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Smartphone Addiction among Prospective Teachers with reference to Demographic Characteristics

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Abstract: Smartphone dependence is creating behavioural, health, and distraction problems among youths. The majority of the population has regular internet and Smartphone access, which leads to smartphone addiction. This study aimed (i) to know the status of Smartphone addiction among prospective teachers, (ii) to compare the differences in Smartphone addiction among prospective teachers according to their gender, streams, locality, & type of family, and (iii) to suggest measures to reduce Smartphone addiction among prospective teachers. In this survey study, a total of 96 prospective teachers were selected randomly who were studying in two years B.Ed. programme of Teacher Training Institutes affiliated to Mahatma Jyotiba Phule Rohilkhand University, Bareilly, India. The study revealed that 97.92% (94) prospective teachers had regular internet access without any interruption and 92.71% (89) prospective teachers had their personal Smartphones. The majority of prospective teachers indicated above-average and average level of Smartphone addiction over their demographic characteristics (gender, locality, study stream, and type of family). Prospective teachers were not significantly different in smartphone addiction over their demography (gender, locality, study stream, and type of family). Regular access to the internet, availability of Smartphone and lack of awareness about its negative effects may increase its problematic use. Adequate use of Smartphone and face-to-face social participation should be encouraged in social including education settings.

Keywords: Smartphone addiction, prospective-teachers, teachers

Introduction

Smartphones are convenient tool to perform various activities in modern lifestyle. It became an integral part of modern life. Smartphones can be hugely productive tool but compulsive use of Smartphones can interfere with work, education & relationships among people of different age groups. In present day's life School going children, adolescents, college students and teachers etc. are dependent on Smartphones for virtual interaction, entertainment, education and various daily life activities needs because Smartphones widen the telephoning features to entertainment, social networking, online banking, online learning, virtual meetings etc. Easy access of internet and Smartphones may increase

the problematic use of these devices which may lead the user to various behavoiural problems. The risk of smartphone addiction may differ due to the pattern of using smartphones in different age groups. Some age groups may be more at risk of smartphone addiction than other age groups.

In many researches 'Smartphone addiction' have been used to address the problematic use of Smartphone. Problematic smartphone use can be described as behavioural dependence on advanced cell phones. Smartphone addiction is not classified as a mental health disorder in Diagnostic and Statistical Manual of Mental Disorders-fifth edition (DSM-5), but this manual mentioned characteristics of other behaviournal addiction like 'Internet Gambling Disorder'. Smartphone addiction indicating growing recognition technology related addictions. Obsessive use of smartphone is significantly related to behavioural changes (Ambiha, Sathyapriya, Akila, Vanitha, Muniyammal, 2023). Additionally, problematic use of smartphone was significantly correlated with procrastination, self-esteem, minimal social contacts, suicide and low academic achievement (Achangwa, Ryu, Lee, Jang, 2022). Researches also evidence that excessive use of smartphone may linked to physical, mental and emotional health i.e. anxiety, depressions, sleep disturbance, social isolation, cognitive impairment, procrastination, low self-esteem, aggression, conflict, American Psychiatric Association and World Health Organization attempted to define disorders relevant to the use of such technology. Their work has materialized in the *Diagnostic and Statistical Manual of Disorders, Fifth Edition* (DSM-5) (Pontes and Griffiths; 2015) and in the *International Classification of Diseases 11th Revision* (ICD-11) (Pontes, Schivinski, Sindermann, Li, Becker, Zhou, and Montag, 2021).

In present research authors used term smartphone addiction though contrary to it Panova, Tayana; Carbonell, Xavier (2018) reported that they did not found sufficient support from the addiction perspective to confirm the existence of smartphone addiction. Authors also concluded that the behaviors observed in the research could be better labeled as problematic smartphone use because their consequences do not meet the severity levels of those caused by addiction. Researchers are also convinced with above research evidences to use term problematic smartphone use in future researches; though this research is using the term smartphone addiction to related the research tool used in the study.

Population of each age group is in reach to use smartphones for entertainment, education, information, video games, social networking, e-commerce, research and other purposes. Present social structure and life style is minimizing the face-to-face social interactions which lead for better socialization and adequate development opportunities for young children, and adolescents. Present days technology is attracting them for their social interaction, recreation, and information needs etc. Young children and adolescents having easy reach to use smartphone at home and other places. Due to regular dependence on such devices they might be at risk of excessive use of smartphone. Csibi, Griffiths, Demetrovics, and Szabo (2021) supported in their study that preschool children and young adults are at highest risk for smartphone-related addictive behavior.

Researches also support that participants with low levels of smartphone usage showed less difficulty in their ability to self-control necessary to withdraw smartphone use and faster reaction times on cognitive tests than participants with high levels of smartphone usage (Fabio, Stracuzzi, and Lo Faro, 2022). Similarly, Kliesener, Meigen, Kiess, and Poulain (2022) also reported that intensive smartphone use for social networking, gaming, or watching video clips were significantly associated with more problematic use of smartphone symptoms. Children and adolescents indicating more problematic use of smartphone showed lower quality of life, more behavioral difficulties, and poorer school performance, independently of age, gender, socioeconomic status, and daily smartphone usage time.

Smartphone technology is improving continuously and the use of smartphone is steadily increasing. It is important to address the behavioral addictions related to smartphone use. Future teachers are key social change agent in the society; therefore, it becomes important to know the level of smartphone use among them and how are they differing over their demographics in using their smartphone. Previously conducted researches about problematic smartphone use and related problems nationally and internationally present an overview about the problem to recognize the research gaps.

Review of Literature

Previous research studies explored problematic smartphone use among college students of different streams including prospective teachers; studies reported statistically significant positive correlation between addiction of Smartphone and depression and also affirmatively related Smartphone addiction, aggression and impulsion. Men were more affected by Smartphone addiction rather than women Kim, Kim, Kim, Ju, Choi and Yu (2015). University students are so much attached to Smartphone that they feel unable to function and complete their tasks without it (Aljomaa, Al Qudah, Albursan, Bakhiet and Abduljabbar, 2016). As we talk about the factors of Smartphone addiction a study reported five factors i.e., positive anticipation, impatience, withdrawal, daily- life disturbance and cyber friendship. The Smartphone addiction also creates disturbance in personal life of people and they did not spare time to their families and daily life activities due to overuse of Smartphone (Arefin, Islam, Mustafi, Afrin, and Islam, N., 2017). Further, Konan, Durmus, Turkoglu, Bakir (2018) reported that the scores of prospective teachers on Smartphone use were at a lower level comparatively to the scores of interaction anxiety and there was also a significant positive correlation between prospective teachers' Smartphone addiction & interaction anxiety.

Further, Alhazmi, Alzahrani, Baig, Salawati, and Alkatheri (2018) revealed in their study that in Saudi Arabia there are fewer social activities and entertainment opportunities, therefore medical students mostly use Smartphone at home for social and entertainment activities; but there was no significant difference between Smartphone addiction and smoking status or degree of obesity. In a study, Palmera, Rivas, Garcia and Vega (2019) investigated 'future teachers' Smartphone use and dependence and reported that Smartphones were found to be preferred internet connection device for 80% of students and 38% students were found using internet for 5 hours or more (considered as addiction). In a study Herrero, Torres, Vivas and Uruena, (2019) it was reported that lesser use of Smartphone increases social support and social participation, it can be seen as that greater the social support then greater the reduction in use of Smartphone.

In an empirical study, Alkunaizan (2019) reported that female participants tend to spend more time on Smartphone use rather than male. Less amount of time is given to learning activities on Smartphone and university students spend more than 8 hours a day on their Smartphone. Smartphone are useful for learning but learners have a tendency to use them for non-academic purposes. One year later, Iqbal and Bhatti (2020) reported that faculty members in higher education institutes considered Smartphone as an effective medium for off campus learning & communication with peers & students. Smartphone helps in explaining any difficult problem or concept through audio-visual effects. Though, some faculty members were against the Smartphone usage because it is a source of distraction, wastage of time, anxiety, emotional detachment. Problematic use of Smartphone affects directly the quality of sleep, and self-health directly or indirectly (Cao, Lim,and Kodama, 2021).

Studies suggested that greater use of phone while studying will impact negatively on learning & academic achievements of their cognitive abilities & skills (Sunday, Adesope and Maarhuis (2021). Further, Vujic and Szabo (2022) stated that perceived stress and hedonic use proved positive prediction of addiction of Smartphone. The addiction of Smartphone on women was greater than man, but age effect was not significant. In a recent systematic literature review on "Internet addiction among teachers" He, SQ and Chen, IH (2024) revealed a prevalence rate of internet addiction among educators ranging from 5.2% to 35%, pinpointing specific behaviors that may predispose individuals to higher addiction risks. Behera and Seth (2023) concluded that gender was not a significant predictor but academic streams were significant predictors of smartphone addiction among university students. Authors reported that there was no significant difference between male and female students in smartphone addiction though significant difference was found among the different streams of students in smartphone addiction. A significant interaction effect of gender and academic streams on smartphone addiction. Contrary to it, Rani and Sharma (2023) found no significant impact in smartphone addiction among higher secondary school students with reference to their gender and locality of residence. Researchers also recorded no interaction effect of significant difference in smartphone addiction among higher secondary school students with reference to their gender and locality of residence. Further,

Prakash, Thangavel, and Kumar (2024) concluded that rural and urban high school students were not statistically significant different in their smartphone addiction, meanwhile a significant difference was found among high school boys and girls in their smartphone addiction followed by Jamir, Duggal, Grover, Kumar, Philip, and Nehra (2024) reported in rural students, problematic use was significantly influenced by gender.

Few studies are carried out to assess the level of problematic smartphone use or addiction among prospective teachers and most of studies reported that problematic smartphone use or smartphone addiction is creating various behavioural, health and distraction problems among college students.

Research Questions

In the light of review of related literature and understanding the significance of the study following research questions emerged –

Q.1 What is the level of Smartphone addiction among prospective teachers?

Q.2 What is the status of Smartphone addiction among prospective teachers over their demography?

Objectives of the Study

Keeping in view the above research questions following objectives have been framed–

1. To study the level of Smartphone addiction among prospective teachers.
2. To examine Smartphone addiction among prospective teachers over their demographics.
3. To suggest measures to reduce Smartphone addiction among prospective teachers.

Hypotheses of the Study

In accordance of above-mentioned objectives following hypotheses have been formulated –

H_{01} There is no significant difference in the level of Smartphone addiction between male and female prospective teachers.

H_{02} No significant difference exists in the level of Smartphone addiction between prospective teachers of Arts, Science and Commerce Streams.

H_{03} The significant difference does not exist in the level of Smartphone addiction between rural and urban prospective teachers.

H_{04} The difference is not significant in the level of Smartphone addiction prospective teachers according to their family type.

Method and Participants

Investigator employed Survey method of descriptive research approach to collect the data from selected sample. In this study, researcher listed the Teacher Training Institutes (TTIs) located in Bareilly city and affiliated to MJP Rohilkhand University, Bareilly Uttar Pradesh, India. Later, 5 TTIs were selected randomly using Lottery method as sample TTIs. Further, 20 prospective teachers were selected from each sample TTI. Therefore, a total sample of 100 prospective teachers studying in two-year B.Ed. programme was selected through simple random sampling method. Smartphone Addiction Scale (SAS) developed and standardised by Dr. Vijayashree and Dr. Masaud Ansari (2021, 2019) was used to gather the information from the participants. Reliability of the tool was 0.857. Researcher collected all filled tools but found that 4 of them were not appropriately filled and then eliminated from the data group and data from 96 participants was analysed below.

Analysis and Interpretation of Data

The analysis of data was analysed in following three sections according to study objectives as follows–

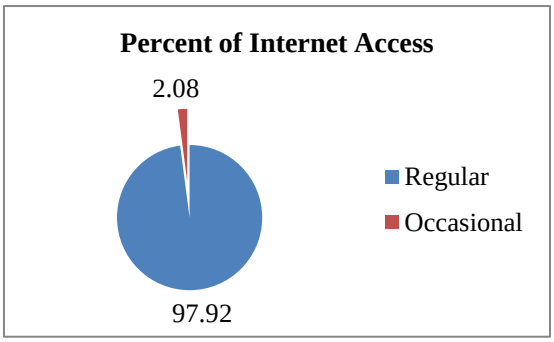
Access to Internet and Smartphone

Internet access and availability of Smartphone has an important role in Smartphone addiction among youths. In present study the sample of prospective teachers also use Smartphones for using social media, communication, entertainment and educational purpose etc. In the following table the distribution of internet access and availability of Smartphone is given -

Table-1: Distribution of Internet Access and Smartphone

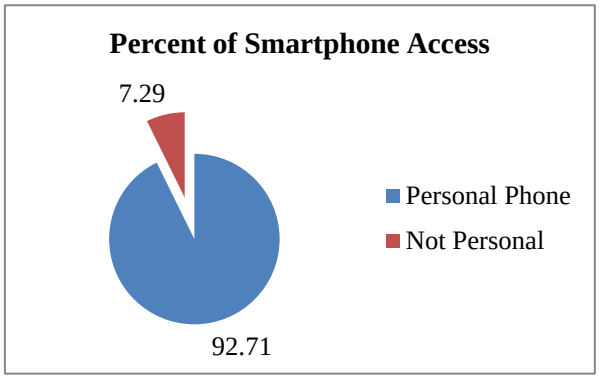
	Internet Access		Access of Smartphone	
	Regular	**Occasional**	**Personal Phone**	**Not Personal Phone**
Number	94	02	89	07
Percent	97.92	2.08	92.71	7.29

Table-1 indicates that 97.92% (94) prospective teachers have regular internet access without any interruption. The percentage of users having regular internet accessibility is extremely high. It could be a reason of increased Smartphone addiction among prospective teachers. Meanwhile, only 2.08% of them have occasional internet access. It may be due to adequate internet services, regular internet data update or inadequate device use by the users.



Graph 1: Access to Internet

Similarly, 92.71% (89) prospective teachers have their personal Smartphone and only 7.29% (07) prospective teachers do not have their personal phone. Access to personal phone among prospective teachers reflects that huge number population is using Smartphone individually.



Graph 2: Access to Smartphone

It can be concluded from above table and graphs that majority of study population has regular access of internet and availability of Smartphone which may lead them to be addict of using Smartphone.

Level of Smartphone Addiction

Objective-1: To study the level of Smartphone addiction among prospective teachers.

The purpose of analysing distribution of prospective teachers on different levels of addiction was to know the level of addiction as follows -

Table-2: Status of Smartphone Addiction among Prospective Teachers

Sr. No.	Level of Smartphone Addiction	Gender		Locality		Streams			Type of Family		Overall
		M	F	R	U	A	S	C	JF	NF	
1	Very High Level of Addiction	02 (2.08)	04 (4.17)	00 (0.0)	06 (6.25)	03 (3.13)	02 (2.08)	01 (1.04)	01 (1.04)	05 (5.21)	06 (6.25)
2	High Level of Addiction	02 (2.08)	02 (2.08)	01 (1.04)	03 (3.13)	01 (1.04)	03 (3.13)	00 (0.0)	01 (1.04)	03 (3.13)	04 (4.17)
3	Above Average Level of Addiction	06 (6.25)	22 (22.92)	07 (7.29)	21 (21.88)	08 (8.33)	15 (15.63)	05 (5.21)	11 (11.46)	17 (17.71)	28 (29.17)
4	Average Level of Addiction	07 (7.29)	34 (35.42)	08 (8.33)	33 (34.38)	08 (8.33)	19 (19.79)	14 (14.58)	16 (16.67)	25 (26.04)	41 (42.70)
5	Below Average Level of Addiction	01 (1.04)	10 (10.42)	02 (2.08)	09 (9.38)	04 (4.17)	05 (5.21)	02 (2.08)	05 (5.21)	06 (6.25)	11 (11.46)
6	Low Level of Addiction	01 (1.04)	03 (3.13)	00 (0.0)	04 (4.17)	01 (1.04)	02 (2.08)	01 (1.04)	03 (3.13)	01 (1.04)	04 (4.17)
7	Very Low Level of Addiction	00 (0.0)	02 (2.08)	00 (0.0)	02 (2.08)	01 (1.04)	00 (0.0)	01 (1.04)	00 (0.0)	02 (2.08)	02 (2.08)
	Total	**19**	**77**	**18**	**78**	**26**	**46**	**24**	**37**	**59**	**96**

M=Male, F=Female, R=Rural, U=Urban, A=Arts, Sc.=Science, C=Commerce, JF=Joint Family, NF=Nuclear Family; (Number in Parenthesis are in Percent)

Table-2 revealed that only 2.08% male prospective teachers showed very high level of addiction which was less than female prospective teachers (4.17%). In overall and urban category of prospective teachers (6.25%) showed very high level of Smartphone addiction which was the highest percentage. Similarly, prospective teachers from Nuclear Family indicated very high Smartphone addiction which was the second highest percent (5.21%) followed by third highest percent of Female prospective teachers (4.17%) showed very high level of Smartphone addiction.

Further, it showed that prospective teachers from Nuclear Family, Urban area and Science Stream (3.13%) reflected high level of Smartphone addiction. In overall category 4.17% prospective teachers reflected high level of Smartphone addiction.

In case of above average level of Smartphone addiction among Female (22.92%) prospective teachers were showing highest percent followed by Urban (21.88%) and Nuclear Family (17.71%). Overall, 29.17% prospective teachers were indicating above average Smartphone addiction.

Additionally, at average level of Smartphone addiction, Female (35.42%) prospective teachers occupied highest percent, second highest percent by urban prospective teachers (34.38%) and lastly it was of Nuclear Family (26.04%) reflected average level of Smartphone addiction. 42.70% prospective teachers were average level addict of Smartphone in overall category.

In below average level of Smartphone addiction 10.42% Female prospective teachers were affected by addiction, though prospective teachers from urban locality indicated below average addiction which was the second below average percent (9.38%) tracked by third below average level addiction percent of Nuclear Family (6.25%). Overall prospective teachers (11.46%) were also showing below average level of Smartphone addiction.

Further, the prospective teachers from urban category (4.17%) showed low level of Smartphone addiction. Female and Joint Family prospective teachers shared same percent of low-level addiction (3.13%) trailed by third low level of Smartphone addiction which is of Science stream (2.08%). Similarly, Arts and Commerce streams share identical percent of very low level of Smartphone addiction (1.04%) whereas Female, Urban and Nuclear Family prospective teachers were at (2.08%) very low level of Smartphone addiction.

Differences in Smartphone Addiction

Researcher verified the following null hypotheses to know the differences in Smartphone addiction of prospective teachers as follows –

H_{01} There is no significant difference in the level of Smartphone addiction between male and female prospective teachers.

Table-3: Comparison of Smartphone Addiction between Male and Female Prospective Teachers

Gender	N	Mean	Std. Deviation	Std. Error Mean	df	t-value
Male	19	67.11	17.52	4.020	94	1.328 NS
Female	77	61.78	15.18	1.729		

*= Significant at 0.05 level, **=Significant at 0.01 level, NS=Not Significant

Table-3 indicated that the scores of Smartphone addiction of male and female prospective teachers do not differ significantly (t=1.328, df=94). Therefore, above null hypothesis was accepted and it concluded that there was no significant difference exists in Smartphone addiction of male and female prospective teachers. Though, the mean scores of Male (M=67.11, SD=17.52) indicated that male prospective teachers appear to have higher level of Smartphone addiction than Female prospective teachers (M=61.78, SD=15.18). The difference may be because male prospective teachers are much more open to the society and communication activities as compared to female prospective teachers. In our society females have dual duties and they are always engaged in family works. Therefore, it might cause lower level of Smartphone addiction among female prospective teachers. The findings of this study are aligned with Behera and Seth (2023) reported that gender was not a significant predictor and no significant difference between male and female students in smartphone addiction. Rani and Sharma (2023) also found no significant impact in smartphone addiction among higher secondary school students with reference to their gender and locality of residence. Contrary to it, Prakash, Thangavel, and Kumar (2024) reported a significant difference was found among high school boys and girls followed by Jamir Duggal, Grover, Kumar, Philip, and Nehra (2025) among rural students problematic use was significantly influenced by their gender.

H_{02} No significant difference exists in the level of Smartphone addiction between prospective teachers of Arts, Science and Commerce Streams.

Table-4: Descriptive Statistics for Smartphone Addiction of Prospective Teachers of Arts, Science and Commerce Streams

Streams	N	Mean	SD	Std. Error	95% Confidence Interval for Mean		Min.	Max.
					Lower Bound	Upper Bound		
Arts	26	63.69	18.52	3.633	56.2107	71.1739	28.00	106.00
Science	46	63.96	14.76	2.176	59.5733	68.3398	34.00	98.00
Commerce	24	59.75	14.42	2.943	53.6623	65.8377	26.00	98.00
Total	96	62.83	15.72	1.604	59.6488	66.0179	26.00	106.00

From above table it can be seen that mean score of prospective teachers of Science stream (M=63.96, SD=14.76) is slightly higher than Arts group (M=63.69, SD=18.52). But the mean score of prospective

teachers of Commerce stream (M=59.75, SD=14.42) seems quite lower than the other two groups. Therefore, it can be concluded that Smartphone addiction among prospective teachers of Science and Arts streams is higher than their counterparts of Commerce stream.

Table-5: Summary of ANOVA (One Way) for Smartphone Addiction of Prospective Teachers of Arts, Science and Commerce Streams

Groups	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	305.382	2	152.691	.613	.544 NS
Within Groups	23161.952	93	249.053		
Total	23467.333	95			

From above table-5 the ANOVA one way results showed that F(2, 93)=0.613 value was not found to be significant. Thus, the null hypothesis that there is no significant difference among prospective teachers according to their streams may be accepted. The reason behind no difference in Smartphone addiction could be the equal use of Smartphone by all stream participants because communication and entertaining devices almost engage all equally. The findings of this study were aligned with Rani and Sharma (2023) reported no interaction effect of significant difference in smartphone addiction among higher secondary school students with reference to their gender and locality of residence. Contrary to it, Behera and Seth (2023) reported a significant interaction effect of gender and academic streams on smartphone addiction. Contrary to it,

H_{03} The significant difference does not exist in the level of Smartphone addiction between rural and urban prospective teachers.

Table-6: Comparison of Smartphone Addiction between Urban and Rural Prospective Teachers

Locality	N	Mean	SD	Std. Error Mean	df	t-value
Urban	78	62.14	16.55	1.874	94	.760 NS
Rural	18	65.28	11.74	2.767		

From the table 6, it can be seen that scores of Smartphone addiction among urban area and rural area prospective teachers did not differ significantly (t=0.760, df=94). Therefore, above null hypothesis is accepted and it concludes that the significant difference did not exist among prospective teachers from urban and rural areas. The difference in mean scores of rural areas (M=65.28, SD=11.74) appear to have higher level of Smartphone addiction than urban area prospective teachers (M=62.14, SD=16.55). The difference may be because rural area prospective teachers use Smartphone more for their source of entertainment like playing games, online chatting, reel making and for news and other information as compared to urban area prospective teachers who are mostly busy with their work and important practices. Hence, it might cause lower level of Smartphone addiction among urban areas prospective teachers. The findings of this study are aligned with Rani and Sharma (2023) and Prakash, S.; Thangavel, K.; & Kumar, S.R. (2024) who found no significant difference in smartphone addiction among rural and urban higher secondary and high school students. Contrary to it, these findings were not aligned with Arasi (2018) who reported that student-teachers from urban and semi urban areas differ significantly in smartphone addiction.

H_{04} The difference is not significant in the level of Smartphone addiction among prospective teachers according to type of family.

Table-7: Comparison of Smartphone Addiction among Prospective Teachers according to family type

Family Type	N	Mean	Std. Deviation	Std. Error Mean	df	t-value
Joint Family	37	60.84	14.97	2.461	94	.931
Nuclear Family	59	63.92	16.24	2.115		NS

The scores of Smartphone addiction (Table-7) between prospective teachers belongs to joint and nuclear family do not differ significantly (t=.931, df=94). Therefore, above null hypothesis is accepted and it concluded that no significant difference exists between prospective teachers from joint and nuclear family. The difference in mean scores of nuclear family (M=63.92, SD=16.24) indicates that nuclear family prospective teachers seem to have higher level of Smartphone addiction than joint family prospective teachers (M=60.84, SD=14.97). The difference may be because of nuclear families having less number of family members and social interactions or social gathering between nuclear family members happens less in number. Mostly they are engaged in their own circle and virtual networks. Therefore, prospective teachers from nuclear family do not have the opportunity to interact with free and older persons of the family and so are accustomed to Smartphone usage whereas in joint family people have large group of people to talk and share their life experiences and stories with one another leading to less usage of Smartphone. Therefore, it might be a cause of lower level of Smartphone addiction among joint family prospective teachers. Authors could not find any study in align to these findings but the findings of this study were in contrast with Narain and Gupta (2024) that adolescents of nuclear and joint family are significantly differ on smartphone addiction.

Results

1. There was no significant difference in Smartphone addiction in male and female prospective teachers.
2. Similarly, prospective teachers did not differ significantly in Smartphone addiction over their streams of study.
3. Again, the significant difference did not exist in Smartphone addiction between rural and urban prospective teachers.
4. Further, no significant difference was found among prospective teachers belong to joint and nuclear family.

Discussion

Level of Smartphone addiction may vary over the demographic characteristics of study population. Though, majority of population is falls in above average, and average level of Smartphone addiction. This can lead major problems related to mental health, psychological well-being, negative effects on academic achievement of learners; increased Smartphone addiction may increase screen dependency compulsiveness and forgetfulness etc. In other words, increased Smartphone addiction may decrease face to face social interactions which will lead to increased social isolation. Ratan, Parrish, et al. (2021) concluded that there were consistent associations between smartphone addiction and physical and mental health, especially mental health. Social awareness campaigns about smartphone addiction and its impact on physical and mental health are needed.

Increased Smartphone addiction may lead to academic procrastination among prospective teachers as well as other college students. Saxena & Chandra (2024) also suggested that distractions should be eliminated during the study to avoid academic procrastination. High level of Smartphone addiction may lead to lack of attention, disturbed hunger or sleep, depression & anxiety, and social withdraw

behaviours among youths or among prospective teachers. These, behavioural problems or disorders may have adverse effects on the personality of prospective teachers. Geng, Gu, et al. (2021) concluded in their study that smartphone addiction contributes in postponing the bedtime and further experience more depression and anxiety among university students. Authors suggested that self-control can serve as a protective factor for bedtime procrastination, depression and anxiety.

It can be concluded from above discussion that a teacher with a high level of Smartphone addiction will not be able to concentrate, to plan, to teach and to perform other academic activities as per teaching profession demands. In the era of emerging technologies, prospective teachers and in-service teachers will be using Smartphone like other population and they will confident and efficient in using technology but high level of Smartphone may lead them towards compulsiveness, forgetfulness, lack of attention, depression & anxiety and social withdrawal; these behavioural disorders will disturb his/her academic and teaching learning activities/assignments. These behavioural problems or disorders among future teachers and in-service teachers might affect students' learning and academic achievement. Therefore, self-control and awareness about negative effects of smartphone addiction are recommended.

Conflict of Interest: There is no conflict of interest.

Funding: Not Applicable

Ethics: Prospective teachers were informed well about research objective and scope of the study. Researcher assured them that their personal and smartphone addiction will be kept confidential before sharing the scale for data collection. Researcher kept any personal information of respondents confidential. Research works cited in this study are listed in the reference list below accordingly.

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