

## Smartphone Addiction, Loneliness and Life Satisfaction Among Undergraduate Students

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### ABSTRACT

The study aimed at investigating the correlation between smart phone addiction and loneliness as well as the correlation between smart phone addiction and life satisfaction. 88 college students age ranging from 18-21 participated in the study from Pune city. Standardized tests were used for collecting the data which were Smart Phone Addiction Scale (SAS), UCLA Loneliness Scale and Satisfaction with Life Scale (SWC). Non-Parametric Tests were used to check the correlation between the variables. Results revealed a significant positive correlation between smart phone addiction and life satisfaction ( $r=-0.1777$ ,  $p>0.05$ ) and correlation between smart phone addiction and loneliness among undergraduate students.

**Keywords:** *Smart Phone Addiction, Loneliness, Life Satisfaction.*

Smartphone addiction, sometimes colloquially known as “nomophobia” (fear of being without a mobile phone), is often fueled by an Internet overuse problem or Internet addiction disorder. After all, it’s rarely the phone or tablets itself that creates the compulsion, but rather the games, apps, and online worlds it connects us to.

Now a day our personal life is highly dependent on the technology that people have developed. Technology has advanced with years and it has changed the way we purchase products, the way we live, the way we communicate, the way we travel, the way we learn and so many changes have been brought about by these continuous technological advancements. When we talk about the mobile phone the type of mobile phones we had in 1995 are no longer on demand in this century, the demands of mobile phone users have changed greatly, Now people demand simplicity and more functionality, which has forced mobile phone manufactures to develop computer minded smart phones, which are so easy to use, but also they come with more functionality compared to the type of mobile phones we used to have in the past. Recently, smart phone addiction has emerged as a significant problem among users (Kwon et al., 2013). Smartphone users could access information (1999). In addition, past research has found that lonely people and shy people are more likely to be addicted to different and entertainment content almost everywhere whenever they want to. This could lead to addiction in the form of frequent checking or habitual checking (Lee,

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2015; Oulasvirta et al., 2012). People are now less attentive to whom they are within person and indulge themselves in their smart phones, (Wei & Leung, substances.

### ***1.2 Concepts of The Study***

#### **1.2.1 SMARTPHONE**

The smart phone is a most popular mobile device, most people own a smart phone, it is commonly used, there is a large number of applications available and it is more affordable than a tablet. In addition, due to its small size and functions, this device is carried around most. Smart phones are carried everywhere: in bed, at the restroom, at work, at restaurants, etc. Therefore, smart phone devices are different from other mobile or technical devices, as they are extensions of the human being (McLuhan, 1964). As usage per device is different, it is important to choose one device.

Smart phones have unique factors, such as size, screen size, applications, ubiquity, and flexibility in both time and space (Nielsen & Fjuk, 2010). The smart phone is an extension of many people lives; due to its size and features it is carried around 24/7 by its owner. Different applications promote the 24/7 usage of smart phones and the need of being online (Okazaki & Hirose, 2009). Applications are suitable in different contexts, like mobile internet, camera, telephone connection, agenda, among many more downloadable applications. Life without a smart phone is for many people unthinkable; thus, people are getting in some way dependent on their smart phone (Haverlag, 2013). Thus, the use of smart phones is intense because it is always accessible.

#### ***From a Habit to Smartphone Addiction***

The smart phone is 24/7 accessible with applications that stimulate its continuous usage. These devices could lead to excessive and impulsive behavior because of problematic habitual involvement (Oulasvirta, Rattenbury, Ma, & Raita, 2011).

#### **1.2.3 Habit Forming and Smartphones**

Online mobile applications on smart phones can cause habits (Oulasvirta, Rattenbury, Ma & Raita, 2011). How do habits develop and become addictive? Habits are formed through repeated acts in certain circumstances (Oulasvirta et al., 2011). In cognitive research, habits are defined as “an automatic behavior triggered by situational cues, such as places, people, and preceding actions (Oulasvirta et al., 2011). Habits are behavioral acts without self-instruction or conscious thinking (La Rose & Eastin, 2004).

Habits can have both positive and negative effects (Wood & Neal, 2007). Positive effects of habits line in that, due to the fast automatic behavior aspect, they enable multitasking and accomplishment of complex tasks. Habits give control over behavior in novel situations, where fast anticipation is needed (Wood & Neal, 2007). Habits have also a positive social feature, because they identify a person, because habit characterizes a person and predicts that person's actions (Oulasvirta, et al., 2011; Wood & Neal, 2007). On the other hand, habits can have a negative influence on someone's behavior. They can cause unintended behavior activated by internal or external cues interfering other acts. This is also called maladaptive habits, as people create excessive urges, for example, unintended smart phone checking. It could interfere with daily life; however, due to regulations or social norms, people are able to limit these negative influences (Rush, 2011).

Oulasvirta et al. (2011) concluded that smart phones causes negative checking habits. Checking habits are automatic actions whereby the smart phone is unlocked to check the

start screen for new messages, notifications, alerts, and application icons; these habits can be triggered by external (ringtone) and internal cues (emotional state, urge). Those habits can be maladaptive and interfere with people's life. Checking for information can be rewarding, if someone has a new message or notification, the so-called new information reward. Rewards can enforce repeated actions (Everitt, & Robbins, 2005).

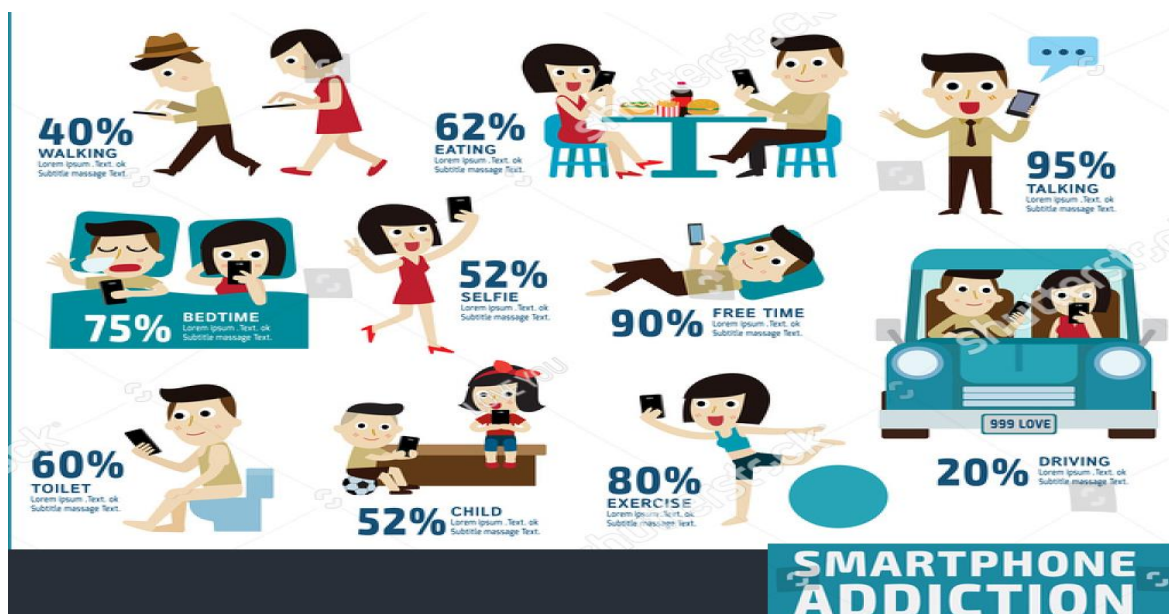
### 1.2.4 Smartphone Addiction Can Negatively Impact Your Life By-

- **Increasing loneliness and depression:-** While it may seem that losing yourself online will temporarily make feelings such as loneliness, depression, and boredom evaporate into thin air, it can actually make you feel even worse. A 2014 study found a correlation between high social media usage and depression and anxiety. Users, especially teens, tend to compare themselves unfavorably with their peers on social media, promoting feelings of loneliness and depression.
- **Fueling anxiety:** One researcher found that the mere presence of a phone in a work place tends to make people more anxious and perform poorly on given tasks. The heavier a person's phone use, the greater the anxiety they experienced.
- **Increasing stress:** Using a smart phone for work often means work bleeds into your home and personal life. You feel the pressure to always be on, never out of touch from work. This need to continually check and respond to email can contribute to higher stress levels and even burnout.
- **Exacerbating attention deficit disorders :**The constant stream of messages and information from a smart phone can overwhelm the brain and make it impossible to focus attention on any one thing for more than a few minutes without feeling compelled to move on to something else.
- **Diminishing your ability to concentrate and think deeply or creatively:** The persistent buzz, ping or beep of your smart phone can distract you from important tasks, slow your work, and interrupt those quiet moments that are so crucial to creativity and problem solving. Instead of ever being alone with our thoughts, we're now always online and connected.
- **Disturbing your sleep:** Excessive smart phone use can disrupt your sleep, which can have a serious impact on your overall mental health. It can impact your memory, affect your ability to think clearly, and reduce your cognitive and learning skills.
- **Encouraging self-absorption :** A UK study found that people who spend a lot of time on social media are more likely to display negative personality traits such as narcissism. Snapping endless selfies, posting all your thoughts or details about your life can create an unhealthy self-centeredness, distancing you from real-life relationships and making it harder to cope with stress.

### 1.2.5 How Can You Help Your Child or Teen With Smartphone Addiction?

- Be a good role model
- Use apps to monitor and limit your child's smart phone use
- Create "phone free" zones
- Encourage other interests and social activities
- Talk to your child about underlying issues

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### 1.2.6 Current Statistics Revealed by Indian Express on Smart Phone Addiction.

As far as Pune figures are concerned, the survey offers some interesting data. As many as 44 per cent of the Puneites among the Indian surveyed confessed to using smartphones most frequently at home. Interestingly, the figure is the highest as compared to other big Indian cities — Delhi (35 per cent), Mumbai (29 per cent), Bangalore (37 per cent) and Hyderabad (36 per cent).

The survey says that Puneites have the highest tendency of buying gadgets like smartphones (90 per cent) and laptops (91 per cent) when they are on leisure travel. They lead the segment across Delhi, Mumbai, Bangalore and Hyderabad. It also reveals that at 48 per cent, Puneites are the highest users of gaming, music, movie and TV show apps while travelling. “It clearly emphasizes on the trend of Puneites moving on to a more connected experience while travelling,” said Malhi.

About 39 per cent of the Puneites (the figure is again highest compared to Delhi, Mumbai, Bangalore and Hyderabad) associate the anxiety of losing mobile with the feeling that “all my apps, music and social networks are on my device”. As many as 59 per cent of the smartphone owners in Pune feel “insecure”, “isolated” and “shipwrecked” when they lose a mobile device. This figure too is highest among the cities surveyed — Delhi (40 per cent), Mumbai (41 per cent), Bangalore (37 per cent) and Hyderabad (43 per cent).

Though considered a wrong etiquette, 55 per cent of the Pune respondents confessed to making phone calls while dining at a restaurant or a cafe. The percentage of other four cities is much lower — Delhi (40), Mumbai (42), Bangalore (39) and Hyderabad (46).

### 1.2.7 Theoretical Perspective

Some theories related to smartphone addiction are as follows:

#### Relational Dialectics Theory.

This theory proposed by Baxter and Simon (1993). This theory described that people rely on cell phones to communicate, share, include and validate. Although being able to contact others is one of the most liked qualities of cell phones, being continuously available for others’ contact is also one of its most disliked qualities that badly affect their interpersonal

relationship. People experience internal tensions inconsistently, while being in a relationship. Over time the pressures will be recurring in nature and from these extreme tendencies, the relationship sustains. For instance, consider the point between harmony and separation. Communication patterns causing a constant state of instability acts as a contrary in sustaining a relationship.

### **Uses and Gratifications Theory.**

UG theory founded by Elihu Katz in 1959. According to Katz (1959), the outcomes of media usage depend on why and how they decided to use the media. Therefore, there are two main components that discuss in U&G theory which are media that choose to be engaged and gratification that get from the media. By explaining about the U&G theory, mainly this theory works operationally through the social and the psychological needs for individuals generating motives and expectation of mass media (Katz, 1959), and how individuals use media to satisfy their needs and to achieve their goals. U&G theory is commonly used to: “(1) Explain how the psychological and social needs of people give rise to their expectation and motivations to choose and to use the mass media that will best meet their needs and expectations, (2) Explain how people use the media to meet their specific needs, (3) Understand the motives for their dependency on a particular media, and (4) Identify the consequences that resulted from the needs, motives, and dependency on a particular me.

### **1.2.8 Lonliness**

Sahu and Gupta, (2016) defined loneliness is a complex and usually unpleasant emotional response to isolation. Loneliness typically includes anxious feelings about a lack of connection or communication with other beings, both in the present and extending into the future. As such, loneliness can be felt even when surrounded by other people. The causes of loneliness are varied and include social, mental, emotional, or even physical factors. People can experience loneliness for many reasons, and many life events may cause it, like the lack of friendship relations during childhood and adolescence, or the physical absence of meaningful people around a person. At the same time, loneliness may be a symptom of another social or psychological problem, such as chronic depression.

### **Feeling lonely v/s being socially isolated**

There is a clear distinction between feeling lonely and being socially isolated (for example, a loner). In particular, one way of thinking about loneliness is as a discrepancy between one's necessary and achieved levels of social interaction (Peplau, & Perlman, 1982). while solitude is simply the lack of contact with people. Loneliness is therefore a subjective experience; if a person thinks they are lonely, then they are lonely. People can be lonely while in solitude, or in the middle of a crowd. What makes a person lonely is the fact that they need more social interaction or a certain type of social interaction that is not currently available. A person can be in the middle of a party and feel lonely due to not talking to enough people. Conversely, one can be alone and not feel lonely; even though there is no one around that person is not lonely because there is no desire for social interaction. There have also been suggestions that each person has their own sweet spot of social interaction. If a person gets too little or too much social interaction, this could lead to feelings of loneliness or over-stimulation (Suedfield, 1987).

Solitude can have positive effects on individuals. One study found that, although time spent alone tended to depress a person's mood and increase feelings of loneliness, it also helped to improve their cognitive state, such as improving concentration. Furthermore, once the alone

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time was over, people's moods tended to increase significantly (Larson, Csikszentmihalyi, & Graef, 1982). Solitude is also associated with other positive growth experiences, religious experiences, and identity building such as solitary quests used in rites of passages for adolescents (Suedfeld, 1982).

Loneliness can also play an important role in the creative process. In some people, temporary or prolonged loneliness can lead to notable artistic and creative expression, for example, as was the case with poet Emily Dickinson, and numerous musicians. This is not to imply that loneliness itself ensures this creativity, rather, it may have an influence on the subject matter of the artist and more likely be present in individuals engaged in creative activities.

### Transient v/s chronic illness

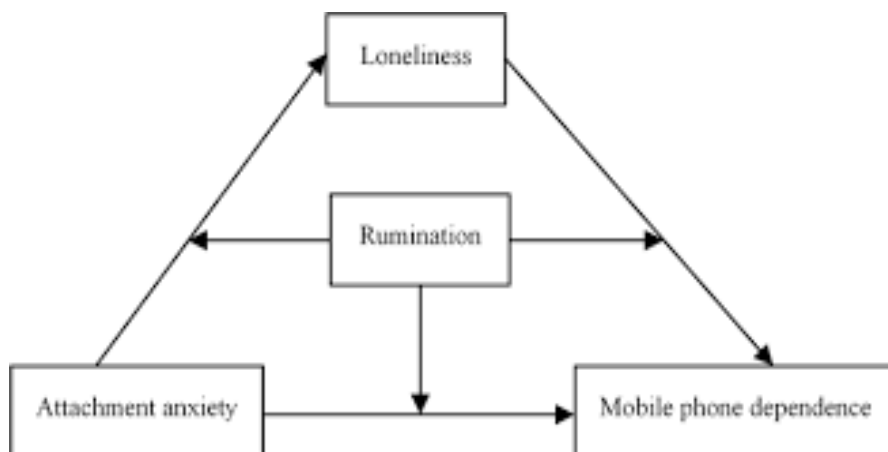
The other important typology of loneliness focuses on the time perspective (Peplau, & Perlman, 1982). In this respect, loneliness can be viewed as either transient or chronic. It has also been referred to as state and trait loneliness. Transient (state) loneliness is temporary in nature, caused by something in the environment, and is easily relieved. Chronic (trait) loneliness is more permanent, caused by the person, and is not, easily relieved (Sahu, Gupta, & Jaib 2016). For example, when a person is sick and cannot socialize with friends would be a case of transient loneliness. Once the person got better it would be easy for them to alleviate their loneliness. A person who feels lonely regardless of if they are at a family gathering, with friends, or alone is experiencing chronic loneliness. It does not matter what goes on in the surrounding environment, the experience of loneliness is always there.

### 1.2.9 Theoretical Perspective

Some theories related to loneliness are:

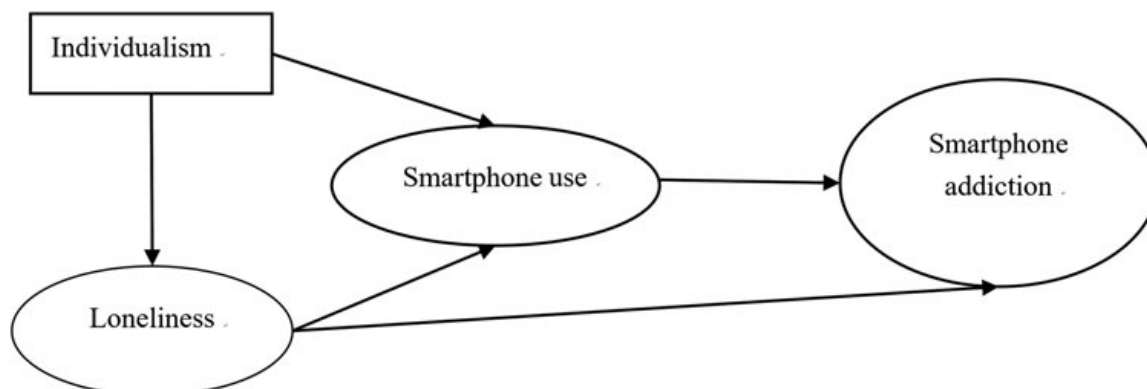
#### Attachment Theory:

Attachment theory was the foundation for an influential psychological theory of loneliness developed by the sociologist Robert S. Weiss. Weiss identified six social needs that, if unmet, contribute to feelings of loneliness. Those needs are attachment, social integration, nurturance, reassurance of worth, sense of reliable alliance, and guidance in stressful situations. As would be predicted by attachment theory, Weiss maintained that friendships complement but do not substitute for a close, intimate relationship with a partner in staving off loneliness (Cacioppo, & Patrick, 2008).



**Behavioral approach:**

Another theoretical perspective, the behavioral approach, holds that loneliness is characterized by personality traits that are associated with, and possibly contribute to, harmful patterns of interpersonal interaction. For instance, loneliness is correlated with social anxiety, social inhibition (shyness), sadness, hostility, distrust, and low self-esteem, characteristics that hamper one’s ability to interact in skillful and rewarding ways. Indeed, lonely individuals have been shown to have difficulty forming and maintaining meaningful relationships. They are also less likely to share information about themselves with their peers, and that helps to explain why they report a lack of intimacy with close friends (Heinrich, & Gullone, 2006).



**1.2.10 Life Satisfaction**

Life satisfaction is the way in which people show their emotions and feelings (moods) and how they feel about their directions and options for the future. It is a measure of well-being and may be assessed in terms of mood, satisfaction with relations with others and with achieved goals, self-concepts, and self-perceived ability to cope with daily life. It is having a favorable attitude of one's life rather than an assessment of current feelings. Life satisfaction has been measured in relation to economic standing, amount of education, experiences, and residence, as well as many other topics.

Life satisfaction is a key part of subjective wellbeing (SWB).

**Ed Diener and his Work on Subjective Well-Being**

Since the 1980s, Diener’s work has been leading the way on research into these topics. He even coined the term “**subjective well-being**,” or SWB, and introduced SWB as a quantifiable aspect of the elusive construct of happiness.

From Diener, we also know that people are generally happy. A groundbreaking study in 1996 found that about one third of people in the United States say they are “very happy” and only one in ten say they are “not too happy” (Diener & Diener).

Diener’s future work on average subjective well-being or life satisfaction found that those we often think of as being prime candidates for depression and unhappiness are surprisingly happy—perhaps because of a genetic predisposition towards being happy.

Diener contributed to the idea that happiness is largely determined by genetics when he found that external conditions are unlikely to have a large or lasting impact on a person’s happiness (unless it’s a huge life change, such as becoming completely disabled or otherwise being unable to work, or being unable to engage in a healthy sexual relationship).

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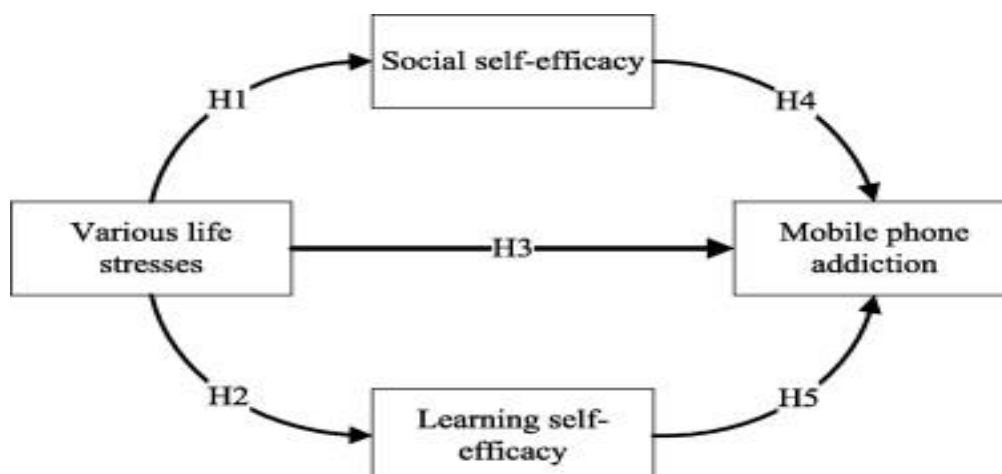
Based on Diener's extensive work in this area, he has identified four "ingredients for a happy life":

1. Psychological wealth is more than money—it is also your attitude, goals, and engagement at work.
2. Happiness not only feels good, it is also beneficial to relationships, work, and health.
3. It is helpful to set realistic expectations about happiness. No one is completely happy all the time!
4. Thinking is an important piece of happiness; boosting our cognition can boost our happiness, if done appropriately (Pursuit of Happiness, n.d.).



### 1.2.11 Factors affecting life satisfaction:

- Personality
- Self esteem
- Outlook on life
- Age
- Life events and experiences
- Seasonal effects
- Values
- Culture
- Family
- Career





### **1.3 DEFINITION**

**SMART PHONE ADDICTION-** Smart phone addiction is a disorder involving compulsive overuse of the mobile devices usually quantified as a number of times users access their devices and/or the total amount of time they are online over a specified period. Smartphones lend themselves to overuse because unlike a desktop or laptop it can be easily carried anywhere a user goes.

**LONLINESS-** Loneliness is a complex and usually unpleasant emotional response to isolation. Loneliness typically includes anxious feelings about a lack of communication and connections with other beings, both in present and extending into future. As such loneliness can be felt even by other people. The causes of loneliness are varied and include social, mental, emotional and physical factors.

**LIFE SATISFACTION-** Life Satisfaction is an overall assessment of feelings and attitudes about one's life at a particular point in time ranging from positive to negative. It is one of 3 major indicators of well being: life satisfaction, positive affect and negative affect. [Diener, 1984] Glossary Source- Buetell, N (2006). Life Satisfaction, a Sloan Work and Family Encyclopedia entry.

### **1.4 Statement of The Problem**

- 1) To study the correlation between smart phone addiction and loneliness
- 2) To study the correlation between smart phone addiction and life satisfaction

#### ***Objectives***

- 1) To study smart phone addiction among undergraduate students
- 2) To study loneliness among undergraduate students
- 3) To study life satisfaction among undergraduate students.
- 4) To explore the relationship between smart phone addiction, loneliness and life satisfaction among undergraduate students

#### ***Significance of The Study***

Firstly, the significance of the study in the field is to help to provide the information on how severe smartphone addiction influences our day to day lifestyle and the effects of addicted to smart phone would also affect individual in a lot of things. Secondly, the significance of the study is also to bring out the awareness of how serious is the smartphone addiction problem in our country. According to Dr Dale Archer, people with smartphone addiction use their smartphone even when they are driving. If we compare to people who drive in drunken condition, it is said it is 6 times more dangerous (Archer, 2013). Besides that, people also have high risk to get brain cancer, if they use smartphone too much.

Our study also showed the important of reduce loneliness among society. Loneliness is also a kind of psychopathology which leads to a very wide ranging of disorders such as depression and suicide, stress, antisocial behavior as well as alcoholism and drug abuse (Cherry, 2015). Lonely people report higher levels of stress even when facing to the same stressors as non-lonely people (Marano, 2003). Therefore, if the loneliness in society does not reduce, some people will suffer from loneliness and would tend to suicide but not look for help or support.

Our study also showed the importance of measuring life satisfaction which isn't just a way to see how happy are with their lives, it's also a way of determining how unhappy they are.

### *Rationale Of the Study*

Since there are few studies about the relationship between smartphone addiction, loneliness and life satisfaction to be referenced by researchers who are going to have further study on relevant topics, therefore I decided to study on this topic. So, I am hoping that this study can be referencing and beneficial to who are going to have future study on the relevant topic.

Other than that, the study would be beneficial to society as we hope to deliver knowledge to the public and society so that they have the opportunity to know the significance of smartphone addiction as well as loneliness and life satisfaction.

Throughout our study, we hope to be able to spread out the knowledge and information to the public and society so that they realize the consequences and the importance of reduced smartphone addiction as well as taking suitable action at the same time receive proper treatment from professional psychologist.

### *Summary*

This chapter had began with the introduction outlining the contents of the chapter and a brief discussion of the problem under the study which was followed by statement of the problems and objectives as well as the brief definition of concepts or variables which is used in this study followed by significance and rationale of the study.

## **REVIEW OF LITERATURE**

### *Smartphone Addiction*

In China, Casey, B.M (2012) conducted a research titled “Linking Psychological Attributes to Smart Phone Addiction, Face-to Face Communication, Present Absence, and Social Capital”. The purpose of the research is to classify symptoms of smart phone addiction that are uniquely related with smart phone usage. It was also examining the relationships among psychological attributes (such as shyness and loneliness), smart phone functions, Smart phone addiction symptoms, face-to-face communication, and present absence. The subjects are among university students in mainland China. Snow ball sampling was used to gather the data and the sample included 565 university students whose age was less than 30. Finally, the relative influence of psychological attributes (such as shyness and loneliness), smart phone usage, symptoms of smart phone addiction, present absence, and face-to-face communication were compared by using a pair of hierarchical regression analyses on bonding and bridging social capital. Results revealed that those university students who scored high on loneliness and shyness will have the higher likelihood in addicted to smart phone.

Myers, NK (2013) in US State of California examined the connection between social isolation, GPA, and cell phone usage among college students. The study examined social isolation's levels in terms of level of loneliness, traits of shyness, and their correlations with academic performance. Convenience sampling was used to recruit 206 community colleges and universities students with 18+ years of age. The sample was taken from Allan Hancock College in Santa Maria, CA and California Polytechnic State University in San Luis Obispo. 38.5% of the sample were male while 61.5% were female. To examine the relationships between variables, Correlational Analysis was conducted. The results showed that there was some evidence to support the negative relationship between the number of calls received by peers ( $r = -.12$ ) and a positive relationship between levels of loneliness and communication with family members ( $r = .13$ ). However, both correlational values were not significant. As

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the conclusion, result of the study revealed that there is no significant relationship between cell phone usage and loneliness (Myers, 2013).

According to research of Pawłowska & Potembska (2011), mobile phone addiction is heterogeneous phenomenon as it has been differentiated into sending and receiving text messages, voice call addiction, mobile phone feature addiction and mobile phone games. The purpose of their research is to examine the gender differences in severity of symptoms of mobile phone addiction and the difference between women and men in the severity of symptoms of mobile phone addiction. This research involved 493 participants from age between 13 to 22. T-test was used to analyze data. Pawłowska and Potembska research found that women have higher severity of symptoms of addiction to voice calls and text messages. Besides, woman were significantly frequently using mobile phone to satisfy the desire to be accepted and intimacy, establish and maintain social relationships and to express their emotions whereas men have higher severity symptoms of addiction to listen to music, take pictures, play games, and connect to Internet (Pawłowska&Potembska, 2011).

Some Indian researches have also been conducted on smartphone addiction by a few researchers. The following are:

- In India, a research was conducted by Davey,S& Davey ,A (2014) on Assessment of Smartphone Addiction in Indian Adolescents. It was a Mixed Method Study by Systematic review and Meta- analysis Approach.
- Finally, meta-analysis on only Indian studies was done using Med-Calc online software capable of doing meta-analysis of proportions. A total of 45 articles were considered in systematic-review from whole world; later on 6 studies out of these 45 related to Smartphone's addiction in India were extracted to perform meta-analysis, in which total 1304 participants (range: 165-335) were enrolled. The smartphone addiction magnitude in India ranged from 39% to 44% as per fixed effects calculated ( $P < 0.0001$ ). Smartphone addiction among Indian teens can not only damage interpersonal skills, but also it can lead to significant negative health risks and harmful psychological effects on Indian adolescents.
- In India, Bhardwaj, M &Sode, J.M (2015) examined mobile phone addiction and loneliness among teenagers. Random sampling method was used by researchers to select the sample of 100 teenagers from different colleges in Mumbai city, Maharashtra. Out of the sample, there were 50 male students and 50 female students whose age ranged from 13 to 17 years. Survey model was used to administer the students. Results reveal that there was a significant correlation found between mobile phone addiction and loneliness among college students. Mobile phone addiction was significantly related with loneliness. Besides, there was no significant difference found in the study when loneliness and mobile phone addiction among college students was examined according to gender.

### 2.2 Loneliness

Borys and Perlman (1985) had conducted a research on gender differences in loneliness which appear to have the result of gender differences which exist in adolescents' loneliness and boys' loneliness is higher compare to females. Borys and Perlman (1985) had selected the sample of 117 students out of which, 48 were male students and 69 were female students who studied different psychology subjects. The brief characterization of a lonely person was presented together with the subjects. The researcher found that males manifest greater loneliness as measured by using UCLA loneliness scale (University of California Los

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Angeles Loneliness Scale) compare to females (Borys& Perlman, 1985). The males' and females' social forces show up differently where females provoke a more positive reaction for displaying their loneliness than males (Borys& Perlman, 1985). Therefore, males more unwilling to accept loneliness and they are not aware of the loneliness. Hence, the loneliness issues of males are more difficult to be identified and cured by the professional (Borys& Perlman, 1985).

In Turkey, the journal titled "Psychology of loneliness of high school students" studies the relation between the students' loneliness level who appeared at 4 different high-schools and the different variables for example schools, genders, type of accommodation and achievement in academic (Gürses, Merhametli, Sahin, Günes, &AQikyildiz, 2011). The researchers selected the sample of 136 male students and 131 female students by random sampling. Results showed that there was significant relation found between the loneliness and gender of the 4 different high schools at 0.05 significant levels. Therefore, female students' loneliness level was higher than the male students. (Gürsesa et al., 2011).

Some Indian researches were also conducted on loneliness by a few researchers. The following are:

- In India, Swami,H.M & Bhatia, V & Thakur, J.S (2007) conducted a research on health problems and loneliness among the elderly in Chandigarh. The purpose of the study was to study the health-related problems and loneliness among the elderly in different micro –environment groups. The participants aged from 65 and above from urban and rural areas of Chandigarh. Cross sectional study was done. Results reveal that out of 361 people 311 reported health related complaints with two or more illness. It was also found that loneliness was prevalent more in females (72.8%) as compared to males (65.6%). Loneliness was more prevalent among persons who lived alone (92.2%) as compared to those who lived with their spouse (58.9%) or when husband and wife lived with the family (61.4%). It was higher among the widows (85.2%) and widowers (75.8%) who lived with the family as compared to the aged who lived with the spouse (58.9%) and the aged husband and wife who lived with the family (61.4%).
- In India, a research was conducted by Medora, N &Woodwar, J (1986). It was research conducted among students at an Indian University. Loneliness questionnaires were distributed to 104 late adolescent college students attending Maharaja Sayajirao University in Baroda, India. The objective of the study was to investigate feelings of loneliness experienced by the Indian adolescent college students. The extent of loneliness experienced by the subject was studied in relation to certain selected background variables, e.g., socio economic status, religiosity, number of close friends, self-perceptions of loneliness etc. Significant difference was found to exist in the loneliness scores among individuals with varying degree of happiness during the past year, varying degree of happiness during childhood, varying degree of closeness with family members and varying self-perceptions of loneliness. The Indian adolescents were the 8<sup>th</sup> most lonely group when compared to 15 others groups that were studied previous
- In India, a research was conducted by Anil,R, Prasad, K.R Puttaswamy ,M (2016) in Karnataka, India. The purpose of the study was to study the prevalence of loneliness and its determinants among geriatrics population in Bengaluru city. A community based, quantitative, descriptive, cross sectional and explorative study was conducted among 370 elderly populations residing in ward 32in Bengaluru city

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between July and August 2015. Information was collected using revised UCLA loneliness questionnaire at the doorsteps and analysis was done using SPSS. Results reveals that prevalence of loneliness with a score of 50 and above was 37.6%, among males and females it was observed 29.6% and 42.7% respectively. The increase in prevalence was proportional to their age group. Elderly people aged 80 years and above were more affected. The problem of loneliness increased as the family size decreases (85.7%), either of the spouse was separated or dead (46.7%), presence of disabilities affecting basic and instrumental daily activities (61% and 39%) and financial dependency (38.5%). Likewise, Loneliness decreased as the number of family members aged 60 years and more increased in the family.

### 2.3 Life Satisfaction

In Turkey, a research was conducted by Toker, B (2012) on life satisfaction among academicians. The purpose was also to investigate the effects of demographics on levels of life satisfaction. A questionnaire-based study was conducted on 648 students. The data was collected using Diener et al's life satisfaction scale. The results revealed that professors have a higher level of life satisfaction as compare to assistant professors, instructors and research assistants. Among the demographic variables, gender, age, income level, abroad experience were significantly related to life satisfaction marital status was not significantly related to life satisfaction of the academicians.

A Research was also conducted by Freddie L, Johnson R. N and Elizabeth A & Mannlein R.N (1986). This study examined the life satisfaction of 58 elderly American Indians and its relationships to selected external and internal environmental factors. Participants age was 51 to 85 years and resided on two mid-western reservations. Results revealed a higher correlation between self-perception of life satisfaction and mental health.

A research was conducted by Shirazi, M & Ahmedkhan, M (2013). The objective of the study was to examine the relationship between life satisfaction and mental health among students. A total of 150 students were selected randomly from Aligarh Muslim University, India out of which 75 were professional and 75 were non professional students. Results revealed that there was no significant difference between the mean scores of professional student's life satisfactions with considerations of residence and no significant difference between the means scores of professional student's life satisfaction with consideration of gender. Also, there was no significant difference between the means scores of non professional student's life satisfaction with considerations of residence and no significant difference between the means scores of non professional student's life satisfaction with consideration of gender.

Some Indian researches have also been conducted on life satisfaction but a few researchers. Some of the following are:

- In India, a research was conducted by Raina, D in Uttarakhand (2013) on life satisfaction of married women in relation to female foeticide and girl child in Uttarakhand. A total of 600 married women were taken, those with two male children (2Mc), those with one male and one female child (1Fc1Mc) and those with two female children (2Fc). The sample comprised of five blocks of Uttarakhand namely Doiwala, Raipur, Sahaspur, Kalsi and Vikas Nagar. The study gives an insight life satisfaction of these women, who were ridiculed only because they did the 'sin of bearing a girl child', or were worshipped for bearing a male child. The 't' test between 2Mc and 2Fc reveals the value as 6.60, between 2Fc and 1Fc1Mc as -

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4.39, and between 2Mc and 1Fc1Mc as 2.99, suggesting the existing difference in the life satisfaction of these women. The absence of a male heir amongst the women of two female children have been found to have impact in the form of a lower life satisfaction as compared to high satisfaction being experienced by women of two male children. The gender of child plays a crucial role in determining the status of the female and thus effecting her satisfaction with life too.

- In India, a research was conducted by Antaramian, S.P and Kamble, S.V (2015) on life satisfaction and coping in Hindu adolescents in India. This exploratory study examined the relations between approach and avoidance coping behaviors and general life satisfaction in a sample of 248 Hindu adolescents from an urban area in India. The major findings were threefold. First, gender differences were observed, with females reporting more frequent use of the strategies of seeking social support, direct problem solving, and internalizing behaviors. Second, using multiple regression analyses, the coping behaviors of problem solving and externalizing behaviors accounted for significant, unique variance in life satisfaction scores. Third, gender did not moderate the relations between any of the coping behaviors and life satisfaction.

### **METHODOLOGY**

The present study was designed to investigate the correlation between smart phone addiction, loneliness and life satisfaction among undergraduate students. This chapter outlines the description of the method used for the present study. It includes the operational definitions of the various concepts which the present study measures and appropriate hypotheses are stated as well. This chapter also includes detailed descriptions about the samples, tools used for data collection, procedure followed and the statistical analysis of the present research.

#### **3.2 Hypothesis and Design**

The present study is a correlational research.

- 1) There will be a positive correlation between smart phone addiction and loneliness among undergraduate students.
- 2) There will be a negative correlation between smart phone addiction and life satisfaction among undergraduate students.

#### **3.3 Sample**

- Sample Age- 18-21years
- Sample Size-88
- Sampling Type- Purposive Sampling

#### **Variables and Operational Definitions**

- Smartphone Addiction
- Loneliness
- Life satisfaction

**SMARTPHONE ADDICTION:** -The terms “Smartphone addiction” has been used to define a phenomenon, which is individual engrossed in their Smartphone use to the degree that they are neglecting the other life’s important areas (Al-Barashdi, Bouazza, &Jabur, 2014). It is a situation where a person would over rely on his or her smart phone for all the numerous day to day activities and not aware or concentrating on anyone else who near to him or her. The

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person who is involving in smart phone addiction can be predicted by the amount of phone bills and the unforeseen behavior in case when his or her phone is missing or losing (Bhardwaj & Ashok, 2015).

**LONELINESS**:-The term 'loneliness' can be defined as a social deficiency. Loneliness is an undesirable feeling that derives from inconsistency between wished and accomplished levels of social connection (Perlman & Peplau, 1981). Loneliness is the displeasure experience and feelings that take place when an individual's social relation networking is incomplete (Perlman & Peplau, 1981). In loneliness there is three general points to be noticed. First, loneliness is stressful and unpleasant; second, the person's social relations network deficiency will cause loneliness; third, loneliness is an individual phenomena which means it is different with objective isolation, so that people can be alone without being lonely (Perlman & Peplau, 1981)

**LIFE SATISFACTION**- Life Satisfaction is an overall assessment of feelings and attitudes about one's life at a particular point in time ranging from positive to negative. It is one of 3 major indicators of well being: life satisfaction, positive affect and negative affect . [Diener, 1984]

### 3.5 Tools

#### **Smartphone Addiction Scale (SAS-SV)**

The smart phone addiction scale is a 10 item scale that measures smart phone addiction. Kwon, Lee, Won, Park, Min, Hahn developed this scale in 2013. This scale is a 6 point Likert scale ranging from 0-6. Each item of the test consist responses from "strongly disagree" to "strongly agree". The maximum score are 60 points. The test reveals that higher the score higher is the person's addiction.

#### **Psychometric Properties of SAS.**

**Reliability**- Cronbach alpha- 0.87, Test Retest- 0.66 and Internal Consistency- 0.76

**Validity**- Construct validity and content Validity was used

#### **UCLA LONELINESS SCALE**

UCLA Loneliness Scale is a 20item measure that measures loneliness of an individual. Russell,D, Peplau and Fergusson M.L. in 1978 developed this scale. This scale is a 4point Likert scale ranging from 0-4. This scale has a reverse scoring for some of the items. Each item of the test consists responses from " I often feel this way" to "I never feel this way". The maximum scores are 80 points. The test reveals higher is the score higher is the person's loneliness.

#### **Psychometric Properties of UCLA**

**Reliability**- Internal Consistency- 0.89-0.94 and Test Retest- 0.73

**Validity**- Convergent and Construct validity was used.

#### **The Satisfaction with Life Scale (SWC)**

The satisfaction with life scale is a 5item instrument designed to measure global cognitive judgement of satisfaction with one's life.Pavot,W and Diener.E developed this test in 1986. This scale is a 7point Likert scale ranging from 0-7. Each item of the scale consists of responses from "strongly disagree" to "strongly agree". The maximum score are 35 points. The test reveals higher is the score higher is the individual's life satisfaction.

#### **Psychometric Properties of SWC**

**Reliability**- Cronbach alpha- 0.88

**Validity**- Has satisfactory construct validity.

### 3.6 PROCEDURE

The study involved a sample of 88 students from a college setting.

- All participants were told in advance that their data will be kept strictly confidential.
- In all colleges the data was collected with proper consent of the students.
- The true nature of the research was not disclosed at the beginning to prevent response bias.
- Consent was taken from the students before data collection.
- The students were handed out the personal data sheet and the three scales as mentioned in the tools. The investigator read out the instructions and all the doubts were answered before the employees began to answer the scales.
- All the research ethics were followed.

### 3.7 STATISTICAL ANALYSIS

The participants score on the scale of smart phone addiction, loneliness and life satisfaction was measured by using Non Parametric Test.

### 3.8 Summary

The overall chapter outlines the purpose of the study which was to study the correlation between smart phone addiction, loneliness and life satisfaction among undergraduate students. The hypothesis was formulated on the basis of literature review found. In the present study data was collected from 88 students from a college setting whose age ranged from 18-21. The following tools were used for the above study.

#### *Smartphone addiction scale*

- UCLA Loneliness scale
- Satisfaction with Life scale
- Purposive sampling was used to collect the data and the scores were measured using Non Parametric Test.

## RESULTS

This chapter deals with the analysis of results. The present research has attempted to investigate the correlation between smart phone addiction and loneliness and smart phone addiction and life satisfaction among undergraduate students. A correlational study has been conducted. To verify the hypothesis in the context, a data of 88 students was collected and non parameteric tests were used.

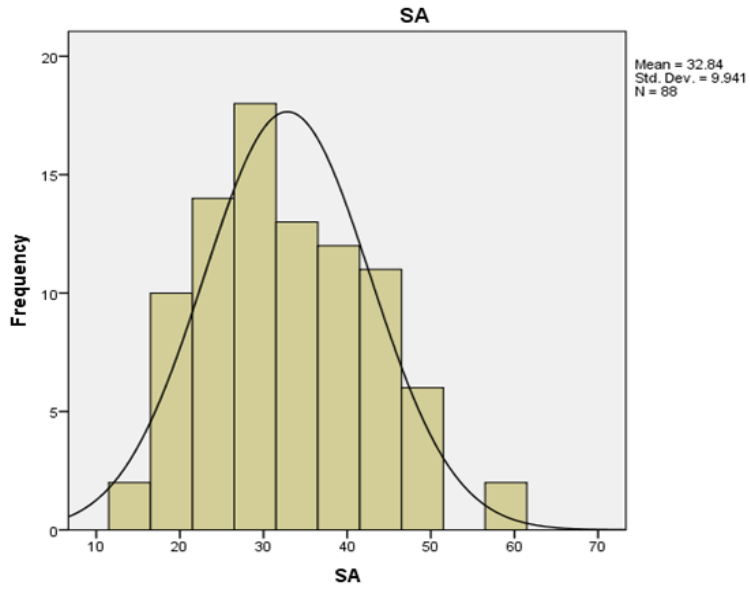
### 4.2 Statistical Analysis and Graphs

Table 1:

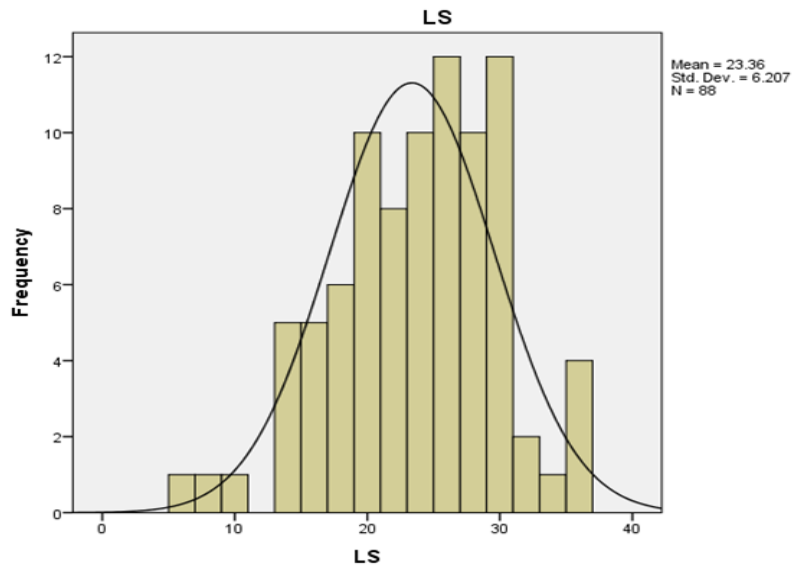
	Smartphone Addiction	Loneliness	Life Satisfaction
Valid/N	88	88	88
Missing	0	0	0
Mean	32.84	48.56	23.36
Median	31.50	48	24
Mode	30	46	30
Std Deviation	9.941	3.043	6.207
Skewness	0.469	0.840	-0.404
Std error of Skewness	0.257	0.257	0.257
Kurtosis	-0.211	-0.156	-0.005
Std error of Kurtosis	0.508	0.508	0.508



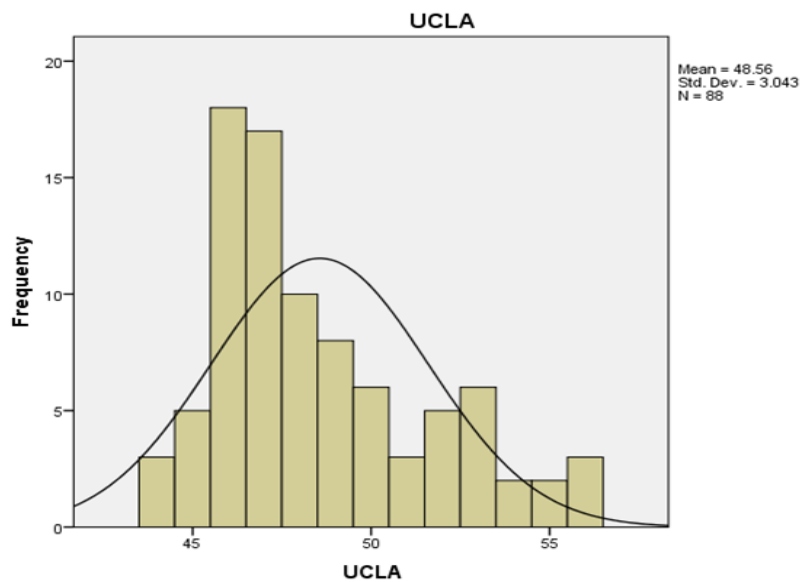
# Smartphone Addiction, Loneliness and Life Satisfaction Among Undergraduate Students



Smartphone Addiction



Life Satisfaction



Loneliness

**DISCUSSION**

*Spearman Rank Correlation*

**Table 2:**

		Loneliness	Life Satisfaction
	<b>Correlation coefficient</b>	<b>0.009</b>	<b>-0.1777*</b>
<b>Smartphone Addiction</b>	<b>Sig(1-tailed)</b>	<b>0.468</b>	<b>0.05</b>
	<b>N</b>	<b>88</b>	<b>88</b>

*\*Correlation is significant at the 0.05 level (1-tailed)*

After the data was collected, following statistical information was revealed based on the correlational statistical operations performed in SPSS. Description of the result table has been written in detail regarding the result in Table 1.

Total sample occupied for the analysis was 88. For smart phone addiction, mean was found to be 32.84. For the test on loneliness mean was found to be 48.56 and for the test on life satisfaction mean was found to be 23.36. Median for smart phone addiction was found to be 31.50; for test on loneliness it was calculated to be 48; and for life satisfaction it was found to be 24. Mode for smart phone addiction was calculated to be 30; for test on loneliness it was calculated to be 46; and for life satisfaction it was 30. SD for smart phone addiction was found to be 9.941; for loneliness it was calculated to be 3.043; and for life satisfaction it was 6.027. Skewness of smart phone addiction was calculated to be 0.469; for test on loneliness it was calculated to be 0.840; and for life satisfaction it was found to be -0.404. Kurtosis was also calculated for all three variables. Kurtosis for smart phone addiction was found to be -0.211; for loneliness it was calculated to be -0.156; and for life satisfaction it was found to be -0.005.

Statistical analysis was done in order to find correlation. Normal distribution was found in smart phone addiction and life satisfaction. Normal distribution was not found in loneliness scale. Hence non parametric test was used to find correlation.

After reviewing the literature, two hypotheses were formed:

1. There will be a positive correlation between smart phone addiction and loneliness among undergraduate students.

This hypothesis was rejected as shown in Table 2.

Therefore, the overall results states that higher is the person addicted to his smart phone the less lonely he is.

The hypothesis was rejected because we can say that the research was done on students whose age is between 18-21 years. Usually these students are much focused on their careers and their future so it can be possible that smart phone addiction in these students is not there. Also, we can see that now a days there are more of nuclear families seen and children have a habit of staying alone and spending their day, so being lonely is something they like and like being connected to their friends and family by phone rather than meeting them on a daily basis. Also these children are themselves not aware that that they are addicted to their phones or are lonely.

There are studies which show that there is no positive correlation between smart phone addiction and loneliness. A research was conducted in 2013 in U.S by Nichol Elise Myers. Convince sampling was used to recruit in 206 college and university students with 18 years

## Smartphone Addiction, Loneliness and Life Satisfaction Among Undergraduate Students

of age. Results revealed that there is no significant relationship between smart phone use and loneliness.

Another research was conducted by Bharadwaj, M& Sode, J.M in 2015 who examined mobile phone addiction and loneliness among teenagers. Random sampling was used to select a sample of 100 teenagers from different colleges in Mumbai city. Results revealed that there was a significant correlation between mobile phone addiction and loneliness among college students. Besides, there was no significant difference found in the study when loneliness and mobile phone addiction among college students was examined according to gender.

Based on the above given two studies and results shown in the above given present study, the hypotheses was rejected.

2. There will be a negative correlation between smart phone addiction and life satisfaction among undergraduate students.

This hypothesis was accepted as shown in Table 2. ( $r = -0.1777$ ,  $p > 0.05$ )

Therefore, the overall results states that higher is the smart phone addiction the less is the person satisfied with life.

This hypothesis is proved and there are a few studies which prove the same.

A research was conducted by Nazir, S and Maya Samaha in 2016. Systematic random sampling was used in order to collect data from 396 participants. Results revealed that there was a negative correlation between smart phone addiction and self esteem and negative correlation between smart phone addiction and life satisfaction.

Another research was also conducted by Bernd Lachmann, Cornelia Sindermann, and Rayna Sariyska et.al in 2016. The total number of participants was 612 from both China and Germany and was females only. Results revealed that there was a negative correlation between smart phone addiction and life satisfaction as well as a negative correlation between life satisfaction and internet use.

It is also seen that the age group 18-21 was too small to understand the concept of life satisfaction.

### *Summary*

In the overall chapter, the results of the present study have been discussed in detail. The obtained results were computed with Non Parametric test. The present results show that there is a significant negative correlation between smart phone addiction and life satisfaction ( $r = -0.1777$ ,  $p > 0.05$ ) and correlation between smart phone addiction and loneliness.

## **CONCLUSION**

In the advent of 21<sup>st</sup> Century, the development of smart phones has been growing rapidly, as well as its usage. Today every age group is using smart phone. Smart phone has become a necessity for everyone in this world. The younger population is continuously in the influence of smart phones. There are positive as well as negative consequences attached to smart phones.

Positive consequences are that it helps in communicating with others really fast and negative consequences are that as individuals are all the time in their phones so it can cause physical

## Smartphone Addiction, Loneliness and Life Satisfaction Among Undergraduate Students

as well as mental problems such as frequent headaches, somatic complaints, lack of interest in activities etc. Also, it has been seen that people who are very addicted to their phones are lonely as well as less satisfied with their lives.

### Conclusion

- The first hypothesis stated that there will be a positive correlation between smart phone addiction and loneliness among undergraduate students. It was rejected.
- The second hypothesis stated that there will be a negative correlation between smart phone addiction and life satisfaction among undergraduate students. This was accepted. ( $r = -0.1777$ ,  $p > 0.05$ )

### Limitations

1. The sample consisted of students from age range 18-21 only.
2. The respondents were only from a college setting.
3. Gender was not controlled.

### Implications

1. Awareness can be created that using a smart phone does not always lead to better relationships with other people.
2. People addicted to their smart phones can be referred for counseling and can be taught social skills to interact with people without using smart phones.
3. People who are not satisfied with their lives can also be referred to counselors for understanding their own problems.

### Suggestions For Further Research

1. A diverse sample could be used for further studies so the findings can be generalized.
2. A comparative study of adolescents, young adults and adults can be done.
3. Gender differences can also be studied.

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### **Conflict of Interest**

The author(s) declared no conflict of interest.

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