



# “A QUASI EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME (STP) ON KNOWLEDGE AND EXPRESSED PRACTICES REGARDING MENSTRUAL HYGIENE AMONG ADOLESCENT GIRLS IN SELECTED SCHOOLS OF SHIMLA H.P. 2019”

<sup>1</sup> Ms. Netali, <sup>2</sup> Dr (Mrs) Krishna Chauhan, <sup>3</sup> Ms. Ritika Soni, <sup>4</sup> Ms. Monika Kanwar

<sup>1</sup> Nursing Tutor <sup>2</sup> Professor cum Principal, <sup>3</sup> Associate Professor, <sup>4</sup> Nursing Tutor

Obstetrics and Gynaecological Nursing

Shimla Nursing College, Annandale Shimla Himachal Pradesh, India

## Abstract

### Background:

**Aim:** The aims of study was to assess the Knowledge and Expressed Practices regarding menstrual hygiene among adolescent girls of government schools of Shimla.

**Methodology:** Quantitative research approach with Non –Randomized pre -test post-test control group design was used.

**Sample and sampling technique:** This study included 100 samples i.e. 50 for experimental group and 50 for control group of adolescent girls and the sample were selected by using Non-Probability Convenient sampling technique

**Tools and technique:** The tools used for data collection were selected by using selected demographic variables, structured knowledge questionnaire (36 questions) for assess the knowledge and check list (30 statements) for assess the expressed practices.

**Results:** In analysis both descriptive and inferential statistical methods were used. Before the administration of Structured Teaching Programme regarding menstrual hygiene in experimental group with relation to knowledge majority of adolescent girls 25 (50%) had moderate knowledge, 24 (48 %) had inadequate knowledge, and 1 (2%) had adequate knowledge and with relation to expressed practices 23 (46 %) had poor expressed practices, 27 (54 %) had average expressed practices and 0 (0%) had good expressed practices. After administration of Structured Teaching Programme regarding menstrual hygiene majority of adolescent girls 34(68%) were having adequate knowledge, 16(32%) were having moderate knowledge and 0 (0%) was

having inadequate knowledge and 36(72%) were having good practices, 14(28%) were having average practices and 0 (0%) was having no poor practices. Hence the structured teaching programme regarding menstrual hygiene was effective.

**Conclusion:** From the findings of the study following conclusion were drawn that the majority of adolescent girls exhibited adequate Knowledge scores and good Expressed Practice scores in post-test in experimental group. This showed that structured teaching programme was effective to increase the Knowledge and Expressed Practices regarding menstrual hygiene.

**Key words:** Assess, Effectiveness, Structured Teaching Programme (STP), Menstrual hygiene, Adolescent girls, Knowledge and Expressed Practices.

### Introduction:

Adolescence in girls has been recognized as a turbulent period which signifies the transition from girlhood to womanhood and considered as a land mark of female puberty. This transitional period is marked with the onset of "MENARCHE" which is generally accepted by adolescent girls, as a sign of maturity. <sup>1</sup> Onset of menstruation is one of the most important changes occurring among the girls during the adolescence. The first menstruation (menarche) occurs between 11-15 years with a mean age of 13 years. According to WHO, Adolescence as the age period between 10 to 19 years of age for both the gender. <sup>2</sup>

In existing Indian culture\milieu, there are several traditions, myths, misconceptions, mystery and superstition prevailing about menstruation. The more mention of the topic has been a taboo in the past and even to this date the cultural & social influences appear to be a major hurdle for advancement of the knowledge of the subject. <sup>3</sup>

Globally about 52% of the female population, out of which 26% population is of reproductive age. In lives of girls and women, there is that adolescence stage marked by the onset of menarche, and from this stage they bleed every month between two to seven days. Menstruation hygiene continues to be major problem in India. <sup>4</sup> The adolescent period is the backbone of the future India. Healthy adolescents are the healthy generations of our country. As an old quote states "if a man is healthy, the family is healthy; if a woman is healthy, the generation is healthy". With this point of view the present study researcher focused on promoting a healthy lifestyle for the adolescent girls. Many of the health aspects can be conversed liberally but the menstrual issues are often concealed. This served as an aspiration for the researcher to select this study. <sup>2</sup>

Poor menstrual hygiene can negatively affect's the females health, when women and girls cannot afford the sanitary napkins due to poor economic status, they may use unclean cloth or other material such as tissue paper. So, this may cause reproductive tract infection, such as bacterial vaginosis. There are other menstrual disorders and menstrual –related symptoms that affect a woman's health and she is not able to do her daily activities. Moreover, anemia, a major contributor to maternal morbidity, is linked with heavy bleeding, or painful menses, girls miss school due to this problem. <sup>5</sup>

In India, lack of awareness regarding menstrual hygiene is a major problem. Indian Council for Medical Research's 2011-2012 report stated that only 38 percent menstruating girls in India tell to their mothers about menstruation. In 2015 a survey conducted by ministry of Education reported that 63% schools in villages, teachers have not discussed or teach menstruation and necessity of menstrual hygiene with girls. <sup>6</sup>

Menstruation is thus considered to be a matter of embarrassment in most cultures. After reviewing many literature and keeping in view about taboos regarding menstrual hygiene it was therefore decided to conduct a study to assess the level of knowledge and Expressed Practices regarding menstrual hygiene among adolescent girls. Because there was urgent need to aware the adolescent girls regarding importance of menstrual hygiene.

## 2. METHODS AND MATERIALS:

**2.1 Research Approach Design:** Quantitative research approach was used. Research design used was Quasi Experimental with Non –Randomized pre -test post-test control group design.

**2.2 Setting:** the study was conducted at 4 Govt Schools of Shimla.

### For pilot study:

- Govt Sen. Sec. School Chotta Shimla at kasumpti, Shimla (Experimental group)
- Central School for Tibetan Chotta Shimla (Control group)

### For main study:

- Govt. Girls Sen .Sec. School Portmore, Shimla-East (Experimental group)
- Govt. Girls Sen .Sec. School Lakkar bazaar, Shimla (Control group)

**2.3 Population:** In the present study:

**Population:** Adolescent girls

**Target Population:** Adolscent girls of selected schools of Shimla, H.P. i.e. Govt. Girls Sen .Sec. School Portmore, Shimla-East, and Govt. Girls Sen .Sec. lakkar bazar, Shimla, Govt Sen. Sec. School Chotta Shimla at Kasumpti, Shimla, and Central School for Tibetan Chotta Shimla.

**Accessible Population:** Students of 9<sup>TH</sup> and 10<sup>TH</sup> standard of selected schools of Shimla.

**2.4 Sample and Sampling Technique:** In present study Non-Probability Convenient sampling technique were used to select 100 adolescent girls i.e. 50 for experimental group and 50 for control group.

### 2.5. Data collection tools and Technique:

Based on objectives and conceptual framework of the study, the tool developed was divided into four parts:

**Part I :** This part was deals with demographic variables (Age, Education status, religious status ,Type of family, Residential area, Educational status of mother, Occupational status of father and mother, Family monthly income, no of elder sister , age at first menstruation, reaction to first menstruation, duration of bleeding during menstruation, monthly menstrual cycle, any prior information, source of information).

**Part II:** This part was deals with Structured Knowledge questionnaire. Total 36 questions were formulated. Test questions was prepared in the form of multiple choice Questionnaires.

**Part III:** This part deals with check list to assess the Expressed Practices regarding menstrual hygiene. Total 30 statements was prepared regarding menstrual hygiene and Expressed Practices.

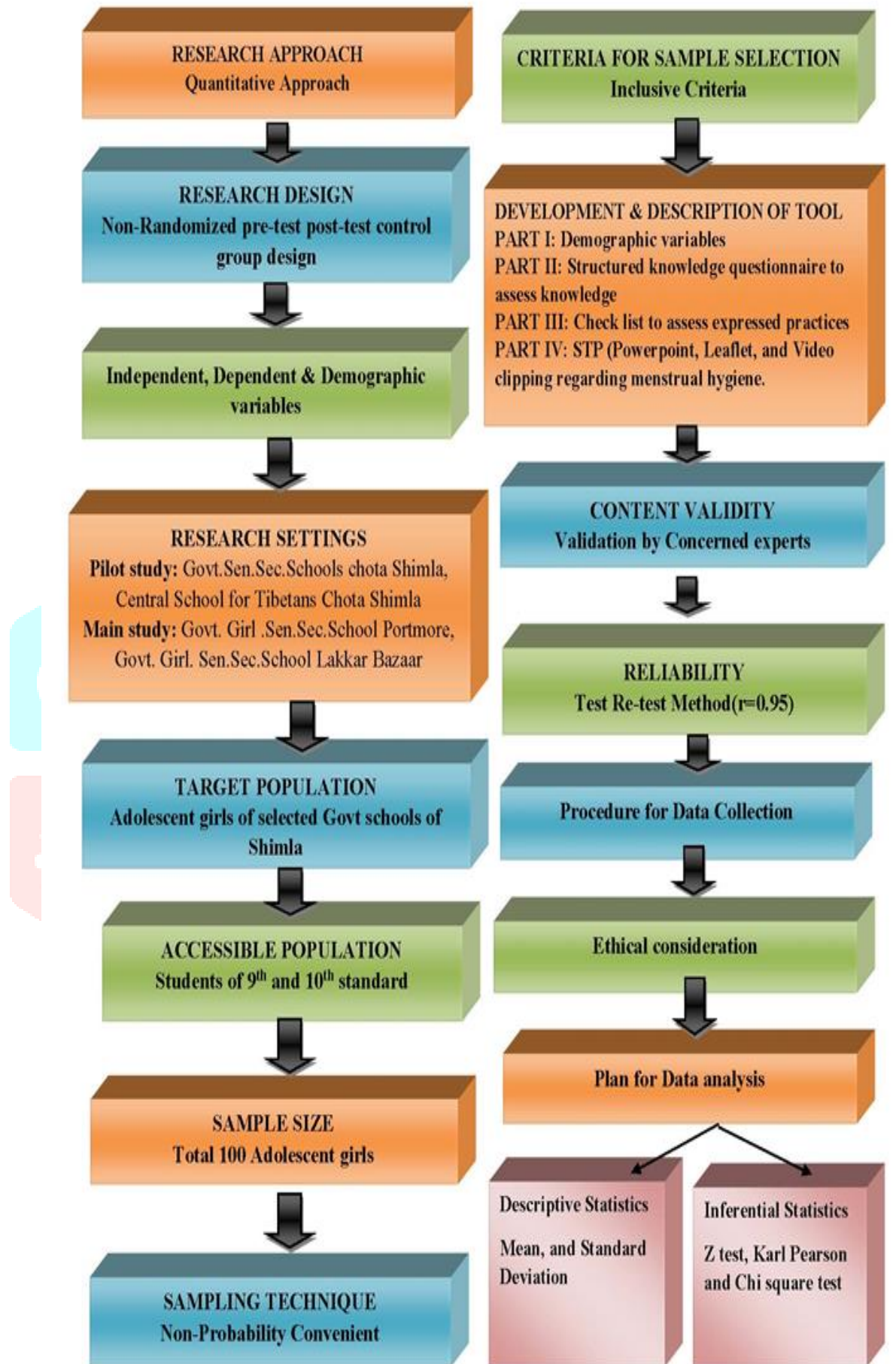
**Part IV:** After an extensive review of literature and discussion with Guide, & experts, the intervention tool was prepared. It was systematically developed instructional programme using instructional aids (Power-Point presentation, Leaflets and Video clipping) designed to provide information regarding Menstrual hygiene. The teaching program was developed by the researcher.

All the tools were incorporated in the study by establishing the content validity by 13 experts which include Medical Officer-2, Professor -1, Associate Professor-1, Assistant Professor-4, Lecturer -2, Clinical instructor -1, Nursing officer -Experts were requested to judge the items for their clarity ,relevance, meaningfulness and content.

### 2.5 Ethical consideration:

- Written Permission was obtained from the principal, research & ethical committee of Shimla Nursing College and the principals of selected Schools of Shimla. Written/Verbal consent was taken from the adolescent girls. Assurance, purpose of study was given to the adolescent girls regarding the confidentiality of the data collected.

## DEPICTS SCHEMATIC REPRESENTATION OF RESEARCH STUDY



**3 Result:****Section A: Description of demographic variables among the adolescent girls****Table -1: Description of demographic variables among the adolescent girls in experimental and control group N=100**

S.No	Demographic Variables	Experimental Group (N= 50 )		Control Group (N=50)	
		(f)	%age	(f)	%age
1	<b>Age in years</b>				
	11-12 years	0	0%	0	0%
	13-14 years	16	32%	16	32%
	15-16 years	34	68%	34	68%
2	<b>Educational status</b>				
	9th standard	25	50%	25	50%
	10th standard	25	50%	25	50%
3	<b>Religion</b>				
	Hindu	49	98%	48	96%
	Muslim	0	0%	0	0%
	Christian	0	0%	0	0%
	Sikh	0	0%	0	0%
	Other	1	2%	2	4%
4.	<b>Types of family</b>				
	Nuclear family	25	50%	18	36%
	Joint family	25	50%	31	62%
	Extended family	0	0%	1	2%
5.	<b>5) Residential area</b>				
	Rural	16	32%	24	48%
	Urban	29	58%	25	50%
	Semi-urban	5	10%	1	2%
6.	<b>Education status of mother</b>				
	No formal education	4	8%	2	4%
	Primary education	15	30%	28	56%
	Middle education	4	8%	2	4%
	Higher Secondary education	12	24%	3	6%
	Senior Secondary education	8	16%	1	2%
	Graduated	6	12%	13	26%
	Post- graduated	1	2%	1	2%
Doctorate	0	0%	0	0%	
7	<b>Occupation of mother</b>				
	Housewife	36	72%	25	50%
	Government employee	4	8%	11	22%
	Private employee	6	12%	3	6%
	Business women	3	6%	10	20%
	Agriculturist	1	2%	0	0%
	Others	0	0%	1	2%
8.	<b>Occupation of father</b>				
	Unemployed	2	4%	2	4%
	Government employee	22	44%	31	62%
	Private employee	19	38%	17	34%
	Own business	0	0%	0	0%
	Farmer	6	12%	0	0%
	Others	1	2%	0	0%
9.	<b>Family monthly income</b>				
	Less than 5000	2	4%	0	0%
	5000-10000	7	14%	2	4%
	10001-15000	9	18%	4	8%
	More than 15000	32	64%	44	88%
10.	<b>Number of elder sister</b>				
	None	16	32%	3	6%
	One	14	28%	20	40%
	Two	16	32%	26	52%
	Three	4	8%	1	2%
	More than three	0	0%	0	0%

11.	<b>Age at first menstruation</b>				
	9-11 years	0	0%	0	0%
	12-14 years	44	88%	49	98%
	15-17 years	6	12%	1	2%
12.	<b>Reaction to first menstruation</b>				
	Fear	18	36%	16	32%
	Embarrassed	19	38%	27	54%
	Anxious	13	26%	7	14%
13.	<b>Duration of bleeding during Menstruation</b>				
	Less than 3 days	10	20%	2	4%
	3-7days	33	66%	47	94%
	More than 7 days	7	14%	1	2%
14.	<b>Monthly menstrual cycle</b>				
	Regular	35	70%	47	94%
	Irregular	15	30%	3	6%
15.	<b>Any prior knowledge regarding menstrual hygiene</b>				
	Yes	50	100%	50	100%
	No	0	0%	0	0%
16.	<b>If yes, Source of information</b>				
	Family members	30	60%	40	80%
	Friends	6	12%	0	0%
	Health workers	5	10%	8	16%
	Mass media	5	10%	1	2%
	Teacher	2	4%	1	2%
	Books	1	2%	0	0%
	Others	1	1%	0	0%

Table-1 showed the frequency and percentage distribution of demographic variables with respect to Age in years, Education status, religious status, Type of family, Residential area, Educational status of mother, Occupational status of father and mother, Family monthly income, no of elder sister, age at first menstruation, reaction to 1st menstruation, duration of menstruation during menstruation, monthly menstrual cycle, any prior information, source of information about menstrual hygiene.

### Section B: Findings related to assessment of the pre-test and post- test knowledge score and expressed practices score regarding menstrual hygiene in experimental group and control group

**Table-2: Frequency and percentage distribution of pre-test and post-test Knowledge scores in Experimental Group and control group N=100**

Level of Knowledge	Pre test				Post –test			
	Experimental group		Control group		Experimental group		Control group	
	(f)	(%age)	(f)	(%age)	(f)	(%age)	(f)	(%age)
<b>Inadequate Knowledge</b>	24	48%	12	24%	-	-	5	10%
<b>Moderate Knowledge</b>	25	50%	38	76%	1	32%	45	90%
<b>Adequate Knowledge</b>	1	2%	-	-	3	68%	-	-

**Maximum Score =36**

**Minimum score =0**

Table -2 showed frequency and percentage distribution of Pre-test and post-test knowledge score among adolescent girls. Before administration of structured teaching programme in experimental group 50% had moderate knowledge and in control group 76% had moderate knowledge. But after administration of structured teaching programme in experimental group 68% had adequate knowledge and in control group 90% had moderate knowledge.

**Table -3: Frequency and percentage distribution of pre-test and post-test expressed practices scores in Experimental Group and control group N=100**

Level of Expressed practices	Pre test				Post –test			
	Experimental group		Control group		Experimental group		Control group	
	(f)	(%age)	(f)	(%age)	(f)	(%age)	(f)	(%age)
Poor Practices	23	46%	13	26%	0	0%	9	18%
Average Practices	27	54%	37	74%	14	28%	41	82%
Good Practices	-	-	-	-	36	72%	-	-

**Maximum Score =30****Minimum score =0**

Table -3 showed frequency and percentage distribution of Pre-test and post-test Expressed practices score among adolescent girls. Before administration of structured teaching programme in experimental group 54% had average practices and in control group 74% had average practices. But after administration of structured teaching programme in experimental group 72% had good practices and in control group 82% had average practices.

**Section C: Findings related to comparison of pre-test and post-test knowledge and expressed practices score regarding menstrual hygiene among adolescent girls of experimental and control group to determine effectiveness of structured teaching programme (STP).**

**Table 4: Comparison of Pre-test and post- test Knowledge scores in experimental and control group.****N=100**

Group	Pre-test		Post-test		Z-test	
	Mean	S.D	Mean	S.D	Z Value	P Value
Experimental Group (N=50)	13.50	4.311	25.98	2.284	18.08	<0.00001*
Control Group (N=50)	13.56	4.109	13.66	1.673	0.279	.780245 <sup>NS</sup>

\* Significant, <sup>NS</sup>- Non –Significant

\*Significant at 0.005 level.

Table 4: showed the Comparison of Pre-test and Post- test Knowledge score in Experimental Group and Control Group to determine the effectiveness of Structured Teaching Programme. In Experimental group, Mean post-test knowledge score, 25.98 was significantly higher than the mean pre-test knowledge score 13.50 as evident from 'Z' value 18.08 at 0.005 level of significance. In control group Mean post-test knowledge score, 13.66 was significantly higher than the mean pre-test knowledge score 13.56 as evident from 'Z' value 0.279 at 0.005 level of significance.

**Table 5: Comparison of Pre-test and post- test Expressed Practice scores in experimental and control group.****N=100**

Group	Pre-test		Post-test		Z-test	
	Mean	S.D	Mean	S.D	Z Value	P Value
Experimental Group (N=50)	12.34	4.109	22.28	2.572	14.49	<0.00001*
Control Group (N=50)	11.66	1.698	11.68	1.558	0.061	.95112 <sup>NS</sup>

\* Significant, <sup>NS</sup>- Non –Significant

\*Significant at 0.005 level

Table 5: showed the Comparison of Pre-test and Post- test expressed practices score in Experimental Group and Control Group to determine the effectiveness of Structured Teaching Programme In Experimental group, Mean post-test expressed practices score 22.28 was significantly higher than the mean pre-test expressed practices score 12.34 as evident from 'z' value 14.49 at 0.005 level of significance. In control group, Mean post-test expressed practices score 11.68 was significantly higher than the mean pre-test expressed practices score 11.66 as evident from 'z' value 0.061 at 0.005 level of significance.

## Section D: findings related to correlation between knowledge and expressed practice regarding menstrual hygiene among adolescent girls in experimental and control group.

**Table 6: Correlation between Knowledge and Expressed Practices among adolescent girls in experimental and control group.**

N= 100

S.No	Correlation	Experimental Group		Control Group	
		r value	P value	r value	P value
1	Pre-test Knowledge and post- test Knowledge	0.3189	0.23994*	0.948	<.00001*
2	Pre –test Knowledge and pre-test Expressed Practices	0.2714	.056585 <sup>NS</sup>	0.529	.000078*
3	Pre-test Knowledge and post- test Expressed Practices	0.2687	.059187 <sup>NS</sup>	0.531	.000073*
4	Post-test Knowledge and pre- test Expressed Practices	0.3536	.011767*	0.518	.000117*
5	Post-test Expressed Practices and post- test Knowledge	0.1832	.202853 <sup>NS</sup>	0.528	.000081*
6	Pre-test Expressed Practices and post-test Expressed Practices	0.5354	.00062*	0.977	<.00001*

\* Significant, <sup>NS</sup>- Non –Significant

\*Significant at 0.005

level

Table 6: Showed that correlation between knowledge and expressed practices among adolescent girls in experimental group. In experimental group, Significant correlation was found between pre-test knowledge score and post –test knowledge (0.3189), Post–test knowledge and pre- test expressed practices (0.3536) .and Pre –test expressed and post-test practices (0.5354) at 0.05 level of significance. In control group, Significant correlation was found between pre –test knowledge and post-test knowledge (0.948) pre-test knowledge and Pre-test expressed practices (0.529), Pre- test knowledge and Pre – test expressed practices (0.529).Pre-test knowledge and Post -test expressed practices (0.531), Post- test Knowledge and Post-test expressed practices (0.528) and pre –test expressed practices and post –test expressed practices (0.977) at 0.05 level of significance.

## Section E: Findings related to association between knowledge and expressed practices regarding menstrual hygiene among adolescent girls with demographical variables in experimental and control group

In experimental group, the Pre-test Knowledge scores of adolescent girls regarding menstrual hygiene was significantly associated with Duration of bleeding during Menstruation ( $\chi^2 = 11.184$ , df =4) at p value <0.005. The Post -test knowledge score of adolescent girls regarding menstrual hygiene was significantly associated with Duration of bleeding during Menstruation ( $\chi^2 = 8.439$ , df =2) at p value <0.005. Pre-test Expressed Practices scores of adolescent girls regarding menstrual hygiene was significantly associated with education status of mother ( $\chi^2 = 18.867$ , df =6) and if yes source of information ( $\chi^2 = 14.573$ , df=6) at p value <0.005. Post-test Expressed Practices scores of adolescent girls regarding menstrual hygiene was not significantly associated with selected demographic variables. In control group, Pre-test Knowledge scores of adolescent girls regarding menstrual hygiene was significantly associated with family monthly income, ( $\chi^2 = 7.262$ , df=2) at p value <0.005. Post-test Knowledge scores of adolescent girls regarding menstrual hygiene was significantly associated with family monthly income, ( $\chi^2 = 7.82$ , df=2) at p value <0.005. Pre-test Expressed



Practices scores of adolescent girls regarding menstrual hygiene was not significantly associated with selected demographic variables. Post-test Expressed Practices scores of adolescent girls regarding menstrual hygiene was significantly associated with occupation of mother ( $\chi^2 = 9.674$ ,  $df = 4$ ) at  $p$  value  $< 0.005$ .

## CONCLUSION

The present study was conducted to assess the effectiveness of structured teaching programme on Knowledge and Expressed Practices regarding menstrual hygiene among adolescent girls in selected schools of Shimla, Himachal Pradesh. Main study revealed that, in experimental group pre-test Knowledge scores regarding menstrual hygiene among adolescent girls had inadequate knowledge, moderate knowledge and adequate knowledge and pre-test Expressed Practices score regarding menstrual hygiene among adolescent girls had poor practices and average practices. In post-test, after implementation majority of adolescent girls had adequate knowledge, and moderate knowledge and majority of adolescent girls had good practices and So, structured teaching programme was effective in enhanced the knowledge of adolescent girls. Main study revealed that, in control group pre-test Knowledge score regarding menstrual hygiene among adolescent girls had inadequate knowledge and moderate knowledge and pre-test Expressed Practices score regarding menstrual hygiene among adolescent girls had poor practices and average practices. In post-test, adolescent girls had inadequate knowledge and moderate knowledge and poor practices and average practices.

**RECOMMENDATIONS:** Based on the result of the study following recommendation were made.

1. A descriptive study to assess Knowledge, Attitude and Expressed Practices regarding menstrual hygiene among adolescent girls in selected schools of Una.H.P.
2. A pre-experimental study to assess Knowledge and Expressed Practices regarding menstrual hygiene among tribal school girl of Kinaur. H.P
3. A quasi-experimental study to assess the Knowledge and Expressed Practices regarding menstrual hygiene and effect of educational intervention among slum adolescent girls.
4. A comparative study to assess the Knowledge and Expressed Practices regarding menstrual hygiene among adolescent girls of urban and rural schools.
5. A pre-experiment study to assess Knowledge, Attitude and Expressed Practices regarding menstrual hygiene among adolescent girls in selected schools of Shimla.
6. A cross-sectional study to assess the Knowledge and Expressed Practices regarding menstrual hygiene among the female junior college students of selected district of H.P.
7. A cross-sectional study to assess Knowledge and Expressed Practices regarding menstrual hygiene among urban adolescent girls in selected school of Shimla, H.P.
8. A community based study to assess Knowledge and Expressed Practices related to maintenance of menstrual hygiene among the women of reproductive age group in selected villages of Mandi .H.P .

**LIMITATIONS:**

Due to COVID-Pandemic, it was tough to get permission from Principal of selected schools of Shimla. It was difficult to convince parents to allow their children for research study due to COVID –pandemic. There was difficulty to gather all the adolescent girls in a classroom because of COVID –pandemic. Study is limited to limited samples. It cannot be generalized to all. Literature related to Expressed Practices regarding menstrual hygiene in India was limited.

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**REFERENCES:**

1. Johnson, Fernandez. "A Study on awareness regarding safe and hygienic Practices amongst school going adolescent girls"; Wardha district, India, Vol: 2, October 2010. (Available at:[http://www.whoindia.org/LinkFiles/Adolescent\\_Health\\_and\\_Development](http://www.whoindia.org/LinkFiles/Adolescent_Health_and_Development))Viewed on 1/6/2019).
2. World health organization. Adolescent health Available from:[http://www.searo.who.int/entity/child\\_adolescent/topics/adolescent\\_health/en](http://www.searo.who.int/entity/child_adolescent/topics/adolescent_health/en) Viewed on 19 April 2019.
3. Biswas. R, "Indian journal of public health"; October –December-2004; Vol XXXXVIIIIN04; 155156.
4. Derrickson Bryan H, Tortora Gerard J, "Principals of Anatomy and Physiology" 12th edition; page no. 953- 954
5. importance of menstrual hygiene management for sexual and reproductive health -313d1fc4c45 Available from <http://medium.com/@wilsonlucyc/the> viewed on date 13/5/2019
6. [www.google.com/amp/s/swachindia.ndtv.com/23](http://www.google.com/amp/s/swachindia.ndtv.com/23) viewed on date 20/3/2020