

Effect of Self Instructional Module vs. Audio CD-ROM Regarding Reproductive Health on Knowledge and Self-Reported Practices among Adolescent Blind Students in Selected Blind Schools: A Report on Pilot Study

Mrs. Vijaya Rahul Kumbhar¹, Dr. Prof. (Mrs.) Nilima Rajan Bhore²

¹Ph.D. Scholar, under Faculty of Nursing/ Associate Professor; Bharati Vidyapeeth (Deemed to be University), Pune, Western Maharashtra, India

²Dean, Faculty of Nursing / Bharati Vidyapeeth (Deemed to be University), Pune,/ Principal, BVDUCON, Sangli/ Research guide Western Maharashtra, India

Corresponding Author: Vijaya Rahul Kumbhar

ABSTRACT

Teenagers from the age group between the 10-19 years need information about their bodies and emerging sexuality to develop a healthy self-image and to provide them with the sex education as they are interested in sexual issues to prevent the further risky behaviour in relation to reproductive life. *Research Methodology:* The present study adopted the quantitative research approach with quasi-experimental research method with one group -pre-test-post-test-design on 24 study samples which were homogenously distributed by using simple random sampling technique to evaluate their knowledge and self-reported practices on intervention of Self-instructional module(12 Samples) and Audio-CD-ROM(12 samples) regarding reproductive health. The tool which was used constructed by the researcher herself i.e. Self-instructional module in Marathi Braille script and audio-CD-ROM as an educational packages and structured knowledge questionnaire and self-reported practices in Marathi Braille script. The reliability of the tool calculated for the difficult index of the listed item questionnaire by using the split half method and r values was 0.84 for structured knowledge questionnaire and self-reported practices items r value is, 0.75 for boys and 0.83 for girls respectively. *Results:* Data were analyzed and calculated by using the frequency, percentage in descriptive data and 'Z'test, Karl's Pearson's correlation coefficient and chi-square test were applied with inferential statistical methods. After the intervention of self-reported practices and Audio-CD- ROM there is increase

in the knowledge score and the self-reported practices score were satisfactory.

Conclusion: The encouraging interpretation of the pilot study findings were drawn by the researcher is blind youths need a help of the health planners, policy makers and NGOs to prepare a scheme for welfare of vulnerable groups on the issues like potential risk due to their sheer ignorance and indulge in sex. So the nurse researcher would like to proceed for the main data collection on the same study to generalise the further findings.

Keywords: self-instructional module, Audio-Cd-ROM, reproductive health, knowledge, self-reported Practices, adolescent blind students.

INTRODUCTION

At the individual level everyone has right to receive a correct information about their phases of life and changes in their own body similarly during the adolescent phase they are keen interested to get an accurate information but they are feeling embarrassing to explore their feelings and clarify their doubts so the researcher concluded that the information booklet, planned health teaching programme can be effective teaching aids etc.^[1] Anaemia is a condition in which the number of red blood cells or the amount of haemoglobin is low. In Maldives there is public health problem especially on the iron and iodine deficiency anaemia, so there is proper diet management

during the growth and development phase of the adolescent's life.^[2] Nurses can play a vital role in preparation the various educational aids like information booklet, pamphlet and planned teaching programme on the reproductive health on menarche, menstruation and sexual health and other concepts.^[3] Some researches shows the findings that female are getting very little information due to lack of accessible resources even they don't access to sanitary pads due to poor financial condition the female has to use the cotton cloths, so the female should be impart with the knowledge through the health education.^[4] Among the adolescent girls the good hygienic practices are mainly influenced by the educational level of the mother. The education level among the adolescent girls also plays a role in understanding the concept of menstruation and can easily prevent the potential risk behaviours on reproductive life. Even at the schools and workplace there is need to install the sanitary vending machine and incinerators to maintain the hygienic practices.^[5] Annie John, Anugraha P. Josh, Anumol et.al(2016) conducted study on the quantitative researcher with descriptive research design to assess the knowledge regarding menstrual hygiene among 100 adolescent girls with convenient sampling technique; majority 81% of the students had moderate knowledge so researcher further concluded that the policy maker must be considered this issue as a priority, and enhance their knowledge through educative programmes, workshops and seminar.^[6] A descriptive exploratory survey conducted on the adolescent blind students and shown the findings that majority of the male were having poor (59.82%), average (38.39%) and good (1.79%) level of knowledge respectively, whereas, in majority of female blind students were poor score(65.18%), 33.04% average and 1.78% as good level of knowledge. Furthermore, the practices on reproductive health also analysed shown the unsatisfactory scores in males (85.71%) and

only 14.29% is having satisfactory self-reported practices. Similarly in females practices unsatisfactory score is more (91.96%) and only 8.04% of them were having satisfactory practices.^[7]

The present study represents the findings to assess the effect of self-instructional module vs. Audio CD-ROM regarding reproductive health on knowledge and self-reported practices among adolescent blind students in selected blind schools.

Objectives studied under this study:

1. To assess the knowledge and self-reported practices regarding Reproductive Health among Adolescent Blind Students before and after implementation of Self - Instructional Module.
2. To assess the knowledge and self-reported practices regarding Reproductive Health among Adolescent Blind Students before and after implementation of Audio-CD-ROM.
3. To compare the effectiveness of Self - Instructional Module vs. Audio- CD-ROM Regarding Reproductive Health among Adolescent Blind Students.
4. To find the correlation between knowledge score with the self reported practices score.
5. To find the association between pre-test knowledge and pre-test self -reported practices score with selected demographic variable i.e. Gender.

The collected data was coded and entered in Microsoft excel sheet in Statistical package SPSS 22 version. Further data were analysed and calculated by using the frequency, percentage in descriptive data and inferential statistical methods.

HYPOTHESIS TESTED UNDER THIS STUDY WERE

H01: There is no difference in pre-test and post test knowledge and self- reported practice scores of adolescent blind students regarding reproductive health after

administration of self instructional module and Audio-CD-ROM at $p < 0.05$ level of significance.

H1: There is difference in pre-test and post-test knowledge and self-reported practices score of adolescent blind students regarding reproductive health after administration of self-instructional module and Audio-CD-ROM at $p < 0.05$ level of significance.

H02: There is no difference in post test knowledge and self-reported practices score of adolescent blind students regarding reproductive health after administration of self-instructional module and audio-CD-ROM at $p < 0.05$ level of significance.

H2: There is difference in post test knowledge and self-reported practices score of adolescent blind students regarding reproductive health after administration of self-instructional module and audio-CD-ROM at $p < 0.05$ level of significance.

H03: There is no correlation between pre-test knowledge score with pre-test self-reported practices score regarding reproductive health among adolescents' blind students before administration self-instructional module and audio-CD-ROM group at $p < 0.00001$ level of significance.

H3: There is correlation between the pre-test knowledge scores with pre-test self-reported practices score regarding reproductive health among adolescent blind students before administration of self-instructional module and audio-CD-ROM group at $p < 0.00001$ the level of significance.

H04: There is no association between the pre-test knowledge scores and pre-test self-reported practices scores with selected demographic variables i.e. Gender- Male and female at $p < 0.05$ level of significance.

H4: There is no association between the pre-test knowledge scores and pre-test self-reported practices scores with selected demographic variables i.e. Gender- Male and female at $p < 0.05$ level of significance.

Research methodology: Quantitative research approach with quasi-experimental one group -pre-test-post-test-design was used.

Research setting: Blind Schools from the districts Sholapur district (2).

Variables under study:

Independent Variables:

Self-Instructional Module

Audio CD-ROM

Dependent Variables:

Knowledge

self-reported practices

Population (target population): adolescents from Western Maharashtra, India.

Sample (accessible population): In this study the adolescent Blind students from selected Blind Schools were selected.

Sampling criteria: Inclusion Criteria:

Adolescent Blind in the age group of 13-18 years.

Those who can read Marathi Braille script.

Those who can hear Audio-CD ROM

Exclusion criteria:

Those who are sick at the day of data collection.

Those who are medically declared deaf.

Those who are mentally challenged.

SAMPLE SIZE: Calculation of Sample size- 24

SAMPLING METHOD: Researcher had selected the Multiphase sampling technique -non-probability purposive sampling technique.

METHODLOGIES AND TECHNIQUE TO BE USED

Research Tool:

Tool is prepared in three sections

A- Demographic Proforma in braille script

B- Structured knowledge questionnaire in braille script

C – Structured three point likert scale to assess the self-reported practices on reproductive health separate for girls (Ca) and boys (Cb) in braille script.

Description of the treatment:

Self-Instructional Module in Marathi Braille script

Audio CD-ROM is prepared in Marathi language.

The content of audio CD-ROM and self-instructional module is same.

Items on Knowledge questionnaire	Items on self -reported practices questionnaire
Introduction	BOYS
Definition	Perineal hygiene
Anatomy	Care of underwear
Physical changes	Health seeking behavior during reproductive tract infections
Psychological changes	
Emotional changes	GIRLS
Sex drive	Perineal hygiene
Rights	Menstrual hygiene-
Menstrual cycle	Care of underwear
Nightfall	Health seeking behavior during reproductive tract infections
Hygiene	
Masturbation	
Reproductive tract infection	
Diet during adolescent	

Analysis and discussion:

The analysis is described in following sections

Section-I –Demographic characteristics of samples of SIM group and Audio CD-ROM group

Section-II-Description of knowledge scores of SIM group and Audio CD-ROM group

Section-III-Comparison of knowledge scores of SIM group and Audio-CD group

Section-IV - Description of self-reported practice scores of SIM group and Audio CD-ROM group

Section-V – Comparison of self-reported practice scores of SIM group and Audio-Cd group

Section-VI– Description of correlation between the knowledge and self -reported practice scores

Section VII- Description of association between the pretest knowledge and practice scores with selected demographic variable i.e. Gender

Section-I –Demographic characteristics of samples of SIM group and Audio CD-ROM group

Table No-1: Distribution of frequency and percentage of sample characteristics among the SIM and Audio CD group. n=24

Demographic variables		SIM group n=12		Audio-Cd ROM group n=12	
		Frequency	(%)	Frequency	(%)
Age in years	13	0	0	1	8.33
	14	3	25	2	16.67
	15	2	16.67	2	16.67
	16	2	16.67	1	8.33
	17	3	25	4	33.33
	18	2	16.66	2	16.67
Gender	F	6	50	6	50
	M	6	50	6	50
Previous information regarding reproductive health(y/n)	NO	7	58.33	4	33.33
	YES	5	41.67	8	66.67
If yes, Source of information	Friend	2	40	4	50
	Mother	2	40	2	25
	Teacher	1	20	2	25
With whom do you discuss queries regarding reproductive health?	Friend	2	16.67	4	33.33
	Mother	3	25	2	16.67
	Teacher	1	8.33	2	16.67
	No one	6	50	4	33.33

The data given in the table 1 shows that in the SIM group majority of samples were in the age of 17 years , samples were from male 6(50%) and female gender 6(50%) respectively, while 7(58.33%) samples were

not having previous information as 2 (40%) and 2 (40%) of samples had friend and mother as a source of information and also 6 (50%) of samples are not discussing their queries regarding reproductive health, whereas in the audio CD-ROM group majority 4(33.33%) of samples were in the

age of 17 years, samples were from male 6(50%) and female gender 6(50%) respectively, while 8(66.67%) were having the previous information where in majority 4 (33.33%) of samples had friend as a source of information with whom they were

discussing their queries regarding reproductive health but 4(33.33%) of samples were not discussing their queries regarding reproductive health.

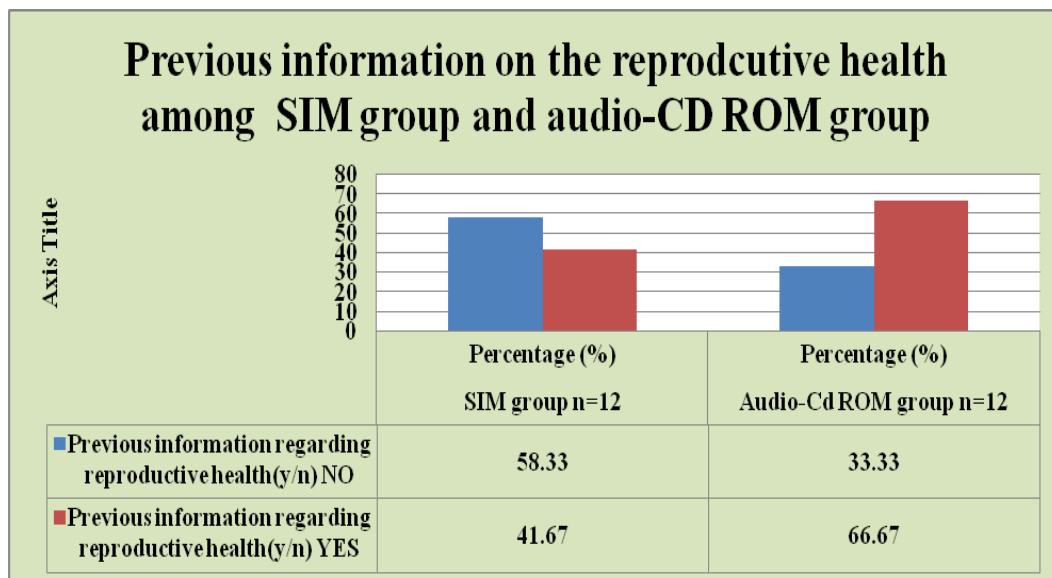


Fig. No. 1 represent the bar diagram on previous information on reproductive health among adolescent blind student

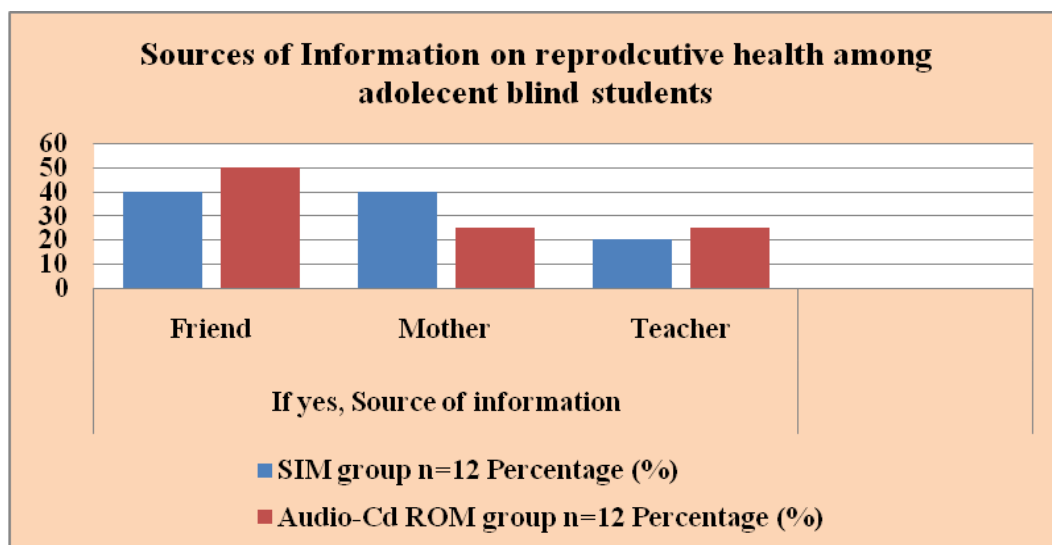


Fig. No. 2 represent the bar diagram on sources of information on reproductive health among adolescent blind student.

Section-II - Description of knowledge scores of SIM group and Audio CD-ROM group

In this section the knowledge scores of pre-test and post- test are compared after the

administration of the self-instructional module and Audio-CD ROM to the adolescent blind students.

The findings are represented below.

Table No.2 Pre-test and posttest overall level of knowledge score for SIM group and Audio-CD ROM among the adolescent blind students on reproductive health. n=12

Level of knowledge	SIM group				Audio-cd ROM			
	Pre-test score		Post test score		Pre-test score		Post test score	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Poor(1-11)	11	91.67	1	8.33	9	75	4	33.33
< 50 %								
Average(12-18)	1	8.33	5	41.67	3	25	6	50
51-75%								
Good(19-24)	0	0	6	50	0	0	2	16.67
76-100%								

The above table shows that in pre-test majority 11(91.67%) of samples having poor knowledge and after administration of the self-instructional module, majority 6(50%) of samples having good knowledge whereas before the administration of Audio-

CD ROM in the pre-test majority 9(75%) of the samples were having poor knowledge and after administration the finding was majority of the samples were average 6(50%) score.

Table no.3 Determination of overall knowledge score of SIM group and Audio-CD group (n=12)

Knowledge	SIM group					
	Mean	SD	Stand. Error mean	t-cal	df	P value
Pre-test	9.16666	1.96402	.68595	9.316	9	.000
Post Test	14.0000	2.98142	.94281			

The above table shows that there is highly significant difference between the mean

score of pre-test (9.1666) and mean score of post -test (14.00) of SIM group.

Table no.4. Determination of overall knowledge score of Audio-CD group n=12

Knowledge	Audio-CD group					
	Mean	SD	Stand. Error mean	t-cal	df	P value
Pre-test	9.3000	1.41814	.44845	7.125	9	.000
Post Test	13.1000	1.96921	.62272			

The above table shows that there is highly significant difference between the mean score of pre-test (9.30) and mean score of post -test (13.10) of Audio-Cd ROM group.

Section-IV - Assessment and description of self-reported practice scores of SIM group and Audio CD-ROM group

In this section the self-reported practice scores of pre-test and post- test are compared after the administration of the self-instructional module and Audio-CD ROM to the adolescent blind(girls and Boys). The findings are represented below.

Table No.5 Pre-test and post-test overall level of self-reported practice scores of SIM group and Audio-CD ROM among the adolescent blind girls on reproductive health. n=12

Level of practices	SIM group				Audio-CD ROM			
	Pre-test score		Post test score		Pre-test score		Post test score	
	Freq	%	Freq	%	Freq	%	Freq	%
Poor (0-15)	5	83.33	3	50	6	100	4	66.67
< 50 %								
Average (16-25)	1	16.67	3	50	0	0	2	33.33
51-75%								
Good (26-34)	0	0	0	0	0	0	0	0
76-100%								

The above table shows that in pre-test majority 15(83.33%) of samples were having poor knowledge and after administration of the self-instructional module, samples having poor 3(50%) and 3(50%) average knowledge respectively,

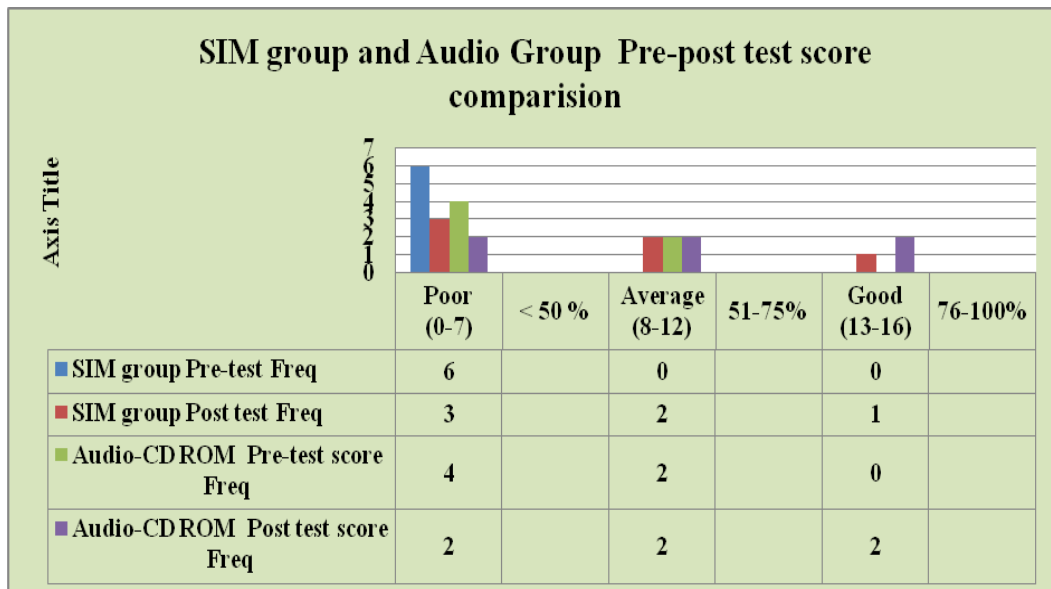
whereas before the administration of Audio-CD ROM in the pre-test majority 6(100%) of the samples were having poor knowledge and after administration the finding was majority of the samples were average 4(66.67%) score.

Table No.6:Pre-test and post-test overall level of self-reported practice scores of SIM group and Audio-CD ROM among the adolescent blind boys on reproductive health. n=24

Level of Practices	SIM group				Audio-CD ROM			
	Pre-test score		Post test score		Pre-test score		Post test score	
	Freq	%	Freq	%	Freq	%	Freq	%
Poor (0-7) < 50 %	6	100	3	50	4	66.67	2	33.33
Average (8-12) 51-75%	0	0	2	33.33	2	33.33	2	33.33
Good (13-16) 76-100%	0	0	1	16.67	0	0	2	33.34

The above table shows that in pre-test majority 6(100%) of samples were having poor knowledge and after administration of the self-instructional module, samples having poor 3(50%) and 2(33.33%) average knowledge and 1 (16.67%) respectively,

whereas before the administration of Audio-CD ROM in the pre-test and post-test majority 2(33.33%) of the samples were having poor knowledge and average 2(33.33%) and good 2(33.34%)score.



Section-VI – Description of correlation between the knowledge and self -reported practice scores

Table No-7: correlation between the knowledge and self -reported practice scores of pre-test and post-test n=12

Items	Test-	r	P(A.001)
Total knowledge scores in SIM group	Pre-test post -test	.865	.001
Total Self -reported practices scores in SIM group	Pre-test Post-test	.705	.001
Total Knowledge score in Audio group	Pre-test Post-test	.545	.103
Total Self -reported practices in Audio group	Pre-test Post-test	.564	.001

The above table shows that there is significant correlation between the knowledge scores and self-reported practice score in the samples received the information through SIM in pre-post programme as the $p < 0.001$, whereas there is no significant correlation between the knowledge scores and self-reported practice score in the samples received the information through audio-Cd ROM in pre-post programme as the $p < 0.001$. so the conclude with the findings that the adolescent blind students who used the audio Cd need to listen repeatedly as this is new area of their knowledge and practice. Section VII- Description of association between the pretest knowledge and pre-test self-reported practice scores with selected demographic variable i.e. Gender.

Table no-8: Association between the pretest knowledge scores with selected demographic variable. i.e. Gender

SR. NO.	DEMOGRAPHIC VARIABLE	Fisher's Exact Test Value	p VALUE	REMARK
01	Gender- Male	1.245	0.768	Not significant
02	Gender- Female	6.885	0.257	Not significant

The above table shows that there is no significant association between gender and pre-test knowledge score as calculated 'p' value is more than tabulated 'p' (0.05) value. Thus it shows that there is no significant association between pre-test knowledge score and selected demographic variable.

Table no-9: Association between the pretest self -reported practices scores with selected demographic variable. i.e. Gender n=24

SR. NO.	DEMOGRAPHIC VARIABLE	Fisher's exact test value	p VALUE	REMARK
01	Gender- Male	1.967	0.943	Not significant
02	Gender- Female	3.267	0.161	Not significant

The above table shows that there is no significant association between gender and pre-test self -reported practices score as calculated 'p' value is more than tabulated

'p' (0.05) value. Thus it shows that there is no significant association between pre-test knowledge score and selected demographic variable

Conclusion of pilot study:

Pilot study was conducted from the 10th January 2018-24th January 2018 i.e. 15 days interval between the pre-test and post-test was kept as these group need the time more than sighted students to go through the Braille material and listening to the audio Cd ROM at Blind School, Solapur. The subjects for pilot study possessed the same characteristics as per the sampling criteria. 24 samples were recruited from that 12 were taken for SIM and 12 for Audio. None of the interviewed adolescents reported any sexual experience, but they all manifested the desire and interest in talking about sexuality, their doubts, fears and desires. The findings of the pilot study revealed that the tool is reliable and it is feasible to conduct the final study.

Limitation of the study:

Availability of the teachers from blind school was taken into consideration as they need to help the investigator in evaluating the Braille question and answer paper.

Conflict of interest: Nil

Funding agency: Self- Funding Research project

Ethical consideration: The project is approved by the Institutional Ethical committee of Bharati Vidyapeeth Deemed University College of Nursing, Pune. Permission was obtained from the principal of the school. The participants were informed about the purpose of the study and consent was taken from the participants.

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