

ORIGINAL ARTICLE

Gadget Dependency among Medical College Students in Delhi

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Abstract

Background: Gadget holds the great importance in everyday life. Mobile phone and internet usage have become universal practice especially among the student community. Gadgets usage has both pros and cons. **Objective:** To assess the magnitude of gadget utilization among medical college students in Delhi and to estimate the burden of gadget dependency. **Methodology:** A cross sectional study was conducted in three medical colleges. The participants were 957 medical students selected by systematic random sampling, interviewed using a self-administered questionnaire. **Result:** The sample consisted of 485 (50.7%) males and 472 (49.3%) females, aged 17-25 years. Gadgets of at least one variety were uniformly used by all the students, 22.4% of the students surveyed were found to be gadget dependent. **Conclusion:** Our study shows high prevalence of gadget dependency among medical students. There is need to create awareness regarding the problem of gadget dependency and its social and health effects.

Key Words

Gadget, Medical College; Delhi; Gadget dependent; Students

Introduction

The term "gadget" refers to the portable electronic devices that belong to either one or more of the following categories: mobile phones, MP3 players and gaming consoles or any other wireless-enabled devices. This comprises of variety of devices including notebooks, tablets and i-touch. These gadgets can perform a great variety of functions. Mobile phones, for instance, have been transformed into multi-functional devices with

cameras, radio/MP3, wireless technology connectivity and more (1).

Globally an increasing number of people own more than one gadget. In America, young adults aged 18 to 29 years old own four gadgets on average in 2010 (2). Indian market has emerged as the second largest market after China for mobile phone handsets. It has been found in various studies that it is difficult to part people from their gadgets even for a second. Gadget usage has both pros and cons. With at a stretch continuous use of gadget many health problems are reported like eye

straining, finger pain, backache, neck pain, day time sleepiness and sleep disturbances. Depending on the amount of time spent on gadget (duration and frequency), there are adverse effects like physiological, psychological, social and emotional (2).

Although media is raising the issue of adverse effects of gadget usage, still there are no substantial efforts regarding the proper usage of gadgets.

Aims and Objectives

The present study was planned to assess the magnitude of gadget utilization and to address the issue of gadget dependence among medical college students.

Methods

The study was a cross-sectional analysis of the subject population with the units of study being college students studying in medical colleges under Delhi University. Delhi has total seven medical colleges. Of these, medical colleges under university of Delhi were chosen by convenience. The chosen colleges were Maulana Azad Medical College (MAMC), Lady Harding Medical College (LHMC) and University College of medical Sciences (UCMS). The study protocol was approved by Ethics Committee of University College of Medical Sciences Delhi University. A written permission and consent from the respective college principals was obtained prior to conducting the study in these colleges.

As no previous study was available from the specific study population and area, we relied on previous results from international studies for calculating sample size. With an estimated proportion (p) of gadget dependency as 20%, with an allowable error (d) of 3%, statistical power of 80% and constant $Z=1.96$, the required minimum sample size came out to be

682 using the formula, sample size = $Z^2 \times p \times (1-p)/d^2$.

By considering the non-response rate of 20%, the total sample size calculated was 822. The sample size was equally divided for the three medical colleges and every second student was selected from each batch by systematic random sampling. All students from different batches were included in the study except interns.

A pre-tested, self-administered and semi structured questionnaire was used to collect information about socio-demographic profile and about gadget dependency amongst the college students.

The demographic variables include age, gender, type of schooling and socio economic status. As currently there is no standard definition for gadget dependency. In the present study it is defined as compulsive usage of gadgets even when individuals know their usage affects them and others around them – psychologically, socially, emotionally and physically (3). The questionnaire focusing on gadget dependency (4) had ten components: effect on academic performance, use of gadget to escape from problems, thinking about electronic gadget more and more, stolen a gadget from a store or a friend, tried to use it for lesser time but unsuccessful, have become restless if tried to cut down gadget usage, compromised studies or co circular activities to use gadget, spending more time and money on gadget to feel a level of excitement, lied to family or friends about how much you use gadget and ever needed to borrow money so you could get electronic gadget. Each question had three options: yes, sometimes and no. By adapting the point allocation system from a study on video gaming (5), for the option 'yes' score was 1 and for 'sometimes' score was 0.5, total score of more than 5 signifies gadget dependency.

The individual responses thus obtained were compiled, processed and analyzed by using SPSS version 12.

Result

The study was conducted among three medical colleges located in Delhi, under university of Delhi. [Table 1](#) shows the demographic profile of the students. The study population comprised 485 (50.7%) males and 472 (49.3%) females their age ranged from 17-25 years (mean 20.8 years). About two third (57.9%) students were aged above 20 years. Majority of the students (70.1%) did their schooling from private schools. Most of the students belonged to upper (414; 43.3%), upper middle (500; 52.2%) socio economic class while remaining (43; 4.5%) belonged to either lower middle or upper lower socio economic class according to modified Kuppaswamy scale for socio economic status.

Discussion

The present study was an analysis of the magnitude of gadget utilization and gadget dependency among medical college students in Delhi. The sample consisted of 50.7% males and 47.3% females. The mean age of the study population was 20.8 ± 1.4 years with range of 17-25 years. All the three medical colleges had almost equal representation in the sample. Similarly batch wise also there is equal representation by each batch of MBBS.

In the present study atleast one gadget (mobile phone) is owned by each student. More than three fourth (79.1%) of students had multimedia mobile. Nearly three fourth (71%) had laptops. About half of the students used wireless internet and ipods. A study by Kaiser Family Foundation (6) reported that there has been a huge increase in ownership of gadgets among 8-18 years old: from 39% to 66% for cell phones and from 18% to 76% for iPods and

other MP3 players. With global trends indicating an exponential increase in gadget ownership, it would not be feasible to encourage the people to discontinue or disengage in the use of gadgets. Further more young people want technology to add value to their lifestyles, satisfy their social and leisure needs and reinforce their group identity (7).

At present there is not much information about the topic. Of the total 957 students, 22.4% were found to be gadget dependent. Our finding was similar to that of S Dixit (8) in whose study 19% of medical students were mobile phone dependent. Wong Fei Mun et al 2011 (9) in a study in Malaysia, found 22% of males were mobile phone dependent. Even though the proportions are almost similar, our results represent a broader view as we have taken into account all electronic gadgets to assess dependency. Gadget dependency may be a larger problem than we think as the people are oblivious to the extent of their gadget usage as they tend to lie-subconsciously and not-to conceal the extent of their gadget usage.

Conclusion

The gadget dependency was found to be high (22.4%) among the medical college students of Delhi. The results give an alarming indication that the younger generation is inclined towards possessing more gadgets and becoming gadget dependent. There is a need to counsel students and parents regarding dependency on gadgets. For mitigating gadget dependency, co-curricular activities and yoga can be promoted. Seminars should be conducted to create awareness regarding indiscriminate use of gadgets, their addicting potential and ill-health effects related to it and also regarding the usage of gadgets at intervals rather than continuously at a stretch. Further more research is required focusing on gadget

utilization, gadget dependency and ill-health effects.

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Tables

TABLE 1: DEMOGRAPHIC PROFILE OF STUDY SUBJECTS (N=957)

Variable	Males (n=485)	Females (n=472)	Total (n=957)
AGE			
≤ 18 years	28 (5.8)	27 (5.7)	55 (5.8)
19-20 years	173 (35.7)	174 (36.9)	347 (36.3)
21-22 years	213 (44.0)	202 (42.8)	415 (43.4)
23 -24 years	71 (14.5)	69 (14.6)	140 (14.5)
COLLEGE			
UCMS	258 (53.2)	102 (21.6)	360 (37.6)
LHMC*	0	281 (59.5)	281 (29.4)
MAMC	227 (46.8)	89 (18.9)	316 (33.0)
YEAR OF MBBS			
First year	114 (23.5)	106 (22.5)	220 (23.0)
Second year	121 (24.9)	106 (22.5)	227 (23.7)
Third year	146 (30.1)	118 (25.0)	264 (27.6)
Forth year *	104 (21.4)	142 (30.1)	246 (25.7)
TYPE OF SCHOOLING			
Private	335 (69.1)	336 (71.2)	671 (70.1)
Public	150 (30.9)	136 (28.8)	286 (29.9)

* LHMC is girl's medical college

TABLE 2: GENDER-WISE DISTRIBUTION OF GADGET DEPENDENCY AMONG THE STUDENTS (N=957)

Status	Males	Females	Total
Gadget dependent	117 (24.1)	97 (20.6)	214 (22.4)
Gadget non-dependent	368 (75.9)	375 (79.4)	743 (77.6)
Total	485(100)	472(100)	957(100)

Figures in parenthesis are percentages

Figures

FIGURE 1: COMPARISON OF GADGET DAILY USAGE BETWEEN MALES & FEMALES

