

Influence of Phubbing, Fear of Missing Out on Depression, Anxiety and Stress Among Generation Z Population

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Abstract

The aim of the study was to assess the relationship between the variables phubbing, fomo, depression, anxiety and stress among generation z population. The study also analyses the predictivity of variables phubbing and fomo on depression, anxiety and stress. Participants were given Personal information schedule, Phubbing Scale, fomo scale, DASS-21 for the purpose of study. The Phubbing scale was developed to assess the phubbing. The results found that there is significant relationship with all the study variables. The results revealed only fomo predicts depression, anxiety and stress while phubbing predicts depression and stress. The results showed no influence of gender on the study variables. The area of living of the participants also didn't impact the study variables. The findings from the study can help individuals to identify their specific behaviour pattern so that they can seek support from individuals or organization. So that the upcoming generation of the society, will not be tangled in the disturbance of the virtual world, also the new age gadgets can be used wisely to utilise its opportunity to grow and develop.

Keywords: phubbing, fear of missing out (fomo), depression, anxiety, stress.

Introduction

The internet has transformed communication methods and accelerated global change. The days of living close to the workplace and travelling great distances to communicate with those who did not live nearby are long gone. The society of the twenty-first century is open to new ideas and technology. Every year, technology develops and becomes more pervasive in everyone's daily lives. People's homes, work, schools, transportation, and healthcare are all incorporating technology like smartphones, computers, smart watches, smart glasses, and smart TVs. People can now communicate effortlessly over large distances because to technology. Although living in a technologically advanced environment has many advantages, there are also some drawbacks that should be taken into account. Few things even come close to its immense impact on daily life. With the use of cell phones and laptops, one can connect at any time, 24 hours a day, and seven days a week, to the internet, social media, and more. People who are glued to their phone or tablet for the majority of the day may find it impossible to look away from it; as a result, they are unable to even enjoy a meal without being interrupted by a text message or other notification. This issue has probably affected almost everyone to some degree. Many people experience a wide range of detrimental effects as a result of excessive technology use and created rated major

issues. Furthermore, today's quick mood swings and lack of social skills have an impact on how people interact. To avoid future issues, it is preferable for individuals to engage with each other more, spend less time online, and use technology in ways that don't harm others.

The context of the study

Generation x (those born between 1965 and 1980) and Generation y (those born between 1981 and 1995) have a significant influence on Generation z because they are the parents of the majority of them, and they also serve as the foundation upon which Generation z can grow.

The generation known as Generation z was roughly born between 1996 and 2010. The first generation born entirely online; Generation z was created at the height of technological advancement. They are the generation that has had constant access to social media and a range of digital platforms. They are able to maintain contact with various kinds of self-expression because to this, which is said to have contributed to their liberalising perspectives. Their self-expression frequently reflects this diversity dissemination, setting them apart from earlier generations. This includes gender-fluid attire and hairstyles, as well as a sombre demeanour appropriate for their on-going eco-anxiety.

Given that they have had a predominately WEIRD (Western, educated, industrialised, affluent, and democratic) upbringing, it appears that this representation holds true for upper-class and upper-caste Indians who reside in major cities. Generation z, however, expresses themselves differently in second- and third-tier Indian towns due to the co-impact of two opposing sources of influence, which distinguishes them as a group. It is crucial to take note of the ways in which Generation z in Tier-two and Tier-three cities in India differs from the Generation z global schema in order to comprehend these differences.

Generation z, including the population in India, is one of the most depressed generations. Generation z uses their online personas to locate their clan and a sense of belonging in order to cope. Generation z today is cloaked in mystery. For young people, a choice dilemma has been brought on by the internet, capitalism, and new technologies. When determining which field to pick for their school and career, they have a wide range of possibilities to consider. The same holds true for the behavioural variations they are exposed to in terms of gender, sexual orientation, and appearance. The pandemic has undoubtedly made this uncertainty worse. Generation z in second- and third-tier cities differs from the rest of the generation in how they approach this challenge. Generation z in second- and third-tier cities in India have continued to cling to Indian cultural values and conventions of their setting to guide them in personhood construction, in contrast to Generation z in the west whole idea of the self is extremely free and dependent on personal thought and one's action.

In a period of increased confusion, these values act as anchors that offer clearly defined boundaries for their self-expression. As a result, their motivations and actions are not just intended to make them feel good; they also take into account the context in which they exist, including how to interact with their parents, the wider society, and the expectations placed on them. The majority of them choose careers that make this abundantly clear. The majority of Generation z still chooses traditional professions like engineering, medicine, or business with an MBA. These careers are highly prized not only for their minimal risk, but also for the significant prestige boosts they give the person and their family for having produced a smart, successful child. Instead, these Generation z exhibit self-determinism similar to that of other Generation z through their interests and hobbies, which do not adhere to conventional boundaries but instead focus considerably more on self-experimentation.

Today's Generation z is more accepting of their own mental health difficulties and is publicly seeking therapy for them in urban areas of the west and India. Similar problems with loneliness and anxiety are being experienced by Generation z in India's second and third tiers. However, they still avoid discussing their own mental health issues in public due to the shame attached to doing so. This does not stop them from advocating for those who do experience mental health problems or from using mental health information as a way to advertise their wokeness. In conclusion, there is a general acceptance of mental health issues nowadays, as long as they occur outside of the home and nobody else learns about them.

Phubbing

Phubbing can be described as an individual looking at his or her mobile phone during a conversation with other individuals, dealing with the mobile phone and escaping from interpersonal communication (Karadağ et al., 2015).

According to O'Dea (2021) there were 7.1 billion mobile phone subscribers globally in 2021, up from 6.95 billion in 2020 and to predict there may be 7.49 billion users worldwide in 2025 (O'Dea, 2021). These figures correspond with the rapid spread of the COVID-19 infection, which has resulted in severe limitations and isolation across the globe (Abel & McQueen, 2020), including extended lockdowns, online learning and employment, and meetings that increase internet and phone use (King et al., 2020; Mestre-Bach et al., 2020; Wiederhold, 2020).

The issue of phubbing is getting more widespread as smartphone and handheld device dissemination increases along with the number of individuals using and adopting smartphones globally (Qian, 2014; Relling, 2014; and Pheeraphuttharangkoon, 2015).

Phubbing is the practise of staring down at one's phone while talking to someone else, preoccupying oneself with it, and avoiding face-to-face interaction. The concept of phubbing has a variety of dynamics (Karada et al., 2015). Phubbing lowers the standard of social interactions because those who engage in it may come across as rude to those around them, showing a desire to avoid interpersonal engagement or a lack of awareness or interest in their surroundings (Anshari et al., 2016).

David and Roberts (2017) hypothesized that being phubbed leads to a sense of social exclusion and his two studies have found support for the proposed relationship between being phubbed and feelings of social exclusion/ostracism. previous use of the internet and social media, individuals turn to the internet and social media whenever these needs arise, one of the important needs of individuals is to stay in touch with other people (Ferris et al., 2021).

Fear of missing out [FOMO]

FOMO has been defined as “a pervasive apprehension that others might be having rewarding experiences from which one is absent,” or “the desire to stay continually connected with what others are doing” (Przybylski et al., 2013). The fear of missing out (FOMO) arises from the individual's inability to participate in certain contexts and their perception that other people are having fun there (Gokler et al., 2016). People with high levels of FOMO frequently use their smartphones to check social media to see what other people are up to or to prevent missing out on enjoyable situations (Przybylski et al., 2013)

Later studies evaluated whether negative affectivity, such as depression and anxiety, impacts FOMO or whether FOMO influences negative affectivity. Globally, FOMO has been researched and validated using a variety of self-report psychological assessments and physiological monitoring. Due to the ease with which teenagers can engage and their on-going need for approval and positive feedback from

others, FOMO is also linked to problematic use of social networking sites (Stead & Bibby, 2017). A vicious cycle of compulsive checking and participation can result from the "round-the-clock" nature of these communications, which can make one feel lonely and unworthy by drawing attention to others' accomplishments, popularity, and comparisons of oneself to others.

Depression

Depression is characterized by persistent sadness and a lack of interest or pleasure in previously rewarding or enjoyable activities. (WHO, 2022). Depression is characterized by persistent sadness and a lack of interest or pleasure in previously rewarding or enjoyable activities. Additionally, it may impair appetite and sleep [WHO 2022]. Concentration problems and fatigue are frequent. The largest cause of disability in the world today is depression, which also significantly increases the burden of sickness on the planet. The study's findings indicated that phubbing served as a mediator between the association between mobile phone addiction and depression, with higher levels of phubbing and mobile phone addiction being linked to higher levels of melancholy moods. Studies have identified a favourable correlation between depression and social media addiction, such as with Facebook, mobile phones, and phubbing, in persons who experience depressive symptoms more frequently. Additionally, research indicates a link between sadness and a feeling of loneliness (Ivanova et al., 2020). Internet addiction patients use their phones and the internet excessively and repeatedly to cure underlying psychological issues and lessen the intensity of withdrawal symptoms (Bell, 2009). Heavy phone use might cause sleep problems that are linked to more severe depressed symptoms (McDaniel & Coyne, 2016).

Anxiety

Anxiety involves a general feeling of apprehension about possible future danger. (Butcher, 2013). Anxiety is a typical response to stress and in some circumstances, it can be helpful. It can warn us about potential threats and assist with planning and attention. In contrast to typical uneasiness or anxiety, anxiety disorders feature excessive fear or anxiety. Nearly 30 percent of adults experience an anxiety disorder at some point in their life, making it the most prevalent of all mental disorders.

Furthermore, phubbing is strongly linked to anxiety. According to research, phubbing is positively associated with increased social withdrawal, a negative assessment of communication quality, and a lack of interpersonal trust, all of which increase anxiety (Chotpitayasunondh & Douglas, 2018; Roberts & David, 2016). The more people check their phones to calm their worry, the more they discover that they are socially isolated and are missing out on many events, which makes them feel even more anxious (Abel et al., 2016; Franchina et al., 2018).

Stress

Stress describes a person's response to demands and pressures that are not compatible with their knowledge and skills and that test their capacity for adjustment. (Guazzini et al., 2021)

Stress describes a person's response to demands and pressures that are not compatible with their knowledge and skills and that test their capacity for adjustment. It's not an illness. However, prolonged, extreme stress can result in both mental and physical illness (for example, depression, nervous breakdown, heart disease). Additionally, a recent study discovered that phubbing was inversely connected with good affect and favourably correlated with negative affect (Guazzini et al., 2021). Because negative affect is associated with higher levels of stress, people who are under stress may use

their phones excessively to cope with their unpleasant emotions (Berry et al., 2017). Another study made the case that some mobile phone activities, such as playing games, receiving unfavourable text messages, or seeing upsetting movies or news, can lead to stress. It's interesting to note that a recent study found that those who watch phubbing are also impacted by it; they show less positive affect, more negative affect, and more tension.

Need and significance of the study

Phubbing is a topic that hasn't been thoroughly examined in relation to Kerala. This study examines its effects on stress, anxiety, and depression in conjunction with fomo. After the epidemic, as digitalization rapidly advanced, the phubbing significantly grew. Following the introduction of mobile phones, the importance of digital life increased significantly. Phubbing became increasingly widespread as people started to use their phones more frequently. Social networking sites also allow users access to the lives of others, which causes people to develop a fear of losing out on people or things in life and may also make them more likely to compare themselves to others. As a result, the person's mental health suffers, and their likelihood of experiencing depressive, anxiety, and stress symptoms increases. Therefore, further research in this area may add some knowledge regarding the issue.

Objective

1. To explore the relationship between phubbing, FOMO, depression, anxiety, and stress among generation z.
2. To study the predictive role of phubbing and FOMO on depression, anxiety and stress among generation z.
3. To examine the influence of socio-demographic variables (area of living and gender) on phubbing, FOMO, depression, anxiety, and stress among generation z.

Hypotheses

1. There is a significant relationship among generation z between phubbing and depression.
2. There is a significant relationship among generation z between phubbing and anxiety.
3. There is a significant relationship among generation z between phubbing and stress.
4. There is a significant relationship among generation z between fomo and depression.
5. There is a significant relationship among generation z between fomo and anxiety.
6. There is a significant relationship among generation z between fomo and stress.
7. There is a significant relationship among generation z between phubbing and fomo.
8. Phubbing and Fomo are predictors of depression among generation z.
9. Phubbing and Fomo are predictors of anxiety among generation z.
10. Phubbing and Fomo are predictors of stress among generation z.
11. There is a significant difference among study variables phubbing, FOMO, depression, anxiety and stress based on gender among generation z.
12. There is a significant difference among study variables phubbing, FOMO, depression, anxiety and stress based on area of living among generation z.

Methodology

Sample

The participants of the present study are 203 generation z population in age range 12-26.

Research design : In the present study, relationship between phubbing, FOMO and depression, anxiety, stress among generation z population is explored. The study used a quantitative correlational research design. Correlational research or psychometric research is one in which the experimenter collects two or more sets of data from the same group of subjects for determining the relationship between the data. Correlations are the common statistics that are employed in analyses of these data. Depression, anxiety, stress is treated as a dependent variable whereas phubbing and FOMO are considered as independent variables

Instruments used

1. Informed consent- adult and child
2. Personal data schedule.
3. Phubbing Scale (Johnson & Meenakshy, 2022)
4. Fomo scale (Przybylski et al., 2013)
5. DASS- 21 (Lovibond & Lovibond,1995).

Procedure

The participants were selected using the simple random sampling method from different parts of Kerala. Data collection is done through online platforms using Google Forms. For collecting the information from the participants, items for measuring phubbing, fomo, depression, anxiety, stress were entered separately in the Google form along with an introduction, informed consent, and socio-demographic variables. Then the Google form send to the selected participants via social media platforms and email. The participants were collected based on the availability of their contacts and their accessibility to online platforms.

The prepared Google form consisted of an introduction section that describes the title of the study, the name of the researcher, the institution of the researcher. The general instructions for completing the Google Form and the contact details of the researcher were provided to the participants. The introduction session is followed by an informed consent form and it provided participants with the information they need to decide to volunteer for the present study. They were informed that their participation is voluntary and assurance about the confidentiality of the collected data was shared. It is followed by the personal data sheet for collecting information regarding socio-demographic variables. The socio-demographic sheet in the Google form is followed by the items for measuring major variables. Each scale for measuring the variables was given separately with the necessary instructions for completing the items. They were also asked to read all the questions carefully and were told to attempt every item. After data collection, each item was scored according to the scoring procedure and the reliability and normality of the online data were checked. After finding reliability and normality, the appropriate statistical analyses were conducted using computer programs.

Statistical techniques

Pearsons product moment correlation, t-test, regression, one way ANOVA are the statistical techniques used in this study to test the hypotheses.

Pearson's product moment correlation is used to examine the strength of relationship between phubbing, fomo, depression, anxiety and stress among generation z population. The linear regression analysis is done in the present study to find whether the phubbing and fomo predicts depression, anxiety and stress. *T-test* is used to compare means of groups of gender and area of living on phubbing and fomo predicts depression, anxiety and stress among generation z population. ANOVA is used to find whether there is significant difference between phubbing and fomo predicts depression, anxiety and stress

Results and discussions

Research is a focused, in-depth analysis of a particular topic using a scientific methodology. The aim of the present study is to find the relationship between phubbing, fomo, depression, anxiety, stress and also check the predictive role of phubbing, fomo, on depression, anxiety and stress. The following variables also studied the difference in above variables based on area of living, gender and socio-economic status.

Table 1: Relationship between phubbing, fomo, depression, anxiety, stress among generation Z population.

	Phubbing	Fomo	Depression	Anxiety	Stress
Phubbing	1	.36**	.37**	.26**	.31**
Fomo	.36**	1	.37**	.41**	.39**
Depression	.37**	.37**	1	.59**	.72**
Anxiety	.26**	.41**	.59**	1	.69**
Stress	.31**	.39**	.72**	.69**	1

** . Correlation is significant at the 0.01 level (2-tailed).

Considering the variables under the study, phubbing and fomo have positive correlation with depression, anxiety and stress. The variable phubbing and fomo are positively correlated to each other at 0.01 level of significance.

The variable phubbing is positively correlated with fomo ($r = 0.36, p < 0.01$), depression ($r=.37, p < 0.01$), anxiety ($r=0.26, p < 0.01$), stress ($r=0.31, p < 0.01$). These values have positive correlation which indicate that as phubbing increases values of each these variables also increases.

The variable fomo is positively correlated with phubbing ($r = 0.36, p < 0.01$), depression ($r=.37, p < 0.01$), anxiety ($r=0.41, p < 0.01$), stress ($r=0.39, p < 0.01$). These values have positive correlation which indicate that as fomo increases values of each these variables also increases.

The variable depression is positively correlated with phubbing ($r = 0.37, p < 0.01$), fomo ($r=.37, p < 0.01$), anxiety ($r=0.59, p < 0.01$), stress ($r=0.72, p < 0.01$). These values have positive correlation which indicates that as depression increases values of each these variables also increases.

The variable anxiety is positively correlated with phubbing ($r = 0.26, p < 0.01$), fomo ($r=.41, p < 0.01$), depression ($r=0.59, p < 0.01$), stress ($r=0.69, p < 0.01$). These values have positive correlation which indicate that as anxiety increases values of each these variables also increases.

The variable stress is positively correlated with phubbing ($r = 0.31, p < 0.01$), fomo ($r=0.39, p < 0.01$), depression ($r=0.72, p < 0.01$), anxiety ($r=0.69, p < 0.01$). These values have positive correlation which indicate that as anxiety increases values of each these variables also increases.

The process of phubbing involves interacting with cell phones rather than people. So naturally these people have a subconscious tendency to compare themselves or their life with other people as they are all interconnected. This virtual world might seem more entertaining, happening than real world. The individuals are given easy access to have a sneak-peak into other people’s life, but what they see or perceive in the virtual world might not be the case in real world. Also, this easy access will give them the fear of missing out something in life, that their life is not as happening as others’ life. People usually share all the happy exciting moments from their life, by seeing this viewer might feel others’ lives are always filled with colours of joy, which may not be the real scenario. The feeling of not having beautiful lives like others might be a reason that causes depression, anxiety or stress.

A study was conducted by Russo (2019) on the topic of correlations of the fear of missing out and interpersonal stress with female college student’s sleep. It was found that interpersonal stress was more highly correlated with insomnia than Fomo was correlated with insomnia. However, both interpersonal stress and Fomo were more highly correlated with each other than either was to insomnia. Adrian & Sahrani (2021) initiated research on the topic relationship between fear of missing out (FOMO) and problematic smartphone use (PSU) in generation Z with stress as a moderator. The findings revealed that Fomo had a positive and significant relationship with problematic phone use, but that stress played no role in moderating the relationship between Fomo and problematic smartphone use. As a result, stress cannot be a moderating variable in the relationship between Fomo and problematic smartphone use.

Table 2 :Regression analysis of Variables connection to phubbing and fomo on depression

Operational variables	B value	R Square	F value	Sig	t	B constant
Phubbing	.193	.205	25.779	.000	4.033	-.696
Fomo	.186				4.095	

The dependent variable has regressed on the prediction variables phubbing and fomo. The result shows that phubbing significantly predicted depression ($f=25.779, p < 0.001$) which indicates that phubbing play significant role in shaping depression ($b=0.193, p < 0.001$). Fomo significantly predicted ($f=25.779, p < 0.001$) which indicated that fomo play significant role in shaping depression ($b=0.186, p < 0.001$). The r square value, 0.205 represent that model predicts 20.5 percentage of variance in depression.

The regression formula obtained for the prediction of depression obtained from the above table is $Depression = -0.696 + 0.193*(phubbing) + 0.186 *(fomo)$

The constant social interaction through phones and endless snubbing behaviour could typically affect a person’s mental state if persisted over a longer period of time. This can also be due to the subconscious social comparison these consistent users engage in. The life in the virtual world seems real to people involving in that. The occurrence of pandemic has significantly restricted people’s social circles to social media platforms. A study was conducted by Parmaksiz, (2021) on the topic of predictive effect of phubbing and life satisfaction on depression symptoms in adults. According to the preliminary analysis, depression symptoms scores do not significantly differentiate according to gender; differentiates

significantly according to marital status, educational level and perceived personality traits. According to the results of hierarchical regression analysis, life satisfaction and phubbing behaviour were found to be medium-level predictors of depression symptoms. Phubbing and life satisfaction are important predictors for depression symptoms. Problematic internet use has become an important health issue that should not be overlooked, particularly because of the increased use of the internet by adolescents.

Table 3 :Regression analysis of Variables connection to phubbing and fomo on anxiety.

Operational variables	B value	R Square	F value	Sig	t	B constant
Fomo	.201	.164	39.33	.000	6.271	.297

The dependent variable anxiety has regressed on the prediction variables fomo. The result shows that fomo significantly predicted anxiety ($f=39.33$, $p<0.001$) which indicates that fomo play significant role in shaping anxiety ($b=0.201$, $p<0.001$). The r square value, 0.164 represent that model predicts 16.4 percentage of variance in anxiety.

The regression formula obtained for the prediction of anxiety obtained from the above table is $Anxiety = .297 + 0.201*(fomo)$

The fear of not having something that others have can have a severe impact on a person’s day to day life, if they value themselves based on how they lived their life in relation to others, this might be causing anxious symptoms in the person. A Boredom proneness also mediated the relations of anxiety and depression severity with Fomo. Nurkhamidah (2020) conducted a study on exploring factors causing listening anxiety on generation z students. This study is conducted to find out the factors causing listening anxiety on generation z students that raised with technology and have more opportunity to listen English from many sources than the previous generation. The factor is categorized in two sources; students and technological factors. The internal factors trigger students listening anxiety are rate of speech, vocabulary and accent, and concentration. On the other hand, technological factor causing listening anxiety comes from the poor quality of audio sounds from speaker used in the class.

Table 4:Regression analysis of Variables connection to phubbing and fomo on stress.

Operational variables	B value	R Square	F value	Sig	t	B constant
Phubbing	.124	.185	22.703	.000	2.936	1.146
Fomo	.184				4.605	

The dependent variable stress has regressed on the prediction variables phubbing and fomo. The result shows that phubbing significantly predicted ($f=22.703$, $p<0.001$) which indicates that phubbing play significant role in shaping stress ($b=.124$, $p<0.001$). Fomo significantly predicted ($f=22.703$, $p<0.001$) which indicated that fomo play significant role in shaping stress ($b=0.184$, $p<0.001$). The r square value, 0.185 represent that model predicts 18.5 percentage of variance in stress.

The regression formula obtained for the prediction of depression obtained from the above table is $Stress = 1.146 + .124*(phubbing) + 0.184 *(fomo)$

Stress is a part of every human-being’s life, the degree and dimension of stress just keep changing over time. The differences in social scenarios of the modern world and the fact that we are in a way pressured to constantly update ourselves to other about one’s life can lead to stress. Bala et al (2020) conducted another study on consequence of phubbing on psychological distress among the youth was found to be mild (43%), moderate (34%) and severe (23%).

Table 5 :Result of t-test of phubbing, fomo, depression, anxiety and stress based on gender.

Variables	Gender	N	Mean	SD	t	df	Sig. (2-tailed)																																												
Phubbing	Female	120	10.98	5.39	.513	146.95	.609																																												
	Male	83	10.52	6.94				Fomo	Female	120	23.08	6.34	-1.36	201	.173	Male	83	24.33	6.40	Depression	Female	120	5.93	4.59	.658	201	.511	Male	83	5.53	3.82	Anxiety	Female	120	4.86	3.2	-1.18	201	.237	Male	83	5.36	3.12	Stress	Female	120	6.87	3.98	.20	201	.840
Fomo	Female	120	23.08	6.34	-1.36	201	.173																																												
	Male	83	24.33	6.40				Depression	Female	120	5.93	4.59	.658	201	.511	Male	83	5.53	3.82	Anxiety	Female	120	4.86	3.2	-1.18	201	.237	Male	83	5.36	3.12	Stress	Female	120	6.87	3.98	.20	201	.840	Male	83	6.76	3.34								
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Stress	Female	120	6.87	3.98	.20	201	.840																																												
	Male	83	6.76	3.34																																															

Table 5 shows the Mean, Standard deviation, t-value of phubbing, fomo, depression, anxiety and stress based on gender. Mean value of phubbing in females is 10.98 (SD = 5.39). Mean value of phubbing in males is 10.52 (SD = 6.94). t-test was done to find the significant difference in gender for phubbing and t-value obtained is 0.513. t test shows that there is no significant difference for phubbing between the male and female participants.

Mean value of fomo in females is 23.08 (SD = 6.34). Mean value of fomo in males is 24.33 (SD = 6.4). t-test was done to find the significant difference in gender for fomo and t-value obtained is -1.36. t test shows that there is no significant difference for fomo between the male and female participants.

Mean value of depression in females is 5.93 (SD = 4.59). Mean value of depression in males is 5.53 (SD = 3.82). t-test was done to find the significant difference in gender for depression and t-value obtained is 0.658. t test shows that there is no significant difference for depression between the male and female participants.

Mean value of anxiety in females is 4.86 (SD = 3.2). Mean value of anxiety in males is 5.36 (SD = 3.12). t-test was done to find the significant difference in gender for anxiety and t-value obtained is -1.18. t test shows that there is no significant difference for anxiety between the male and female participants.

Mean value of stress in females is 6.87 (SD = 3.98). Mean value of stress in males is 6.76 (SD = 3.34). t-test was done to find the significant difference in gender for stress and t-value obtained is 0.20. t test shows that there is no significant difference for stress between the male and female participants.

From the above findings, it can be summarized that, there is no significant difference exists between male and female participants on phubbing (t-value=0.513), fomo (t-value=-1.36), depression (t-value=0.658), anxiety (t-value=-1.18), and stress (t-value=0.2). The reason for this is that, in the present era both women and men are exposed to various factors equally like having a smartphone, engaging in social interaction, facing pressure from work or from personal life. These situations that people have to

indulge in their lives are irrespective of their gender orientations. Adrian & Sahrani (2021) initiated research on the topic relationship between fear of missing out (FOMO) and problematic smartphone use (PSU) in generation Z with stress as a moderator and the findings revealed that fomo had a positive and significant relationship with problematic smartphone use, but that stress played no role in moderating the relationship between fomo and problematic smartphone use.

Table 6 :Summary of t-test of phubbing, fomo, depression, anxiety and stress based on area of living.

Variables	Area of living	N	Mean	SD	t	df	Sig. (2-tailed)																																												
Phubbing	Urban	92	11.53	5.96	1.58	201	.114																																												
	Rural	111	10.18	6.09				Fomo	Urban	92	23.77	6.56	.36	201	.714	Rural	111	23.44	6.25	Depression	Urban	92	6.35	4.71	1.79	201	.074	Rural	111	5.28	3.85	Anxiety	Urban	92	5.25	3.5	.84	201	.402	Rural	111	4.87	2.88	Stress	Urban	92	7.34	4.1	1.79	201	.073
Fomo	Urban	92	23.77	6.56	.36	201	.714																																												
	Rural	111	23.44	6.25				Depression	Urban	92	6.35	4.71	1.79	201	.074	Rural	111	5.28	3.85	Anxiety	Urban	92	5.25	3.5	.84	201	.402	Rural	111	4.87	2.88	Stress	Urban	92	7.34	4.1	1.79	201	.073	Rural	111	6.39	3.34								
Depression	Urban	92	6.35	4.71	1.79	201	.074																																												
	Rural	111	5.28	3.85				Anxiety	Urban	92	5.25	3.5	.84	201	.402	Rural	111	4.87	2.88	Stress	Urban	92	7.34	4.1	1.79	201	.073	Rural	111	6.39	3.34																				
Anxiety	Urban	92	5.25	3.5	.84	201	.402																																												
	Rural	111	4.87	2.88				Stress	Urban	92	7.34	4.1	1.79	201	.073	Rural	111	6.39	3.34																																
Stress	Urban	92	7.34	4.1	1.79	201	.073																																												
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Table 6 shows the Mean, Standard deviation, t-value of phubbing, fomo, depression, anxiety and stress based on area of living. Mean value of phubbing in urban residents is 11.53 (SD = 5.96). Mean value of phubbing in rural residents is 10.18 (SD = 6.09). t-test was done to find the significant difference in area of living for phubbing and t-value obtained is 1.58. t test shows that there is no significant difference for phubbing between the urban and rural participants.

Mean value of fomo in urban residents is 23.77 (SD = 6.56). Mean value of fomo in rural residents is 23.44 (SD = 6.25). t-test was done to find the significant difference in area of living for fomo and t-value obtained is 0.36. t test shows that there is no significant difference for fomo between the urban and rural participants.

Mean value of depression in urban residents is 6.35 (SD = 4.71). Mean value of depression in rural residents is 5.28 (SD = 3.85). t-test was done to find the significant difference in area of living for depression and t-value obtained is 1.79. t- test shows that there is no significant difference for depression between the urban and rural participants.

Mean value of anxiety in urban residents is 5.25 (SD = 3.5). Mean value of anxiety in rural residents is 4.87 (SD = 2.88). t-test was done to find the significant difference in area of living for anxiety and t-value obtained is 0.84. t test shows that there is no significant difference for anxiety between the urban and rural participants.

Mean value of stress in urban residents is 7.34 (SD = 4.1). Mean value of stress in rural residents is 6.39 (SD = 3.34). t-test was done to find the significant difference in area of living for stress and t-value obtained is 0.84. t test shows that there is no significant difference for stress between the urban and rural participants.

From the above findings, it can be summarized that no significant difference exists between urban and rural participants on phubbing (t-value= 1.58), fomo (t-value= 0.36), depression (t-value= 1.79), anxiety (t-value= 0.84), and stress (t-value= 1.79). Everybody in this post pandemic era has access to smartphones and internet. So even though people are leading their life regardless of urban or rural regions they have access to smartphones which connect them to virtual social world. The impact of phubbing or fomo might not be significantly different for their mental health on Chotpitayasunondh & Douglas (2016) study also proved. The present findings suggest that phubbing is an important factor in modern communication that warrants further investigation.

Conclusion and Major Findings

Considering the variables the following major finding was observed. Phubbing and fomo have positive correlation with depression, anxiety and stress. Phubbing and fomo predicts depression. Fomo predicts anxiety, Phubbing and fomo predicts stress. Based on gender there was no significant difference on the study variables. There is no significant difference based on the area of living in all study variables.

Implications of the study

Based on the findings, a lot of implications were drawn from the present study. This study reveals how phubbing and fear of missing out impact a person's mental state. The phubbing predicted the presence of depression, stress while fomo predicted depression, anxiety and stress in generation z population. The phubbing activity is a learned behaviour that can be unlearned. This behaviour pattern poses a serious risk to the growth of future generations. The tendency to have the fear of missing out feeling in life with their same age counter-parts tends to have a significant impact upon them. Therefore, it is necessary to offer appropriate assistance as well as counselling services regulate behavioural pattern that these people face. The upcoming generation is more prone to phubbing and fomo is very evident from the study, so awareness on the significant impact of these phenomena can be awakened in the needed population. Modules can be introduced that emphasise on how to use smartphone wisely might be used to address the urgent demand for supervision and counselling services. Smartphone is a necessary part of modern lifestyle, so it can never be avoided but people can use them more consciously. A good place to start is to be aware of how some people behave around other people.

References

1. Abel, T., & Queen, D. (2020). The COVID-19 pandemic calls for spatial distancing and social closeness: Not for social distancing! *International Journal of Public Health*, 65(3), 231–231. <https://doi.org/10.1007/s00038-020-01366-7>
2. Adrian, K., & Sahrani, R. (2021). Relationship between fear of missing out (FOMO) and problematic smartphone use (PSU) in generation Z with stress as a moderator. *Advances in Social Science, Education, Humanities, Research*, <https://doi.org/10.2991/assehr.k.210805.152>
3. Anshari, M., Alas, Y., Hardaker, G., Jaidin, J. H., Smith, M., & Ahad, A. D. (2016). Smartphone habit and behavior in Brunei: Personalization, gender, and Generation Gap. *Computers in Human Behavior*, 64, 719–727. <https://doi.org/10.1016/j.chb.2016.07.063>
4. Bell, V. (2009). Taking an internet history. *British Journal of Psychiatry*, 194(6), 561–562. <https://doi.org/10.1192/bjp.194.6.561b>
5. Butcher, J. N. (2013). *Abnormal psychology: International edition*. Pearson.

6. Chi, L.C., Tang, T.-C., & Tang, E. (2022). The phubbing phenomenon: A cross-sectional study on the relationships among social media addiction, fear of missing out, personality traits, and phubbing behavior. *Current Psychology*, *41*(2), 1112–1123. <https://doi.org/10.1007/s12144-021-02468-y>
7. Chotpitayasunondh, V., & Douglas, K. M. (2018). Measuring phone snubbing behavior: Development and validation of the generic scale of phubbing (GSP) and the generic scale of being phubbed (GSBP). *Computers in Human Behavior*, *88*, 5–17. <https://doi.org/10.1016/j.chb.2018.06.020>
8. David, M. E., & Roberts, J. A. (2021). Investigating the impact of partner phubbing on romantic jealousy and relationship satisfaction: The moderating role of Attachment Anxiety. *Journal of Social and Personal Relationships*, *38*(12), 3590–3609. <https://doi.org/10.1177/0265407521996454>
9. Ferris, A. L., Hollenbaugh, E. E., & Sommer, P. A. (2021). Applying the uses and gratifications model to examine consequences of social media addiction. *Social Media + Society*, *7*(2), 205630512110190. <https://doi.org/10.1177/20563051211019003>
10. Franchina, V., Vanden Abeele, M., van Rooij, A., Lo Coco, G., & De Marez, L. (2018). Fear of missing out as a predictor of problematic social media use and phubbing behavior among Flemish adolescents. *International Journal of Environmental Research and Public Health*, *15*(10), 2319. <https://doi.org/10.3390/ijerph15102319>
11. Gokler, M., Aydin, R., nal, E., & Metintas, S. (2016). Determining validity and reliability of Turkish version of fear of missing out scale. *Anatolian Journal of Psychiatry*, *17*(1), 53. <https://doi.org/10.5455/apd.195843>
12. Gupta, M., & Sharma, A. (2021). Fear of missing out: A brief overview of origin, theoretical underpinnings and relationship with Mental Health. *World Journal of Clinical Cases*, *9*(19), 4881–4889. <https://doi.org/10.12998/wjcc.v9.i19.4881>
13. Ivanova, A., Gorbaniuk, O., Błachnio, A., Przepiórka, A., Mraka, N., Polishchuk, V., & Gorbaniuk, J. (2020). Mobile phone addiction, phubbing, and depression among men and women: A moderated mediation analysis. *Psychiatric Quarterly*, *91*(3), 655–668. <https://doi.org/10.1007/s11126-020-09723-8>
14. Kacker, P., & Saurav, S. (2020). Correlation of missing out (FOMO), anxiety and aggression of young adults. *International Journal of Research -GRANTHAALAYAH*, *8*(5), 132–138. <https://doi.org/10.29121/granthaalayah.v8.i5.2020.107>
15. Karadağ, E., Tosuntaş, Ş. B., Erzen, E., Duru, P., Bostan, N., Şahin, B. M., Çulha, İ., & Babadağ, B. (2015). Determinants of phubbing, which is the sum of many virtual addictions: A structural equation model. *Journal of Behavioral Addictions*, *4*(2), 60–74. <https://doi.org/10.1556/2006.4.2015.005>
16. Lovibond, S.H. & Lovibond, P.F. (1995). Manual for the Depression Anxiety & Stress Scales. (2nd edition). Sydney: Psychology Foundation.
17. McDaniel, B. T., & Coyne, S. M. (2016). “technoference”: The Interference of Technology in couple relationships and implications for women’s personal and relational well-being. *Psychology of Popular Media Culture*, *5*(1), 85–98. <https://doi.org/10.1037/ppm0000065>
18. Nurkhamidah, N. (2020). Exploring factors causing listening anxiety on generation Z students. *ACITYA Journal of Teaching & Education*, *2*(2), 141–151. <https://doi.org/10.30650/ajte.v2i2.1386>

19. Ozkan, M., & Solmaz, B. (2015). Mobile addiction of generation Z and its effects on their Social Lifes. *Procedia - Social and Behavioral Sciences*, 205, 92–98. <https://doi.org/10.1016/j.sbspro.2015.09.027>
20. Parmaksiz, İ. (2021). Predictive effect of phubbing and life satisfaction on depression symptoms in adults. *Bağimlilik Dergisi*, 22(3), 236–247. <https://doi.org/10.51982/bagimli.888038>
21. Pheeraphuttharangkoon, S. (2015). The Adoption, Use and Diffusion of Smartphones among Adults over ...<https://uhra.herts.ac.uk/.../05129573%20Pheeraphuttharangkoo>
22. Przybylski, A. K., & Weinstein, N. (2012). Can you connect with me now? How the presence of mobile communication technology influences face-to-face conversation quality. *Journal of Social and Personal Relationships*, 30(3), 237–246. <https://doi.org/10.1177/0265407512453827> .
23. Przybylski, A. K., Murayama, K., DeHaan, C. R., & Gladwell, V. (2013). Motivational, emotional, and behavioral correlates of fear of missing out. *Computers in Human Behavior*, 29(4), 1841–1848. <https://doi.org/10.1016/j.chb.2013.02.014>
24. Qian, Z. (2014). Research on Factors of Smartphone Diffusion Based on Innovation Diffusion Theory https://etd.ohiolink.edu/rws_etd/document/get/bgsu1395476287/inline
25. Roberts, J. A., & David, M. E. (2019). The Social Media Party: Fear of missing out (FOMO), social media intensity, connection, and well-being. *International Journal of Human–Computer Interaction*, 36(4), 386–392. <https://doi.org/10.1080/10447318.2019.1646517>
26. Russo, V. (2019). Correlations of the fear of missing out & interpersonal stress with Female College Students' sleep. *Open Access Master's Theses.*, 14(5), 56–64. <https://doi.org/10.23860/thesis-russo-victoria-2019>
27. Stead, H., & Bibby, P. A. (2017). Personality, fear of missing out and problematic internet use and their relationship to subjective well-being. *Computers in Human Behavior*, 76, 534–540. <https://doi.org/10.1016/j.chb.2017.08.016>
28. World Health Organization. (2021, September). *Depression*. World Health Organization. Retrieved July 27, 2022, from <https://www.who.int/news-room/facts>.