



EFFECTS OF MOBILE PHONE USAGE ON HEALTH OF MEDICAL PRACTITIONERS

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ABSTRACT

Mobile phone and handheld gadgets have transformed our lives and made it more convenient. Excess use of mobile phones is also associated with several physical and mental health problems. This study was conducted to see the effects of mobile phone usage on health of medical practitioners. A web-based survey was used to collect data. Out of 343 surveys received, 270 surveys were included in the final study. Majority of respondents were females and majority were from internal medicine. Majority of respondents used mobile phones for more than 5 hours a day. The most common health issues encountered were back and neck pain, eye strain, fatigue and lack of sleep. Loss of concentration was also reported by majority of respondents. It is therefore required to limit the use of mobile phones and hand-held gadgets.

KEYWORDS : Mobile phones usage, health hazards, psychological problems.

INTRODUCTION:

Advancement in technology has revolutionized our lives. We live in an era where technology is advancing and evolving at a very faster rate⁽¹⁾. It has revolutionised the mobile phone and hand-held gadgets industry. It has invaded human lives in such a way that it is now impossible to avoid the use of gadgets and mobile phones⁽²⁾. Physicians have been using mobile phones in their daily life activities. They serve as a means of communication, fulfil various tasks ranging from writing a prescription to reviewing the medical record of patients⁽³⁾. The smart phones have made many tasks easier with a single click which used to take

hours to finish. Various medical mobile applications are available now which help health care professionals in communication, consultations, accessing the information, analysing and interpreting results along with clinical decision making and education and training⁽⁴⁾.

There are many challenges as well with excess use of mobiles and hand-held devices. They are source of various viruses and security issues related to work place data. Excess use of phones lead to various physical and psychological health issues. There have been reports where excess usage has led to disturbance of daily life activities.

They have been a source of eye problems, psychological issues, fatigue and sleep disturbance. They have been a source of entertainment, so today's generation use mobile without even realizing that it is causing damage to their health⁽⁵⁾.

Various studies have been done to see the health hazards of excess mobile phone use. Little data is available on health hazards of excess use of mobiles among physicians.

This research aims to study the effects of mobile phone usage among medical practitioners. It is important to identify health effects to create awareness and limit the use of screens during the working hours to reduce stress on the lives of doctors who already work in a stressful environment.

OBJECTIVES:

1. To determine the effects of mobile phone usage on health of medical practitioners.
2. To determine the perception of health hazards related to the excess use of mobile phones.

HYPOTHESIS:

Excessive use of mobile phone is associated with various physical and psychological symptoms and has detrimental effects on individual performance.

Definitions

Physical symptoms: Symptoms affecting the functioning of any human organ system

Psychological symptoms: Symptoms causing changes in human behaviours

MATERIALS AND METHODS

The study design was cross sectional web-based survey. Survey was sent through e mails to medical practitioners and a snow ball technique was used. The study was carried out in September 2018 after approval of institutional Review Board (IRB) of a private hospital in Riyadh. Purposive (non-probability) sampling technique was used. Data analysis was done using SPSS software. Qualitative and quantitative data was analysed using frequency distribution, ANOVA and chi-square tests were applied.

Inclusion Criteria:

Survey was sent to medical practitioners whose e mail was available in the hospital record.

Exclusion Criteria:

Physicians who mentioned any chronic physical or psychological problems in the survey were excluded from the data analysis.

RESULTS

Out of 343 surveys received, 270 surveys were included in the final study and rest of surveys were excluded because of either

incomplete information or chronic illnesses mentioned by the medical practitioners. Majority of surveys were from female physicians (n=184, 67.7%). Mean age was 37 years. Majority of physicians were from internal medicine (n=156, 58%), Paediatrics (n=30, 11.1%), Surgery (n=28, 10.3%) Gynaecology (n=17, 6.29%) and remaining from other specialities.

The number of participants using mobile phone for more than 5 hours a day was (n=193, 71.4%) Majority of participants (n=184, 67.7%) experienced loss of concentration, (17%, n=45) reported nomophobia. Addiction to mobile phones was reported by (n=111, 41%). 83% of participants (n=224), believe that mobile phones make life easy despite their harmful effects on human body and brain.

Back and neck pain was reported by (n=153,57.7%) ,eye strain by (n=145,53%), fatigue and lack of sleep was reported by (n=67, 24%) and Ear ache by (n=27, 10%).Psychological problems like irritability and anxiety was reported by (n=99, 36%).Physicians who were spending less than 5 hours a day on mobile reported less back ache (n=112, 41%), eye strain (n=97, 35.9%), fatigue and lack of sleep (n=54, 20%), ear ache (n=16, 5.9%) and anxiety was reported by (n=34, 31%).

Majority of physicians were working in private medical setups (n=175, 65%). Physicians working in government set up were (n=59, 21.9%). Rest of physicians who returned the survey were self-employed and post graduate residents.

Table:1 Frequency of health problems reported by physicians

Health problems reported	Percentage	P value
Back and neck pain	(n=153,57.7%)	0.063
Hand pain	(n=78, 29%).	0.048
Eye strain	(n=145, 53%)	0.067
Blurred vision/dry eyes	(n=57, 58%).	0.345
Fatigue and lack of sleep	(n=67, 24%)	0.222
Ear related problems	(n=27, 10%)	0.231
Anxiety and irritability	(n=99, 36%)	0.0743
Migraine/headache	(n=81, 30%).	0.444
Lack of concentration	(n=114, 42%).	0.024
Memory loss	(n=10, 3.7%).	0.579

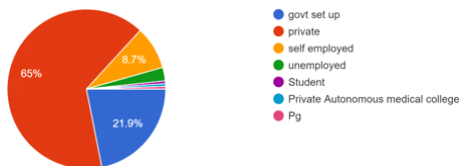


Fig: Physicians working in different types of medical set up

DISCUSSION

Mobile phones have become an essential luxury of today's modern era. Advancement in technology has increased the dependency of humans on gadgets. There are many useful aspects of technology but at the same time it creates health issues which can be reduced by life style changes. People use mobile phones to stay in touch with loved ones, gaming, socializing and surfing the internet for various things. Use of smart phones among physicians is very common and it increases the physical and mental stress of physicians who are already prone to stress due to the nature of their job. This study was done to see effects of mobile phone use among the Doctors.

Our study shows that majority of respondents were females and mean age was 37 years. Physicians who responded were from internal medicine, paediatrics, surgery, gynaecology and other specialities. There was no significant gender difference in reported side effects in our study.

The percentage of participants using mobile phone for more than 5 hours a day was 71%. Loss of concentration was reported by 67%, which is similar to a study done in China where the association of

mobile phone use and inattention was studied. In attention was found in 69% of participants⁽⁶⁾. Nomophobia was reported by 17% and addiction was reported by 41% in the same study. A similar study done online by Parasuraman S in 2015 shows that the dependency on mobile phone was reported by 74% of respondents⁽⁷⁾. 83% of participants believed that mobile phones make life easier in spite of their harmful effects on health in our study in our study.

Back and neck pain was reported by 57.7%,Eye strain 53% ,fatigue and lack of sleep was reported by 24% and ear ache by 10%.Psychological problems like irritability and anxiety was reported by 36%.A similar study done in Lebanon in 2015 shows that neck pain was reported by 100% of participants due to the wrong posture while using mobile phones .Eye strain was reported by 12%and dry eyes by 7% of participants⁽⁸⁾. Another study reported stress among females as 29% and 16 % among men due to mobile phone usage. Sleep disturbance was reported by 23%men and 34% women in the same study⁽⁹⁾ which is similar to our study.

Physicians who were spending less than 5 hours a day on mobile reported less back ache, eye strain, fatigue, lack of sleep, ear ache and anxiety. These differences were not significant statistically when compared with the participants who used mobile phone for more than 5 hours a day.

Majority of physicians were working in private medical setups. Rest of physicians who returned the survey were from government hospitals, self-employed and post graduate residents.

Mobile phones have become unavoidable along with an ongoing use of computers and other gadgets, so the effects faced by the participants cannot be generalised to only mobile phone use. Further studies are needed to collect data from a larger population, removing the confounding factors to get more accurate results. The duration of exposure to mobiles and devices also could not be assessed in the study which is another confounding factor. The psychological symptoms reported were subjective. Further research is needed to exclude the subjective element for the psychological symptoms reported in our study. It is recommended that screen exposure of physicians should be reduced during the working hours to avoid work place related physical and mental health problems.

CONCLUSION

Smart phones, computers and fancy gadgets have become an essential part of our daily life. We cannot exclude them and therefore cannot avoid the harmful effects of technology. We can however minimize the health hazards of the technology by proper education and counselling of people and awareness campaigns about harmful effects of mobile phones. There should be proper guidelines to limit the use of mobile phones and computers at work place, offices and public places.

Conflict of interest

The authors declare that they have no conflict of interest

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