JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

Association of Nomo-phobia with Anxiety, Aggression and Loneliness among college students of Raigarh District of Chhattisgarh (India)

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Abstract

The present research paper investigates the association of Nomophobia with anxiety, aggression and loneliness among college students of Raigarh District of Chhattisgarh (India). Nomophobia (No Mobile Phone Phobia) refers to the worry or fear that individuals experience when they are without their mobile phone or they are unable to use it. The term was first coined in 2008 and it is considered a modern type of phobia. The term Nomophobia is constructed on definitions described in the DSM-IV; it has been labeled as a "phobia for particular/specific things". Various psychological factors are involved when an individual overuses the mobile phone, e.g., low self-esteem, extrovert personality. The burden of this problem is now increasing globally. The signs and symptoms are observed in Nomophobia cases include- anxiety, respiratory alterations, trembling, perspiration, agitation, disorientation and tachycardia. Nomophobic may also act as a proxy to other disorders.

The cross sectional research study was conducted during January 2024 to June 2024 on 400 college students of Raigarh affiliated with Shaheed Nand Kumar Patel University of Chhattisgarh State. Different standardized test and measures were used to assess Nomophobia, anxiety level, aggression and loneliness among college students. The data was analyze using descriptive statistic, MANOVA(Multivariate Analysis of Variance) and Multiple Regression analysis to see the psychological impact of nomophobia among the college going students and how the severity of nomophobia associated with Anxiety, Aggression and Loneliness among students. The results were clearly indicated that the nomphopia individual had higher level of anxiety, aggression and Loneliness in compare to Non-nomophobia. There is also gender wise differentiation on the psychological variables i.e. anxiety, aggression and loneliness. In order to understand how the nomophopia will be affect psychologically on the behavior and psychological wellbeing of the students this research study was conducted.

Instead, smart phones have transformed the way we communicate, learn, and entertain ourselves. The advent of smart phones has brought about significant changes in our society, with profound implications for mental health. Hence, their omnipresence can lead to compulsive use and a sense of dependency. The constant stream of notifications and updates can create a sense of urgency and a fear of missing out, leading to increased anxiety and stress. Smart phone not only impact psychologically but the transformation of society structure was also be changed. The dependency on Smartphone leads to demolish our society values and norm also; it can affect our emotion and thought process due to overuse of smartphones individual become more self centered, and reserved. Now it is time to think and work in this field to identify how the nomophobia will psychological, sociological, morally, emotionally and behaviorally affect all sphere of life. If we are not taking a right step at right time than society and each individual may face their ill consequence. Government, higher education and school education may take important initiative to control its bad impact on the individual well being and social well being. The psychologist and school counselor may be appointed in each and every school and colleges to mitigate the effect of nomophobia otherwise it is dangerous for our society. This research try to give the explanation that the nomophobia has play a vital role in creating psychological issues among college going students. The present generation is very addictive to smartphone, their life is totally controlled by this smartphones. Instead of that they know it will adversely impact on their physical and psychological health but they continuously use this, we Say that "There is No life without mobile"

Keywords: *Nomophobia, Anxiety, Aggression, Loneliness and social isolation, social media.*

Introduction

Nomophobia is an emerging problem of the modern era. Nomophobia, or "NO MOBILE PHONE PHOBIA" is when a person experiences fear or anxiety about not having mobile phone connectivity. It can lead to agitation, changes in breathing pattern, and other symptoms. Nomophobia is similar to other psychological conditions related to fears of certain things. It also shares a connection with other types of anxiety disorders, such as social phobia. The Journal of Family Medicine and Primary Care 2019 mentioned that several potential psychological conditions, such as social anxiety or panic disorder, may appear in a person before the development of nomophobia. Hence, researchers also noted that it is still unclear if the disorder comes from an existing anxiety disorder or from a cell phone addiction. Other researchers have expressed similar findings. In a 2016 study, researchers proposed that nomophobia may be less of a specific phobia or anxiety and more of an addiction. They proposed changing the name and making a classification called "smartphone addiction disorder." Currently, the Diagnostic and Statistical Manual of Mental Disorders, 5th edition does not recognize nomophobia as an actual disorder. However, researchers have argued for its inclusion for several years.

The Symptoms of nomophobia are similar to other phobias and anxiety disorders. It can include; anxiety, changes in breathing, trembling, sweating, agitation, disorientation, tachycardia, which is a fast heartbeat that can be irregular or regular. The exact cause of nomophobia is not fully understood, Jenna Fletcher, 2022 mentioned that it developed due to the instant communication and instant gratification that smartphones provide. This can develop the addictive and compulsive behavior. Others believe that an existing anxiety disorder or phobia may lead to the development of nomophobia. Some researchers proposed that possible causes or predictors included: obsessive thoughts and compulsive behavior related to a smartphone, interpersonal sensitivity, which is the ability to assess the abilities and traits from nonverbal cues in others, and may include; feelings of personal inferiority, social discomfort, the number of hours of smartphone use each day (Soraia Goncalves, 2020).

Nomophobia, can have a number of psychological consequences, including anxiety, depression, and isolation. It can also lead to other psychological distress, such as: Loneliness, Panic, Sadness, Impaired memory, and Low quality of life. Nomophobia can also negatively impact personality, self-esteem, stress, and academic performance. It can also lead to physical consequences, such as headaches, stomach aches, and eye discomfort. Research speculated that the symptoms of depressed and anxious adolescents may worsen if they perceive the lives of others through such “apps” to be better than theirs. Adolescents may experience anxiety when they are unable to use a mobile phone and/or the services it offers, when they are unable to access information through smartphones, or when they have to give up the convenience that smartphones provided (Yildirim C., 2014). Excessive mobile phone use may disrupt adolescents’ academic achievement and contribute to anxiety. (Lepp A, et al., 2014) Adolescents with anxiety disorders, particularly those with social anxiety disorder, may develop a more severe dependence on mobile phone technologies than those without anxiety disorders.

The research conducted in United Kingdom shows 2163 people revealed that 53% of the subjects tend to be anxious when they lose their mobile phone, run out of battery or credit or have no network coverage. The study found that about 58% of men and 48% of women suffer from the phobia, and an additional 9% feel stressed when their mobile phones are off. About 55% of those surveyed cited keeping in touch with friends or family as the main reason that they got anxious when they could not use their mobile phones.(Katharine B., 2008) A study conducted by Market Analysis and Consumer Research Organization (MACRO) in Mumbai to study the various patterns and association of mobile phone usage reported that 58% of the respondents could not manage without a mobile phone even for a day.(A report of Macro - market analysis and consumer research organization, Mumbai 2004)

Research focus that over use or excess smartphone use has given rise to the term nomophobia that is defined as an uncontrollable fear of leaving home without a mobile phone and causes symptoms, such as anxiety, emotional instability, aggressiveness, and difficulty concentrating (Arpaci I, 2015). Studies carried out among the students of Islamic Azad University, Tehran South Branch, Iran, university students showed that between 42% to 66% of smartphone users suffer from nomophobia (Yildirim C, et al., 2015). Research in college students has also found that problematic smartphone use can cause several detrimental consequences, including sleep interference (Xie X, et al., 2017), aggression (Cho HY et al., 2017), poor academic performance (Samaha M et al., 2016), negative emotions (Elhai JD et al., 2017) and mobile phone-based aggression (Rozgonjuk D, et al., 2018). Also, Visnjic et al. found that the overuse of smartphones could negatively affect the mental health of university students (Višnjić A, et al., 2018). Accordingly, university students were found to be seriously impotent to the negative health impacts of problematic smartphone use (Vally Z, et al., 2019). In addition, empirical studies indicate that college students with problematic smartphone use often exhibit antisocial behaviors, such as poor peer relationships, suicidal ideation, cyber bullying, and involving in crimes (Wang P, et al., 2017; Marchant A., et al 2017).

Nomophobia and Aggression

According to Buss "aggression is a feeling of anger or antipathy resulting in hostile or violent behavior" With the rapid popularity of the smartphone, its extreme use influenced various aspects of college students' study and life (Wang JL, et al., 1995). In this line, Um et al. reported that although smartphone use may reduce distress by providing immediate rewards and opportunities to engage in different activities, problematic smartphone use is an important risk factor for aggression (Um YJ., et al., 2019). Similarly, Yen et al. found a high correlation between aggressive behaviors and problematic smartphone use. Furthermore, the studies of Mehroof and Griffiths and Polman et al. (2010) showed that problematic smartphone use was significantly correlated with aggression. The results showed that problematic smartphone use significantly and positively affects aggressive behavior in university students; this is consistent with the results of previous research.

Accordingly, Um et al. and Yen et al. (2019) reported that problematic smartphone use is an important risk factor for aggression, and the frequency of cyber aggression is significantly high among students who excessively use a smartphone. The current finding is also in line with Mehroof and Griffiths's (2010) study showing that smartphone dependency can result in behavioral problems, such as the feeling of anger, tension, aggression, and hostility among students. Because of some stressors and special circumstances in academic life, university students may suffer from mental health problems, such as chronic fatigue as a result of problematic smartphone use, and then lose their self-control in challenging situations (Yen CF, et al., 2009). In an

explorative prospective study reported that aggressive behavior worsened with a high lack of self-control (Vally Z et al., 2019). Another possible explanation by Marchant A (2017) according to the social learning theory, individuals can get aggressive behaviors unconsciously and reduce the inhibition of aggression in the internet violence through a smartphone for a long time so that the aggression will be strengthened.

Research in this area showed that problematic smartphone use significantly affected aggressive behavior through sleep quality; this is in line with other studies (Cote KA et al., 2013;& Whalen DJ et al., 2017). When many students use smartphones at night, artificial shortwave light exposure could influence sleep and neurobehavioral functions. Also, chronic inopportune exposure to shortwave light causes a malfunction of the circadian timing system, which results in sleep disturbances (Sahin S, et al., 2013). Accordingly, some studies revealed that college students use their smartphones while in bed before falling asleep. Hence, one explanation is that university students want to prolong their time online, which results in a sleep phase shift to later hours. In addition, excessive smartphone use leads to sleep disturbances due to irregular bedtime patterns (Gaultney JF, 2010). Research Studies showed that individuals with low sleep quality are vulnerable to the negative effects of poor sleep quality, such as aggressive behavior. Poor sleep quality affects emotional functioning and is accompanied by emotional instability, greater irritability, and short-temperedness that may result in outbursts of aggression (Lemma S, et al., 2012). Moreover, individuals who experience serious sleep problems reported physical aggressive behaviors in their interpersonal relationships (Chen YL, et al., 2016).

Nomophobia and Social Isolation

Humans are social creatures, and our need for connection with others is hardwired into our brains. Researches in this field had shown that social isolation and loneliness can lead to depression, anxiety, and even physical illnesses such as heart disease and stroke. Therefore, it is crucial that we make an effort to connect with others and build meaningful relationships (Valtorta et al., 2016). Loneliness is a feeling that every human being experiences at some point in their lives. It is a natural response to the absence of social interaction and connection with others. However, it is important to recognize that loneliness can have serious consequences on one's mental health and well-being (Arslan, 2021). One of the biggest barriers to human interaction is fear. Fear of rejection, fear of vulnerability, and fear of judgment can all prevent individuals from reaching out and connecting with others. However, it is important to recognize that these fears are often speculative. Making oneself vulnerable and reaching out to others can lead to deep, meaningful connections and a sense of belonging. By breaking down these barriers and taking risks, individuals can experience the joy of human interaction and combat feelings of loneliness (Goll et al., 2015). Nomophobia and loneliness are serious concerns that can have a significant impact on mental health and well-being (Rodríguez-García et al., 2020).

Few research studies had shown the relationship between nomophobia levels among high school students and their Internet Addiction. That explores the factors including the duration of smartphone and mobile Internet usage that trigger and create this phenomenon. Research show that the longer the duration of smartphone usage the higher the risk of exhibiting nomophobic behaviors and also indicated that they tend to exhibit more nomophobic behaviors as an increase in the level of student Internet addiction, (Yıldız Durak, 2018). In another study, there were substantial variations in the students' scores on nomophobia, loneliness, and self-happiness (Ozdemir et al., 2018).

Nomophobia can also have a significant impact on social connections. While smartphones are often seen as tools for staying connected with others, excessive reliance on them can actually hinder interpersonal relationships. Social desirability and loneliness may seem like unrelated concepts, but they are more closely intertwined than one might think. In many cases, social desirability can actually contribute to feelings of loneliness and isolation. While social desirability, loneliness, and nomophobia can all have negative impacts on individuals and society as a whole, there are steps that can be taken to address these issues. Promoting authenticity and vulnerability can help break down the barriers created by social desirability and foster genuine connections between individuals. Encouraging mindfulness and limiting technology use can also help combat feelings of loneliness and nomophobia, allowing individuals to fully engage with the world around them. Gratitude and appreciation are essential components of healthy relationships. Expressing gratitude for the things one does, no matter how small can foster feelings of love and connection. Appreciation also involves recognizing and valuing each other's strengths and contributions to the relationship. Physical touch and showing empathy is a fundamental aspect of human interaction. From a simple hug to a handshake, physical touch releases oxytocin, a hormone that promotes feelings of trust and bonding. It is a critical component of human interaction, as it allows individuals to connect with others on a deeper level and build meaningful relationships. By cultivating empathy and actively seeking to understand others, individuals can break down barriers and build strong, lasting connections. Therefore, it is crucial to find a balance between social interaction and solitude. By prioritizing meaningful connections with others while also taking time for ourselves, we can cultivate a sense of fulfillment and combat feelings of loneliness.

In the research, it was found that there is a positive correlation between nomophobia and loneliness. The outcomes concurred with earlier research showing that loneliness had a strong significant relationship with nomophobia (Gezgin et al., 2018, Yıldız Durak, 2018). These results provide credence to Gezgin et al. (2018) that adolescents' levels of loneliness somewhat predict their levels of nomophobia. According to the research, people who lose access to their smartphones experience loneliness because they worry about being unable to interact and connect with others. The major finding of the study is that there is a significant relationship

between nomophobia and loneliness level and loneliness level is significant in males and females. The results revealed that there is significant difference between males and females for nomophobia levels. Given these findings and the data on the relationship between nomophobia and loneliness in the literature, it is believed that nomophobia may develop following loneliness and may worsen as a person becomes more isolated. Because those who experience loneliness can connect with others via their smartphones, social networking sites, and online games, meet new people and communicate with them there. According to this perspective, people who are experiencing feelings of loneliness may get dependent on their smartphones while using them to access platforms and may be able to eliminate such sensations. Finally, using their smartphones to escape feelings of loneliness may cause nomophobic actions.

To mitigate these effects, it's must we educate them and discuss the psychological impact of nomophobia and also the excess use of smartphone and the health consequence due to use of it.. It's also crucial to model healthy digital habits for children and to educate them about the potential risks associated with excessive screen time and social media use. In the realm of mental health, professionals are increasingly recognizing and addressing the impact of Nomophobia. Therapies cognitive, behavioural, biofeedback, meditation, relaxation therapies now often include components aimed at reducing anxiety, stress, aggression, loneliness and promoting healthier digital habits, and addressing the negative thought patterns associated with nomophobia..

Research Objective

1. To examines the association of Nomophobia with level of anxiety, aggression and loneliness and social isolation among college students of Raigarh District of Chhattisgarh (India).

Research Question

In the research study following research questions related to association of nomophobia with anxiety, aggression and loneliness among college students were addressed in the present study.

1. Are there significant differences in the mean scores of male and female on the Nomophobia on the level of anxiety, aggression and loneliness?
2. Are the scores of level of anxiety, aggression and loneliness significantly predicted about the Nomophobia among college students?
3. Are the students of nomophobia differing in terms of their level of anxiety, aggression and loneliness?

Research Hypothesis

The research hypothesis will examine the association of nomophobia with anxiety, aggression and loneliness among college students of Raigarh. Thus the following hypothesis were proposed and tested in the present study.

1. There will be significant difference in the mean score of male and female participant of nomophobia on the level of anxiety, aggression and loneliness.
2. The level of anxiety, aggression and loneliness significantly predict about the nomophobia.
3. The nomophobia students will have higher levels of anxiety, aggression and loneliness in compare to the student with the low level of anxiety, aggression and loneliness.

Methodology

Participants

Participants for the present study comprises of 400 college students (170 Male and 230 Females) with nomophobia randomly selected from different colleges of Raigarh district of Chhattisgarh States. The age ranged from 17 to 32 years. Nompobhobia was assessing by using Nomophobia questionnaire developed by Yildirim, C. & Correia, A. in 2015.

Measures

The following measure were used in this research study

1. **Nomophobia Questionnaire scale:** Nomophobia questionnaire developed by Yildirim, C. & Correia, A. in 2015 were used to assess a fear or phobia for being without one's cell phone (also known as mobile phone or smart phone). The NMP-Q has 20 questions, each scored on a 7-point Likert scale. The total score on the NMP-Q is 20 at its lowest (20 * 1) or 140 (7 * 20) at its highest.
2. **State Trait Anxiety Scale:** The State-Trait Anxiety Inventory (STAI) is a commonly used measure of trait and state anxiety (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). It can be used in clinical settings to diagnose anxiety and to distinguish it from depressive syndromes. It also is often used in research as an indicator of caregiver distress (e.g., Greene et al., 2017, Ugalde et al., 2014). Internal consistency coefficients for the scale have ranged from .86 to .95; test-retest reliability coefficients have ranged from .65 to .75 over a 2-month interval (Spielberger et al., 1983). Test-retest coefficients for this measure in the present study ranged from .69 to .89. Considerable evidence attests to the construct and concurrent validity of the scale (Spielberger, 1989).

3. **Revised UCLA loneliness Scale:** A 20 items scale designed by Russell, D., Peplau, L. A., & Cutrona, C.E. in 1980 to measure ones subjective feeling of loneliness as well as the feeling of social isolation. Participants rate each item on a scale from 1 never to 4 often. The measure has high

internal consistency coefficient alpha =.96 and a test-retest correlation over a 2 month period of .73 concurrent and preliminary construct validity are indicated by correlation.

4. **Aggression Scale:** To assess the aggression level Buss, A.H., & Perry, M. (1992) developed a scale in 1992. Buss-Perry Aggression Questionnaire (BPAQ): The BPAQ is a 29-item instrument that measures aggressive behaviors. The questionnaire uses a Likert-type response format ranging from 1 (extremely uncharacteristic of me) to 5 (extremely characteristic of me), yielding a minimum score of 29 and a maximum score of 145. The internal consistency coefficients for the subscales were as follows: physical aggression, α=0.85; verbal aggression, α=0.72; anger, α=0.83; and hostility, α=0.77; with the internal consistency being α=0.89. Besides, the test-retest reliability (nine weeks) for the subscales and total score ranged from α=0.72 to α=0.80.

Procedure

The present study was a cross-sectional study conducted amongst 400 (Male =170 and Female=230) college students of different colleges of Raigarh district. Only those students are selected who are using their smart phone from last 1 year and more than that. The data was collected by department of psychology students, Kirodimal Govt. Arts & Science College, Raigarh. The data were collected to elicit information on demographic and psychological aspects of the respondents. The demographic variables included age, gender, religion, stream and residence. The psychological variables included nomophobia, anxiety, aggression and loneliness and social isolation scales. Nomophobia was assessed by using Nomophobia questionnaire developed by Yildirim, C. & Correia, A. in 2015. Only those participants were included in the study whose score has more than 20 on the NMP-Q scales. Firstly they were informed of the purpose and objectives of research study and requested them to participate in the study. Before filling the questionnaire consent form was filled by the participants that they are willing to participate in the research work and asked them in understanding any question please ask and try to fill the questionnaire as soon as possible and assure them there response will be kept confidential after filling the questionnaire by the participant checking it whether the respondent given all the answers of this questionnaire or not. The responses of some of the participants who had difficulty in reading questions were collected by interviews. All the participants were thanked for their actively participation in the research work. Responses of the participants who did not fill the questionnaire properly were excluded from the analysis.

Analysis of Data

At the present study was a cross sectional descriptive statistics were used to characterize the demographic variables for this sample of individual with Nomophobia. These include age, gender, religion, stream and residence, duration of smartphone uses. MANOVA(Multivariate Analysis of variance were performed to determine the relationship among different psychological variables on the score of gender and severity of nomophobia. Multiple regression analysis also used to identify the role of different predictors in promoting nomophobia. Data was analyzed using IBM SPSS Statistic 27 version software.

Table 1: Characteristics of Sample

	N	*%*	*Mean*	*SD*
Age				
17 to 20 Yrs	112	28		
21 to 25 Years	138	34.5	2.09	0.80
25+	150	37.5		
Gender				
Male	170	42.5	1.58	0.49
Female	230	57.5		
Religion				
Hindu	278	69.5		
Muslim	35	8.8	1.53	0.93
Sikh	18	4.5		
Christian	69	17.3		
Residence				
Urban	209	52.3		
Semi Urban	36	9.0	1.87	0.95
Rural	155	38.8		
Stream				
Science	247	61.8	1.38	0.49
Arts	153	38.3		
Own Smartphones				
Yes	384	96	1.04	0.19
No	16	4.0		
Times spends on Smartphones				
1 to 2 hours	33	8.3		
3 to 5 hours	260	65	2.12	0.76
6 to 8 hours	44	11		
More than 8 hours	63	15.8		

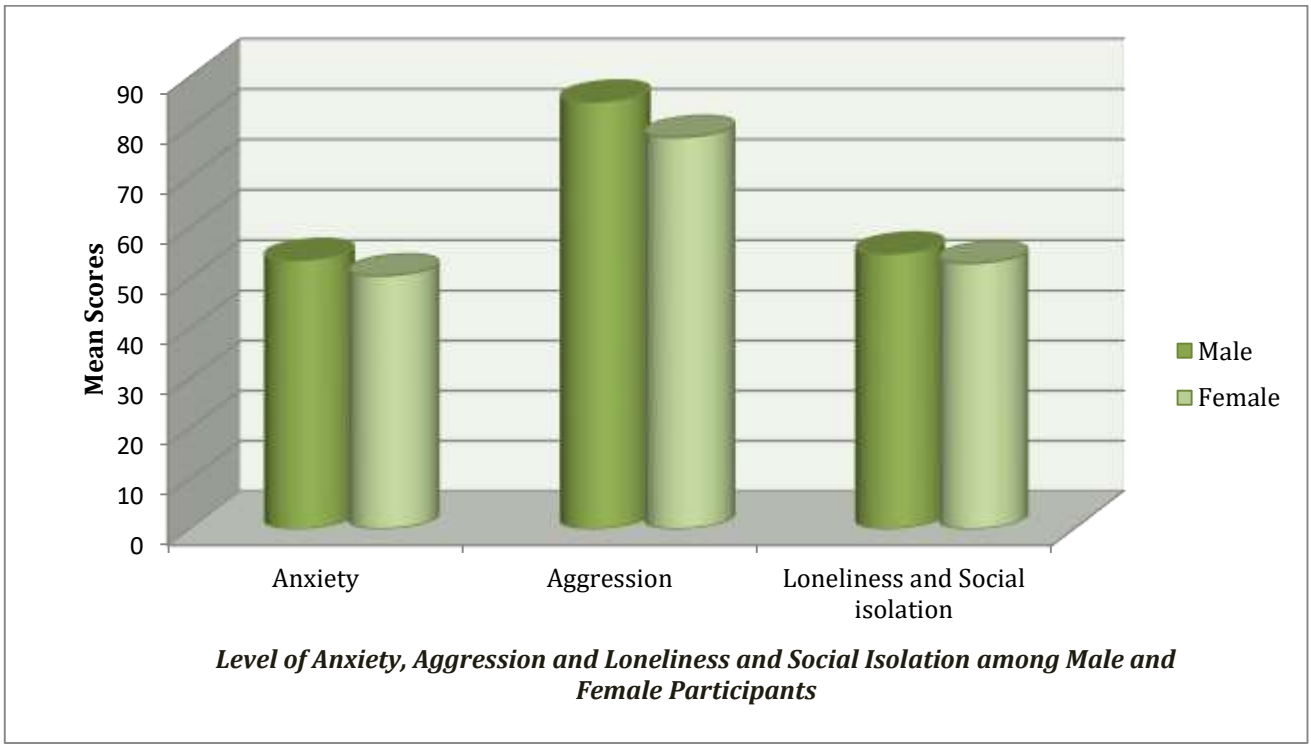
Gender

Multivariate analysis of variance (MANOVA) was used to examine difference between mean scores of male and female participants on different Psychological variables i.e. level of anxiety, aggression and loneliness and social isolation. Results presented in Table 2 revealed Wilk's Lambda of 0.88 for level of Anxiety, Aggression and loneliness and social isolate on as statistically significant, $F(3,396) = 22.46^{***}$, $\eta^2 = 0.15$,. Individual F values for level of anxiety

F(1,398) = 33.27***, η^2 = 0.07, F values for level of aggression F(1,398) = 33.34***, η^2 = 0.07, F values for level of loneliness and social isolation F(1,398) = 2.76*, η^2 = 0.00showed significance difference between mean scores of male and female participants.

Table 2: Gender differences between mean scores on the measures of different Psychological variables i.e. level of anxiety, aggression and loneliness and Social isolation

Variables	Gender		F(1,398)	η^2
	Male (N=170)	Female (N=230)		
Anxiety	*Mean*= 53.59	50.52	33.27***	0.07
	SD = 3.67	6.19		
Aggression	*Mean*= 85.01	77.99	33.34***	0.07
	SD = 13.17	11.06		
Loneliness &Social Isolation	*Mean*= 54.86	52.99	2.76*	0.00
	SD = 10.63	11.56		



Level of Anxiety, Aggression and Loneliness and Social Isolation among Male and Female Participants

Figure 1: Level of Anxiety, Aggression and Loneliness and Social Isolation among Male and Female Participants

Figure 1 indicated that the Mean scores of male participants shows higher level of anxiety (Male mean scores = 53.59, SD =3.76, Female mean scores = 50.52, SD =6.19), aggression (Male mean scores = 85.01, SD =13.17, Female mean scores = 77.09, SD =11.06) and loneliness and Social isolation (Male mean scores = 54.86, SD =10.63, Female mean scores = 52.99, SD =11.53) in compare to female participants. Thus our hypothesis has proved there will be significant difference in the mean score of male and female participants of nomophobia on the level of anxiety, aggression and loneliness and social isolation.

Table 3

Results of Multiple regression analysis predicting scores on the measures of Nomophobia on the level of different psychological variables (Level of Anxiety, Aggression and loneliness and Social isolation).

Predictors	**Nomophobia**		
	b	***β***	***t***
Anxiety	1.29	0.32	7.47***
Aggression	0.73	0.41	9.16***
Loneliness and Social Isolation	0.69	0.35	7.88***
	R=0.62		
	R^2 =0.39		
	*F(3, 396) =83.31****		

Table 3 shows results of multiple regression analysis predicting scores on nomophobia on the level of different psychological variables i.e. level of Anxiety, aggression, loneliness and social isolation. Results indicated that Nomophobia was significant predictors of the scores on the measures of different psychological variables, R= 0.62, R^2 =0.39, F (3,396) = 83.31, P<.001, explaining 39% variance in the scores on dependent measures. Participants with Nomophobia was significantly related to Level of Anxiety (b= 1.29, β = 0.32, t = 7.47), Level of Aggression (b= 0.73, β = 0.41, t = 9.16) and loneliness and social isolation (b= 0.69, β = 0.35, t = 7.88) on the scores of Nomophobia. Hence we say that the level of anxiety, aggression and loneliness strongly predict about the nomophobia.

Results of Multivariate analysis of variance (MANOVA) presented in table 4 show significant Wilk's Lambda of 0.36 for level of Anxiety, Aggression and loneliness and social isolation scores of three groups of

participants with differing levels of severity of Nomophobia, F (6, 393) = 73.96, P <0.001. Univariate F values presented in table 4 clearly indicated significant differences between mean scores of participants with the three levels of severity of nomophobia for Anxiety, F (2, 397) = 106.77, p<0.001, η^2 = 0.35, Aggression, F (2, 397) = 39.29, p<0.001, η^2 = 0.17 and social isolation and loneliness Anxiety, F (2, 397) = 37.24, p<0.001, η^2 = 0.16. Mean score indicated that participants with severe nomophobia had higher Anxiety (M=51.00, SD = 4.16) and Moderate (M=54.36, SD = 3.48), in compare to Mild level of nomophobia (M=47.36, SD = 5.82).

Psychological Variables (Anxiety, Aggression and Social Isolation and loneliness) and Severity of Nomophobia

Table 4: Differences between mean scores of three groups (on the Severity of Nomophobia) on the measures of different Psychological variables i.e. level of anxiety, aggression and loneliness and Social isolation

Variables		Severity of Nomophobia			F (2,397)	η^2
		Mild (N=132)	Moderate (N=241)	Severe (N=27)		
Anxiety	*Mean*=	47.36	54.36	51.00	106.77***	0.35
	SD =	5.82	3.48	4.16		
Aggression	*Mean*=	73.91	84.88	80.67	39.29***	0.17
	SD =	9.11	13.06	0.48		
Loneliness & Social Isolation	*Mean*=	48.50	55.39	65.33	37.24***	0.16
	SD =	10.63	10.59	3.93		

Similarly, aggression was also higher among participants with severe (M=80.67, SD = 0.48) and Moderate anxiety (M=84.88, SD = 13.06), in compare to Mild level of nomophobia (M=73.91, SD = 9.11). Loneliness and social isolation was also higher among participants with severe nomophobia (M = 65.33, SD = 3.93) than participants with Moderate (M = 55.39, SD = 10.59) and Mild nomophobia (M = 48.50, SD = 10.64).

Multivariate analysis of variance conducted separately for three measures clearly indicated that participants with different level of severity of nomophobia different significantly on the measures of Anxiety, Aggression and loneliness and social isolation. Thus hypothesis stating significant difference between three groups of participants was supported by these findings.

Discussion

Nomophobia is the problem of modern era. After Covid 19 pandepic the use of smartphone is rapidly increasing. Nomophobia is the fear of not being able to use a mobile phone and/or the services it offers. The prevalence of nomophobia ranges from 6% to 73% among various populations (Bartwal J, et al., 2020). This prevalence is predicted to increase, becoming a major problem, due to the massive use of smartphones after Covid 19 pandemic.

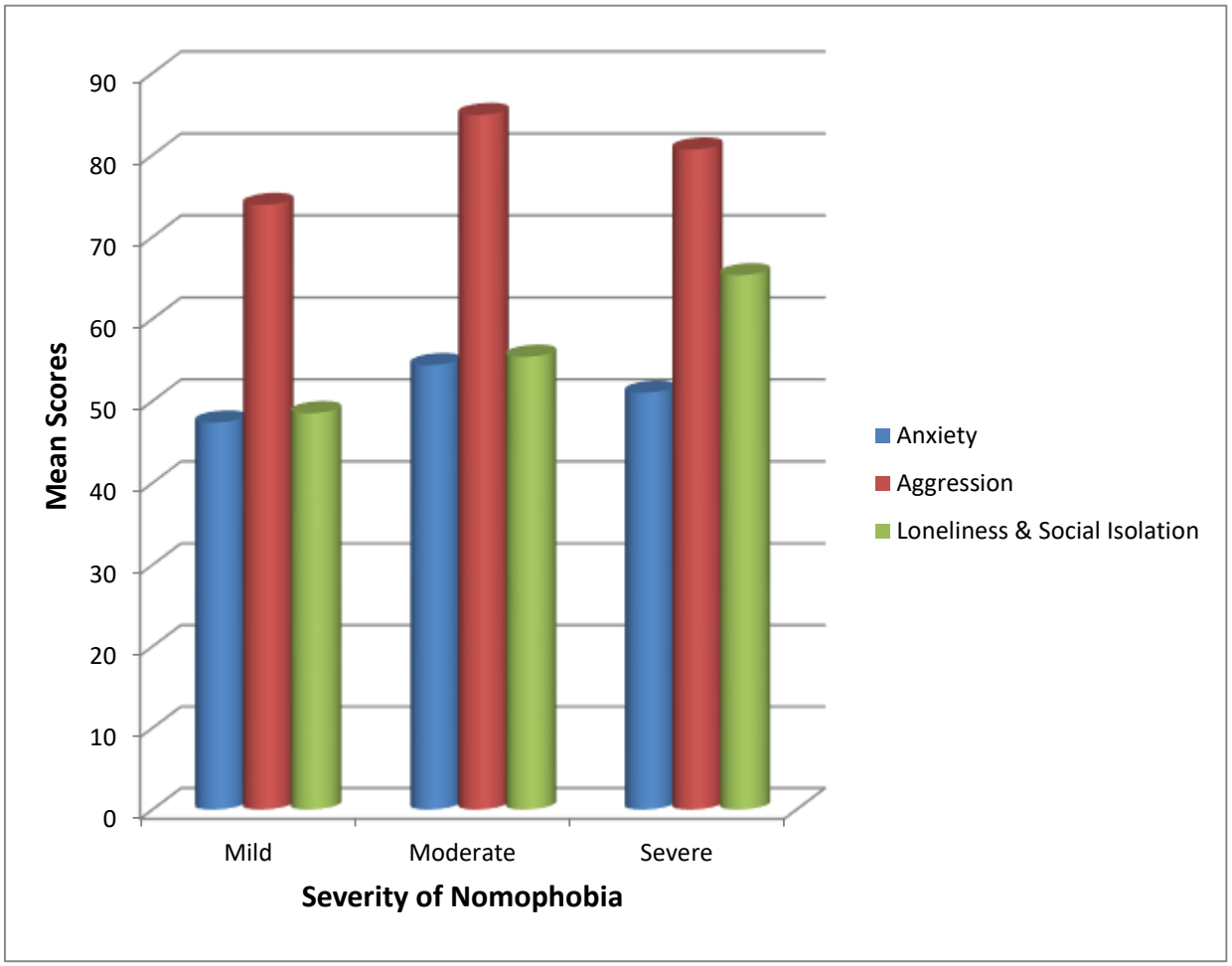


Figure 2: Anxiety, Aggression and loneliness and social isolation among participants on the severity of Nomophobia.

The nomophobia can be associated with anxiety, aggression, and loneliness among young adults. The major problems of nomophobia in this population are associated with poor academic performance and sleep disturbances, because nomophobia can be associated with anxiety, stress, dependence, low self-esteem, social problems, and fear, which is followed by feelings of frustration and obsessive thoughts, among others (Ismail

PA., 2020). Therefore, a lack of confidence, low self-esteem, and lack of social skills when making social connections cause more dependence on mobile phones (Torpil B, et al., 2020). It should also be taken into account that demanding academic and personal lives make the use of these devices indispensable.

The Technology is an integral part of our daily lives and been linked to a range of mental health issues, including anxiety, depression and sleep disorders. The constant barrage of notifications and the pressure to stay connected can lead us to feel overwhelmed and burned out. The relationship between humans and mobile phones is complex and multifaceted, but they have also created new challenges and concerns. Ultimately, the relationship between humans and mobile phones will continue to evolve as technology advances and we learn more about the impacts of these devices on our health, society, and environment. Mobile phones have had a profound impact on society. They have changed the way we work, play, and socialize. However, the constant use of mobile phones has also led to concerns about addiction and the negative Influence of Nomophobia and Loneliness on Young Adults mental health. Studies have shown that excessive smartphone use can lead to anxiety, depression, and sleep disturbances (Santl et al., 2022).

More over the results of the study show the association between nomophobia and different psychological variable and its impact of health and behavior. Similarly the findings of Thomee (2018) the Associations between mobile phone use and adverse mental health outcomes are found in studies that take a psychological or behavioral perspective on the exposure. It was discovered that a variety of psychological variables, such as extrovert personality and low self-esteem, are connected to excessive cell phone use. Nomophobia is rising as a threat to our social, mental, and physical health. The study suggests that we cannot ban using mobile phones or smartphones still we can limit our use and exposure to them (Bhattacharya et al., 2019). Accordingly, Um et al. and Yen et al. reported that problematic smartphone use is an important risk factor for aggression, and the frequency of cyber aggression is significantly high among students who excessively use a smartphone. The present finding is consistent with findings of Mehroof and Griffiths's study showing that smartphone dependency can result in behavioral problems, such as the feeling of anger, tension, aggression, and hostility among students. Because of some stressors and special circumstances in academic life, university students may suffer from mental health problems, such as chronic fatigue as a result of problematic smartphone use, and then lose their self-control in challenging situations Additionally, it was found that one of the disorders of the modern world that is already pervasive among young people is nomophobia, or the dread of not being able to access and consume information through mobile phones (Yildirim & Correia, 2017).

Conclusion:

These findings substantially contribute to our understanding of nomophobia and their impact on adverse psychological, physical and social outcome. This likelihood demonstrated the superposition effects of the

certain risk factors. Students are unknown that how this will impact their lives psychologically, emotionally and socially. The Psycho-social intervention programs (Workshop and seminar on Nomophobia education and different psychological therapy like cognitive behavior therapy, biofeed back techniques) are useful for mediating the negative impact of Nomophobia and for promoting psychological and social well being. Government, higher education and school education may take important initiative to control its bad impact on the individual well being and social well being. The psychologist and school counselor may be appointed in each and every school and colleges to mitigate the effect of nomophobia otherwise it is dangerous for our society and upcoming generation.

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