



ORIGINAL RESEARCH PAPER

Health Science

KNOWLEDGE REGARDING AUDITORY AND VISUAL PROBLEMS RELATED TO THE OVER USAGE OF MOBILE PHONES AND COMPUTERS AMONG B.Sc. NURSING STUDENTS

KEY WORDS: Assessment, knowledge, auditory and visual problems

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ABSTRACT

The aim of the research study was to “ Assess the level of knowledge regarding auditory and visual problems related to the over usage of mobile phones and computers among B.Sc. Nursing students of a selected nursing college at Ernakulam district .The objectives of the study were:1. To assess the level of knowledge among first year BSc Nursing students regarding auditory and visual problems related to over usage of mobile phones and computers. 2. To determine the presence of auditory and visual problems among B.Sc.Nursing students . 3. To prepare and distribute an information leaflet regarding auditory and visual problems related to over usage of mobile phones and computers. The present study adopted a quantitative approach with a non-experimental descriptive design. The study was conducted among 65 BSc Nursing students of selected College of Nursing, Ernakulam. Non probability convenient sampling technique was used for the study. For data collection a structured questionnaire was used. The results of the study revealed that 10% of students have good knowledge, 78% of students have average knowledge and 12% of students have poor knowledge regarding auditory and visual problems related to over usage of mobile phones and computers. Majority of subjects (58.2%) have different types of auditory and visual problems related to over usage of mobile phones and computers. It was concluded that majority of subjects have average knowledge and majority of subjects suffering from different types of auditory and visual problems with the over use of mobile phones and computers. So we developed and distributed an information booklet to make them aware of different types of auditory and visual problems related to over usage of mobile phones and computers

INTRODUCTION

The emergence of communication and education technology and internal facilities have drastically affected almost every phase of human life¹. It is greatly evident in the way of teaching and learning¹. The proliferation of their facilities has changed the style of learning whereby students or learners no more solely depends on paper based materials. The introduction of internet lead to the emergence of smartphones which enable learning to take place transporthive of geographical period of time².

The covid-19 pandemic has led to sharp increase in our screen time owing to virtual education, video conferences etc. The tremendous use of mobile phones and computers during covid-19 pandemic for online classes lead to ocular and auditory diseases in students .The use of mobile phones and computers are beneficiary in the present generation. Eventhough its use has a number of positive benefits, the negative impact over health and mental status is also high in number. The disease to the eyes and ears are affecting them very badly and was affecting their future also. Over the past decade utilization of mobile phones and computer has dramatically increased. They are now an essential part of business, commerce and communication; however their use may lead to health problems. Over use of cell phone and computer can result in a number of different physical problems, that may cause permanent damage or be difficult to treat.³ Mobile phones emit radio frequency energy, a form of non ionizing electromagnetic radiation, which can be absorbed by the tissue close to the phone.^{10,11}

MATERIALS AND METHODS

The study was conducted among 65 students who met with the eligibility criteria following convenience sampling technique. The tools used for the study were structured questionnaire developed after reviewing related literature. The tool has three parts Part A- social demographic variables. It includes age of the participant, sex, qualification and presence of mobile phone Part -B -self developed structured questionnaire on knowledge of BSc nursing students regarding auditory and visual problems related to the over use of mobile phones and computers. It includes 30 questions

which includes general aspects of auditory and visual problems, clinical manifestation of auditory and visual problems and management of auditory and visual problems.Part-C- Questionnaire to determine the presence of auditory and visual problems .The developed tool was sent to experts and their valuable suggestions were incorporated. Formal permission obtained from the principal of the selected college ,Ernakulam. The participants were explained about the study and confidentiality was ensured. Then the questionnaire for data collection was administered to students those who present at the time of data collection. Data was analysed using descriptive and inferential statistics.

RESULTS

Section I: demographic characteristics of the subjects

Table 1: distribution of subjects based on socio demographic characteristics

Sl.No	Demographic variables	Frequency	Percentage
1	Age		
	18	6	9.2
	19	49	75.3
	20	9	13.8
2	Sex		
	Male	10	15.3
	Female	55	84.6
3	Qualification		
	Plus two	64	98.4
	Degree	1	1.5

Majority of the subjects belongs to the age group of 19 years(78.4%). Most of the subjects (84.6%) were females. Every subjects (100%)have their own mobile phones.

Section II: Distribution of subjects based on knowledge regarding auditory and visual problems associated with over usage of mobile phones and computers

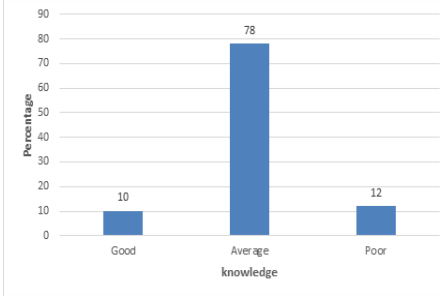


Fig 1: Distribution of subjects based on knowledge

The figure 1 shows that 10% of the subjects had good knowledge, and 78% had average knowledge and 12% had poor knowledge regarding auditory and visual problems associated with overusage of mobile phones and computer.

Section 3- Distribution of subjects based on auditory and visual problems associated with over usage of mobile phones and computers

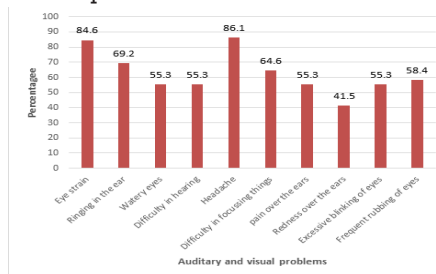


Fig 2: Distribution of subjects based on auditory and visual problems

Fig. 2 illustrates that headache was reported by 86.1% of students, eyestrain by 84.6% of subjects, ringing in the ears by 69.2% of students, trouble focusing, frequent eye rubbing by 58.4% of subjects, watery eyes by 55.3% of students, difficulties hearing, redness over the eyes, and excessive blinking by 55.3% of subjects. Redness around the eyes was noticed in 41.5% of subjects.

DISCUSSION

The findings of the present study were compared with the objectives of the study and the findings of other studies are reviewed. The present study aimed to assess the level of knowledge regarding auditory and visual problems related to the over usage of mobile phones and computers among B.Sc. Nursing students of a selected nursing college at Ernakulam district. According to the study's findings, just 10% of subjects had good knowledge, while 78% of subjects have average knowledge. This study also reveals that 86.1% of the subjects were experiencing headache, 84.6% of the subjects reported having eyestrain, 69.2% of the subjects reported having ringing in their ears, and 64.6% of the subjects had difficulty in focusing.

The findings of the present study were supported by the study conducted at Gulf Medical University of Science and Technology to evaluate computer usage patterns and associated visual problems among students at Ajman University. 500 students over all were included in the study. The most prevalent visual problems experienced by computer users were headache (53.3%), eye burning (54.8%), & tired eyes (48%)¹³

A study conducted by Southampton University among postgraduates to assess their knowledge of the use of mobile phones and the way it affects their hearing over time. Researchers from Southampton University performed a survey among postgraduates, out of 160 subjects, 117 were eligible for analysis. Compared to low or short-term users,

high or long-term users reported worse hearing and tinnitus symptoms.¹⁴ Most of the study findings similar and supporting the current study findings.

CONCLUSION

According to the study findings, the majority of the subjects experienced visual and hearing problems caused on by excessive computer and mobile phone use. Additionally, BSc nursing students do not have appropriate knowledge of the issues brought on by excessive use of computers and mobile devices.

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