Smartphone Induced Anxiety: An Investigation into Nomophobia and Stress Levels Among Universities Students

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ARTICLE INFO	ABSTRACT
Keywords: *Nomophobia, Anxiety, Stress, Universities Students* **Corresponding Author:** **Waqas Mahmood** Email: waqas.mahmood@iub.edu.pk OPEN ACCESS	*The aim of this research was to investigate the extent of nomophobia, anxiety, and stress among students attending both public and private universities in Bahawalpur. The objectives included identifying contributing factors, assessing the prevalence of these issues, and suggesting potential solutions. A sample of 436 students was chosen from a population of 89,805 using Morgan's table, and data was collected via a survey employing a questionnaire. Statistical analysis was conducted using SPSS Version 2020 to compare means between public and private universities, while NVIVO software Version 2023 was utilized for analyzing responses to open-ended questions. The study revealed that a significant proportion (56.2%) of students experienced discomfort without constant access to their smartphones, indicating a notable prevalence of nomophobia. Furthermore, individuals affected by nomophobia reported heightened levels of stress and agitation, leading to social unease. Additionally, the study emphasized the importance of mobile phones as tools for research and information gathering, highlighting potential limitations faced by students lacking access to them. Based on these findings, recommendations were put forth to address these issues. Suggestions included engaging in mindfulness practices such as meditation or yoga to alleviate anxiety, finding alternative activities unrelated to mobile phones like exercise or reading, and encouraging outdoor pursuits to promote overall well-being. In summary, this study sheds light on the prevalence of nomophobia, anxiety, and stress among universities students and proposes strategies to mitigate these challenges, ultimately aiming to enhance students' well-being and academic success.*

Introduction

In the New Year's, cell phones have generally assumed control over an individual's day to day existence. These shrewd gadgets have advanced into a fundamental apparatus for work, school, amusement, and everyday living as a result of the range of purposes and benefits they offer. Cell phones likewise offer various different materials that can assist with peopling adapt to upsetting circumstances (Ahmed, Pokhrel et al. 2019). In spite of the way that cellphones significantly work on individuals' regular routine, studies on the unfavorable associations and impacts of unnecessary cell phone use are unsettling. Research conducted by Pera (ÖZDEMİR, ÇAKIR et al. 2018) highlights the potential negative impacts of excessive and inappropriate use of technology on the human brain and associated psychological functions. This is particularly relevant in the case of young people, as improper use of mobile phones has been linked to a decline in their psychosocial wellbeing and mental health. In fact, recent studies suggest that smartphones can further aggravate symptoms of anxiety and depression, lower self-esteem, decrease perceived social support, and disrupt emotional regulation (Haron et al., 2024).

NOMOPHOBIA, also referred to as no mobile phone phobia, is a psychological condition characterized by a fear of losing connection to one's mobile phone (Darvishi, Noori et al. 2019). Stress, on the other hand, has been defined in numerous ways by various individuals, including doctors, social scientists, anthropologists, psychologists, and even zoologists. In order to gain a thorough understanding of this phenomenon and its origins, it is essential to explore it from multiple perspectives. According to Niaz, Akram, Mushtaq, & Mahmood (2023), individuals diagnosed with panic disorder may experience more severe mental and physical symptoms when they lack access to a smartphone (cited in Al-Balhan, Khabbache et al., 2018). This suggests that smartphones could play a beneficial role in reducing the severity of panic attacks among those affected. Furthermore, Akram, Javed, Niaz, & Mahmood (2022) found that individuals with higher levels of anxiety often use online communication as a means of alleviating their symptoms, highlighting the potential for technology to serve as a coping mechanism in managing anxiety.

In their recent study, Mir and Akhtar et al. (2020) delved into the connection between body image-related social anxiety and nomophobia. They discovered that individuals who struggle with anxiety surrounding their physical appearance also have a higher likelihood of reporting nomophobia symptoms. Positive school climate also reduce the stress and anxiety from the student (Mahmood, Akram, et al., 2024; Mahmood, Ismail, & Omar, 2024). This fear of being without a phone has been associated with debilitating psychiatric conditions like anxiety, stress, and depression, as noted by Aldalalah (2020). Essentially, the fear of not having access to a cellphone may contribute to increased levels of stress, anxiety, and depression, but it is also possible that individuals who already experience these conditions may be more susceptible to developing nomophobia.

Statement of the Problem

Smartphones have quickly become a crucial aspect of our daily lives, simplifying many daily tasks. Thanks to continuous technological advancements and progress in information and communication technologies, we are constantly experiencing new developments that aim to improve our overall quality of life. Yet, it's worth noting that excessive use of smartphones can have some negative effects on our mental well-being, as has been seen in cases of nomophobia, or the fear of being without your phone. It has been observed that there is a lack of experimental research examining the behavioral, physiological, and emotional changes in individuals who are deprived of their phones (Rodríguez-García, Moreno-Guerrero et al., 2020). This new meta-

analytic review has found limited evidence linking mobile phone use to anxiety (Rodríguez-García, Moreno-Guerrero, & Lopez Belmonte, 2020), highlighting the need for further investigation into potential moderating factors (Sharma, Sharma et al., 2015). Unfortunately, there haven't been any studies that specifically target individuals with varying levels of nomophobia. Additionally, previous research required participants to complete a completely new cognitive task in a controlled setting.

Hence, this research aims to thoroughly explore the pervasiveness of Nomo phobia and its link with stress levels among students enrolled at Bahawalpur Universities. Through a thorough examination of smartphone-related anxiety within the universities setting, this study strives to yield important findings on the impact of technology use and aid in the creation of specific strategies to foster a healthier and more balanced interaction with smartphones among universities students.

Literature Review

Nomophobia, or the fear of being without a mobile phone, refers to the anxiety experienced when one cannot access or use their phone due to reasons like a dead battery or lack of network coverage (Tran, 2016). Individuals with nomophobia may become anxious or stressed when their phones are unavailable. This anxiety can present itself through behaviors such as frequent phone checking, needing to keep the phone nearby at all times, and experiencing panic when unable to use it. This condition can affect people of all ages and is often associated with other mental health issues like social anxiety, depression, or obsessive-compulsive disorder (Gezgin, Cakir, & Yildirim, 2018). Coined in 2008 by a UK research study examining mobile phone users' fears, nomophobia has since been the subject of various studies aiming to understand its causes, prevalence, and effects. The initial study in 2008, involving nearly 2,100 participants, revealed that 53% of mobile phone users experienced nomophobia, with men (58%) being more susceptible than women (48%) to anxiety when unable to use their phones (Bosnjak, Neubarth et al., 2008).

Nomophobia, a term that has gained considerable media attention since its inception, especially in internet-based platforms, has been an area of growing interest despite limited empirical research. Searches across academic databases such as Web of Science, EBSCOHOST, PsychInfo, and ProQuest confirm the prominence of nomophobia in scholarly discourse. This section highlights several notable research studies that have contributed to understanding this phenomenon.

Stress is the body's natural reaction to perceived threats or demands, whether real or imagined, prompting physiological and psychological responses intended to manage challenges. Stressors include factors like work pressure, financial concerns, health issues, and life changes, which can result in physical symptoms (e.g., elevated heart rate, muscle tension) and emotional impacts (e.g., irritability, sadness). Chronic stress has been linked to increased risks of cardiovascular disease, depression, and impaired immunity, though short-term stress may enhance cognitive function (Bano et al., 2020; Shek et al., 2021). Positive school climate also reduce the stress level (Mahmood, Ismail, et al., 2024). Stress manifests in multiple forms, including acute stress from specific events, chronic stress from prolonged issues, episodic acute stress from frequent challenges, and traumatic stress following severe events. Recognizing these types can aid individuals in developing tailored coping strategies, such as exercise, mindfulness, or therapy, to mitigate stress's adverse effects and promote overall well-being and effective implementation of quality assurance and leadership can enhance the student performance and improve mental health (Cheng Li, Md Zalli, Jamil, & Mahmood, 2023; Mahmood, Ismail, & Omar Fauzee, 2021) .

Anxiety is a common emotional response to stress, characterized by feelings of worry, fear, or unease, ranging from mild to severe. While mild anxiety can be beneficial by promoting alertness, chronic or excessive anxiety can disrupt daily functioning and mental health. Anxiety disorders, such as Generalized Anxiety Disorder (GAD), Panic Disorder, Social Anxiety Disorder, and specific phobias, involve persistent and intense worry or fear in response to ordinary situations. These disorders manifest through symptoms like restlessness, muscle tension, fatigue, and sleep disturbances, which can significantly impair quality of life (Julian, 2011). Effective treatment often involves a combination of cognitive-behavioral therapy (CBT), medication (e.g., SSRIs), lifestyle changes, and support groups, all aimed at reducing symptoms and improving coping skills (Catone et al, 2020; Zinbarg & Barlow, 1996). Recognizing the type and severity of anxiety is crucial for individualized treatment, promoting well-being and resilience in those affected while job satisfaction also reduces the anxiety level of students and teachers (Mahmood, 2020).

Measures of Problematic Mobile Phone Use

Although it is obvious that a thorough understanding of what constitutes problematic mobile phone use is necessary, the measures developed so far appear to have focused on the literature on drug use and addiction, as shown in Table 1.

Measures	Authors	Basis
Mobile Phone Use Questionnaire (MP-UQ)	King et al.(2014)	Literature on mobile phone use.
Problematic Use of MobilePhone (PUMP) Scale	Merlo, Stone &Bibbey (2013)	Informal interviews and DSM-IV-TRcriteria for substance use disorder
Test of Mobile PhoneDependence (TMD)	Choliz (2012)	and DSM-IV-TR criteria fordependence disorder
Mobile Phone Involvement Questionnaire (MPIQ)	Walsh White, & McdYoung (2010)	Brown,s Behavioral AddictionComponents and Interviews
Problem Cellular Phone UseQuestionnaire (PCPUQ)	Yen et al. (2009)	DSM-IV-TR criteria for substance use disorder
Problematic Mobile Phone Use Questionnaire (PMPUQ)	Billieux et al. (2008)	Problematic mobile phone useliterature
Text- Message DependencyScale (TMDS)	Igarashi, Takai &Yoshida (2008)	Text message use literature
SMS Problem Use DiagnosticQuestionnaire (SMS- PUDQ)	Rutland, Sheets &Young (2007)	Young's criteria for internet addiction
Mobile Phone Dependence Questionnaire (MPDQ)	Toda, Moden &Kubo (2006)	Excessive mobile phone use literature

Mobile Phone Problem UseScale	Bianchi & Phillips(2005)	Mobile phone use literature and addiction literature

Research Objectives

The research objectives of the study as follow:
1. To identify and examine the key factors influencing nomophobia, stress and anxiety among the students of private and public universities of Bahawalpur.
2. To analyze the relationship between smart phone- induced Nomophobia and stress among the universities students.
3. To investigate the coping techniques utilized by universities students understudies to oversee cell phone-initiated pressure.

Research Questions

To achieve the stated objectives, the study will address the following research questions:
1. What are the key factors that contribute to students' nomophobia, anxiety, and stress levels in both public and private universities?
2. What is the extent and relationship between nomophobia and the levels of anxiety and stress among students at both public and private universities in Bahawalpur?
3. What concrete steps can be taken to eradicate nomophobia, anxiety, and stress among students attending both public and private universities?

Research Methodology

The basic purpose of this research is to assess the Nomophobia, Anxiety and Stress among Students of Public and Private Universities at Bahawalpur. Descriptive method of research was selected to conduct the current study. Survey method was used for data collection. The Islamia University of Bahawalpur, The Government Sadiq College Women University of Bahawalpur, Cholistan University of Veterinary and Animal Sciences of Bahawalpur, University of Central Punjab Bahawalpur and The National College of Business Administration and Economics were included in the population of the study. According to the Krejcie and Morgan's table, sample size of 436 is selected from population of 89805 students, through systematic random sampling technique. After reviewing relevant literature, a self-administered questionnaire was developed on a five-point rating scale, and its validity and reliability were tested through Cronbach's Alpha and exploratory factor analysis. The questionnaire items were refined based on expert feedback, and further analysis ensured that each item aligned with the intended constructs, providing a robust tool for data collection.

Table 1.1: Sampling Framework

S.No	Names of Universities	Students
1	The Islamia University of Bahawalpur	101
2	The Government Sadiq College WomenUniversity of Bahawalpur	87
3	Cholistan University of Veterinary and Animal Science	75
4	University of Central Punjab Bahawalpur	85
5	National College of Business Administration and Economics Bahawalpur	88
	Total	436

Data Analysis and Interpretation

Demographic Information

Table 2.1: Gender wise comparison

Gender	*F*	%
Male	218	50.0
Female	218	50.0
Total	436	100

Table 2.1 displays gender of respondents. 50% respondents were Male and also 50.0% respondents were female.

Table 2.2: Types of universities

University Type	*F*	%
Public	254	58.3
Private	182	41.7
Total	436	100

Table 3.1: For how long have you been using a smartphone?

Responses	f	%	Mean	S.D
Less than 1 year	58	13.3		
less than 2 years	48	11.0		
less than 3 years	63	14.4	3.92	1.735
less than 4 years	84	19.3		
less than five years	69	15.8		
5 years or more	112	25.7		
Total	436	100.0		

Table 3.1 shows respondents opinion about "For how long have you been using a smartphone". Approximately 13.3% students using a smartphone for less than a year. 11.0% students using a smartphone for 1 year to less than 2 years. 14.4% students using a smartphone for 2 years to less than 3 years. 19.3% students using a smartphone less than 4 years. 15.8% students using a smartphone for less than 5 years. While 25.7% students using a smartphone for 5 years or more. Mean 3.92 shows average performance level for the statement that for how long you have been using a smartphone. While standard deviation for how long have you been usinga smartphone is 1.735.

Table 3.2: Do you have a mobile data package that enables you to use your smartphone to browse the internet?

Responses	*f*	%	Mean	SD

			Mean	S.D
Yes	350	80.3		
No	86	19.7	1.20	0.398
Total	436	100		

Table 3.2 shows respondents opinions about having a mobile data plan to access internet using mobile phone. Approximately 80.3% students agreed that they have mobile internet package for accessing data through mobile phone. While 19.7% students disagreed to the given statement. Mean score for having mobile data packages for accessing internet is 1.20. While Standard Deviation of statement having mobile data plan to access internet using mobile phone is 0.398.

Table 3.3: How many hours a day on usual do you use your smartphone?

Responses	*F*	%	Mean	S.D
1-4	130	29.8		
5-8	115	26.4		
9-12	51	11.7	2.91	1.305
13-16	117	26.8		
17 & above	23	5.3		
Total	436	100.0		

Table 3.3 shows respondents opinion about "How many hours a day on usual do you use your smartphone"? 29.8% student's respond approximately 1-4 hours sending time using smartphone per day. 26.4% students respond approximately 5-8 hours spending time using smartphone per day. 11.7% students respond approximately 9-12 hours spending time using smartphone per day. 26.8% students respond approximately 13-16 hours spending time using smartphone per day. 5.3% students respond approximately 17 and above hours spending time using smartphone per day. Mean for the statement how many hours a day on usual do you use your smartphone i s 2.91. While standard deviation of this statement is 1.305.

Table 3.4 : How frequently do you check your smartphone?

Responses	*F*	%	Mean	S.D
Every 5 minutes	83	19.0		
Every Hour	111	25.5		
Every 10 minutes	45	10.3		
Every 2 Hours	32	7.3		
Every 20 minute	21	4.8	3.78	2.346
Every 3 hours	40	9.2		
Every 30 minutes	98	22.5		
Other(please specify)	05	1.1		
Total	436	100.0		

Table 3.4 shows respondents opinion about "How frequently do you check your smartphone". 19.0% students think that in every 5 minutes usually check their smartphones. 25.5% students

think that in every hour usually check their smartphone. 10.3% students think that in every 10 minutes usually check their smartphones. 7.3% students think that in every 2 hours usually check their smartphones. 4.8% students think that in every 20 minutes usually check their smartphones. 9.2% students think that in every 3 hours usually check their smartphones. 22.5% students think that in every 30 minutes usually check their smart phones. 1.1% students respond that they usually check their smartphones for other purpose. Mean for statement how frequently you check your smartphone is 3.78. While standard deviation is 2.346.

Table 3.5: What do you often use your smartphone for?

Responses	f	%	Mean	S.D
Checking email	106	24.3		
Looking information up on the internet	111	25.5		
Checking lecture notes	65	14.9		
Listening to music	30	6.9		
Checking social media	33	7.6		
Scheduling meetings and events	11	2.5	3.63	2.830
Gaming	10	2.3		
Talking with family or friends	30	6.9		
Getting news	10	2.3		
Texting family or friends	22	5.0		
Killing time	8	1.8		
Total	436	100.0		

Table 3.5 shows respondents opinion about "What do you often use your smartphone for". 24.3% students respond that usually use their smartphones for the purpose of checking email. 25.5% students respond that usually use their smartphones for the purpose of looking information up on the internet. 14.9% students respond that usually use their smartphones for the purpose of checking lecture notes. 6.9% students respond that usually use their smartphones for the purpose of listening to music. 2.3% students respond that usually use their smartphones for the purpose of gaming. 6.9% students respond that usually use their smartphones for the purpose for talking with family or friends. 1.8% students respond that usually use their smartphones for the purpose the killing time.

Table 3.6: When I am not using my smartphone, I constantly think about it

Statement	Scale	F	%	Mean	S.D
When I am not using my smartphone, I constantly think about it.	SA	63	14.4		
	A	212	48.6		
	UD	39	8.9	2.22	1.396
	DA	96	22.0		
	SDA	26	6.0		
	Total	436	100.0		

Table 3.6 describes "When I am not using my smartphone, I constantly think about it". Data in table reveals that 14.4% respondent were strongly agreed that when they not using smartphone, they constantly think about it. 48.6% respondents were agreed that when they

not using smartphone, they constantly think about it. 22.0% respondents were disagreeing that when they not using smartphone, they constantly think about it. 6.0% respondents were strongly disagree that when they not using smartphone, they constantly think about it while 8.9% respondents have no opinion. The mean score of the statement is 2.22 which show inclination toward agreement. Standard deviation value is 1.396. This analysis reveals that most of the participants said that when they not using smartphone, they constantly think about it.

Table 3.7: I frequently use my smartphone for no apparent purpose

Statement	Scale	*F*	%	Mean	S.D
I frequently use my smartphone for no apparent purpose.	SA	106	24.3		
	A	189	43.3		
	UD	42	9.6	2.16	1.282
	DA	79	18.1		
	SDA	20	4.6		
	Total	436	100.0		

Table 3.7 describes about "I frequently use my smartphone for no apparent purpose". Data in table reveals that 24.3% respondent were strongly agreed that I frequently use my smartphone for no apparent purpose. 23.3% respondents were agreed that they frequently use their smartphone for no apparent purpose. 18.1% respondents were disagree that they frequently use smartphone for no apparent purpose. 4.6% respondents were strongly disagree that they frequently use their smartphone for no apparent purpose while 9.6% respondents have no opinion. The mean score of the statement is 2.16 which show inclination toward agreement. Standard deviation value is 1.282. This analysis reveals that most of the participants agree on the statement that I frequently use my smartphone for no apparent purpose.

Table 3.8: When get called on my smartphone, I stop what I am doing

Statement	Scale	*F*	%	Mean	S.D
When I get called on my smartphone, I stop what I am doing .	SA	86	19.7		
	A	187	42.9		
	UD	91	20.9	2.15	1.223
	DA	53	12.2		
	SDA	19	4.4		
	Total	436	100.0		

Table 3.8 describes about "When I get called on my smartphone, I stop what I am doing". Data in table reveals that 19.7% respondent were strongly agreed that when they get called on their smartphone, they stop what they are doing. 42.9% respondents were agreed that when they get called on their smartphone,they stop what they are doing. 12.2% respondents were disagree that when they get calledon their smartphone, they stop what they are doing. 4.4% respondents were strongly disagree that when they get called on their smartphone, they stop

what they are doing. While 20.9% respondents have no opinion. The mean score of the statement is 2.15 which show inclination toward agreement. Standard deviation value is 1.223. This analysis reveals that most of the participants agree on the statement that when they get called on their smartphone, they stop what they are doing.

Table 3.9: To be without my smartphone scares me

Statement	Scale	*F*	%	Mean	S.D
To be without my smartphone scares me.	SA	104	23.9		
	A	146	33.5		
	UD	69	15.8	2.42	1.308
	DA	89	20.4		
	SDA	28	6.4		
	Total	436	100.0		

Table 3.9 describes about "To be without my smartphone scares me". Data in table reveals that 23.9% respondent were strongly agreed that to be without my smartphone scares them. 33.5% respondents were agreed that to be without my smartphone scares them. 20.4% respondents were disagree that to be without my smartphone scares them. 6.4% respondents were strongly disagree that to be without my smartphone scares them, while 15.8% respondents have no opinion. The mean score of the statement is 2.42 which show inclination toward agreement. Standard deviation value is 1.308. This analysis reveals that most of the participants agree on the statement that to be without my smartphone scares them.

Table 3.10: I have been unable to minimize my smartphone usage

Statement	Scale	*F*	%	Mean	S.D
I have been unable to minimize my smartphone usage.	SA	92	21.1		
	A	164	37.6		
	UD	46	10.6	2.41	1.371
	DA	105	24.1		
	SDA	29	6.7		
	Total	436	100.0		

Table 3.10 Table 4.13 describes about the statement "I have been unable to minimize my smartphone usage". Data in table reveals that 21.1% respondent were strongly agreed that they have been unable to minimize their smartphone usage. 37.6% respondents were agreed that they have been unable to minimize their smartphone usage. 24.1% respondents were disagree that they have been unable to minimize their smartphone usage. 6.7% respondents were strongly disagree that they have been unable to minimize their smartphone usage. While 10.6% respondents have no opinion. The mean score of the statement is 2.41 which show inclination toward agreement. Standard deviation value is 1.371. This analysis reveals that most of the participants agree on the statement that they have been unable to minimize their smartphone usage.

Table 3.11: Without continuous access to information from my smartphone, I would feel nervous

Statement	Scale	*F*	%	Mean	S.D
Without continuous access to information from my smartphone, I would feel nervous.	SA	82	18.8		
	A	245	56.2		
	UD	41	9.4	1.88	1.205
	DA	52	11.9		
	SDA	16	3.7		
	Total	436	100.0		

Table 3.11 describes about statement "Without continuous access to information from my smartphone, I would feel nervous". Data in table reveals that 18.8% respondent were strongly agreed that without continuous access to information from smartphone, they would feel nervous.11.9% respondents were disagree that without continuous accessto information from my smartphone, they would feel nervous. 3.7% respondents were strongly disagree that without continuous access to information from my smartphone, they would feel nervous while 9.4% respondents have no opinion. The mean score of the statement is 1.88 which show inclination toward agreement. Standard deviation value is 1.205.

Respondents Opinion about Do they feel Frustrated of not checking information on Smartphone?

Table 3.12: If I could not check information on my smartphone when I needed to, I would be frustrated

Statement	Scale	*F*	%	Mean	S.D
If I could not check information on my smartphone when I needed to, I would be frustrated .	SA	96	22.0		
	A	215	49.3		
	UD	59	13.5	1.98	1.182
	DA	52	11.9		
	SDA	14	3.2		
	Total	436	100.0		

Table 3.12 describes about statement "If I could not check information on my smartphone when I needed to, I would be frustrated". Data in table reveals that (22.0) respondent were strongly agreed that If they could not check information on my smartphone when they needed to, they would be frustrated. (49.3) respondents were agreed that If they could not check information on my smartphone when they needed to, they would be frustrated. (11.9) respondents were disagree that If they could not check information on my smartphone when they needed to, they would be frustrated. (3.2) respondents were strongly disagree that If they could not check information on my smartphone when they needed to, they would be frustrated. (13.5) respondents have no opinion. The mean score of the statement is 1.98 which show inclination toward agreement. Standard deviation value is 1.182.

Respondents Opinion about Does Low battery of smartphone made them worried?

Table 3.13: If the battery on my smartphone died, I would be worried

Statement	Scale	*F*	%	Mean	S.D
If the battery on my smartphone died, I would be worried.	SA	97	22.2		
	A	190	43.6		
	UD	44	10.1	2.21	1.330
	DA	78	17.9		
	SDA	27	6.2		
	Total	436	100.0		

Table 3.13 describes about the statement "If the battery on my smartphone died, I would be worried". Data in table reveals that (22.2) respondent were strongly agreed that If the battery on my smartphone died, they would be worried. (43.6) respondents were agreed that If the battery on my smartphone died, they would be worried. (17.9) respondents were disagree that If the battery on my smartphone died, they would be worried. (6.2) respondents were strongly disagree that If the battery on my smartphone died, they would be worried. (10.1) respondents have no opinion. The mean score of the statement is 2.21 which show inclination toward agreement. Standard deviation value is 1.330. This analysis reveals that most of the participants agreed on the statement that If the battery on my smartphone died, they wouldbe worried.

Respondents Opinion about dead battery of smartphone made them worried.

Table 3.14: If I ran out of credits or used all my monthly data package, I would stressed out

Statement	Scale	*F*	%	Mean	S.D
If I ran out of credits or used all my monthly data package, I would stressed out.	SA	93	21.3		
	A	131	30.0		
	UD	58	13.3	2.64	1.398
	DA	09	25.0		
	SDA	45	10.3		
	Total	436	100.0		

Table 3.14 describe about "If I ran out of credits or used all my monthly data package, I would stressed out". Data in table reveals that (21.3) respondent were strongly agreed that If they ran out of credits or used all monthly data package, they would stressed out. (30.0) respondents were agreed that If they ran out of credits or used all monthly data package, they would stressed out. (25.0) respondents were disagree that If they ran out of credits or used all monthly data package, they would stressed out. (10.3) respondents were strongly disagreethat If they ran out of credits or used all monthly data package, they would stressed out. (13.3) respondents have no opinion. The mean score of the statement is 2.64 which show inclination toward agreement. Standard deviation valueis 1.398.

Respondents opinion on loss of data or internet would make them worried?

Table 3.15: If I did not have a data signal or could not connect to Wi-Fi, I would continually try tosee if I could locate a network

Statement	Scale	*F*	%	Mean	S.D
	SA	91	22.9		
If I did not have a data signal or could not connect to Wi-Fi, I would continually try to see if I could locate a network.	A	197	45.2		
	UD	44	10.1	2.20	1.356
	DA	72	16.5		
	SDA	32	7.3		
	Total	436	100.0		

Table 3.15 describes about the statement "If I did not have a data signal or could not connect to Wi-Fi, I would continually try to see if I could locate a network". Data in table reveals that (20.9) respondent were strongly agreed that if they did not have adata signal or could not connect to Wi-Fi, they would continually try to see if they could locate a network. (45.2) respondents were agreed that if they did not have a data signal or could not connect to Wi-Fi, they would continually try to see if they could locate a network. (16.5) respondents were disagree to the statement. (7.3) respondents were strongly disagree. (10.1) respondents have no opinion. The mean score of the statement is 2.20 which show inclination toward agreement. Standard deviation value is 1.356.

Respondents Opinion on Without smartphone, they would be fearful of being stuck?

Table 3.16: Without my smartphone, I would be fearful of being stuck

Statement	Scale	*F*	%	Mean	S.D
	SA	70	16.1		
Without my smartphone, I would be fearful of being stuck.	A	127	29.1		
	UD	65	14.9	2.75	1.457
	DA	140	32.1		
	SDA	33	7.6		
	Total	436	100.0		

Table 3.16 describes about the statement "Without my smartphone, I would be fearful of being stuck". Data in table reveals that (16.1) respondent were strongly agreed that without their smartphone, they would be fearful of being stuck. (29.1) respondents were agreed that without their smartphone, they would befearful of being stuck. (32.1) respondents were disagree that without their smartphone, they would be fearful of being stuck. (7.6) respondents were strongly disagree that withouttheir smartphone, they would be fearful of being stuck. (14.9) respondents have no opinion. The mean score of the statement is 2.75 which show inclination toward agreement. Standard deviation value is
1.457. This analysis reveals that most of the participants agreed on the statement that without their smartphone, they would be fearful of being stuck.

Respondents Opinion on they would have a strong desire to check my smartphone if I could not use it for a while?

Table 3.17*: I would have a strong desire to check my smartphone if I could not use it for a while

Statement	Scale	*F*	%	Mean	S.D
I would have a strong desire to check my smartphone if I could not use it for a while.	SA	70	16.1	2.35	1.441
	A	191	43.8		
	UD	48	11.0		
	DA	85	19.5		
	SDA	42	9.6		
	Total	436	100.0		

Table 3.17 describes about the statement "I would have a strong desire to check my smartphone if I could not use it for a while". Data in table reveals that (16.1) respondent were strongly agreed that they would have a strong desire to check their smartphone if they could not use it for a while. (43.8) respondents were agreed that they would have a strong desire to check their smartphone if they could not use it for a while. (19.5) respondents were disagree that they would have a strong desire to check their smartphone if they could not use it for a while. (9.6) respondents were strongly disagree that they would have a strong desire to check their smartphone if they could not use it for a while. (11.0) respondents have no opinion. The mean score of the statement is 2.35 which show inclination toward agreement. Standard deviation value is 1.44. This analysis reveals that most of the participants said that they would have a strong desire to check their smartphone if they could not use it for a while.

Mean Comparison between Universities

Table 3.18*: Relation to your smartphone use in male and female students

Sr	Statements	Gender ofrespondents	N	Mean	Std. Deviation
1	When I am not using my smartphone, I constantly thinkabout it.	Male	218	2.02	1.371
		Female	218	2.43	1.393
2	I frequently use my smartphonefor no apparent purpose	Male	218	2.15	1.241
		Female	218	2.17	1.326
3	When I get called on my smartphone, I stop what I amdoing	Male	218	2.13	1.173
		Female	218	2.18	1.274
4	To be without my smartphonescares me	Male	218	2.43	1.262
		Female	218	2.42	1.356
5	I have been unable to minimizemy smartphone	Male	218	2.33	1.355
		Female	218	2.49	1.385

usage

Total Mean	Male		11.06
	Female		11.69

Table 3.18 illuminate's students' opinion about relation with smartphone use. In above table group statistics illustrates mean score of male and female students are 11.06 and 11.69. However mean score of female students is 11.69 is higher than male students.

Table 3.19: Student's opinion about relation with smartphone use

Sr	Statements	University type of respondents	N	Mean	Std. Deviation
1	When I am not using my smartphone, I constantly think about it.	Public	254	2.27	1.408
		Private	182	2.16	1.379
2	I frequently use my smartphone for no apparent purpose	Public	254	2.32	1.262
		Private	182	1.95	1.282
3	When I get called on my smartphone, I stop what I am doing	Public	254	2.19	1.222
		Private	182	2.10	1.226
4	To be without my smartphone scares me	Public	254	2.53	1.294
		Private	182	2.28	1.319
5	I have been unable to minimize my smartphone usage	Public	254	2.59	1.377
		Private	182	2.16	1.328
	Total Mean	Public		11.9	
		Private		10.65	

Table 3.19 illuminates student's opinion about relation with smartphone use. In above table group statistics illustrates mean score of public and private universities students are 11.9 and 10.65. However mean score of private students is 11.9 is higher thanpublic universities.

Table 3.20: Stress level in male and female students

Sr	Statements	gender of respondents	N	Mean	Std. Deviation
1	Without continuous access to information from my smartphone, I would feel nervous.	Male	218	1.95	1.230
		Female	218	1.81	1.178
2	If I could not check information	Male	218	2.18	1.168

Sr.	Statements		N	Mean	Std. Deviation
	on my smartphone when I needed to, I would be Frustrated	Female	218	1.78	1.164
3	Being unable to get the news (e.g., happenings, weather, etc.) on my smartphone would make me nervous.	Male	218	2.37	1.331
		Female	218	2.51	1.385
4	I would be frustrated if I could not access my smartphone and/or its features when I wanted to.	Male	218	2.28	1.336
		Female	218	2.36	1.313
5	If the battery on my smartphone died, I would be worried..	Male	218	2.27	1.380
		Female	218	2.15	1.280
6	If I ran out of credits or used all my monthly data package, I would stressed out	Male	218	2.72	1.364
		Female	218	2.56	1.430
7	If I did not have a data signal or could not connect to Wi-Fi, I would continually try to see if I could locate a network.	Male	218	2.29	1.376
		Female	218	2.11	1.333
8	Without my smartphone, I would be fearful of being stuck.	Male	218	2.62	1.529
		Female	218	2.88	1.373
9	I would have a strong desire to check my smartphone if I could not use it for a while.	Male	218	2.37	1.441
		Female	218	2.33	1.444
Total Mean		Male		21.05	
		Female		20.49	

Table 3.20 illuminates students' opinion about what is my stress level. In above table group statistics illustrates mean score of male and female students are 21.05 and 20.49. However mean score of male students is 21.05 is higher than female students.

Table 3.21: Stress level in public and private universities

Sr.	Statements	University type of respondents	N	Mean	Std. Deviation
1	Without continuous access to information from my smartphone, I would feel nervous.	Public	254	1.85	1.168
		Private	182	1.93	1.257
2	If I could not check information on my smartphone when I needed to, I would be frustrated	Public	254	1.98	1.151
		Private	182	1.97	1.228
3	Being unable to get the news (e.g., happenings, weather, etc.)	Public	254	2.34	1.309
		Private	182	2.57	1.419

Sr	Statements		N	Mean	Std. Deviation
	on my smartphone would make me nervous.				
4	I would be frustrated if I could not access my smartphone and/or its features when I wanted to.	Public	254	2.52	1.318
		Private	182	2.04	1.285
5	If the battery on my smartphone died, I would be worried..	Public	254	2.34	1.361
		Private	182	2.03	1.268
6	If I ran out of credits or used all my monthly data package, I would stressed out	Public	254	2.76	1.403
		Private	182	2.47	1.377
7	If I did not have a data signal or could not connect to Wi-Fi, I would continually try to see if I could locate a network.	Public	254	2.29	1.389
		Private	182	2.08	1.302
8	Without my smartphone, I would be fearful of being stuck.	Public	254	2.88	1.330
		Private	182	2.58	1.605
9	I would have a strong desire to check my smartphone if I could not use it for a while.	Public	254	2.48	1.479
		Private	182	2.17	1.370
	Total Mean	Public		21.44	
		Private		19.84	

Table 3.21 illuminates students' opinion about what is stress level. In above table group statistics illustrates mean score of public and private universities students are 21.44 and 19.84. However mean score of public universities students is 21.44 is higher than private universities.

Table 3.22: Anxiety level in male and female Students

Sr	Statements	Gender of Respondents	N	Mean	Std. Deviation
1	I would be anxious since I could not immediately contact with my family and friends.	Male	218	1.95	1.232
		Female	217	2.01	1.307
2	I would be worried because my family and/or friends could not reach me.	Male	218	1.92	1.161
		Female	218	1.82	1.214
3	Being unable to receive phone calls or text messages would scare me.	Male	218	2.31	1.271
		Female	218	2.11	1.271

4	I would be worried since I could not contact my family or friends.	Male	218	2.48	1.389
		Female	218	1.96	1.266
5	I would be worried since I would not know if someone had attempted to contact me.	Male	218	2.39	1.420
		Female	218	2.03	1.208
6	My regular connection to my family and friends would be cut, which would make me anxious.	Male	218	2.14	1.267
		Female	218	2.15	1.388
7	Being cut off from my social identity would disturb me.	Male	218	2.29	1.352
		Female	218	2.44	1.430
8	Being unable to keep up with online and social platforms would make me uneasy.	Male	218	2.31	1.220
		Female	218	2.41	1.396
9	Being unable to check my alerts for updates from my contacts and online networks	Male	218	2.53	1.365
		Female	218	2.34	1.403

Table 3.22 illuminates students' opinion about what is Anxiety level in male and female students. In above table group statistics illustrates mean score of male and female students are 30.83 and 28.74. However mean score of male students is 30.83 is higher than female students.

Table 3.23: Anxiety level in public and private universities

Sr	Statements	University type of respondents	N	Mean	Std. Deviation
1	I would be anxious since I could not immediately contact with my family and friends.	Public	254	2.09	1.305
		Private	181	1.83	1.204
2	I would be worried because my family and/or friends could not reach me.	Public	254	1.94	1.229
		Private	182	1.77	1.123
3	Being unable to receive phone calls or text messages would scare me.	Public	254	2.26	1.281
		Private	182	2.13	1.262
4	I would be worried since I	Public	254	2.32	1.407

	could not contact my family or friends.	Private	182	2.08	1.261
5	I would be worried since I would not know if someone had attempted to contact me.	Public	254	2.28	1.362
		Private	182	2.12	1.280
6	My regular connection to my family and friends would be cut, which would make me anxious.	Public	254	2.22	1.332
		Private	182	2.05	1.318
7	Being cut off from my social identity would disturb me.	Public	254	2.39	1.366
		Private	182	2.34	1.431
8	Being unable to keep up with online and social platforms would make me uneasy.	Public	254	2.44	1.320
		Private	182	2.25	1.291
9	Being unable to check my alerts for updates from my contacts and online networks would cause me to feel Uncomfortable	Public	254	2.37	1.339
		Private	182	2.52	1.448
10	I would feel anxious because I could not check my email messages.	Public	254	2.49	1.402
		Private	182	2.63	1.399
11	I would feel uneasy because I would not know what to do	Public	254	2.49	1.291
		Private	182	2.48	1.353
12	Because I could not check my important texts, I would be anxious.	Public	254	2.02	1.199
		Private	182	1.85	1.178
13	I would not be nervous since I could not immediately contact with my family and friends.	Public	254	2.55	1.497
		Private	182	2.45	1.424
	Total		Public	27.37	
	Mean		Private	30.5	

Table 3.23 illuminates students' opinion about what is stress level. In above table group statistics illustrates mean score of public and private universities students are 21.44 and 19.84. However mean score of public universities students is 21.44 is higher than private universities.

Analysis of Open Ended Questions

Why do you think smartphone is important for you?

The word cloud indicates that nowadays, smartphone is our basic need. We can reach to everybody among the whole world is very easy. The word cloud gives a clear picture that Access to Information: With the help of a smartphone, students can easily access information on the internet, such as research articles, online libraries, and educational videos, which can help them learn and understand a wide range of topics. The cloud indicates that Smartphones allow students to stay connected with their classmates, teachers, and peers. They can easily share files, notes, and other important information via messaging, email, or social media. The word cloud provides that students share their knowledge, ideas, and informative videos with one another. In today's world, it is most important to remain connected with the outside world. There is always a need to remain updated. The word clouds shows that through smartphone students are connected with family,

friends also keep us up to date. The clouds shows that smartphones can be a powerful tool for students to enhance their learning, improve their communication and collaboration skills, and increase their productivity. However, it is important for students to use their smartphones responsibly and in a way that supports their academic goals.

Why do you feel stress/ Fear when do you not have smartphone with you?
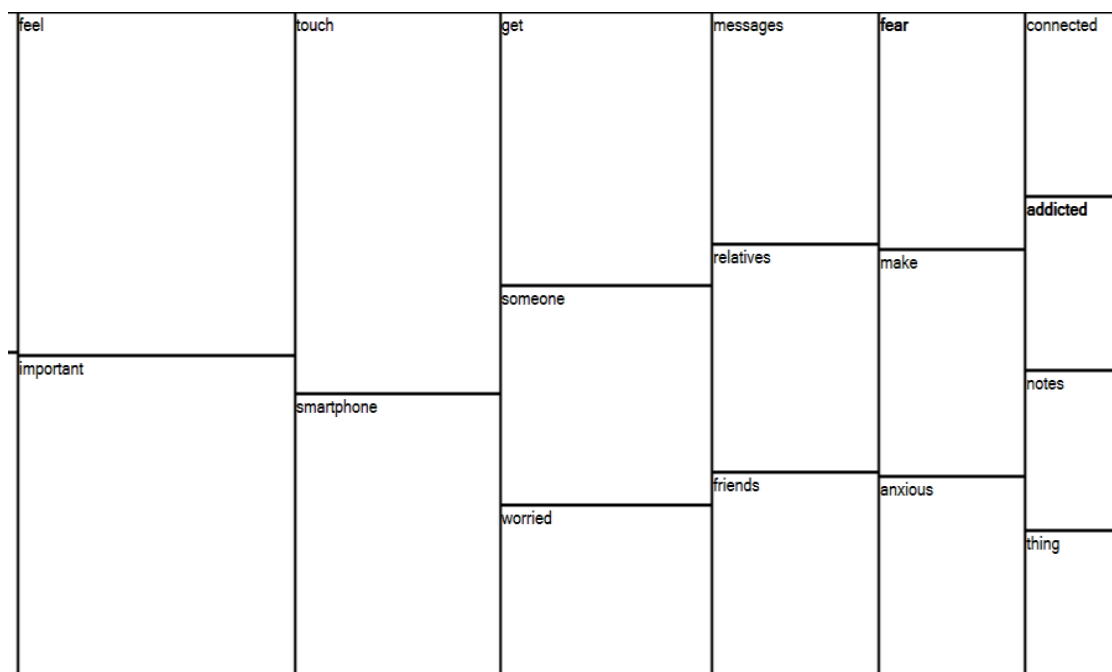
The word tree map provides a clear concept of because we can't contact with my family, relatives and friends. The tree map shows that when we are alone or when we are in emergencies, having no smartphone with us will make us stressed and we might have fear of having any mishap. The tree map shows that we feel stress because when we have no mobile we disconnect from every news and we get worried about our class schedule and we feel fear. It showed that we need our notes pdf and assignment making theory so we feel stress also feel fear when we have not smartphone. The tree map indicates that for many students, smartphones are an essential tool for learning, communication, and productivity. Without their phone, they may feel disconnected from their coursework or struggle to keep up with their responsibilities. It showed that Students may use their smartphones as a safety net, particularly when they are traveling or in unfamiliar situations. Without their phone, they may feel vulnerable or exposed, which can lead to anxiety and stress. It also indicates that we are not always in our comfort zone, sometimes we are away from home and sometimes, we face an unwanted situation so there is instant need to get connected with family or friends. It showed that we feel stress because our family cares about us because students have to go to university whenever They becomes late from the university then family will be worried.

What is the effect of Nomophobia (fear of having no smartphone) on your personality?

The word clouds indicates that People who have nomo phobia will feel stressed and agitated all the time which in turn will make them socially uncomfortable. It showed that if we do not having smartphone we could not see what is happening around us. We feel guilty in our friends circle for not having mobile phones. Students may feel disconnected from their peers and social networks without a mobile phone, which can lead to feelings of loneliness or isolation. It showed that

without a mobile phone, students' may feel more vulnerable in emergency situations or when traveling in unfamiliar places. The word cloud showed that some students may find that not having a mobile phone is a welcome relief, while others may struggle with the limitations and challenges that come with being without a phone. Ultimately, it is up to each student to determine what works best for him/her and his/her personal needs and circumstances. It showed that people who have nomophobia will feel stressed and agitated all the time which in turn will make them socially uncomfortable. The word cloud showed that Mobile phones can be a valuable tool for research and information gathering, so not having a phone may limit students' ability to access important information and resources.

Findings

Keeping in view the data analysis and interpretation following findings were drawn.

- ➤ 25.7% students use mobile phones for more than 5 years. Average 3.92 students using mobile phone from various years.
- ➤ 80.3% students have mobile data package to access information on internet.
- ➤ 29.8% students use mobile phone from 1 to 4 hours a day. Average 2.91 students use mobile phone per day.
- ➤ 25.5% students check their mobile phones in every hour. Average 3.78 students frequently check their mobile phones.
- ➤ 25.5% students use smartphone to looking up information on internet. Average
- ➤ 3.63 students often use mobile phone for various purpose.
- ➤ 48.6% students think about mobile phone when they are not using it. Average
- ➤ 2.22 students think about mobile phones.
- ➤ 43.3% students frequently use smartphone for no purpose. Average 2.16 students use smartphone frequently.
- ➤ 42.9% students stop working when they get called on phone. Average 2.15 stop working on getting call by someone.
- ➤ 33.5% students scared of being without smartphone. Average 2.42 students scared of having no smartphone.
- ➤ 37.6% students are unable to minimize their smartphone use. Average 2.41 students are unable to reduce use of smartphone.
- ➤ 56.2% students feel nervous when they have no continuous access to information on smartphone. Average 1.88 students feel nervous for not having mobile phone.
- ➤ 49.3% students became frustrated when they are not able to check information of smartphone that they require. Average 1.98 students become frustrated for not using mobile phone.
- ➤ 43.6% students become worried when their smartphones battery died. Average
- ➤ 2.21 students worried when unable to use smartphone.
- ➤ 30.0% students stressed out when data package run out. Average 2.64 students feel stress when data package run out of credits.
- ➤ 45.2% students continuously try to connect to Wi-Fi signals if having no data package. Average 2.20 students try to locate to Wi-Fi network available.
- ➤ 32.1% students have fear of being stuck out without mobile phone. Average 2.75 students have fear of being missing out without mobile phones.
- ➤ 43.8% students have strong desire to check mobile phone if could not use it. Average 2.35 students have desire to use mobile phones.

➢ 52.8% students feel anxious when they could not contact with family and friends. Average 1.98 students feel anxious for not being connected with family.
➢ 55.3% students afraid of being not in touch with family or friends. Average 1.87 students afraid if family or friends could not able to access them.
➢ 42.7% students scares for unable to receive text messages or phone calls. Average
➢ 2.21 students scare of not having smartphone.
➢ 45.0% students feel anxious because they could not keep in touch with family/or friends. Average 2.22 students become anxious for not having connection with family or friends.
➢ 45.6% students would be worried because they could not check if someone had contacted to them or not. Average 2.21 student worries for not getting in contact with anyone.
➢ 47.5% students worry for not having smartphone because their daily connection to family and friends will be disturbed. Average 2.15 student feel worried for not having smartphone. .
➢ 55.3% students worry due to cut off from online personality. Average 2.37 student worry for losing their online identity.
➢ 37.8% students would be uncomfortable because they could not stay up-to- data with social media and online networks. Average 2.36 student worry about not connected to social networks for getting updates.
➢ 38.5% students would feel uncomfortable they could not checktheir notifications for updates from contacts and internet networks. Average 2.43 student worry about not connected to social networks.
➢ 36.0% students worry because they could not check email. Average 2.55 student worried about not checking emails.
➢ 33.9% students feel uncomfortable because they not know what to do. Average
➢ 2.49 feel uncomfortable for not having smartphone.
➢ 53.9% students worry since they could not check my important texts. Average
➢ 1.95 students worry about unable to check important messages.
➢ 39.4% students would not be anxious because they could not keep in touch with family/or friends. Average 2.50 student feel anxious for not having smartphone.

Conclusion

The study investigated nomophobia, anxiety, and stress among university students in Bahawalpur, comparing public and private institutions. Findings revealed that nomophobia, or fear of being without a mobile phone, contributes to increased anxiety and stress in students. Public university students reported higher levels of nomophobia than their private university counterparts. The study highlighted that smartphones play a critical role in students' academic and social lives, enabling access to information and communication with peers, which enhances learning and collaboration. However, dependence on smartphones also makes students vulnerable to anxiety when disconnected. The research aligns with previous studies on nomophobia and its psychological impacts, emphasizing the need for responsible smartphone use. Future research should explore strategies to reduce nomophobia and promote healthier technology habits for improved mental well-being.

Recommendations

Following recommendations were made on the basis of findings and conclusion.

➢ Establishing clear boundaries around students' mobile phone use can help them manage their fears. For example, they may decide not to use their phone during meals or at certain times of a day.

➢ Engaging in mindfulness practices, such as meditation or yoga, can help students stay present and focused in the moment, rather than feeling anxious about being withouttheir phone.

➢ Find other activities in which students' mobile phone should not involve and they can enjoy these activities such as exercise, reading or spending their time outdoor.

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