"Effect Of Structure Teaching Programme (STP) On Cyberchondria Among Adolescents Studying in Selected Private Schools".

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Abstract—**Background of the study: In Maharashtra, with the increasing penetration of smartphones and internet accessibility, the risk of cyberchondria among school-going adolescents is a growing concern. In India, a study of undergraduate medical students reported a cyberchondria prevalence rate of 37.5%. The condition was more common among males, Cyberchondria, characterized by excessive online health-related searches that increase anxiety, aspects of cyberchondria, with 100% affected by excessiveness and reassurance-seeking behaviours, 92% by distress, and 75% by compulsivity. Notably, 52.04% of participants were severely affected by reassurance- seeking behaviour. students aged 18 to 45 years revealed moderate to high levels of cyberchondria in 74.2% of participants. Among them, 50.4% exhibited moderate levels, while 23.8% exhibited high levels. Additionally, 60% of female students reported moderate cyberchondria compared to 40.7% of male students. Individuals with diagnosed medical conditions and those who self-diagnosed via the internet showed higher prevalence rates ($p<0.01$ and $p<0.001$, respectively). Aim: The aim of the study is to evaluate the effectiveness of a Structured Teaching Programme (STP) on cyberchondria among adolescents studying in selected private schools of Maharashtra,**

Objectives: 1) To assess the knowledge on cyberchondria among adolescents belonged to experimental & control group before intervention.2) To assess the knowledge on cyberchondria among adolescents belonged to experimental & control group after intervention. Methodology: A quantitative approach and true experimental design were used to carry out this study. The adolescents were selected by probability sampling technique. Technique where data was collected by using self-administered questionnaire. The analysis was done by using descriptive and inferential statistics. Results: In the demographic distribution, the highest proportion of adolescents were in the age group of 14–16 years in the experimental group (42%) and 14–16 years in the control group (46%). male constituted the majority in both groups (experimental: 51%; control: 53%). Regarding educational status, 51% in the experimental group held a secondary education, whereas in the control group, 34% held a Higher Secondary. Monthly Family Income highest proportion experimental group (43%) in 20001-30000 and the control group (42%). in 20001-30000 Regarding religion, the highest proportion of adolescents belonged to Hindu religion in both the experimental group (67%) and the control group (53%).

Type of family: Regarding type of family, the highest proportion of adolescents belonged to nuclear families in the experimental group (49%) and the control group (54%). Area of residence: Regarding area of residence, the highest proportion of adolescents were residing in rural areas in the experimental group (53%) and the control group (49%).in urban area A statistically significant improvement was observed between the pre-test and post-test knowledge scores in the experimental group ($t = 26.49$, $p = 0.0001$; $p < 0.05$), that the structure teaching Programme was effective in improving knowledge. Furthermore, no statistically significant association was found between baseline knowledge scores and demographic variables such as gender, income, types of family, Religion. Conclusion: Analysis of data showed that there is significant difference between pretest and posttest knowledge score. Hence, a structure teaching Programme has significantly brought out their improvement in the knowledge on cyberchondria among adolescent studying in selected private schools in both the experimental group (67%) and the control group (53%).
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rural areas in the experimental group (53%) and the control group (49%).in urban area A statistically significant improvement was observed between the pre-test and post-test knowledge.

***Index Terms*—Structure teaching Programme, Cyberchondria, Adolescents, Knowledge score, Selected private schools.**

I. INTRODUCTION

Adolescents are young people. It is transitional stage of physical, physiological and psychological development of adolescent. It starts from puberty to legal adulthood. World health organization defines an adolescent whose age is between 11 to 19. During this developmental stage, adolescents undergo significant physical, emotional, and cognitive changes. They are increasingly influenced by their peers, social media, and the digital world, all of which can contribute to heightened concerns about their health. Today, more adolescents and teens have access to technological mediums than ever before. The large increase in Internet use of 11to19 year old youth throughout the last decade, coupled with the lack of adult online supervision, Cyberchondria refers to excessive, repeated online searches related to personal health information, resulting in distress, anxiety, and even the inability to control their search behavior, and its most salient characteristics involve cognitive and affective components, such as frequent concern regarding health and repetitive or excessive online searching for health-related knowledge[1] Cyberchondria can bring some adverse effects, including increases in disease-related fear, increased health related anxiety, confusion due to conflicting information, disruptions of other activities, and deterioration in the doctor– patient relationship. Previous studies have identified several predictors of cyberchondria indicating that the risk factors for cyberchondria include the ambiguity of health-related details on the Internet, health-related anxiety and obsessive-compulsive symptoms, inhibitory intolerance of uncertainty.[2] Perfectionism trait, and cognitive bias.[3] Regarding the prevalence of cyberchondria among adolescents in India, specific data is limited. However, studies among young adults and related populations provide some insights. The condition was more common among males, individuals with constant internet access, and those using the internet for more than an hour at night. A significant association was found between nighttime internet use and cyberchondria.[4]

II. OBJECTIVES

The objectives of study are:

1. To assess the knowledge on cyberchondria among adolescents belonged to experimental & control group before intervention.
2. To assess the knowledge on cyberchondria among adolescents belonged to experimental & control group after intervention.

III. METHODS

A quantitative approach was adopted, and non-randomized control group design was used for this study. The study was carried out in the selected private schools. The period of data collection was three weeks. The permission was obtained from authorities concerned of selected private schools. The probability sampling technique was used to select 200 adolescents from different regions. Written consent was obtained from the samples and pre-test has been assessed for all the 200 adolescents using demographic and self-administered questionnaire for assessing knowledge. Then the structured teaching Programme was given for experimental groups adolescents to whom the pre-test was conducted. After 7 days, the posttest was taken and the data was analyzed. Statistical Analysis: The data was analyzed by descriptive and inferential statistics. Demographic data was analyzed using frequency and percentage, data from the questionnaire before and after structured teaching Programme administered was also analyzed using frequency, percentage and's' test. The association between knowledge findings and demographic variables was found by using t test and chi-square test.

IV. RESULTS

Table 1: Percentage wise distribution of Adolescents according to their demographic characteristics.

n = 200

Demographic Variables	Experimental Group (n=100)	Control Group (n=100)
Age(yrs)		
11-13 yrs	33(33%)	8(8%)
14-16 yrs	42(42%)	46(46%)
17-19 yrs	25(25%)	46(46%)

Gender		
Male	51(51%)	53(53%)
Female	49(49%)	47(47%)
Educational Status		
Primary	37(37%)	33(33%)
Secondary	51(51%)	33(33%)
Higher Secondary	12(12%)	34(34%)
Monthly Family Income (Rs)		
≤10000 Rs	3(3%)	3(3%)
10001-20000 Rs	32(32%)	34(34%)
20001-30000	43(43%)	42(42%)
≥30001 Rs	22(22%)	21(21%)
Religion		
Hindu	67(67%)	53(53%)
Muslim	8(8%)	11(11%)
Buddhist	9(9%)	19(19%)
Others	16(16%)	17(17%)
Type of family		
Nuclear	49(49%)	54(54%)
Joint	51(51%)	43(43%)
Extended	0(0%)	3(3%)
Area of Residence		
Urban	47(47%)	49(49%)
Rural	53(53%)	51(51%)

Table 2: Significance of difference between knowledge score in pre and posttest of Adolescents of Experimental Group.

n =100

Test	Mean	SD	Mean Difference	t-value	p-value
Pre Test	12.59	2.20	7.64±2.88	26.49	0.0001 S, p<0.05
Post Test	20.23	2.21			

This table shows the comparison of pretest and posttest knowledge scores of Adolescents regarding Cyberchondria from selected private schools of the city. Mean, standard deviation and mean difference values are compared and student's paired 't' test is applied at 5% level of significance. The tabulated value for n=100-1 i.e. 99 degrees of freedom was 1.98. The calculated 't' value i.e. 26.49 are much higher than the tabulated value at % level of significance for overall knowledge score of Adolescents which is statistically acceptable level of significance. Hence it is statistically interpreted that the Structured Teaching Programme on knowledge regarding Cyberchondria among adolescents from selected private schools of the city among was effective. Thus, the H11 is accepted

Table 3: Significance of difference between knowledge score in pre and posttest of Adolescents of Control Group

n =100

Test	Mean	SD	Mean Difference	t-value	p-value
Pre Test	8.94	1.76	0.17±0.53	3.19	0.002 S, p<0.05
Post Test	9.11	1.93			

This table shows the comparison of pretest and posttest knowledge scores of Adolescents regarding Cyberchondria from selected private schools of the city. Mean, standard deviation and mean difference values are compared and student's paired 't' test is applied at 5% level of significance. The tabulated value for n = 100 - 1 i.e. 99 degrees of freedom was 1.98. The calculated 't' value i.e. 3.19 are much higher than the tabulated value at 5% level of significance for overall knowledge score of Adolescents which is statistically acceptable level of significance. Hence it is statistically interpreted that the Structured Teaching Programme on knowledge regarding Cyberchondria among adolescents from selected private schools of the city among was effective. Thus, the H11 is accepted.

Table 4: Significance of mean difference between knowledge score in pre and posttest of Adolescents of Experimental and Control Group

n = 200

Group	Mean	SD	t-value	p-value
Experimental Group	7.64	2.88	25.47	0.0001 S, p<0.05
Control Group	0.17	0.53		

This table shows the comparison of mean difference in pretest and posttest knowledge scores of Adolescents regarding Cyberchondria among adolescents studying in selected private schools of the city in experimental and control group. Mean, standard deviation and mean difference values are compared and student's unpaired 't' test is applied at 5% level of significance. The tabulated value for n=100+100-2 i.e. 198 degrees of freedom was 1.96. The calculated 't' value i.e. 25.47 are much higher than the tabulated value at 5% level of significance for overall knowledge score of Adolescents which is statistically acceptable level of significance. Hence it is statistically interpreted that

Structured Teaching Programme on knowledge regarding Cyberchondria among adolescents studying in selected private schools of the city in experimental group was effective. Thus, the H12 is accepted.

V. DISCUSSION

Assessment and Comparison of Knowledge on Cyberchondria: At baseline, the assessment of knowledge regarding cyberchondria revealed notable differences between the study groups. In the control group, the majority of adolescents demonstrated average knowledge (91%), while 9% possessed poor knowledge, yielding a mean pre-test score of 8.94 ± 1.76 (29.80 ± 5.87%). Conversely, the experimental group demonstrated higher baseline proficiency, with 44% exhibiting average knowledge and 56% showing good knowledge, corresponding to a mean score of 12.59 ± 2.20 (41.96 ± 7.35%). Following the educational intervention, post-test evaluations indicated substantial cognitive gains in the experimental group. Within this cohort, 71% of participants achieved very good knowledge, 27% attained good knowledge, and 2% reached an excellent level of knowledge, with the mean score rising markedly from 12.59 ± 2.20 to 20.23 ± 2.21 (67.43 ± 7.39%). In contrast, the control group exhibited minimal variation; 89% remained at the average knowledge level, 9% had poor knowledge, and only 2% achieved good knowledge, reflecting a marginal score increase from 8.94 ± 1.76 to 9.11 ± 1.93 (30.36 ± 6.44%). Overall, comparative analysis demonstrated that while knowledge levels in the control group remained virtually stagnant, the experimental group experienced a significant upward shift across all score categories. These findings confirm the effectiveness of the structured educational intervention in enhancing adolescents' awareness and knowledge of cyberchondria.

VI. CONCLUSION

From the findings of present study, it was concluded that the pre-intervention demographic variables of Cyberchondria patients in control and experimental group were more or less Similar revealing both the groups had Similar characteristics. Percentage of knowledge and the mean scores of cyberchondria among adolescents studying were Similar in both the groups before intervention. However, after an intervention, the percentage of knowledge and the mean scores of diabetic patients were significantly increased in experimental group whereas it was remained unchanged in control group. There was a significant difference between pre- test and post-test knowledge scores in experimental group. And there was also a significant difference between the post-tests of control and experimental group. Thus, it was concluded that the STP on cyberchondria as a method of self- learning was effective among adolescents studying in selected private schools.

ACKNOWLEDGEMENT

First and foremost, we expressed our deep gratitude and praise to God almighty whose grace and continuous blessings given us strength and courage to complete this study. I owe my sincere thanks to Prof. Prabhudas Raiborde, Principal, Dr. P.D.N.I. Amravati for his constant support and valuable guidance. I express my heartfelt and sincere gratitude to my guide Ms. Mayuri Panchabuddhe Assistant Professor of Mental Health Nursing for his expert guidance, support, sincere interest and constant concern throughout the research study to make the project fruitful and successful learning experience. I express my heartfelt gratitude to our respected Prof. Mahima Alekar HOD, Mental Health Nursing, for her valuable guidance, constant encouragement, and unwavering support throughout this research study. My innovative gratitude and whole-hearted love to my parents dedicated this Book to my Almighty God who is always there in all works of my life. I extend my deepest gratitude to all expert who have contributed their valuable suggestions in Validating the tool. I extend my grateful thanks to all the adolescents for their co-operation by participating in my study. I am grateful to all my classmates for their support and co-operation throughout the study. My innovative gratitude and whole-hearted love to my parents dedicated this Book to my Almighty God who is always there.

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