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Effectiveness of Video-Assisted Teaching on Adolescents' Awareness of Earphone Health Hazards and Hearing Impairment Prevalence

Dr. M Trupthi
Associate Professor, Anurag University

Abstract: ***Background: Hearing impairment is common in adolescents and young adults exposing themselves to loud noise or music through the use of earphones for a long period of time. If the risky patterns of exposure are not being monitored by themselves to the proper extent may lead to noised induced hearing loss in the latter part of their life. Few years ago, the scope of using earphones was less, nowadays the scope of such use has increased to a great extent. Earphones are not only used for listening to recreational music, but also to hear audio-books, online videos, and online educational programs. Methodology: using Pre experimental one group pretest post- test research design. A total of 54 subjects were selected for study by using convenient sampling technique. Self-structured questionnaire was used as a tool. Results: The result of the study revealed that in pretest regarding knowledge of earphone usage 22(40.74%) had inadequate knowledge, 12(22.22%) had adequate knowledge and 10(37.04%) had moderately adequate knowledge with mean and SD of 6.01±18.70 whereas in post-test 49(90.74%) had adequate knowledge and 5(9.26%) had moderately adequate knowledge with mean and SD of 1.54±1.02, mean difference score was 2.69 and the calculated 't' value is t=15.522. In pretest regarding practice of earphone usage 41(75.93%) had inadequate practice, 9(16.66%) had moderately adequate practice and 4(7.41%) had adequate practice with mean and SD of 4.46±1.79 whereas in post-test 25(46.30%) had adequate practice, 24(44.44%) had moderately adequate practice and 5(9.26%) had inadequate practice with mean and SD of 7.00±1.28, mean difference score was 2.53 and the calculated't' value is t=8.846. Conclusion: Study concluded that the Video Assisted Teaching was effective in improving the knowledge and practice regarding health hazards of earphone uses and prevalence of hearing impairment among nursing students.***
Recommendation: The comparative study can be conducted between rural and urban area.
Keywords: earphone, Video Assisted Teaching, hearing impairment.

I. INTRODUCTION

Head phones are small listening devices designed to be worn around the head & hear with the ears. Ear phones are fitted directly in outer ear but not inserted into ear canal. Head phones are portable & convenient as they are having an electro acoustic transducer which actually converts electrical signals into corresponding sound in user's ear. Hearing impairment is common in adolescents and young adults exposing themselves to loud noise or music through the use of earphones for a long period of time. If the risky patterns of exposure are not being monitored by themselves to the proper extent may lead to noised induced hearing loss in the latter part of their life. Few years ago, the scope of using earphones was less, nowadays the scope of such use has increased to a great extent. Earphones are not only used for listening to recreational music, but also to hear audio-books, online videos and online educational programs.

A. Need for the Study

World Health Organization (WHO) indicates that, among the teenage group and young adults aged between the 12-35 years, around 50% were exposed to unsafe levels of sound due to the use of personal audio devices and nearly 40% were exposed to the potentially damaging levels of sound at entertainment. Using the unsafe levels of sounds i.e., an exposure to raised levels of 85 decibels for more than the eight hours (or) 100dB for more than 15 minutes.

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Indian council medical research (ICMR) reported that 10.7% of hearing impairment is because of earphone usage. A study conducted among Delhi high school students found that 8% of the students have high frequency hearing loss.

B. Statement of the Problem

A study to assess the effectiveness of Video Assisted Teaching Programme on knowledge and practice regarding Health hazards of Earphone uses and prevalence of Hearing Impairment among adolescents in selected colleges, Puducherry.

C. Objectives

1) To assess the level of knowledge regarding health hazards of earphone uses and prevalence of hearing impairment among adolescents
2) To analyze the practice regarding uses of earphones among adolescents
3) To evaluate the effectiveness of Video Assisted Teaching Programme regarding health hazards of earphone uses and prevalence of hearing impairment among adolescents
4) To associate the pre-test level of knowledge on selected socio demographic variables among adolescents.

D. Hypotheses

H1: There will be a significant difference between pretest and post- test level of knowledge score on health hazards of earphone uses and hearing impairment
H2: There will be a significant association between pre-test level of knowledge with selected demographical variables.

II. METHODOLOGY

In this present study, pre-experimental one group pretest and post-test research design were used. 54 students were selected from first year B.Sc. Nursing in College of Nursing East Coast Institute of Medical Sciences, Puducherry by convenient sampling technique with the use of Self-structured questionnaire as the tool.

III. RESULTS

The results shows that in socio demographical variables, majority of the subjects 45(83.3%) belong to the age group of 18 years.40(74.1%) belong to female gender, 44(81.5%) belong to Hindu. 35(64.8%) were in urban area. 37(68.5%) were in nuclear family. 24(44.4%) earn about above Rs. 10000. 26(48.1%) had fathers with primary education, 24(44.4%) had mothers with primary education. 22(40.7%) had fathers who were self-employed. 34(63%) had mothers who were unemployed.

Table 1: Frequency and percentage distribution of pretest and post-test level of knowledge regarding health hazards of earphone uses and prevalence of hearing impairment among adolescents.

Level of Knowledge	Pretest		Post Test	
	F	%	F	%
Inadequate knowledge (≤50%)	22	40.74	0	0
Moderately Adequate knowledge (51 – 75%)	10	37.04	5	9.26
Adequate knowledge (>75%)	12	22.22	49	90.74

Mean	6.01	1.54
Standard Deviation	8.70	1.02
Mean Difference score	2.69	
Paired ‘t’ test value & p-value	t=15.522 p=0.0001, S***	

The table 1 shows that among adolescents in pre-test 22(40.74%) had inadequate knowledge, 12(22.22%) had adequate knowledge and 10(37.04%) had moderately adequate knowledge with mean and SD of 6.01±18.70 regarding health hazards of earphone uses and prevalence of hearing impairment after administration of Video Assisted Teaching Programme, whereas in post-test 49(90.74%) had adequate knowledge and 5(9.26%) had moderately adequate knowledge with mean and SD of 1.54±1.02, mean difference score was 2.69 and the calculated 't' value is t=15.522.

Table 2: Frequency and percentage distribution of pretest and post-test level of practice regarding health hazards of earphone uses and prevalence of hearing impairment

Level of Practice	Pretest		Post Test	
	F	%	F	%
Inadequate Practice (<50%)	41	75.93	5	9.26
Moderately Adequate Practice (51 – 75%)	9	16.66	24	44.44
Adequate Practice (>75%)	4	7.41	25	46.30
Mean	4.46		7.00	
Standard Deviation	1.79		1.28	
Mean Difference score	2.53			
Paired 't' test value & p-value	t=8.846 p=0.0001, S***			

The table 2 shows that among adolescents in pre-test 41(75.93%) had inadequate practice, 9(16.66%) had moderately adequate practice and 4(7.41%) had adequate practice with mean and SD of 4.46±1.79 regarding health hazards and earphone uses and prevalence of hearing impairment after administration of Video Assisted Teaching Programme whereas in post-test 25(46.30%) had adequate practice, 24(44.44%) had moderately adequate practice and 5(9.26%) had inadequate practice with mean and SD of 7.00±1.28, mean difference score was 2.53 and the calculated 't' value is t=8.846.

The demographic variables gender **(^{2}=7.041, p=0.030)** and educational level of father **(^{2}=15.155, p=0.019)** had shown statistically significant association with pretest level of knowledge regarding substance regarding health hazards of earphone uses and prevalence of hearingimpairment among adolescents at p<0.05 level.

IV. CONCLUSION

Using earphone has a tendency to distance those around the individual which cause psychological separation from others. Adolescents should be well educated about hazards of dependence on earphones, its psychological impact on individuals and health issues people experienced after using ear phones. The aim of the study was to assess the effectiveness of Video Assisted Teaching on knowledge and practice regarding health hazards of ear phone usage and prevalence of hearing impairment. Most of the adolescent had inadequate knowledge and practice regarding health hazards of ear phone usage before giving Video Assisted Teaching. After the post-test, there was great difference in knowledge and practice regarding health hazards of ear phone usage and prevalence of hearing impairment among first year nursing students and proved that Video Assisted Teaching have great influence on improving knowledge and practice regarding health hazards of ear phone usage and prevalence of hearing impairment.

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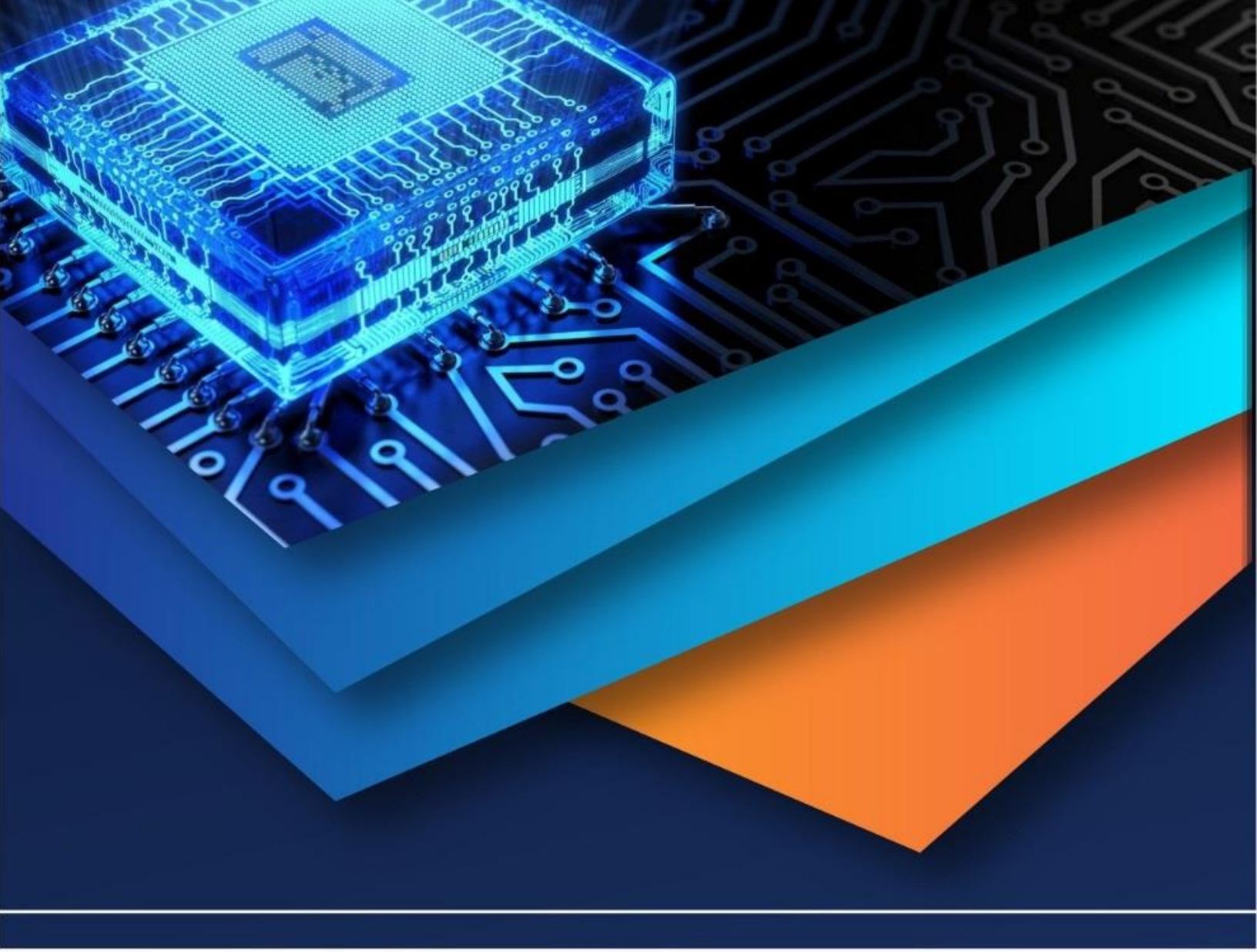
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