Assessing the Cell Phone Behaviours of Undergraduate Regular University Students: Implications for Counselling

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ABSTRACT

The use of mobile phones has become increasingly popular in recent years and it is more prevalent among university students. The widespread usage of cell phones has attracted the attention of many students, thereby increasing their rate of cell phone dependency. This study aimed to describe cell phone behaviours among undergraduate regular students at the University of Cape Coast. A survey research design was adopted for the study. Through the use of the stratified sampling technique, a sample of 2,061 undergraduate regular students participated in the study. Questionnaire adapted from Choliz's (2012) Test of Mobile-phone Dependence (TMD) was used. The internal consistency, estimated using McDonald's omega coefficient, ranged from .84 to .95. Means and standard deviations were used in analyzing the data for the study. The findings of the study revealed that students were prevalent in the use of cell phones in sending text messages, followed by surfing of the internet, length of time spent on the cell phone, and use of cell phone as a source of entertainment. It was recommended among other things that students should consciously regulate their use of cell phones so that it does not jeopardize their academic work.

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1. INTRODUCTION

Feeling connected to others is one of the most primary needs of people and to get anything done, a person has to communicate with other people. Kopomaa [1] points out that the cell phone is an electronic device that adaptively affects one's lifestyle by responding to their hopes and needs as well as orientation and companionship. According to reports from the International Telecommunications Union (ITU) [2], 93% of the world population has access to a mobile-broadband network, less than half a percentage point higher than the previous year. People around the world have adopted this new and exciting technology as one of the most vital required facilities in their everyday life [3]. This suggests that its usage behaviour extends to people of all walks of life. The penetration of mobile applications in the dignity of life has become a universal phenomenon. Presently, the world is full of technological marvels and it is impossible to imagine living without cell phones. They surround us and therefore have become a vital part of our daily lives. Every aspect of our lives has been influenced and moulded by the plethora of gadgets.

It is not surprising that cell phones have become an integral part of university life and culture. A casual observation of today's university students reveals cell phones being used, openly in every possible campus setting or gathering. Gleaning from the literature, cell phone usage facilitates students' studies and their learning in general. In Ghana, it has been documented that 84% of the 250 students sampled from the University of Ghana, Legon, reported the use of smartphones every day. The majority of the students (91%) indicated they mainly used smartphones for learning purposes [4]. Markett [5] opined that enhanced interactivity and the use of short messaging service (SMS) improve classroom instruction. Woodcock, Middleton, and Nortcliffe [6] also reported that smartphones improved productivity and learning performance. Students downloaded online lectures and reading from e-books to improve learning [7]. They use learning applications such as GPS, camera, voice calls, emails, google drive, and so forth, to create, upload, download, and share academic resources with their friends [8].

It must, however, be noted that quite a number of studies have indicated that students use cell phones for many purposes that are unrelated to their academic work, and these have impacted negatively on their academic work. For example, Abdullah, Sedek, Mahat, and Zainal [9] found that university students often use their smartphones for personal communication rather than for learning. Cell phones were also found to be used for social networking, surfing the internet, watching videos, and playing games [10,11]. Each of these activities also apparently, influences academic performance. For example, heavy video game playing has been associated with lower GPAs [12]. There is a negative relationship between social-networking site use (e.g., Facebook, MySpace, Twitter) and academic performance [e.g., Rosen, Carrier, & Cheever, 13, 14]. Likewise, Junco [15,16] found a strong, negative relationship between time spent on Facebook and actual cumulative GPA.

Apart from student's cell phone use for learning purposes and leisure, it also offers them the opportunity to establish new relationships [15] and increased family relationships [18]. However, the behavioural addiction of student's use of cell phones remains a serious challenge [19]. Even though studies have been conducted on the use of mobile phones among university students in Ghana [20, 21], the specific behaviours students exhibit in the use of the cell phones and the counselling implications were not key in their investigations. The purpose of the study, therefore, is to assess the kinds of behaviours regular undergraduate students exhibit in the use of cell phones on campus.

1.1 Research Question

What are the kinds of behaviours regular undergraduate students exhibit in the use of cell phones on campus?

2. METHODOLOGY

The study adopted a survey research design. This helped in data gathering and description of the pattern of the usage of cell phones among undergraduate university learners. Survey studies describe the characteristics of a population regarding the phenomenon in question [22]. The population of the undergraduate regular students in University of Cape Coast, Ghana was 20,607. Out of this number, males were 11,882 while 8,725 were females. These students are housed in four

colleges, namely, College of Health and Allied Science, College of Education Studies, College of Agricultural and Natural Sciences, and College of Humanities and Legal Studies. The study utilized a sample of 2,061, thus 10% of the population. The selection of the sample was done with the use of a stratified sampling technique. The population was segregated into four colleges, then using simple random sampling, specifically, the random numbers approach, 2,061 students were selected.

A questionnaire was used in gathering data from the students. The questionnaire was adapted from Choliz (2012) Test of Mobile-phone Dependence (TMD). The questionnaire had 10 items in each of the six dimensions, namely, student's internet surfing behaviour, student's text messaging behaviour, student's mobile phone calling behaviour, mobile phone use as a source of entertainment, students' mobile phone etiquette, and length of time students spend with their mobile phones. In all 60 items were contained in the questionnaire. The questionnaire is normally the required choice for the collection of data from a large group of interest at a reduced cost [23]. The questionnaire was validated using confirmatory factor analysis. The loadings for all the items were above .72. In addition, the average variance extracted (AVEs) of each of the six dimensions ranged from .52 to .63 confirming convergent validity. Discriminant validity was also achieved [24]. The internal consistency of the various constructs measured in this study ranged from .84 to .95. This was estimated using McDonald's omega coefficient. In addition, other ethical issues such as volition,

anonymity, confidentiality, privacy, etc strictly adhered to. Through the use of means and standard deviations, the data that were collected were analyzed. Means scores were computed for all the responses for each of the items. The scores ranged from 1 to 5. A criterion mean of value of 3.0 was used to interpret the responses. Items with mean scores of 3.0 and above were interpreted as agreeing with the various statements, whereas items with mean scores below 3.0 were considered as participants' disagreement with the statements.

3. RESULTS

Out of the 2,061 students selected, 1,827 constituted a return rate of 88.6%. This return rate is substantial and can be relied on for useful information to answer the research questions. The study had 1,013 (55.4%) of its respondents being males, while 814 (44.6%) of the remaining were females. The ages of the respondents ranged between 17 - 51 years (Mean age = 29.8, SD = 3.4). The following kinds of cell phone use behaviours were found: student's internet surfing behaviour, student's text messaging behaviour, student's mobile phone calling behaviour, mobile phone use as a source of entertainment, students' mobile phone etiquette, and length of time students spend with their mobile phones.

3.1 Internet Surfing Behaviour

Internet surfing behaviour of students was measured using 10 items on a 5-point Likert scale. The responses of the respondents are presented in Table 1.

Table 1. Internet surfing behaviour of participants

Behaviour	M	SD
I often use the internet application on my cell phone	4.55	1.03
I use the internet application on my cell phone once a month	1.45	.95
I frequently browse the internet for academic purposes	3.95	.91
Surfing the internet for online shopping is my favourite hobby	2.12	1.26
I like browsing the internet during lecture time	2.27	1.13
I spend a lot of money on internet browsing	4.15	.90
When I am bored, I browse the internet to keep myself busy	4.07	1.13
I feel anxious without browsing the internet application for a week	3.98	1.20
I spend more time browsing the internet on my cell phone	4.30	.79
Using the internet application on my cell phone often gets in the way of other important things	4.22	.85
Mean of means	**3.51**	**1.02**

From Table 1, the mean scores of the internet surfing behaviour of participants ranged from 1.45 to 4.55. Among the 10 internet surfing behaviours, seven (7) were in agreement with the various statements. Some of these behaviours among others included 'I often use the internet application on my mobile phone' (M = 4.55, SD = 1.03); 'I frequently browse the internet for academic purposes' (M = 3.95, SD = .91); 'I spend a lot of money on internet browsing' (M = 4.15, SD = .90); and 'I spend more time browsing the internet on my cell phone' (M = 4.30, SD = .79). The results further showed that participants were very high on the frequency of the use of internet applications (M = 4.55, SD = 1.03).

3.2 Text Messaging Behaviour

This section presents results on participant's behaviour regarding cell phone text messaging. The results for are presented in Table 2.

All the items in Table 2 happened to be behaviours of participants apart from the statement 'Text messaging is affecting my grammar badly' (M = 2.78, SD = 1.30). This shows that text messaging by the participants was popular. This notwithstanding, it never affected their grammar negatively. Among the text messaging behaviours that participants 'exhibited were: 'constantly checking their cell phones for text messages (M = 4.45, SD = .83); 'text messaging is the most preferred form of communication' (M = 3.97, SD = 1.20); and 'always staying connected with friends and loved ones through the use of text messaging' (M = 3.93, SD = 1.13).

3.3 Students' Cell Phone Calling Behaviour

Table 3 presents the results on students' cell phone calling behaviour.

Table 2. Text messaging behaviour of participants

Behaviour	M	SD
Every day, I send text messages to my dear ones.	3.83	1.20
Text messaging has made me more sociable	3.67	1.12
I send and receive more than thirty messages in a day	3.75	1.31
I constantly check my cell phone for messages	4.45	.83
I feel anxious without checking for text messages	3.83	1.10
I text messages every day because it is less intrusive	3.47	1.21
Text messaging is affecting my grammar badly.	2.78	1.30
I send between 1- 30 messages in a day	3.20	1.31
Text messaging is the most preferred form of communication	3.97	1.20
I always stay connected with my friends and loved ones through the use of text messaging.	3.93	1.13
Mean of means	**3.69**	**1.17**

Table 3. Students' cell phone calling behaviour of participants

Behaviour	M	SD
I spend between 1-4 hours daily on my cell phone calling friends	2.78	1.33
I often have strong urges to use my cell phone for calling	3.03	1.19
I mostly make calls for social chat	2.77	1.10
I like making calls late in the night	2.48	1.24
I attend to all missed calls	3.42	1.08
I spend more than 4 hours daily on my cell phone calling friends	2.33	1.20
I feel very uneasy if I do not make calls to my friends and loved ones	2.70	1.23
I have put a limit to my cell phone calls but I cannot stick to it	2.87	1.31
I will use my friend's cell phone for calls if I have no credit on mine	2.77	1.31
I spend more money on my cell phone calls	3.43	1.18
Mean of means	**2.86**	**1.22**

The results in Table 3 indicate that cell phone calling was not prevalent among participants (overall Mean = 2.86). Though participants were not frequent on phone calling, 'they spent more money on calls' (M = 3.43, SD = 1.18), attended to all missed calls (M = 3.42, SD = 1.08), and 'had strong urges to use cell phone for calling' (M = 3.03, SD =1.19). This could explain why participants were so much involved in text messaging by making it their most preferred form of communication as well as a way of staying connected with friends and loved ones.

3.4 Cell Phone Use as a Source of Entertainment

This section presents results on how participants use the cell phone as a source of entertainment. Table 4 presents the responses of participants.

From Table 4, participants entertain themselves with their cell phones through several means, for instance by 'snapping pictures with their cell phones' (M = 4.22, SD = 1.08) and listening to music (M = 4.13, SD = 1.16). They also use the cell phone as a means of entertainment when they experience unwanted moods (M = 4.13, SD = .91). However, participants become anxious when they are not using their cell phones to entertain themselves (M =3.27, SD = 1.22).

3.5 Students and Cell Phone Etiquette

This part presents results on participants' manners towards the use of cell phones. Table 5 presents the responses of participants.

As presented in Table 5, participants observed good manners with cell phones usage. For instance, 'participants did not like putting their cell phones on silent when they are at lectures' (M =1.73, SD = 1.07), 'they did not like putting their cell phone on silent or vibrate mode' (M = 2.23, SD = 1.17) and 'they did not care to receive their phone calls at any place'. They become distracted whenever they use their cell phone during lecture hours (M = 3.70, SD = 1.29).

Table 4. Cell phone use as a source of entertainment

Behaviour	M	SD
I often play video games on my cell phone	2.97	1.47
I like downloading ringtones and wallpaper on my cell phone	2.38	1.25
I often snap pictures with my cell phone	4.22	1.08
I listen to music on my cell phone every day	4.13	1.16
I frequently watch movies on my cell phone	3.12	1.32
When I feel lonely, I play games on my cell phone	3.18	1.52
I use my cell phone to entertain myself whenever I experience unwanted mood	4.13	.91
I mostly use my cell phone for video recordings	2.68	1.2
I feel moody and irritable-if I am unable to listen to music on my cell phone for a day	2.90	1.34
I feel anxious without using my cell phone to entertain myself	3.27	1.22
Mean of means	**3.30**	**1.25**

Table 5. Students and cell phone etiquette

Behaviour	M	SD
I use my cell phone during lecture periods	2.48	1.23
I do not care to receive my phone calls at any place	2.27	1.18
I don't like putting my cell phone on silent when I am at lectures	1.73	1.07
I like taking my calls in the middle of a conversation with friends without excusing them	2.45	1.21
I chat on my cell phone to the hearing of others	2.67	1.27
I don't mind the feelings of others when using my cell phone	2.62	2.62
The presence of others do not bother me when I am making a call	2.70	1.24
I don't like putting my cell phone on silent or vibrate mode	2.23	1.17
I respond to cell phone call even when it is not convenient for me	3.18	1.43
I become distracted whenever I use my cell phone during lecture hours	3.70	1.29
Mean of means	**2.60**	**1.37**

Table 6. Length of time students spend on their cell phones

Behaviour	M	SD
I have no time limit when using my cell phone	3.85	1.18
I use my free time manipulating my cell phone	3.98	.98
I spend between 1-4 hours daily manipulating my cell phone	3.72	1.26
I am not time conscious when using my cell phone	3.77	1.25
I spend more than four hours a day on my cell phone	3.73	1.16
I regulate when to use my cell phone	2.47	1.24
I have increased the number of times I communicate with my friends	3.08	1.03
I have been cautioned about the number of hours I spend on my cell phone	3.07	1.07
I spend less time on my books than on my cell phone	2.98	1.19
Attempting to reduce the amount of time I spend on my cell phone has remained a problem.	3.68	1.17
Mean of means	**3.43**	**1.15**

3.6 Length of Time Students Spend on their Cell Phones

This section provides details on the length of time participants spend with their cell phones. Table 6 presents the responses of participants.

As shown in Table 6, participants spent much time with their cell phones (mean of means = 3.43). For instance, 'participants use their free time manipulating their cell phones' (M = 3.98, SD = .98), they did not have a time limit when using their cell phone (M = 3.85, SD = 1.18), they were not time conscious when using their cell phones (M = 3.77, SD = 1.25), and they spent more than four (4) hours a day on their cell phones (M = 3.73, SD = 1.16).

4. DISCUSSION

Generally, the findings of the study revealed that participants predominantly use their cell phones for sending text messages (mean of means = 3.69), followed by internet surfing (mean of means = 3.51). The least among them was cell phone etiquette (mean of means = 2.60). This finding of the study resonates with those of other researchers. Mishna, McLuckie, and Saini [25], for example, found that young learners pay much attention to the internet as compared to how they socialize. Learners in higher educational institutions use the internet for academic and non-academic functions. In exploring participant's internet surfing behaviour, the result of the current study revealed that the participants often use the internet application on their cell phones (M = 4.55). The participants disagreed that they use the internet application on their cell phones once a month (M = 1.45). This assertion supports the findings of a study by Philomina and Abiola [26], which averred that most of the

participants (83.8%) usually browse the internet using their phones while only 3.4% of the participants surfed the internet only once a month. This portrays that the higher percentage of the participants browse the internet often on their cell phones, thereby making their mobile phones the major means through which the internet is browsed often.

Again, the study findings indicated that participants browse for diverse purposes. With a mean score of (M = 4.07), the participants frequently browse the internet to keep themselves busy when they are bored. This is consistent with a study by Greenfield [27] who revealed that participants who were categorized as addicted users opined that they use the internet to alter their mood.

Also, the findings of the study showed that participants with a mean score of (M = 3.95) used the internet to search for academic materials. Udende and Azeez [28] concurred and added that learners mainly surf the internet for academic materials [29]. In essence, Bankole and Babalola [28] disagreed with studies by indicating that a majority (90.6%) of tertiary learners use the internet for communication and only a few use it for assignments. Noor [31], revealed that learners of Malaya University used the internet for entertainment and social purposes as compared to academic activities. Other studies concurred that high school learners spent less time browsing for academic materials [32].

Because most of the participants surf the internet for academic purposes which is considered more beneficial and satisfying, it has generated an attitude of spending long hours manipulating the device. Study findings indicated that the

respondents (M = 4.30) spend more time browsing the internet on their cell phones. This finding is in support of a study by Philomina and Abiola [26], which showed that 48.7% of the respondents spent three (3) hours and above browsing the internet daily. A study by Ruzgar [33] is also in support of the idea that students spend more time surfing the internet. This is because it was revealed in his study that participants spend six to twenty (6 - 20) hours per week.

According to Griffiths [34] and Young [35], excessive internet use significantly impairs educational, occupational, and domestic responsibilities. It also disrupts individual relationships and creates fiscal burdens. Findings of the study showed that a mean score value of (M = 4.22) is an indication that participant's network soft-wares mostly conflicts with other relevant things. This is consistent with a study by Nakornthap and Masateianwong [36] who found out that a significant proportion of young people reported having less time for homework (62.4%) as well as inadequate rest (51.6%). Also, a study by Davis, Smith, Rodrigue, and Pulvers [37], showed that abusive use of the internet interferes with learner's relationships, academic performance, etc. Apart from the fact that their activities were interfered with by the excessive use of the internet, they were financially burdened as stated by Griffith [34] and Young [35]. The results of the study revealed that participants spend a lot of money on internet browsing (M = 4.15). These findings confirm the study by Nakornthap and Masateianwong [36] which revealed that a significant proportion of students waste money and time (70.8%) in browsing.

Study findings again showed that among the text messaging behaviours that participants most intensely exhibited were: constantly checking their mobile phones for text messages; message texting is their greatest preferred method of communiqué, and always staying connected with friends and loved ones through the use of text messaging. Faulkner and Culwin [38] found that texting is common among young adults and adolescents. Smith [39] also found that respondents of age group 18-24years exchanged over 100 messages on the average within a day and over 3,000 in a month. Most studies revealed texting to be the required means of conversation for tertiary learners over e-mails and calls [40, 41]. According to Tessa [42], most learners preferred texting to calls that are 83.1%

and 10.8% respectively. He adds that participants text to discuss private functions, update plans, and reserve phone calls for longer discussions [44]. Brown, Campbell, and Ling, [44], found that text messaging was the main reason behind the cell phone usage of learners in the USA with the ratio of 30:80 that is, sending and receiving text messages a day [45]. According to Turkle [46], having a lot of contemplations, the freedom to reply to an SMS or not makes people prefer text messaging to phone calls.

The results in the current study revealed that cell phone usage for calls was not prevalent among participants. This finding is in contrast with Braguglia [47] who found that voice calls were the most frequently used feature (66%) followed by texting (30%). The social arrangement, friendship maintenance, and contacting the family was the main reasons for learners in New Zealand University to make calls. Though participants in the current study were not addicted to cell phone calls, they often had the strong urge of making calls with their cell phones, and they attended to all missed calls. Participants were not making more phone calls for the reason that they spend more money on phone calls. This could perhaps explain why participants were so much involved in text messaging by making it their most preferred form of communication as well as a way of staying connected with friends and loved ones. Pew Research Center [48] found that 67% of cell phone users check their phones for calls even when they do not notice their phones ringing or vibrating.

In the question on cell phone usage as a source of entertainment, participants indicated that they entertain themselves with their cell phones through several means. For instance, by playing games, listening to music, and watching movies. Most studies report that learners at the tertiary level especially use their smartphones to set alarms, take and send pictures, mobile TV, radio, play games, and other forms of entertainment [49, 50]. Laird [50], for example, reported that most learners at their or regularly played games with their smartphones. Dholakia and Dholakia [51] averred that individuals only use their cell phones for entertainment regardless of their present event.

Participants in the current study observed good manners with the use of cell phones. For instance, participants did not use cell phones

during lecture periods. They switched their phones on silent when at lectures, and they did not chat on the cell phone to the hearing of others. Similar to these findings, most of the learners switched off their phones at places where the use of cell phones was prohibited [52]

It was however found in the current study that participants respond to phone calls even when it is not convenient to them, and they get distracted when they use cell phones during lecture hours. Sofowora [53] observed that cell phones were indiscriminately used at churches, highways, hospitals, and classrooms. Among the places that cell phone use is deemed inappropriate is in the lecture theatres and especially while a lecture is going on. It is a ubiquitous event to observe learners who are mentally engrossed by non-course-related material on their mobile devices but are physically present.

The current study revealed that participants spent much time with their mobile phones. The participants did not have a time limit when using cell phones, they used their free time manipulating phones, they were not time conscious when using their cell phones, and they spent between 1 and 4 hours manipulating cell phones. A study by Ellis, Shaw, and Piwek (2015) showed that learners use their cell phones twice as they think and this is roughly an average of 5 hours per day (One-third of working hours). Similarly, James and Drennan [54] revealed a high usage rate among learners between one-half hours to five hours. These suggest that students were with their cell phones and using them almost every day. These suggest the high use of cell phones among students.

5. COUNSELLING IMPLICATIONS

Students spend a lot of money on internet browsing where they get exposed to a lot of online applications. Many of these online applications demand a lot of money. Students are likely going to spend more on phone bills, a situation that will drive them to search for money to sustain the behaviour. According to Griffith [55] and James and Drennan [54], spending a lot of money on mobile phones are symptoms of addiction. As students, this practice can encourage them to engage in a lot of Social Devices.

Students spend a lot of their time on cell phones connecting with friends, relatives and loved ones. These behaviours can be to the detriment of their

academic work. Such students cannot develop effective study habits with such interferances. Spending too much time on text messaging, a behaviour common with students, can therefore be costly.

Phone calling habits as indicated in the findings cannot easily be unlearned. Students become committed to their cell phones most of their time. They spend more time and money attending to their phones. This practice can gradually lead to psychological conditioning, a situation that can be devastating.

Using the cell phone to snap pictures, listen to music and entertain oneself, are common with students. However, engaging in such entertainment without knowing their limits can pose a problem. For that matter, students should be taught to learn how to regulate their behaviours.

As indicated in the findings, only few students refused to put their cell phones on silent at lectures, pick phone calls at any place and become distracted. In other words, many of the students could be described to be disciplined with the use of cell phones. Such behaviours need to be inculcated in students to help them stay focused in their academic pursuit. This is how the negative effects of mobile phone use on students could be minimized.

From the foregoing, it is clear that students use mobile phones for multiple purposes. The frequency of use is reinforced by the satisfaction they derive from the phones. What could be worrying is that the more students get glued to the use of the phones the greater the chances of becoming or developing behavioural addiction. This is a situation that will likely impair their focus on academic work as well as other social-related activities. This calls for an intervention to offset any negative psychological conditions. Much as cell phones serve academic purposes for learners, they need orientation on time management, behaviour management strategies and knowledge on behavioural addictions to minimize their negative impact.

6. CONCLUSIONS

Students frequently use the internet applications on their cell phones for academic and other related social activities. Other applications like text messaging, phone calls, entertainment are popular among the students. These behaviours

when uncontrolled can develop into behavioural addiction, a condition that can impair their academic work as evidenced by students unable to manage the time they spend on their phones. It can be concluded that students are very high on the frequency of the use of internet application because they frequently browse the internet for academic purposes and also keeps them busy whenever they are bored. However, they do not surf the internet for online shopping. It can also be said that students have intense interest in text messaging because it is the most preferred form of communication which makes them stay connected to their friends and loved ones. Despite the fact that students exhibited mobile phone addictive behaviours, they are not addicted to mobile phone calling. They also show less interest in making phone calls, though they often have the strong urge to use mobile phone for calling. Students use their mobile phones to entertain themselves through several means.

Students show good manners with their mobile phones despite the fact that they exhibited mobile phone addictive behaviours. They get distracted whenever they use their mobile phones during lecture hours. So they mostly prefer their phones being on silent whenever they are at lecture. Students are not time conscious when using their mobile phones and because of that they do not have time limit when it comes to mobile phone use.

7. RECOMMENDATIONS

1. Self-regulation skills should be taught to students to help them manage their cell phone behaviours.
2. As part of the orientation programmes for fresh students at the university, the Counselling Centre should on regular basis, organize hall fora to educate students to avoid phone addiction.
3. Counsellors are encouraged to organise seminars on cell phone use among students in order to help regulate Students behaviour on cell phone use.
4. Counsellors in the university should advocate for a liberal course in behavioural addiction to create awareness of the dangers of cell phone dependency.

CONSENT

The respondent's consent was sought before the commencement of data collection.

ETHICAL APPROVAL

The conduct of this study strictly adhered to the ethical codes in the conduct of research.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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