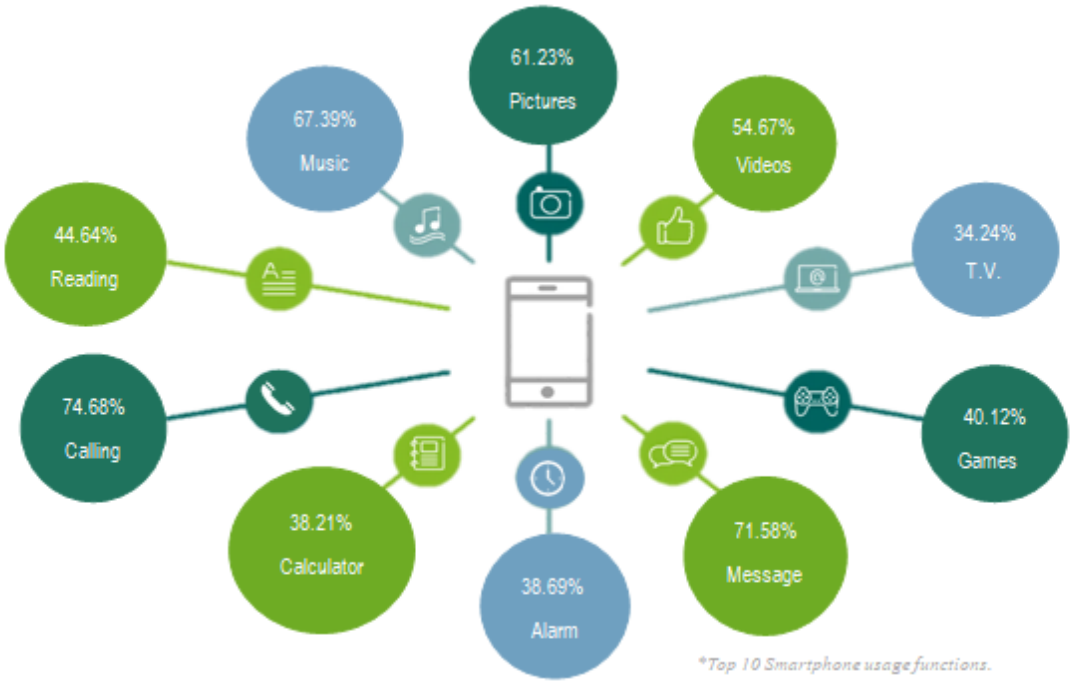
DEPARTMENT OF ANTHROPOLOGY

UNIVERSITY OF DELHI

DELHI-110007

SMARTPHONE USAGE AND ADDICTION AMONG THE STUDENTS OF UNIVERSITY OF DELHI



PROJECT REPORT COMPILED BY THE STUDENTS OF BSc. (Hons) ANTHROPOLOGY, 2nd YEAR

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INTRODUCTION

A mobile phone is considered to be the most dominant communication device. In 1973, the Motorola Company first demonstrated mobile phone and made it commercially available from 1983,[5]. Nowadays, advanced mobile phones with more computing capabilities and connectivity, referred to as ‘Smartphone’ has caused a tech revolution,[8]. It gained mainstream popularity with the introduction of Apple's’ iPhone in 2007, providing customer friendly features like touch screen interface and a virtual keyboard,[8]. It has other important features like internet access, Wi-Fi connectivity, Bluetooth, data transfer, and is capable of running various applications. The two widely used functions of a Smartphone are communication and entertainment.

Over the years, this technological advancement has been revolutionized to a great extent. Its growth in terms of market value and usage, among the population has exponentially increased. The smartphone world is expanding at a fast pace with already more than 2.53 billion smartphone users in the world, [8]. In recent years, the penetration rate of smartphone usage has increased many folds especially among college and university students, due to its wide range of applications.

Smartphones were developed and have been used for the beneficial purposes like connecting around the world, gathering and transferring information and more. But the present concern is that its popularization has hazardously increased its overuse. In 2012, New Time Mobility Poll reported that 84% people “couldn't go a single day without their mobile devices”,[11]. Smartphone overuse can be a sign of Smartphone addiction, which is presently an emergent public health issue.

As per Wikipedia, Smartphone addiction is a dependence syndrome, which is a kind of psychological dependence seen among it’s certain users who exhibit problematic behaviors. The users might frequently check their phones unreasonably, they might feel anxious or restless without the phone, wake up in

the middle of night to check notifications and communication updates, show delay in work performance as a result of prolonged phone activities, and get distracted due to use of Smartphone applications,[5]. “This behavior may reduce thinking capabilities, affect cognitive functions, and induce extreme dependency”,[5]. Excessive smartphone use has impacted severely the users’ life with mental and physical health problems. The prevalence can predominantly be seen affecting many adolescents and adults. This addiction and withdrawal from using the device might increase anger, tension, depression, or cause irritation and restlessness in an individual which affects his or her physiological behavior and reduces work efficacy, [5]. Sociologists, psychologists, and scholars of education visualize it as a kind of mental impairment resulting from this modern technology,[5].

In addition to above psychological health problems, it has also been associated with physical health problems. “For instance, due to small screen size, touch panel, hand holding, and using Smartphone for long durations increase the risk of ocular diseases, dysfunction of fingers, neck pain, and other musculoskeletal problems. Moreover, smartphone overuse also leads to disturbance in daily life, as it distracts people, distorts their perception of time, and negatively affects productivity and interpersonal relationships. Also, smartphone overuse swallows up time that could have been spent in a more constructive way and is therefore linked with other lifestyle risk behavior like physical inactivity”, [7]. Another adverse effect of smartphone overuse is slowed reaction time and increased distraction, both of which are associated with accidents and injuries,[7]. Pedestrians using smartphones like drivers also have a high risk of road accidents and it is because a smartphone reduces situational awareness and distracts which leads to loss of concentration on the roads,[7]. In a nutshell, smartphone addiction has precariously spread as an epidemic, especially among the youth.

In the light of this threatening public health issue, the scope of the study is to look into age and gender specific usage pattern and addiction level of smartphone.

AIM

To asses the pattern of usage and smartphone addiction in Delhi University students using secondary data provided

OBJECTIVES

1. To study the usage patterns among students of Delhi University.
2. To study addiction level among the students of Delhi University.

HYPOTHESES

1. There is no difference between the male and female students w.r.t. the usage of smartphone.
2. Males with high income use phone more for communicational activities than males with low income.
3. The level of sincerity is directly proportional to usage of phone for study related activities.
4. Introverts are more addicted to smartphones.
5. Junior students show higher rate of Smartphone addiction and usage than seniors.

METHODS

SETTING: This study was conducted in North Campus of Delhi University.

PARTICIPANTS: Students of B.Sc.(H) Anthropology 1st year conducted this study with the help of questionnaires on sample strength of 1206 college students. The current study was to assess the smartphone addiction among college students in Delhi University. It was administered by B.Sc. (Hons) Anthropology 1st year students. The questionnaires were divided into personal details, time usage, time usage of mobile phones, social amiability, income level, dependence on phone and ranking of different applications of smartphones which are based on usage.

After collection of data, total 1206 questionnaires were compiled and distributed among different group of B.Sc.(H) Anthropology 2nd year students. Groups handled different work and fed their respective data in Microsoft Excel and Microsoft Word.

Hypothesis were made using independent and dependent variable. There were two composite variables per formulated- Communication Related Activities (CRA) and Study Based Activities (SBA).

In CRA there were calls and text messaging. Mean was taken for both the activities and then it was compared to low, medium and high-income level families of male using Microsoft Excel.

In SBA, it was ascertained whether or not the phone was used as a calculator or as a reading device to gauge the level of sincerity in the participants with respect to their studies and the basic tenets of the directly proportional method.

Compilations of data was done with the help of Microsoft Excel using tables and filter options present in the excel. Mean average formula was used to find the average of the whole data which was presented in the form of ranking system.

In the questionnaire, the participants have given ranks to different applications according to their usage: rank 1 for being the most preferred and rank 13 being the least preferred.
So, the average rank of the applications is determined by its closeness to the lower rank, as is the case with any ranking system, for example, rank 1 is better than rank 6. Afterwards, the requisite data sample was converted into their corresponding percentages using the percentage formula. Additionally, the representation of the data was done with the help of bar graph, column graph, line graph and pie charts for each hypothesis. And finally, each group combined the data, analysis, interpretation, results and discussion into a single report.

FINDINGS AND RESULT

Table A- Average ranking of activities corresponding to various parameters (Highest To Lowest Rank-1 to 13)

Use of Smartphone	Gender		Income level			Age Group		Sincerity Judgement			Social Amicability		Total Average
	Male	Female	High	Medium	Low	Junior	Senior	Very Sincere	Sincere	Less Sincere	Extrovert	Introvert	
Calls	3.421	3.165	3.421	3.277	3.041	3.388	2.719	2.931	3.264	3.768	3.447	3.115	3.292
Messaging	3.865	3.532	3.515	3.703	3.972	3.645	3.847	3.979	3.727	3.299	3.677	3.776	3.694
Pictures	5.109	4.973	4.541	5.096	5.638	4.999	5.274	4.984	4.997	5.289	5.01	5.163	5.04
Music	4.362	4.126	4.239	4.189	4.68	4.189	4.473	3.957	4.256	4.456	4.466	3.935	4.239
Videos	5.745	6.041	5.942	5.849	6.43	5.936	5.643	5.778	6.04	5.424	5.757	6.076	5.893
Calculator	7.956	8.109	7.817	8.133	7.319	7.797	8.385	7.868	8.011	8.284	8.031	8.031	8.033
Games	7.305	8.248	7.645	7.846	7.569	7.722	8.064	8.068	7.89	7.071	7.647	7.931	7.784
Reading	7.193	7.208	7.708	7.076	7.319	7.206	7.181	6.815	7.144	7.765	7.311	7.027	7.197
Alarm	8.053	7.886	8.406	7.896	7.671	7.966	7.994	8	7.901	8.217	7.973	7.966	7.97
TV	8.508	8.584	8.937	8.451	8.875	8.44	9.2	8.905	8.662	7.75	8.581	8.505	8.549
Planning	9.38	9.255	9.197	9.372	9.083	9.294	9.467	9.073	9.34	9.464	9.293	9.392	9.319
Shopping	9.48	9.44	9.77	9.351	10.055	9.54	9.081	10.005	9.312	9.502	9.31	9.663	9.459
Radio	10.246	10.283	10.114	10.322	9.917	10.4	9.567	10.084	10.309	10.253	10.163	10.412	10.267
Total Individuals	594	609	193	929	76	1021	177	194	804	203	685	494	1206

Data from 1206 questionnaires was observed. Some sheets however lacked certain information and thus the total values in various categories varies because of lack of data in certain options.

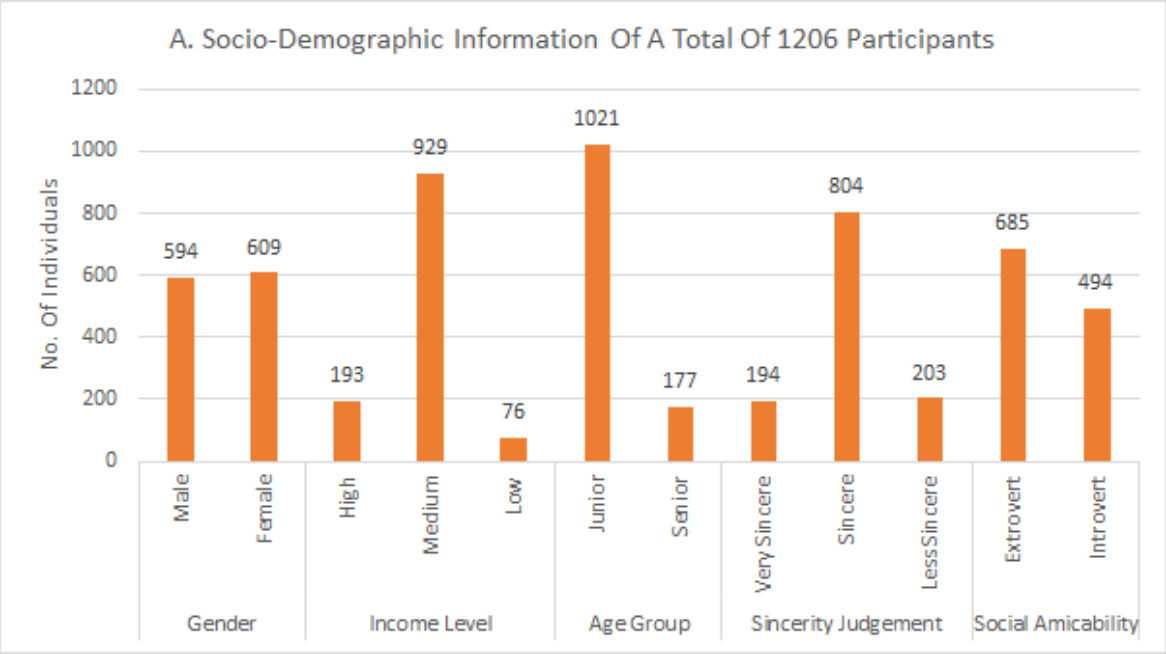


Table B- Socio-Demographic Information

Category	Type	No. of Individuals	%
Gender	Male	594	49.25
	Female	609	50.5
Income Level	High	193	16
	Medium	929	77.03
	Low	76	6.3
Age Group	Junior	1021	84.66
	Senior	177	14.68
Sincerity Judgement	Very Sincere	194	16.09
	Sincere	804	66.67
	Less Sincere	203	16.83
Social Amicability	Extrovert	685	56.8
	Introvert	494	40.96
Total Individuals		1206	100

Table C- Usage Duration of various categories

Usage Duration		less than 2 hours	2-4 hours	4-6 hours	more than 6 hours	% of Smartphone Users
Gender	Male	125	211	138	113	556
	Female	109	226	173	95	574
Income level	High	34	47	54	57	181
	Medium	173	372	236	139	872
	Low	27	18	18	11	73
Age Group	Junior	192	373	265	181	969
	Senior	41	63	45	26	160
Sincerity Judgement	Very Sincere	63	63	40	27	177
	Sincere	147	318	219	114	761
	Less Sincere	23	56	52	67	191
Social Amicability	Extrovert	134	236	174	134	635
	Introvert	92	195	133	70	473
Total		1160	2178	1547	1034	5622

Table D- Usage Pattern Of Smartphone Among The Students Of Delhi University
w.r.t. Gender

Males		Females	
Activity	Average Rank	Activity	Average Rank
Calls	3.421	Calls	3.165
Messaging	3.865	Messaging	3.532
Music	4.362	Music	4.126
Pictures	5.109	Pictures	4.973
Videos	5.745	Videos	6.041
Reading	7.193	Reading	7.208
Games	**7.305**	**Alarm**	**7.886**
Calculator	7.956	Calculator	8.109
Alarm	**8.053**	**Games**	**8.248**
TV	8.508	TV	8.548
Planning	9.38	Planning	9.255
Shopping	9.48	Shopping	9.44
Radio	10.246	Radio	10.283

Table E- Usage Pattern Of Smartphone Among The Students Of Delhi University
w.r.t. Income Level

High Income Level		Medium Income Level		Low Income Level	
Activity	Average Rank	Activity	Average Rank	Activity	Average Rank
Calls	3.421	Calls	3.277	Calls	3.041
Messaging	3.515	Messaging	3.703	Messaging	3.972
Music	4.239	Music	4.189	Music	4.68
Pictures	4.541	Pictures	5.096	Pictures	5.638
Videos	5.942	Videos	5.849	Videos	6.43
Games	7.645	Reading	7.076	**Calculator**	**7.319**
Reading	7.708	Games	7.846	**Reading**	**7.319**
Calculator	7.817	Alarm	7.896	Games	7.569
Alarm	8.406	Calculator	8.133	Alarm	7.671
TV	8.937	TV	8.451	TV	8.875
Planning	9.197	Shopping	9.351	Planning	9.083
Shopping	9.77	Planning	9.372	Radio	9.917
Radio	10.114	Radio	10.322	**Shopping**	**10.055**

Table F- Usage Pattern Of Smartphone Among The Students Of Delhi University
w.r.t. Age Group

Junior		Senior	
Activity	Average Rank	Activity	Average Rank
Calls	3.388	Calls	2.719
Messaging	3.645	Messaging	3.847
Music	4.189	Music	4.473
Pictures	4.999	Pictures	5.274
Videos	5.936	Videos	5.643
Reading	7.206	Reading	7.181
Games	**7.722**	**Alarm**	**7.994**
Calculator	7.797	**Games**	**8.064**
Alarm	**7.966**	Calculator	8.385
TV	8.44	**Shopping**	**9.081**
Planning	9.294	TV	9.2
Shopping	**9.54**	Planning	9.467
Radio	10.4	Radio	9.567

Table G- Usage Pattern Of Smartphone Among The Students Of Delhi University
w.r.t. Sincerity Judgement

Very Sincere		Sincere		Less Sincere	
Activity	Average Rank	Activity	Average Rank	Activity	Average Rank
Calls	**2.931**	**Calls**	**3.264**	**Messaging**	**3.768**
Music	**3.957**	**Messaging**	**3.727**	**Calls**	**3.299**
Messaging	**3.979**	**Music**	**4.256**	**Music**	**4.456**
Pictures	4.984	Pictures	4.997	Pictures	5.289
Videos	5.778	Videos	6.04	Videos	5.424
Reading	6.815	Reading	7.144	Games	7.071
Calculator	7.868	Games	7.89	TV	7.75
Alarm	**8**	**Alarm**	**7.901**	Reading	7.765
Games	8.068	Calculator	8.011	**Alarm**	**8.217**
TV	8.905	TV	8.662	Calculator	8.284
Planning	**9.073**	Shopping	9.312	**Planning**	**9.464**
Shopping	10.005	**Planning**	**9.34**	Shopping	9.502
Radio	10.084	Radio	10.309	Radio	10.253

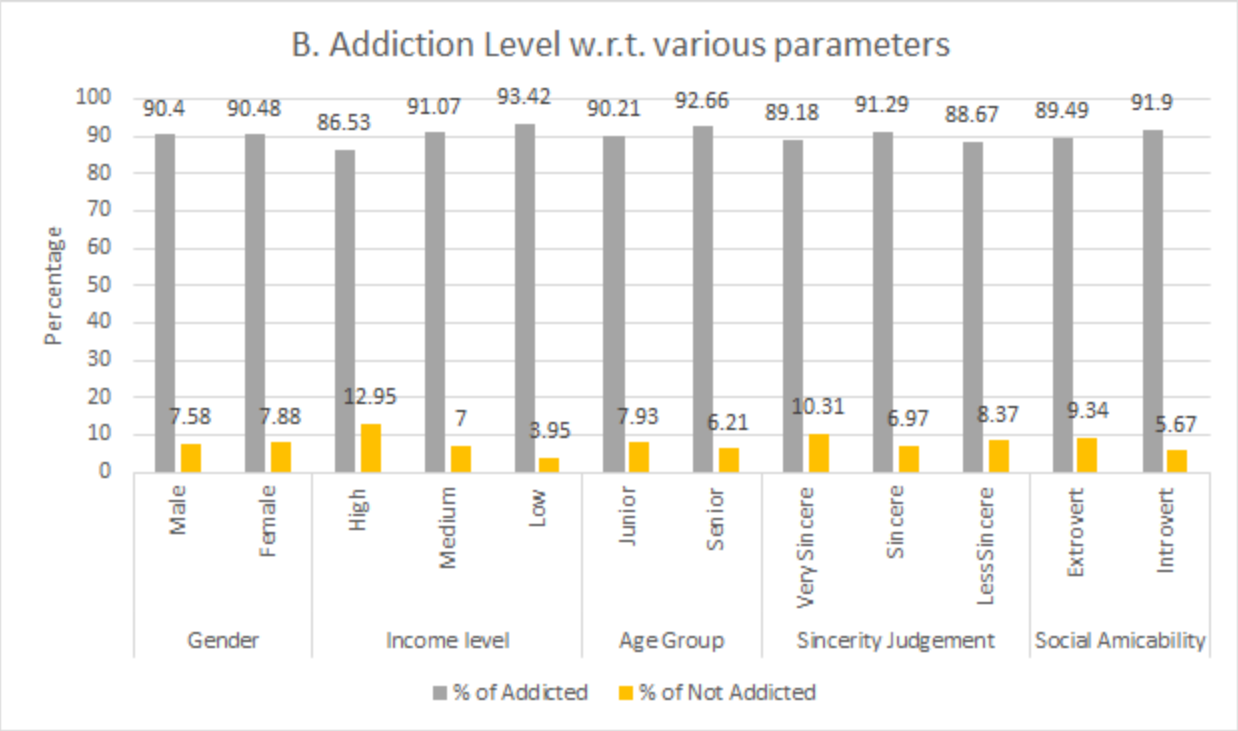
Table H- Usage Pattern Of Smartphone Among The Students Of Delhi University
w.r.t. Social Amicability

Extrovert		Introvert	
Activity	Average Rank	Activity	Average Rank
Calls	**3.447**	**Calls**	**3.115**
Messaging	**3.677**	**Messaging**	**3.776**
Music	4.466	Music	3.935
Pictures	5.01	Pictures	5.163
Videos	5.757	Videos	6.076
Reading	7.311	Reading	7.027
Games	7.647	Games	7.931
Alarm	7.973	Alarm	7.966
Calculator	8.031	Calculator	8.031
TV	8.581	TV	8.505
Planning	9.293	Planning	9.392
Shopping	9.31	Shopping	9.663
Radio	10.163	Radio	10.412

Table I- Addiction Level corresponding to various parameters

Addiction Level		No. of Addicted	No. of Not Addicted	% of Addicted	% of Not Addicted	Total
Gender	Male	537	45	90.4	7.58	594
	Female	551	48	90.48	7.88	609
Income level	**High**	167	25	**86.53**	12.95	193
	Medium	846	65	**91.07**	7	929
	Low	71	3	**93.42**	3.95	76
Age Group	Junior	921	81	90.21	7.93	1021
	Senior	164	11	92.66	6.21	177
Sincerity Judgement	Very Sincere	173	20	89.18	10.31	194
	Sincere	734	56	91.29	6.97	804
	Less Sincere	180	17	88.67	8.37	203
Social Amicability	Extrovert	613	64	89.49	9.34	685
	Introvert	454	28	91.9	5.67	494
Total		1089	93	91.74	7.83	1187

INTERPRETATION AND ANALYSIS



GENERAL

Students nowadays spend 2-6 hours on their smartphones as per our study, and ignore the harm caused by it in theirs studies and health.Cases like these are multiplying at an alarming rate in the Indian student population. Therefore,this study attempts to sketch the diverse reasons for smartphone addiction among the college students. Smartphone addiction is a behavioural addiction which leads to overuse of smartphones, a condition called 'dependence syndrome' as quoted by WHO. Although smartphone use has been increasing in all economic and age sectors, university students are considered as one of the most important target population in its markets. And are also the largest consumer groups of smartphone services.

These are certain reasons for some implications that are found in this study.

- Why people don't own smartphone?
  - In this era too, there are people who disown a smartphone. Reason is the retaliating behavior towards feeling addicted to a smartphone.

- There are economic reasons also, majority of people prefer laptops for emails, reading, etc.

- Girls are more addicted than boys
  - Women's desires for networking and communication are far stronger than men's which drive them to become more addicted to smartphone.
  - In Delhi's context, Safety is an issue. Boys have freedom to hangout as a pastime and girls don't, they spend their time mostly on their phones gossiping, shopping, etc.

- Usage duration is a little high but the addiction level is low for extroverts in comparison to introverts.
  - This is because they (extroverts) talk a lot, have large social circle, does watches more videos, play more games and do more shopping.
  - They are less addicted to their smartphone but spend more time using it.

- Mobile phones are still used for its conversational purpose. Calling still tops the chart. In modern times also, smartphone has retained its conceptualized meaning.

- Less sincere students are highly addicted because they spend leisure time over their phone. Enjoyment, entertainment and fun over phone are what they took for that tries to help them in keeping busy on phone.

- Low income category is highly addicted, and then middle income and then high income individuals.
  - JORDAN BIRNHOLTZ state that the horrible reason which can be attributed is that ubiquity of smartphone provide easier ways to enhance financial lives, helps in searching data, to provide better options. Along with this they call frequently.
  - Middle income individuals are addicted due to study related reasons- 7.076, significantly higher than others.
  - High income individuals are least addicted because their social space is large; they have more money to physically experience things.

- Boys will be boys and girls will be girls. When it comes to gaming.

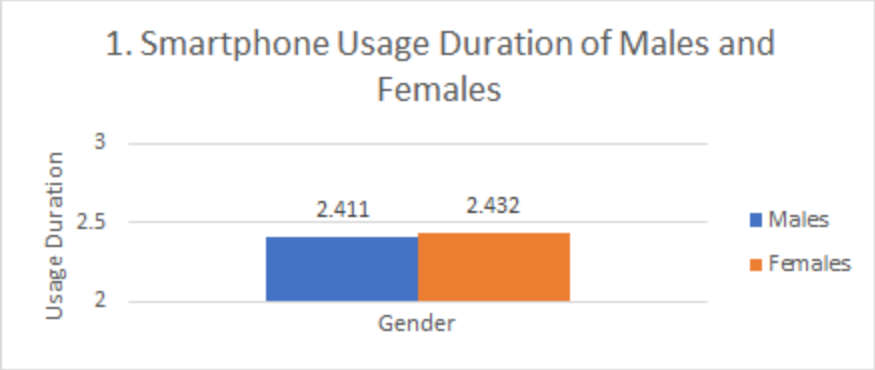
- Tipping point is the borderline timing. Sleep, make eat, so 2-4 is fine timing.

Excess of anything is dangerous.Smartphone are very useful but being dependent on them leads to smartphone addiction.The possible reasons that students are addicted to use their smartphones is that they are not aware of its harmful consequences on health,time management, social life, finance and academic achievement currently as well as in the future . And even if they know, they tend to ignore them.

<u>Hypothesis 1:</u> THERE IS NO MAJOR DIFFERENCE BETWEEN MALES AND FEMALES WITH RESPECT TO USAGE OF MOBILE PHONE. (true)

Table 1- Smartphone Usage Duration of Males and Females

Gender	Usage Duration
Males	**2.411**
Females	**2.432**



This study sees a clear distinction between males and females, and asserts that boys will be boys and girls will be girls, when it comes to the pattern of usage of smartphone. Be it how women outnumber men w.r.t. applications like calling, messaging, music, etc. but still there's no major difference between males and females w.r.t. usage of mobile. It seems to emphasize on the fact that the gender-neutral phone features like access to social networks, long battery life and others like camera, video etc. are actually same across all gender lives in coming terms with usage. So, the smartphone companies aiming at this gender neutral market base have actually succeeded if we go by this hypothesis.

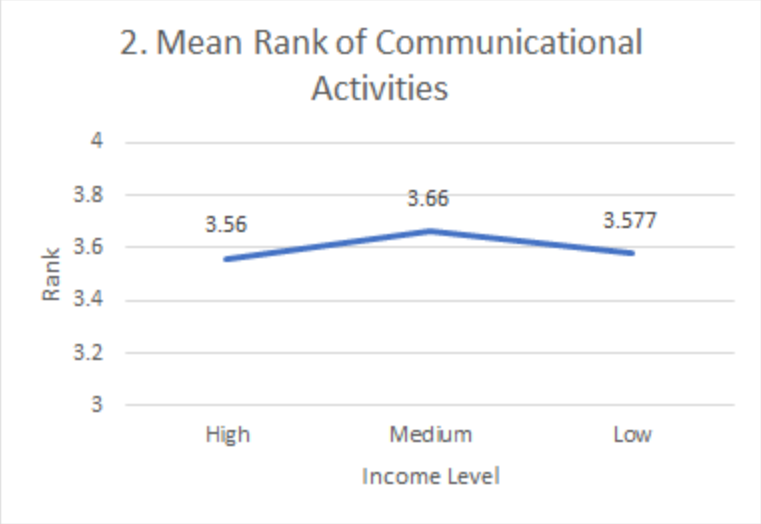
Although, there are several hyper gendered products/features being marketed but still it is hard to create a major difference.

If we see the time duration which lies between 2-4 hours for both males and females is quite evidently proving the hypothesis true. This is 21st century and both genders have equal access to all needs and desires, be it a smartphone or any other thing. This leads to the ownership of good quality smartphone and as the study caters to the DU students who generally have a likeness of a same kind of timetable and routine travels back to home, the duration of usage comes off as an indicator that same universe, leads to same choices and hence the heterogeneity decreases. So, patterning is very similar. Also, age plays a key role in determining the choices. Functional approaches and cheaper access to all apps is a factor which plays same for both genders.

<u>Hypothesis 2:</u> HIGH INCOME MALES USE THEIR SMARTPHONES MORE FOR COMMUNICATION ACTIVITIES THAN LOW INCOME MALES. (false)

Table 2- Relation Between Income Level and Preferred Use for Communication Activities among Males

Income Level	Mean Rank of Communicational Activities
High	**3.56**
Medium	**3.66**
Low	**3.577**

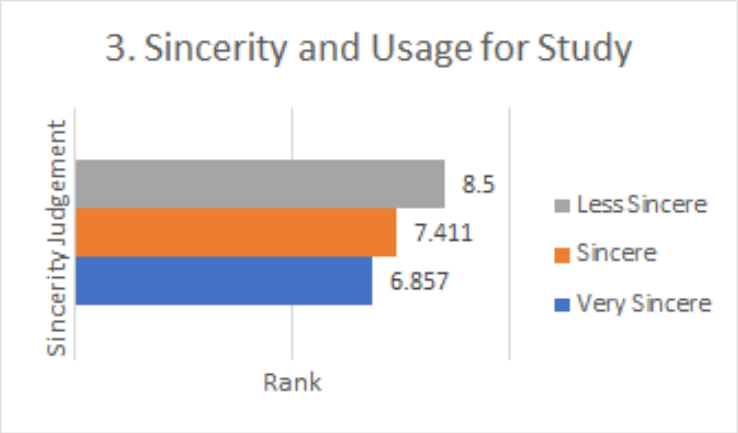


This hypothesis has proven to be false, attributing to the fact that both the groups are not earning by themselves and still fall into the category of students. So both groups shares amity when using phones either for studying purposes or for communication activities. DU is a platform for all and tends to provide similar treatment to all. It overloads there income generalities. Correlating with this with a common base as North Campus Students will be under the influence of one another in certain things and communication activities being one of it. Also, the communication activities are coming off in a same average because the phones are differently used for different purposes like information surfing and transactional behavior by young students (PEW STUDY, 2015). Higher income and lower income individuals, they differ in obtaining certain kind of information but not in calling and messaging.

<u>Hypothesis 3:</u> THE LEVEL OF SINCERITY IS DIRECTLY PROPORTIONAL TO THE USAGE OF THEIR SMARTPHONE FOR STUDY RELATED ACTIVITIES. (true)

Table 3- Relation between sincerity and usage preference for study related activities

Sincerity Judgement	Mean Rank of Study Related Activities
Very Sincere	6.857
Sincere	7.411
Less Sincere	8.5



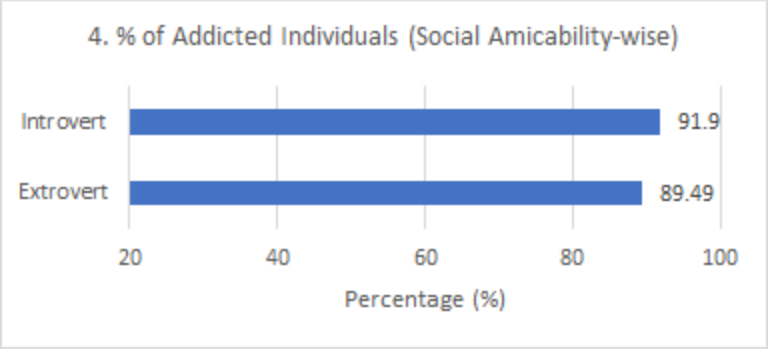
“The secret of success is sincerity” -- Jean Giraudoux

And yes the hypothesis proves this fact to be true. There exist a digital divide when it comes to this space of smartphone usage. The very sincere students using smartphone more, followed by sincere students and then the less sincere. This can be re-aroused with the fact that the sincere students don’t tend to waste their leisure time on other activities and they always tend to plan and chalk out activities related to studies in that time. Sincerity has a close relationship with punctuality. Sincere and very sincere students always respect and value time and hence any time that would affect their studies would not be something they would like. Hence, studies being their top most priority accounts for this as a reason. While the less sincere students are “the rulers of their own kingdom” in study related matters and hence certainly they don’t spend much time on these activities. Their leisure time calls for whatsapp, communicating more in social groups and also the habit of submitting the assignments on the eleventh hour and dependence on others, validates this hypothesis. They have this social fear of losing the ‘cool’ image. Less sincere are more for watching TV, videos, games, etc.

<u>Hypothesis 4:</u> INTROVERTS ARE MORE ADDICTED TO THEIR SMARTPHONES. (true)

Table 4- Difference between Addiction level of Smartphone users on the basis of Social Amicability

Category	% of Addicted Individuals
Extrovert	89.49
Introvert	91.9



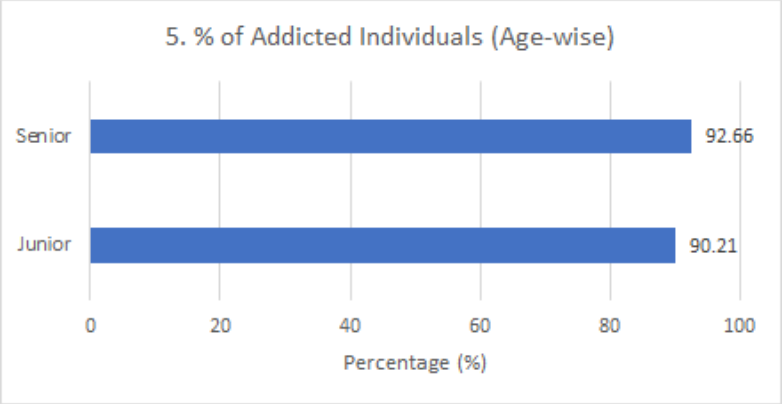
Yes, introverts are more addicted to smartphone than extroverts. The pattern difference is stark which shows that they call, listen to music, read mostly in a higher average than extroverts. How personality drives smartphone addiction is visibly a parameter that has to be

looked upon. This hypothesis goes with the natural personality and instincts of the introverts. They are generally the ones brimming with thoughts and internal care for their peers, family and others and are generally shy lot who are not driven by the sense of being connected in a physical environment. They always feel comfortable when the barrier in physical environment exists. So, in a virtual space that smartphone provide, the barriers exist and thus they feel free to connect over smartphone, and hence are being more addicted than extroverts.
This is the section of students who are "offline introvert/online extrovert"—Mark Collier; a social media strategist explains. Extroverts are sociable, talkative, action oriented.

Hypothesis 5: JUNIORS ARE MORE ADDICTED TO SMARTPHONES THAN SENIORS. (false)

Table 5- Difference in Usage and Addiction level between Junior and Senior Age Groups

Category	% of Addicted Individuals
Junior	90.21
Senior	92.66



Senior calls- 2.719, they have more exposure to smartphone addiction. Seniors are using mobile phones more for shopping, more for reading; smartphone acts as a leisure device for them, seniors have more hands on emailing and formal communication. Juniors go by saying "less is more".
Seniors view their smartphone as an integral part of who they are, as an extension of themselves. They have more mundane exigencies of life and more dependency on phone.

LIMITATIONS OF THE STUDY

Social media is as social and vast as it sounds, so is its addiction. When an investigation is attempted to comprehend the working of social media addiction among university students, a number of factors and variables come into play. These factors are often as complex and dynamic as human psychology which itself is a major factor. So, naturally the process of the study will be faced with unexpected discrepancies and a myriad of biases. Quite a number of these biases are expected to have affected the study. The quantity of the data collected is crucial in determining the trends that the study will produce as its results. Even though an increased number of responses from the subjects would have strengthened the legitimacy of results, the researchers had to confine themselves to controlled set of responses due to various discomforts with regard to time and method available for the study. Hypothesis tested on the grounds of actual mathematical analysis of results might produce impressions that are different from the ever changing and dynamic realities of life. Putting aside the compromises thus explained, the attempt was successful in bringing out its own perspectives on an issue that has been studied and debated over and over by scholars who have been engaging with the interest around the globe.

Elaborating some more of the limitations of the study may be the choice of the population that may have been unknowingly chosen on biases like a particular group of students from some particular college who may or may not be the representative of the whole Delhi University students. It may seem to be very plain and straight that as the data collection has not been performed by the students analyzing it so there may be discrepancy in filling up of the questionnaires as has been noticed in some of them while analyzing. As the filling up of the questionnaires has been done by very young , enthusiastic and energetic age group students so It may be possible that they may have filled it carelessly. Some other students may have felt hesitant about sharing their personal data so they might have filled in the wrong set of data.

Though some conclusions may be drawn from the above study of average 1200 persons but for any study to yield true and appropriate it should include more number of individuals. As the questionnaire has been set up by students themselves and not the experts so the questionnaire may not contain the up to mark research questions to effectively pool out the data for a particular trend to

be observed. Moreover such a short questionnaire may not bring a fruitful result as the pure research based questionnaires are lengthy.
Despite all these cons , the study has been effectively designed and tried to bore out the fruits for the desired results.

SUGGESTIONS

A disturbingly common scene, none other than University students spilling out of their classrooms head bowed and reading a screen on their iPhones, is bothering social scientists all over the world. The malaise is no less common in Indian universities. According to a Facebook official millennial look at their phone 150 times a day on an average. With the number of Indian Facebook users to reach 260 million by 2020, the nation is about to meet with the ghastlier version of an ongoing crisis. Jean Twenge, a psychology professor at San Diego university and the author of **"iGen:Why today's Super-Connected Kids Are Growing Up Less Rebellious, More Tolerant, Less Happy"** in her study describes how the time spent on screen is reflective in a teenage melancholy. The study which scrutinized data from 500,000 American teenagers found that adolescents who spent more time on Facebook, Snapchat, Instagram etc. are more likely to identify with remarks such as "The future often seems hopeless" or "I can't do anything right".

The results and analysis of our original study assents to the higher rate of smartphone addiction among the subjects studied. It is necessary to embrace the technological advancement that the century has gifted its population, but at a point where it is evading healthy social and mental spaces required acts of control are to be resorted to. Teenagers often find it difficult to step into straight and direct ways of control. The dopamine surge that social media is proved to effect in the user make it more complex to tackle. At this point effective ways of control have to be enforced strategically in a systematized manner. The following tips can be put to use.

1. Turn off Notifications

Most of the social media platforms are designed in a way that they draw continuous and instant attention. Activities are notified to the users in order to ensure attentive participation. Your social applications doesn't need your immediate attention as they can be checked out at a later stage.

By turning off notifications it is possible to stop frequent usage of social media applications.It is not necessary to know the responses towards one's social media activities instantly. They can wait and can be checked altogether at a pre-decided interval of time. By assigning a specific time, the users can still maintain his contacts over the media while putting a check on the frequency of usage. If the usage is less frequent we can effectively stop social media being an ingrained habit.

2. Uninstalling Irrelevant Apps

Smart phones usually come with an array of different applications. These apps need to be filtered according to their relevancy. If we avoid the possibility of exploring these irrelevant apps, the smartphone becomes mundane and the user might choose to stay away.

Applications for popular social media platforms can be deleted and used through any browser or a more recommended desktop.

This will prevent social media websites being handier and decreases the dangers of addiction. It would also increase the internal space on your phones so your phone would run and work a faster pace than earlier.

3. Fixing Boundaries

Usage of smartphones can be restricted in some daily life situations where the possibility of looking into the screen is more frequent. It is highly likely that people use their smartphones when they feel relaxed. These more or less informal situations need to be identified to limit the usage at these situations. Some possible situations and control are,

- No phone usage at the dining table
- No phone usage at the restrooms.
- No phone usage at social gatherings.
- No phone usage during informal and personal conversations.

4. Restrictions at Home

Spend more time socializing with family members and invest on building strong relationships. Majority of the smartphone users go to bed with their phone. Charging the smartphone can be done away from the bed. This will stop the urge to check phone immediately after waking up and before going to sleep.

Use a watch to keep track of the time and a separate alarm clock. This will further reduce the usage of phone for basic purposes. If usage is less frequent for basic purposes addiction might gradually wear off.

5. Using Applications to Track Smartphone Usage

RescueTime- Application offered in android. Provide a detailed breakdown of smartphone activity
Moment-Application provided by iOS. Offer Provisions to set usage limits and notifications regarding control.
Appdetox –Enables the user to set smartphone rules. Number of times opening a particular app can be controlled.

Modern lifestyle makes it easier and happier to shrink into a world of “Me, Myself and Smartphone”. Many studies conducted all over the world have produced results linking addicted usage of smart phones to serious levels of depression, anxiety and hopelessness prevalent among younger populations. Psychologists in the United States have found themselves struggling to understand if the increased rates of teenagers admitted in hospitals for suicidal thoughts were related to the surge in the usage of smartphone. Although, there are studies which refuse to agree. They try to focus on the better parts of connectivity and accessibility that social media has to offer. This is suggestive of the fact that, more or less, social media is what the user makes of it. It can be productive if used to maintain connections and productive discussions rather than boasting about exotic vacations and fancy social events.

6. Get a real time alarm clock

It’s tempting to reach for your phone first thing in the morning, especially if your phone is the thing that woke you up. Banish temptation and decrease your dependence on the smartphones by getting a alarm clock which will wake you up in the morning. So avoid starting your day by looking first at your phones.

7. Try turning on your phone’s grayscale

One of the most jarring ways to curb the time you spend on your smartphone is to make its screen much less desirable to look at.

Time Well Spent, a nonprofit focused on changing our relationships to technology, recommends switching your phone to grayscale to remove the "shiny rewards" that colorful icons give you every time you unlock.

CONCLUSION

Smartphone usage and addiction in contemporary times has developed as a universally accepted fact as the device has proved to be handy and highly efficient which has made it an integral part of everyday life. College students have grown up to be an important target group for smartphone market. Present study sought to explore the smartphone usage pattern and addiction level among university students. Data collected for this study is representative of the entire population and the findings have been successfully applied to develop general trends for the population under study.

As the research has demonstrated, most widely used smartphone functions are communication and entertainment, followed by reading. As students spend a lot of time on smartphones (at an average 4 hours per day), a major issue is raised here, less involvement of students in use of smartphones for study-based activities, which may negatively affect their academic performance. Usage patterns for various smartphone functions indicate many trends, which are useful in assessing the overall problem. Average scores indicate that students of Delhi University are addicted to smartphones which clearly indicates seriousness of the problem.

Many of the symptoms of smartphone addiction are not well defined and can not be observed directly, which clearly indicates how important it is to conduct effective studies and proper research in this area. It is not an isolated phenomena and has a cause and effect relation with many other factors. To get a better insight to the problem, various independent variables including gender, age, family income, sincerity and social amicability have been used, on basis of which, general trends for the study population have been developed, which can further be used to develop strategies to combat the problem.
Smartphone addiction leads to several social, psychological and biological problems which according to WHO are important to public health scientists who are concerned with developing overall health of population, to which smartphone addiction poses a big threat, not directly, but through various side effects, like depression, insomnia, eye-sight problems, postural deformities, and many more. No government policies will ever prove to be as effective in regulating smartphone overuse as will be self regulation. According to Science Direct, smartphone usage positively affects smartphone addiction whereas self regulation negatively affects it. Findings of the study also indicate that to get rid of such dependency, efforts must be put at grass root level, for which motivation among individuals is very important.

It is high time to realise the importance of reducing dependency of students on smartphones and to make them realise that social life is not what one lives in the digital space, but what results from face to face interaction. Most of the problems related to smartphone overuse, dependency and addiction are to be addressed as soon as possible if quality of human life is to be improved.

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