will be no significant difference in the level of Internet Addiction between male and female university students.
- There will be no significant difference in the level of Psychological Well-Being between male and female university students.
- There will be a significant relationship between Internet Addiction and Psychological Well-Being among university students.
- Internet Addiction significantly predicts Psychological Well-Being among university students.

Sample:

The research employed a cross-sectional design, collecting a total of 68 responses from potential participants. Among these, 5 participants were excluded from the study due to scoring above 3 on the GHQ-12 questionnaire. Ultimately, the study focused on 63 participants who met the predetermined inclusion criteria. The sample was gathered using a random sampling method. The recruitment process involved distributing an online Google Form to individuals residing in the Jaipur district. The inclusion and exclusion criteria for participant selection were as follows;

Inclusion Criteria:

- UG and PG University Students
- Both males and females
- Age range 18 to 30 years
- Those who are able to read and understand the English language
- Students who score less than 3 on GHQ-12
- Individuals who are using the internet at least for the past 6 months

Exclusion Criteria:

- Individuals diagnosed with any Psychiatric disorder, or serious medical disorder.
- Individuals with a history of excessive substance use and organicity.
- Lack of consent or willingness to participate in the study.

Instruments

- **Semi-Structured Socio-Demographic sheet:** The researchers have developed a semi-structured questionnaire for the purpose of collecting required data. This instrument encompasses comprehensive details such as; age, gender, religion, education, occupation, family type, residence, and marital status. Additionally, the questionnaire elicits information regarding the use of the internet and the purpose of internet use.

- **General Health Questionnaire-12 (GHQ-12):** GHQ 12 is a widely recognized and utilized mental health screening tool on a global scale, and was developed by the esteemed World Health Organization. It comprises 12 items, which include both positively and negatively worded statements. The Likert scoring method, ranging from 0-3, is employed to determine the overall score. A score of 0 indicates frequent occurrence, 1 indicates occasional occurrence, 2 indicates infrequent occurrence, and 3 indicates never occurring. The total score ranges from 0 to 36, with a higher score indicating potential mental health concerns. It is noteworthy that the internal consistency of this instrument is 0.90, and its concurrent validity is 0.58 (Goldberg & Williams, 1979). It was utilized to ascertain the absence of any psychological distress within the general population. Individuals who obtained a score of less than 3 were considered in the study.

- **Scales of Psychological Well-Being (SPWB):** Ryff (1989) developed the Psychological Well-Being Scale to assess an individual's psychological well-being. The scale comprises six dimensions, each consisting of 14 items. These dimensions include autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Internal consistency for each dimension was calculated using Cronbach's Alpha, yielding the following results: self-acceptance ($\alpha = 0.93$), positive relations with others ($\alpha = 0.91$), autonomy ($\alpha = 0.86$), environmental mastery ($\alpha = 0.90$), purpose in life ($\alpha = 0.90$), and personal growth ($\alpha = 0.87$).

- **Internet Addiction Test:** Young (1998) introduced a widely recognized instrument for evaluating internet addiction. This assessment tool comprises 20 items, each scored on a scale of 0 to 5. The score options represent the levels of applicability: "does not apply," "rarely," "occasionally," "frequently," "often," and "always," respectively. The cumulative score spans from 0 to 100, which is then categorized as follows: a score of 0-19 corresponds to no addiction, 20-49 signifies mild addiction, 50-79 indicates moderate addiction and a score of 80-100 represents severe addiction.

Procedure and Data Analysis

Prior to conducting the study, ethical committee approval was obtained from MGUMST, Jaipur. Following the ethical committee approval, the Google form was circulated via various channels such as WhatsApp, Email, and Facebook. The study utilized several tools, including the Semi Structured Socio-Demographic sheet, General Health Questionnaire-12 (GHQ-12) to rule out any psychological distress among participants, and Ryff's Psychological Well-Being Scale and Internet Addiction Test to assess the variables under the study. We received a total of 68 responses from participants in the Jaipur district, with 5 participants excluded due to scoring more than 3 on GHQ-12. Ultimately, 63 participants who met the inclusion criteria were considered for the study, with a convenience sampling method employed for sample collection. To facilitate a comprehensive analysis of the collected data, a range of statistical methods was employed, including Descriptive analysis, Independent t-test Pearson's correlation coefficient, and Multiple regressions. The level of significance was set at $p<0.05$.

RESULTS

This study aimed to investigate the relationship of Internet Addiction and Psychological Well-Being among university students. This section presents the outcomes of the study's data analysis in terms of descriptive and inferential statistics in relation to the variables of interest. The study's results align with the initially proposed hypotheses, and the results are structured in accordance with these hypotheses as outlined at the beginning of the study.

Sample characteristics

Table 1 presents demographic information on the 63 university student participants. The age ranged from 19 to 29 years, with a mean age of 24.73 years (SD = 2.35). The sample was well-balanced in terms of gender, with 49.2% identifying as male and 50.8% as female (Figure 1). Regarding educational backgrounds, 33.3% were undergraduate (UG) students, and 66.7% were postgraduate (PG) students. In terms of religion, the majority were Hindu (87.3%), with smaller proportions identifying as Christian (9.5%) and Muslim (3.2%). In terms of marital status, 84.1% were single, and 15.9% were married. Socio-economic status varied, with 92.1% falling into the middle-class category, 6.3% in the high-class category, and only 1.6% in the low socio-economic status category. With related to residence 55.6% were from urban areas, and 44.4% were from rural areas. Importantly, none of the participants had psychiatric or serious medical disorders, a history of substance use, and all had been using the internet for at least six months for various purposes such as academics, social media, gaming, entertainment, professional work, shopping, and communication.

Figure 1: Percentage of the Gender in the study.
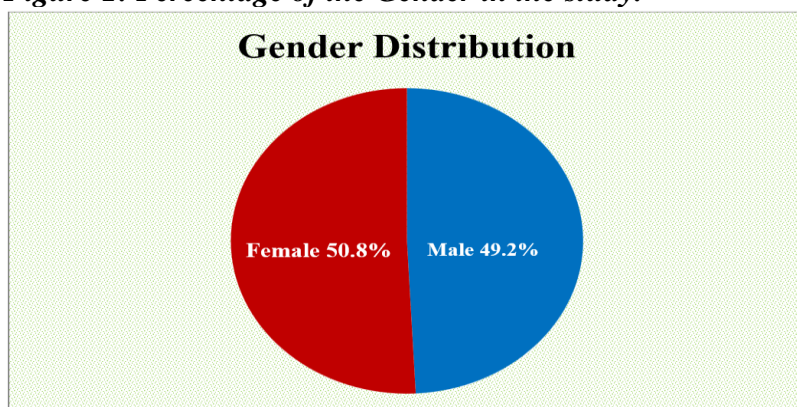
Table.1 Socio-Demographic details of the participants (n= 63)

Participants Characteristics	M	SD	f	%
Age	24.73	2.35		
Gender				
Male			31	49.2
Female			32	50.8
Education				
UG			21	33.3
PG			42	66.7
Religious				
Hindu			55	87.3
Muslim			2	3.2
Christian			6	9.5
Marital Status				
Single			53	84.1
Married			10	15.9
Socio Economic Status				
Low			1	1.6
Middle			58	92.1
High			4	6.3
Locality				
Rural			28	44.4
Urban			35	55.6

Note. UG= Under Graduation, PG= Post Graduation, M= Mean, SD=Standard Deviation

Descriptive and Comparative Analysis:
To assess the levels of IA and PSW, as well as to examine any differences between male and female participants on these variables, descriptive statistics and an independent t-test were carried out. The outcomes of these analyses are provided in Table 2.

H1: There will be no significant difference in the level of Internet Addiction between male and female university students.
As shown in the Table 2, the analysis revealed that the mean score for female participants on the variable IA was 32.15, with a SD of 23.66. On the other hand, the mean score for male participants on the same variable was 31.06, with a SD of 26.08. However, the key finding was that there was no statistically significant difference between the two groups (t= -0.174, p= 0.862). Consequently, Hypothesis 1 was supported by the data, indicating that there was no significant difference in the variable IA between male and female participants in the study.

H2: There will be no significant difference in the level of Psychological Well-Being between male and female university students.
As shown in the Table 2. The result represented that the mean value for female participants on the variable PWB was 151.71 with SD of 15.61. On the other hand, the mean value for male participants on the same variable was 147.67 with SD being 31.16. Moreover, the key findings was that there was no significant difference between the two groups (t= -0.648, p= 0.521). Consequently, Hypothesis 2 was supported by the data, indicating that there was no significant difference in the variable PWB between male and female participants in the study. Additionally, there was no significant difference were noted among male and female students with respect to PWB domains such that AN (t= 1.082, p=0.284), EM (t= 0.545, p=0.588), PG (t= -0.822, p=0.415), PR (t=-1.827, p=0.075), PL (t= 0.935, p= 0.354), and SA (t= -1.736, p= 0.090).

Table 2: Descriptive statistics and Independent t-test on Internet Addiction, Psychological Well-Being and its domains (n=63).

Variables		M	SD	t	p
IA	Male	31.06	26.08	-.174	.862
	Female	32.15	23.66		
PWB	Male	147.67	31.16	-.648	.521
	Female	151.71	15.61		
AN	Male	27.96	7.03	1.082	.284
	Female	26.34	4.59		
EM	Male	25.45	4.58	.545	.588
	Female	24.84	4.26		
PG	Male	23.16	6.37	-.822	.415
	Female	24.25	3.75		
PR	Male	21.32	9.87	-1.827	.075
	Female	24.87	4.51		
PL	Male	26.09	5.52	.935	.354
	Female	24.93	4.21		
SA	Male	23.67	8.17	-1.736	.090
	Female	26.46	3.71		

Note: PWB= Psychological Well-Being, AN= Autonomy, EM= Environmental Mastery, PG=Personal Growth, PR= Positive Relations, PL=Purpose in Life, SA= Self-Acceptance, IA= Internet Addiction.

Figure 2: The Frequency distribution of the Internet Addiction, Psychological Well-Being and its domains among male and female students (n=63).
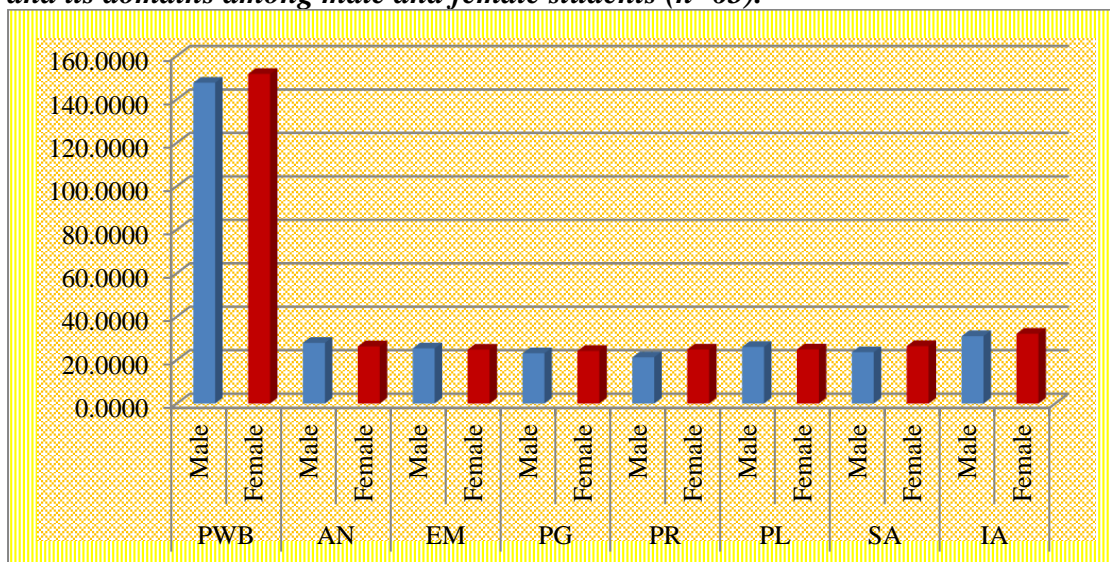
Correlation Analysis:

To assess the relationship between IA and PWB among university students Pearson Correlation was performed and the results are outlined in Table 3.

H3: There will be a significant relationship between Internet Addiction and Psychological Well-Being among university students.

As indicated in Table 3, a significant negative correlation was observed IA and PWB (r= -0.467, p<0.01). This finding underscores an important inverse relationship: as IA levels increased, PWB levels decreased. Additionally, when examining specific dimensions of PWB, it was noted that AN (r= -0.363, p< 0.01), EM (r= -0.389, p< 0.01), PG (r= -0.269, p< 0.05), PR (r= -0.254, p< 0.05), PL (r= -0.436, p< 0.01), and SA (r= -0.318, p< 0.05) consistently exhibited significant inverse relationships with IA. Thus, Hypothesis 3 (H3) was supported from these findings, suggesting that an increase in IA is associated with a decrease in these dimensions of PWB, and all these correlations reached statistical significance.

Table 3: The Relationship of Internet Addiction and Psychological Well-Being among University students (n=63)

	PWB	AN	EM	PG	PR	PL	SA	IA
PWB	1							
AN	.524	1						
EM	.687	.417	1					
PG	.806	.347	.375	1				
PR	.830	.199	.464	.660	1			
PL	.618	.367	.353	.500	.271*	1		
SA	.717	-.019	.407	.497	.703	.276*	1	
IA	-.467	-.363	-.389	-.269*	-.254*	-.436	-.318*	1

*Note: Correlation is significant at the 0.01 level, * Correlation is significant at the 0.05 level, PWB= Psychological Well-Being, AN= Autonomy, EM= Environmental Mastery, PG=Personal Growth, PR= Positive Relations, PL=Purpose in Life, SA= Self-Acceptance, IA= Internet Addiction.*

Linear Regression Analysis

In order to determine the predictive power of Internet Addiction as an independent variable on the level of Psychological Well-Being as the dependent variable among university students, a Linear Regression analysis was conducted. The results of this analysis are detailed in Table 4.

*H4: Internet Addiction significantly predicts Psychological Well-Being among university students.*

As shown in Table 4, IA emerged as a negative predictor of PWB (R^2= 0.218, F= 17.047, p<0.000). This indicates that IA was accounted for 22% of the variance in PWB. Thus Hypothesis 4 (H4) was supported from these findings. Furthermore, simple linear regression analyses revealed that IA also negatively predicted various domains of PWB. Specifically, IA explained a significant portion of the variance: 13% of Autonomy (AN) (R^2= 0.132, F= 9.251, p<0.01), 15% of Environmental Mastery (EM) (R^2= 0.151, F= 10.873, p<0.01), 7% of Personal Growth (PG) (R^2= 0.072, F= 4.754, p<0.05), 6% of Positive Relations with Others (PR) (R^2= 0.064, F= 4.194, p<0.05), 19% of Purpose in Life (PL) (R^2= 0.190, F= 14.310, p<0.000), and 10% of Self-Acceptance (SA) (R^2= 0.101, F= 6.865, p<0.05). In summary, as IA increases, there is a significant decrease in both overall PWB and its individual dimensions.

Table 4: Liner Regression Analysis summary for the Independent Variables Internet Addiction (n=63)

DV	R	R^2	β	SEB	t	F	p
AN	0.363	0.132	-0.087	0.029	-3.042	9.251	0.003
EM	0.389	0.151	-0.069	0.021	-3.297	10.873	0.002
PG	0.269	0.072	-0.057	0.026	-2.180	4.754	0.033
PR	0.254	0.064	-0.080	0.039	-2.048	4.194	0.045
PL	0.436	0.190	-0.086	0.023	-3.783	14.310	0.000
SA	0.318	0.101	-0.083	0.032	-2.620	6.865	0.011
PWB	0.467	0.218	-0.462	0.112	-4.129	17.047	0.000

Note: B: Unstandardized coefficients; SEB: Standard error of B, PWB= Psychological Well-Being, AN= Autonomy, EM= Environmental Mastery, PG=Personal Growth, PR= Positive Relations, PL=Purpose in Life, SA= Self-Acceptance, IA= Internet Addiction, DV= Dependent Variables.

Figure 3: Simple Linear Regression Model
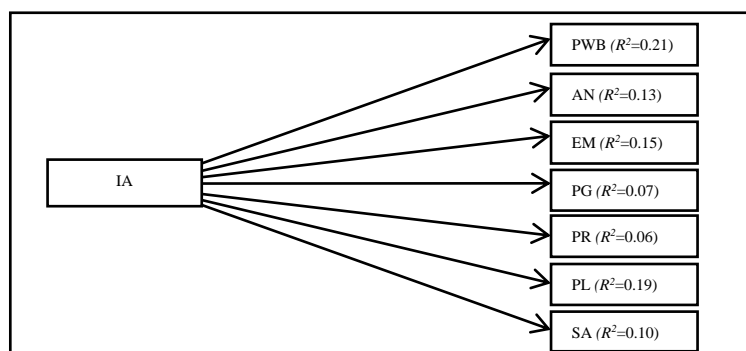
In the following discussion, we delve into the outcomes of our study, analysing the intersections and disparities between Internet Addiction and Psychological Well-Being among the university students. We also explore the alignment of our findings with existing literature. Furthermore, we will dissect the implications of these findings for clinical practice and

psychological theory. Additionally, we will scrutinize the study's limitations and their impact on the results. Finally, we will present suggestions for future research endeavours.

DISCUSSION

Having presented the descriptive statistics and analyses in the preceding Results section, we now turn our attention to the interpretation and implications of these findings. In this Discussion section, we explore the significance of the observed trends, consider their alignment with existing theories, and highlight their potential contributions to the understanding of the relationship between Internet Addiction and Psychological Well-Being among university students.

The current study focused on investigating gender differences in Internet Addiction (IA) and Psychological Well-being (PWB) among university students aged 18-30. Additionally, it aimed to explore the relationship between IA and PWB. Our findings revealed no significant gender disparities in IA. This suggests that internet addiction does not disproportionately affect one gender over the other within our study's participant group. Interestingly, our results contradict the outcomes of prior research, such as the study conducted by Ha and Hwang (2014). Ha and Hwang's research, unlike ours, identified significant gender-based differences in internet addiction and Psychological Well-Being. Conversely, a study led by Chaturvedi and Arora (2018) reported substantial disparities in internet addiction among college-going male and female students. They posited that cultural factors may contribute to this divide, as Indian society often exhibits male dominance, granting males greater freedom and access to various resources. This cultural context influences males' internet usage patterns, with many using it extensively for work and entertainment (Chaturvedi & Arora, 2018). However, in our study, several factors may account for the observed lack of gender differences in internet addiction. One key factor could be the widespread use of the internet, which has become an integral part of daily life for both genders. Additionally, societal changes may have played a role, altering attitudes and behaviors related to internet use and minimizing gender-based variations.

Furthermore, our participants displayed diverse internet usage patterns, employing it for academic purposes, social media, gaming, entertainment, professional work, shopping, and communication. This broad spectrum of internet activities might have contributed to the absence of gender-related discrepancies. It is noteworthy that approximately 66% of our study participants were pursuing postgraduate courses in a medical college. In such an academic environment, the substantial workload and academic pressures may have prompted both genders to employ similar coping strategies when confronted with stressors as the internet may have served as an accessible escape from the challenges of real-life difficulties.

Another findings is that our study also did not find significant gender difference in Psychological well-being which indicates that the lack of a significant gender difference suggest that psychological Well-Being is relatively consistent among male and female students in our study population. Our study result is in a line with previous studies (Hasan, 2019; Bano, 2014; Pirtle &Plata, 2008; Langle et al, 2003). As per Ryff, Psychological Well-Being (PWB) is associated with the extent to which individuals believe they have meaningful control over their lives and activities. However, it's important to note that PWB challenges have become more widespread among today's college students, who are increasingly vulnerable to psychological difficulties. Researchers have underscored the concerning decline in PWB within the college student demographic. Furthermore, as students navigate the various

stages and transitions in their lives, encompassing intellectual, social, and psychological changes inherent in the process of maturation, they frequently confront barriers and hurdles that impede their academic advancement. Moreover, the imperative to effectively manage elevated stress levels cannot be overstated, particularly considering the rising prevalence and severity of psychological issues within the student population (Sharma et al, 2022). Our study concludes that regardless of the level of academic pressure and workload, both male and female students exhibit comparable levels of psychological well-being.

The study results indicate a significant negative correlation between Internet Addiction (IA) and Psychological Well-Being (PWB). These findings suggest that higher levels of Internet dependence are linked to lower levels of psychological well-being, which aligns with earlier research (Caplan 2003; Ferraro et al., 2007; Beydokhti et al., 2012; Khosroshahi & Nosrat, 2012; Akın, 2012; Cardak, 2013; Lei et al., 2020; Nahar & Kakulte, 2022). This suggests that mobile phones can serve as a means to escape negative emotions, potentially exacerbating these emotions due to unresolved underlying issues (Roser et al., 2016). Individuals with poor mental health and emotional instability, particularly students, are more prone to developing addictive mobile phone habits as they seek to alleviate intense negative feelings through communication with others (Babadi-Akashe, 2014). Internet addiction has been associated with reduced social interactions (Smahel et al., 2012), increased depression (Yen et al., 2007), heightened feelings of loneliness (Morahan-Martin & Schumacher, 2003), and diminished self-esteem (Akın & Iskender, 2011; Kraut et al., 1998) decreased social adaptation, and poorer emotional skills (Engelberg & Sjoberg, 2004). Those experiencing severe social interaction anxiety tend to spend more time online (Erwin et al., 2004; Wolfradt & Doll, 2001). Consequently, in line with the current study's findings, it seems that by improving their psychological well-being, individuals might reduce their internet addiction (Cardak, 2013). Numerous strategies have been suggested to elucidate the concept of Internet addiction. For instance, Grohol's perspective suggests that a significant number of individuals who engage in extreme Internet use eventually reduce their online activity due to its excessive nature. This pattern resembles the experiences of those who were previously addicted to satellite television or video entertainment. Nevertheless, a crucial aspect to address is the identification of the underlying causes of this dependence. It is imperative to comprehend why individuals are compelled towards such heavy reliance on platforms like the Internet. Investigating the origins of this dependency holds greater significance than focusing solely on the specific tools individuals depend upon (Jahanian & Seifury, 2013). Furthermore, Qasemzadeh et al. (2007) found that 3.8% of high school students in Tehran are addicted to the Internet, and Nasiri et al. (2011) conducted a study revealing that a substantial 13.8% of students suffer from severe Internet addiction, which has a profound impact on their lives. Additionally, they posit that the emergence of severe Internet addiction can be attributed to subpar academic achievements and limited social engagement. Furthermore, they suggested that alterations in one's social context can lead to the development of severe Internet addiction.

CONCLUSION

In summary, the statistical analyses conducted have yielded results indicating that there is no significant disparity between male and female students in terms of both internet addiction and psychological well-being. Nevertheless, a negative correlation has been observed between internet addiction and psychological well-being, indicating that higher levels of internet addiction are linked to lower levels of psychological well-being among university students. Furthermore, the study has established that internet addiction is a significant predictor of lower psychological well-being and its individual dimensions. These findings highlight the need for

targeted interventions aimed at mitigating internet addiction among university students to improve their overall psychological well-being.

Limitations
The study had a relatively limited sample size, so conducting future research on larger samples is necessary. Additionally, it's important to note that a cross-sectional survey like this one cannot provide definitive conclusions. Furthermore, future studies should consider a longitudinal design. Lastly, it's worth mentioning that this study only included students from universities in the Jaipur district, which could potentially impact the generalizability of the results.

Direction for Future
Despite those limitations, this study's findings have important implications for mental health intervention and prevention efforts, especially in university settings. It highlights the need for universities to prioritize the mental health of their students by implementing evidence-based interventions to reduce stress, enhance emotional regulation skills, and promote healthy smartphone use habits. Future research could explore the effectiveness of such interventions and their potential to improve the mental health outcomes of university students taking into consideration the limitations we've identified. The future studies could focus on the role of Psychological Well-Being as a mediator between alexithymia and Internet addiction as there is evidence that alexithymia influences Psychological Well-Being which in turn impacts internet addiction. If psychological well-being is identified as mediator, intervention can be designed to target this factor to mitigate the risk of internet addiction among individuals with Alexithymia.

REFERENCES
Abiddin, N. Z., & Ismail, A. (2011). Attrition and completion issues in postgraduate studies for student development. *International Review of Social Sciences and Humanities*, 1(1), 15-29.

Agarwal, S., & Bureau, E. T. (2017). Internet users to touch 420 million by June 2017: IAMAI report. The Economic Times, 2.

Akın, A. (2012). The Relationships Between Internet Addiction, Subjective Vitality, and Subjective Happiness. *Cyberpsychology, Behavior, and Social Networking*, 15, 404–410. https://doi.org/10.1089/cyber.2011.0609

Akın, A., & Iskender, M. (2011). Internet Addiction and Depression, Anxiety, and Stress. *International Online Journal of Educational Sciences*, 3(1), 138-148.

Babadi-Akashe, Z., Zamani, B. E., Abedini, Y., Akbari, H., & Hedayati, N. (2014). The Relationship between Mental Health and Addiction to Mobile Phones among University Students of Shahrekord, Iran. *Addiction & Health*, 6(3-4), 93–99.

Bano, A. (2014). Impact of Meaning in Life on Psychological Well-being and Stress Among University Students. Wien: Existenzanalyse, *GLE-International*, 21-25.

Beydokhti, A., Hassanzadeh, R., & Mirzaian, B. (2012). The relationship between five main factors of personality and addiction to SMS in high school students. *Current Research Journal of Biological Sciences,* 4, 685–689.

Blanc, R. A., DeBuhr, L. E., & Martin, D. C. (1983). Breaking the attrition cycle: the effects of supplemental instruction on undergraduate performance and attrition. *Journal of Higher Education,* 54 (1), 80–90. DOI: 10.1080/00221546.1983.11778153

Brenner, V. (1997). Psychology of computer use: XLVII. Parameters of Internet use, abuse and addiction: The first 90 days of the Internet Usage Survey. Psychological Reports, 80, 879-882.

Byrd, D. R., & McKinney, K. J. (2012). Individual, interpersonal, and institutional level factors associated with the mental health of college students. *Journal of American College Health,* 60(3), 185-193. DOI: 10.1016/j.jad.2012.11.026

Caplan, S. (2003). Preference for online social interaction: A theory of problematic Internet use and psychosocial well-being. *Communication Research*, 30(5), 625–648. https://doi.org/10.1177/009365020325784

Cardak, M. (2013). Psychological wellbeing and addiction among university students. *The Turkish journal of journal of educational technology,* 12(3), 134-141

Christakis, D. A. (2010). Internet addiction: a 21stcentury epidemic?. *BMC medicine*, 8(1), 1-3. https://doi.org/10.1186/1741-7015-8-61

Daniel, T., Shek, L., Rachel, C., Sun, F., & Lu, YU. (2013). Neuroscience in the 21st Century from Basic to Clinical (2nd ed.). Springer Science+Business Media LLC.

Diener, E. Subjective well-being, in the science of well-being 2009, Springer. 11-58.

Engelberg, E., & Sjöberg, L. (2004). The Internet: Home to a severe population of individuals with social anxiety disorder?. *Journal of Anxiety Disorders*, 18(5), 629–646. https://doi.org/10.1016/j.janxdis.2003.08.002

Ferraro, G., Caci, B., D'Amico, A., & Di Blasi, M. (2007). Internet addiction disorder: An Italian study. Cyberpsychology & Behavior: The Impact of the Internet, Multimedia and Virtual Reality on Behavior and Society, 10(2), 170–175. https://doi.org/10.1089/cpb.2006.9972

Frangos, C. C., Fragkos, K. C., & Kiohos, A. (2010). Internet addiction among Greek university students: Demographic associations with the phenomenon, using the Greek version of Young's Internet Addiction Test. *International Journal of Economic Sciences and Applied Research*, 3(1), 49-74.

Galderisi, S., Heinz, A., Kastrup, M., Beezhold, J., & Sartorius, N. (2015). Toward a new definition of mental health. World Psychiatry: *Official Journal of the World Psychiatric Association (WPA),* 14(2), 231–233. https://doi.org/10.1002/wps.20231

Gedam, S. R., Ghosh, S., Modi, L., Goyal, A., & Mansharamani, H. (2017). Study of Internet Addiction: Prevalence, Pattern, and Psychopathology among Health Professional Undergraduates. *Indian Journal of Social Psychiatry*, 33 (4), 305-311. https://doi.org/10.4103/ijsp.ijsp_70_16.

Gerdes, H., & Mallinckrodt, B. (1994). Emotional, social, and academic adjustment of college students: a longitudinal study of retention. *Journal of Counseling & Development*, 72, 281–288. https://doi.org/10.1002/j.1556-6676.1994.tb00935.x

Goldberg, D. P., & Hillier, V. F. (1979). A scaled version of the General Health Questionnaire. *Psychological Medicine,* 9(1), 139–145. https://doi.org/10.1017/s0033291700021644.

Griffiths, M. D. (1998). Internet addiction: Does it really exist? In J. Gackenbach (Ed.), Psychology and the Internet: Intrapersonal, interpersonal and transpersonal applications (pp. 61–75). New York: Academic Press. URL: http://irep.ntu.ac.uk/id/eprint/13518/. Accessed on September 29, 2017.

Griffiths, M., Miller, H., Gillespie, T., & Sparrow, P. (1999). Internet usage and internet addiction in students and its implications for learning. *Journal of Computer Assisted Learning*, 15(1), 85-90. https://doi.org/10.1046/j.1365-2729.1999.t01-2-151078.x

Guan, S. S. A., & Subrahmanyam, K. (2009). Youth Internet use: risks and opportunities. *Current opinion in Psychiatry*, 22(4), 351-356. DOI: 10.1097/YCO.0b013e32832bd7e0

Ha, Y. M., & Hwang, W. J. (2014). Gender Differences in Internet Addiction Associated with Psychological Health Indicators Among Adolescents Using a National Web-based Survey. *International Journal of Mental Health and Addiction*, *12*(5), 660-669. https://doi.org/10.1007/s11469-014-9500-7

Hasan, M. (2016). Psychological well-being and gender difference among science and social science students. *Indian Journal of Psychological Science*, 6(2), 151-158.

Jahanian, R., & Seifury, Z. (2013). The impact of Internet addiction on students' mental health in technical and vocational colleges in Alborz Province. *Middle-East Journal of Scientific Research,* 14(11), 1533-1538. DOI: 10.5829/idosi.mejsr.2013.14.11.447

Kandell, J. J. (1998). Internet addiction on campus: The vulnerability of college students. *CyberPsychology & Behavior*, 1(1), 11-17. https://doi.org/10.1089/cpb.1998.1.11

Khosroshahi, J. B., & Nosrat Abad, T. H. (2012). The relationships of attachment styles, coping strategies, & mental health to Internet addiction. *Developmental Psychology: Journal of Iranian Psychologists,* 8(30), 177–185. Retrieved from https://psycnet.apa.org/record/2012-09490-003

Kubey, R. W., Lavin, M. J., & Barrows, J. R. (2001). Internet use and collegiate academic performance decrements: Early findings. *Journal of Communication*, 51(2), 366-382. https://doi.org/10.1111/j.1460-2466.2001.tb02885.x

Kumar, M., & Mondal, A. (2018). A study on Internet addiction and its relation to psychopathology and self-esteem among college students. *Industrial psychiatry journal*, *27*(1), 61–66. https://doi.org/10.4103/ipj.ipj_61_17

Lange, C., & Byrd, M. (1998). The relationship between perceptions of financial distress and feelings of psychological well-being in New Zealand university students. *International Journal of Adolescence and Youth,* 7(3), 193-209. https://doi.org/10.1080/02673843.1998.9747824

Längle, A., Orgler, Ch., & Kundi, M. (2003). The Existence Scale: A new approach to assess the ability to find personal meaning in life and to reach existential fulfillment. *European Psychotherapy,* 4(1), 135-151.

Leahy, R., Tirch, D., & Napolitano, L. (2011). Emotion Regulation in Psychotherapy: A Practitioner's Guide. Guilford Publication.

Lei, H., Chiu, M. M., & Li, S. (2020). Subjective well-being and internet overuse: A meta-analysis of mainland Chinese students. *Current Psychology,* 39(3), 843-853. https://doi.org/10.1007/s12144-019-00313-x

Lessing, A., & Schulze, S. (2002). Postgraduate supervision and academic support: Students' perceptions. *South African Journal of Higher Education*, 16(2), 139-149. http://hdl.handle.net/10500/194

Molina-García, J., Castillo, I., & Queralt, A. (2011). Leisure-time physical activity and psychological well-being in university students. *Psychological Reports,* 109(2), 453-460. https://doi.org/10.2466/06.10.13.PR0.109.5.453-460

Morahan-Martin, J., & Schumacher, P. (2003). Loneliness and social uses of the Internet. Computers in Human Behavior, 19(6), 659–671. http://dx.doi.org/10.1016/S0747-5632(03)00040-2

Nagaur, A. (2020). Internet Addiction and Mental Health among University Students during COVID-19 Lockdown. *Mukt Shabd Journal*, 9, 684-692.

Nahar, R. N., & Kakulte, A. (2022). Relationship between Alexithymia, difficulties in emotion regulation, mental health and internet addiction in young adults. *Mind and Society,* 11(02), 50-58. DOI: https://doi.org/10.56011/mind-mri-112-20225

Nasiri, E., Raei, M., Vatani, J., Keshavarz, S., & Hashiani, A. (2011). Survey the Prevalence of Internet Addiction and Its Influential Factors in Persian College Student in 2011. *Middle-East Journal of Scientific Research*, 10(1), 50-53.

Pirtle, T., & Plata, M. (2008). Meaning in life among Latino university students: Perceptions of meaning in life among first-semester Latino university students. *International Journal of Existential Psychology & Psychotherapy*, 2(1).

Punia, N., & Malaviya, R. (2015). Psychological Well-Being of First Year College Students. *Indian Journal of Educational Studies: An Interdisciplinary Journal,* 2(1), 60-68.

Qasemzadeh, L., Shahrarai, M., & Moradi, A. (2007). Study on Prevalence of Internet Addiction and Its Relationship to Solitude and Self-Esteem in High School Students in Tehran. *Education Quarterly*, 89, 111-141.

Regehr, C., Glancy, D., & Pitts, A. (2013). Interventions to reduce stress in university students: A review and meta-analysis. *Journal of Affective Disorders*, 148(1), 1-11. DOI: 10.1016/j.jad.2012.11.026

Roser, K., Schoeni, A., Foerster, M., & Röösli, M. (2016). Problematic mobile phone use of Swiss adolescents: Is it linked with mental health or behavior?. *International Journal of Public Health,* 61(3), 307–315. https://doi.org/10.1007/s00038-015-0751-2

Ryan, R. M., & Deci, E. L. (2001). On Happiness and Human Potentials: A Review of Research on Hedonic and Eudemonic Well-Being. Annual Review of Psychology, 52, 141–166. https://doi.org/10.1146/annurev.psych.52.1.141

Ryff, C. D. (1989). Happiness is Everything, or is it? Explorations on the Meaning of Psychological Well-Being. *Journal of Personality and Social Psychology*, 57(6), 1069-1081. https://doi.org/10.1037/0022-3514.57.6.1069

Sharma, A., Singh, T. P., Sharma, R., Dhakar , J. S. ., & Bharti , A. . (2022). Psychological well-being among college students: A study from Central India. *Asian Journal of Medical Sciences*, *13*(1), 46–51. https://doi.org/10.3126/ajms.v13i1.39350

Sharma, A., Singh, T. P., Sharma, R., Dhakar, J. S., & Bharti, A. (2022). Psychological well-being among college students: A study from Central India. *Asian Journal of Medical Sciences,* 13(1), 46-51. https://doi.org/10.3126/ajms.v13i1.39350

Sherina M, Rampal L, & Kaneson N. (2004). Psychological stress among undergraduate medical students. *Med J Malaysia*, 59(2), 207-211.

Smahel, D., Brown, B. B., & Blinka, L. (2012). Associations between online friendship and Internet addiction among adolescents and emerging adults. *Developmental Psychology*, 48(2), 381–388. https://doi.org/10.1037/a0027025

Storm, A. (1996). Internet addiction: Is the Internet addictive, or are addicts using the Internet [Web page]. Retrieved November 20, 2003, from http://www.webpages.charter.net/stormking/iad.html.

Suler J. R. (1999). To get what you need: healthy and pathological internet use. *Cyberpsychology & behavior: the impact of the Internet, multimedia and virtual reality on behavior and society*, 2(5), 385–393. https://doi.org/10.1089/cpb.1999.2.385

Wolfradt, U., & Doll, J. (2001). Motives of adolescents to use the Internet as a function of personality traits, personal and social factors. *Journal of Educational Computing Research,* 24(1), 13–27. https://doi.org/10.2190/ANPM-LN97-AUT2-D2EJ

Yang, Y. T. T. (2010). Stress, coping, and psychological well-being: Comparison among American and Asian international graduate students from Taiwan, China, and South Korea (Doctoral dissertation, University of Kansas).

Yen, J. Y., Ko, C. H., Yen, C. F., Wu, H. Y., & Yang, M. J. (2007). The comorbid psychiatric symptoms of Internet addiction: Attention deficit and hyperactivity disorder (ADHD),

depression, social phobia, and hostility. *The Journal of Adolescent Health*, 41(1), 93–98. https://doi.org/10.1016/j.jadohealth.2007.02.002

Young, K. S. (1998). Internet Addiction: The Emergence of a New Clinical Disorder. *Cyber Psychology & Behavior*, 1, 237-244. http://doi.org/10.1089/cpb.1998.1.237.

Zulkefly, N. S., & Baharudin, R. (2010). Using the 12-item General Health Questionnaire (GHQ-12) to assess the psychological health of Malaysian college students. Global Journal of Health Science, 2(1), 73-80. DOI**:**10.5539/gjhs.v2n1p73

Conflict of Interest
The author declared no conflict of interest.

How to cite this article: Mahadevaswamy, M. & Rawat, V.S. (2023). The Relationship Between Internet Addiction and Psychological Well-Being Among University Students. *International Journal of Indian Psychology*, *11(4),* 1167-1184. DIP:18.01.105.20231104, DOI:10.25215/1104.105