

## PROBLEMATIC SOCIAL MEDIA USE IN COLLEGE GOING YOUTH: A CROSS- SECTIONAL STUDY

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### Abstract

**Background:** Adolescents and youth in India, are now showing signs of internet addiction as the number of smart phone users are increasing day-by-day. Smart phone overuse and internet addiction may generate a new psychosocial hazard known as “Phubbing which is a potential area for research. The aim is to find out the prevalence of phubbing, social media addiction, mobile phone addiction and fear of missing out among engineering students and to find out the correlation between the phubbing scale and other three scales. Settings and Design is prospective, cross-sectional observational study, done over two months. Engineering students of a private university in North India constituted the study subjects. **Materials and Methods:** Five branches of engineering were randomly chosen and students present on the day of study and willing to participate were included in the study, a total of 100 students. A pre-designed questionnaire along with 4 structured Likert- type scales was used for data collection, followed by a short educational intervention. Statistical analysis used data entered in MS Excel 2007, analysis carried out using SPSS 22. Proportions and percentages summarized categorical variables. Chi-square test was used as test of significance and P value  $\leq 0.05$  considered statistically significant. **Result:** The prevalence of phubbing was found to be 61%. Those who have greater addiction for mobile phones or social media are more likely to exhibit phubbing behavior. **Conclusion:** The prevalence of phubbing was 61% and reduced to 12% after educational intervention.

## INTRODUCTION

Despite obvious benefits of smart phones and easy internet access, one can't deny their potential adverse effects such as addiction in the form of nomophobia, internet addiction and social media addictions of Facebook, WhatsApp, Instagram, Twitter etc., which are some of the emerging issues that are constantly rising in third world countries, where the number of smart phone users is increasing day by day.<sup>[1,2]</sup> Many people in developing countries including India are now showing signs of addiction to the internet and are therefore, becoming problematic smart phone users, which is a cause of concern owing to its potential consequences.<sup>[3,4]</sup> Therefore, there is a growing concern that the overuse of smart phones may actually result in problematic internet usage, generating a new psychosocial hazard known as “Phubbing” rather than serving as a means of enhancing social interactions.<sup>[3,5]</sup>

The term “Phubbing” has been defined as modern communication in which a person snubs another in a social setting by concentrating on their phone instead

of having a conversation.<sup>[1]</sup> Phubbing word was born as part of a campaign by Macquarie Dictionary. In May 2012, the advertising agency behind the campaign - McCann Melbourne -invited a number of lexicographers, authors, and poets to produce a new word to describe the behaviour. The term has appeared in media around the world, and was popularized by the Stop Phubbing campaign created by McCann. This phubbing phenomenon elucidates the real negative consequences of the lack of communication that detrimentally affects relationships and feelings of personal well-being.<sup>[6]</sup> In India, 21% of the population are adolescents and nearly 20% of adolescents exhibit the negative consequences of smartphone over usage with respect to mental health such as difficulty in concentration and attention deficit-hyperactivity disorder, but the contribution of phubbing is practically unknown. In the Indian scenario, smartphone's addiction and problematic internet use among adolescents are on increase, which indicates the possibility of phubbing among adolescents and youth.<sup>[3]</sup> Moreover, it has also been observed that in the age of e-learning, only a few

Indian students often use their smartphones for teaching- learning purpose, while majority use smartphones only for personal communication,<sup>[7]</sup> which shows that phubbing may have many predictable or attendant factors that are yet to be studied.<sup>[7-10]</sup>

In the current study, we examined the contributing roles of mobile phone usage addiction; fear of missing out, social media addiction and the manner in which the frequency of phubbing behaviour and of being phubbed, may both lead to perception that phubbing is normative. This, therefore, remains a potential area for research and one of the main reasons for conducting this study.

#### **Aims and Objectives**

- To find out the prevalence of phubbing and the prevalence of social media addiction, mobile phone addiction and fear of missing out among engineering students of a private university in North India.
- To find out the correlation between the phubbing scale and other three scales.
- To educate the students about phubbing and internet addiction by powerpoint presentation.
- To assess the phubbing behaviour after 1 week of educational intervention.

## **MATERIALS AND METHODS**

A prospective, cross- sectional, observational study was carried out over a period of two months, among engineering students of a private university in North India. All the engineering students of that university constituted the sampling frame. We randomly selected five branches of engineering field, whose students constituted our target population. All the students in the selected branches those who were present on the day of study and willing to participate were included in the study which constituted a total of 100 students. Students who did not own and used smartphones were excluded from the study.

The study was carried out after obtaining ethical clearance from Institutional Ethical Committee. Permission from authorities of the concerned Engineering College was also sought after explaining the objectives as well as the method of study and they were also told that it included no invasive procedures. Assent was obtained from the minor students (< 18 yrs) and consent from those who were 18 years and above.

A pre-designed, semi-structured, closed ended questionnaire was used for collecting data concerned with socio-demographic details of the participants namely age, sex, type of family, no. of family members, birth order etc. Data concerning problematic social media use and smartphone usage were collected through the use of 4 structured Likert-type scales (The scales can be found in the Appendix section) which included:

- The Phubbing Scale to determine the phubbing behaviors, marked by an individual looking at

his/her mobile phone during a conversation with other individual(s), dealing with his/her mobile phone and escaping from interpersonal communication;

- Mobile Phone Addiction Scale to determine phone addiction;
- Fear of missing out Scale
- Social Media Addiction Scale to determine social media addiction;

Data collection was followed by a short educational intervention using power point presentation, highlighting the adverse impact of social media/ smartphone overuse on the physical, mental and socio- cultural dimensions of health and ways and means to curb unnecessary internet/ social media usage. Data was also collected from the same study subjects 1 week after educational intervention and changes noted.

Data were entered in MS Excel 2007 and statistical analysis was carried out using SPSS 22. Proportions and percentages were used to summarize categorical variables. Chi-square test was used to find out association between sociodemographic variables and score of the various scales and also between Phubbing score with other scale scores. A P value  $\leq 0.05$  was considered as statistically significant.

## **RESULTS**

A total of 100 students were included in the study of which 75 were males and 25 were females. [Table 1] shows the distribution of study participants according to socio-demographic variables. Majority (79%) of the study participants belonged to age group 18-20 years. 43% were first order birth. [Table 2] shows the relationship between phubbing score and social media addiction score with different variables. With regard to type of family, 61.3% of those living in nuclear family and 60.8% of those living in joint family had phubbing score > 25 and the difference was statistically significant (P <0.05). Regarding social media addiction score, 63.8% participants with > 6 family members had score >25 while 66.7% participants with < 4 family members had score > 25 and the difference was statistically significant (P <0.05). [Table 3] shows the relationship between mobile phone addiction score and fear of missing out score with different variables. These scores did not show statistically significant association with socio-demographic variables.

[Table 4] shows the association of the phubbing score with other three scale scores. 100% participants having mobile phone addiction score range of 80-100 also had phubbing score > 25 while 33.3% study participants with mobile phone addiction score range of 20-49 has a phubbing score > 25 and the difference was found to be statistically significant (P <0.05). Likewise, 72% of study participants with social media addiction score > 25 also had phubbing score > 25, while only 50% participants with social media score < 25 had phubbing score > 25, and this

difference was found to be statistically significant ( $P < 0.05$ ). This implies a direct co-relation of mobile phone addiction and social media addiction with

phubbing behavior. Those who have greater addiction for mobile phones or social media are more likely to exhibit phubbing behavior.

**Table 1: Distribution of study participants according to socio-demographic variables**

S.NO.	Variables	Frequency(n)
1.	Age (years)	
	< 18	14
	18-20	79
2.	Sex	
	Male	75
	Female	25
3.	Type of family	
	Nuclear	49
4.	Joint	51
	No. Of family members	
	<4	06
5.	4-6	47
	>6	47
	Birth order	
	1	43
	2	22
	3	16
	4	11
	5	04
	6	03
	7	01

**Table 2: Relationship between phubbing score and social media addiction score with different socio-demographic variables**

Variables	Phubbing scale score		Total	Significance (p- value)
	<25 N(%)	>25 N(%)		
Age (years)				0.795
<18	5(35.7)	9(64.3)	14	
18-20	32(40.5)	47(59.5)	79	
>20	2(28.6)	5(71.4)	7	
Gender				0.722
Male	30(40)	45(60)	75	
Female	9(36)	16(64)	25	
Family type				0.002*
Nuclear	19(38.7)	30(61.3)	49	
Joint	20(39.2)	31(60.8)	51	
Family members				0.358
<4	1(16.7)	5(83.3)	6	
4-6	21(44.7)	26(55.3)	47	
>6	17(36.2)	30(63.8)	47	
Social media addiction score				0.625
Age (years)	<25 N(%)	>25 N(%)		
<18	5(35.7)	9(64.3)	14	
18-20	42(53.2)	37(46.8)	79	
>20	3(42.9)	4(57.1)	7	
Gender				0.817
Male	37(49.3)	38(50.7)	75	
Female	13(52)	12(48)	25	
Family type				0.358
Nuclear	24(48.9)	25(51.1)	49	
Joint	26(50.9)	25(49.1)	51	
Family members				0.028*
<4	2(33.3)	4(66.7)	6	
4-6	6(12.8)	41(87.2)	47	
>6	17(36.2)	30(63.8)	47	

**Table 3: Relationship between mobile phone addiction score and fear of missing out score with different socio-demographic variables**

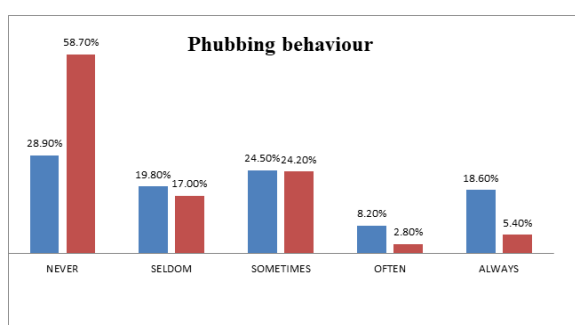
Variables	Mobile phone addiction score			Total	Significance (p-value)
	20-49	50-79	80-100		
Age (years)	N(%)	N(%)	N(%)		
<18	4(28.6)	9(64.3)	1(7.1)	14	0.389
18-20	27(34.2)	47(59.5)	5(6.3)	79	
>20	2(28.6)	3(42.9)	2(28.5)	7	

Gender						
Male	26(34.7)	41(54.7)	8(10.6)	75		0.133
Female	7(28)	18(72)	0(0.00)	25		
Family type						
Nuclear	17(34.7)	29(25.2)	3(6.1)	49		0.775
Joint	16(31.4)	30(58.8)	5(9.8)	51		
Family members						
<4	1(16.7)	5(83.3)	0(0.00)	6		0.610
4-6	15(31.9)	29(61.7)	3(6.4)	47		
>6	17(36.2)	25(53.2)	5(10.6)	47		
<b>Fear of missing out score</b>						
	<b>0-14</b>	<b>15-22</b>	<b>23-29</b>	<b>30-50</b>	<b>Total</b>	
Age (years)	N(%)	N(%)	N(%)	N(%)		
<18	0(0.00)	1(7.1)	8(57.2)	5(35.7)	14	0.817
18-20	2(2.6)	15(18.9)	29(36.7)	33(41.8)	79	
>20	0(0.00)	3(42.9)	0(0.00)	4(57.1)	7	
Gender						
Male	2(2.7)	11(14.7)	27(36.0)	35(46.6)	75	0.166
Female	0(0.00)	8(32.0)	10(40.0)	7(28.0)	25	
Family type						
Nuclear	0(0.00)	13(26.5)	17(34.7)	19(38.8)	49	0.364
Joint	2(3.9)	6(11.8)	20(39.2)	23(45.1)	51	
Family members						
<4	0(0.00)	3(50.0)	2(33.3)	1(16.7)	6	0.948
4-6	1(2.1)	8(17.0)	18(38.4)	20(42.5)	47	
>6	1(2.1)	8(17.0)	17(36.2)	21(44.7)	47	

**Table 4: Association of phubbing score with score of other three scales**

Other scales	Phubbing scale score		Total	Significance (p-value)
	<25	>25		
<b>Mobile phone addiction scale score</b>				
20-49	22(66.7)	11(33.3)	33	0.001*
50-79	17(28.8)	42(71.2)	59	
80-100	0(0.00)	8(100.0)	8	
<b>Social media addiction scale score</b>				
<25	25(50.0)	25(50.0)	50	0.02*
>25	14(28.0)	36(72.0)	50	
<b>Fear of missing out scale score</b>				
0-14	1(50.0)	1(50.0)	2	0.068
15-22	9(47.4)	10(52.6)	19	
23-29	19(51.4)	18(48.6)	37	
30-50	10(23.8)	32(76.2)	42	

[Figure 1] shows the difference in phubbing behavior of study participants before and after educational intervention. Though not statistically significant, a reduction in the phubbing behavior is noted post-intervention.



**Figure 1: Difference in phubbing behavior of study participants before and after educational intervention**

## DISCUSSION

Problematic smart phone use and social media use in adolescent population of developing countries is a matter of serious concern. It is important to target

adolescent age group as counseling regarding lifestyle modifications and behavior change at an early age can lead to a more mentally sound and productive adult population later on. In the present study, the prevalence of phubbing was found to be 61%. Davey S et al,<sup>[3]</sup> conducted a similar study on a sample of 400 adolescents and youth randomly from five colleges of the district of Muzaffarnagar, Uttar Pradesh, India, and they reported the prevalence of phubbing to be 49.3%.

Engin Karadağ et al,<sup>[11]</sup> conducted study in Eskisehir Osmangazi University, Turkey, on 409 university students and concluded that the most important determinants of phubbing behavior are mobile phone addiction and social media addiction. In the present study also it is observed that those study participants who were found to have greater addiction for mobile phones or social media, more likely exhibited phubbing behavior.

Andrew K Przybylski et al,<sup>[12]</sup> conducted a study on motivational, emotional and behavioral correlation of fear of missing out (FOMO) on 1013 participants. In this study FOMO is strongly linked to higher levels of social media engagement. In the present study

also, it was concluded that 2% study participants suffer from severe FOMO, 19% suffer from medium FOMO, 37% are at risk of FOMO and 42% do not likely suffer from FOMO. However, the correlation between FOMO scores and phubbing scores were found not to be statistically significant.

## CONCLUSION

The prevalence of phubbing among the study participants was 61% and was reduced to 12% after educational intervention. Phubbing may affect mental health of the students, hampers their ability to take accurate decisions and reduces empathy towards colleagues, family members and friends and so they should be encouraged and counseled to learn proper time management skills, practice meditation and other techniques in order to reduce their undue dependence on mobile phone and social media addiction. There is an urgent necessity of primary prevention in the form of health education and lifestyle modification of youth and adolescents in order to generate a mentally sound and healthy workforce for the country's bright future.

## LIMITATIONS

It was a college based study and due to time constraints only a selected group of engineering students in a single University were chosen for study. Repeated educational interventions and counseling on different occasions were not done, again due to time constraint. All variables were assessed based on the responses given by the students.

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