



EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING ACNE AMONG ADOLESCENT STUDENTS OF CASET EXPERIMENTAL HIGHER SECONDARY SCHOOL, SRINAGAR, KASHMIR: A PRE-EXPERIMENTAL STUDY.

¹Insha Rasool, ²Syed Shahid Siraj,

^{1,2}Tutor,

^{1,2} Department of Health Sciences,

^{1,2}Islamic University of Science & Technology, Awantipora Kashmir, India.

Abstract: The study was conducted with an aim to improve the knowledge of adolescent students regarding acne, to promote health and to encourage them to establish healthy patterns of behavior that will influence their health and psychological wellbeing.

A pre-experimental one group pre test and post-test design was used for the study in order to evaluate the effectiveness of structured teaching programme on knowledge regarding acne among adolescent students at Caset Experimental Higher Secondary School Srinagar, Kashmir. Simple random sampling technique was used for selection of 60 students from accessible population. The prepared tool (structured knowledge questionnaire) and intervention (structured teaching programme) was validated by a panel of experts. Pre-testing of the tool and Intervention was done to check them for the clarity and feasibility. Pilot study was conducted on adolescent girls other than the study sample to assess the feasibility of the study. The main study was conducted from 14th March to 28th April. Pre-test was done on a group of 30 students on 17-03-2018 and 29-03-2018 by administering structured questionnaire followed by structured teaching programme on the same day and on day 7th post-test was conducted by using same questionnaire. The data collected was analyzed by using descriptive and inferential statistics.

RESULTS

The knowledge level of study subjects regarding acne showed that in pre-test maximum number of the study subjects (66%) had moderate knowledge and 33% of study subjects had inadequate knowledge. None of the study subjects was found to have adequate knowledge regarding acne. Where as in post-test majority of the study subjects (97%) had adequate knowledge and least number of study subjects (3%) had moderate knowledge regarding acne. None of the study subjects was found to have inadequate knowledge regarding acne. The mean post-test knowledge score (42.033 ± 4.63) of the study subjects regarding acne is significantly higher than that of the mean pre-test knowledge score (21.81 ± 2.06) at 0.05 level of significance. This indicates that structured teaching programme was effective in enhancing the knowledge of adolescent students regarding acne. There was a significant association between pre-test knowledge score and the selected demographic variables like gender, academic qualification, education of parents and source of information. However no significant association was found between pre-test knowledge score of study subjects and the selected demographic variables like, any previous medical care received for acne and total monthly family income.

Index Terms - Component, formatting, style, styling, insert.**I. INTRODUCTION**

The transition period from childhood to adulthood is a key factor in determining the future health of the individual. The journey from childhood to adolescence is very challenging. Adolescence is a phase of rapid growth and development during which physical, sexual and emotional changes occur; so adolescent period is the very important period in the life of an individual. Health and development are closely interlinked in adolescents. The physical development (sexual and body changes) that occurs during adolescence takes place along with important psychological and social changes that mark this period as a critical stage towards becoming an adult.¹

According to World Health Organization (WHO), the adolescent is defined as a person between the age of 10 – 19 years. There are about 1.2 billion adolescents worldwide and one in every six people in the world is an adolescent. In India, there are 243 million adolescents comprising 21% of India's total population. They are future of the nation, forming a major demographic and economic force. For a long time, there was no organized system to govern and monitor the social needs of adolescents. The committee on the Gopal Krishnan 4 rights of the Child (CRC, WHO) published guidelines in 2013 on the rights of children and adolescents, and issued guidelines on obligation of the states to recognize the special health and developmental needs, rights of the adolescents and young people. This has been further mentioned in WHO report in 2014 titled "Health for the world's adolescents".²

Adolescence is characterized by biological, psychological, psychosexual, and social maturation. Due to fluctuations in hormonal levels, there are manifestations of several skin diseases among them. Acne is the most commonly diagnosed skin lesion among adolescent students aged 10-19 years.³

Skin is the largest & most visible organ of the body. It constitutes about 15% to 20% of the body's weight. It protects us from invasion of organisms, helps to regulate body temperature, manufactures vitamins and forms our external appearance. The skin has three primary layers (i.e., *epidermis*, or outer layer; the *dermis*, or inner layer; and the *hypodermis*, or subcutaneous layer) as well as epidermal appendages (i.e., eccrine glands, apocrine glands, sebaceous glands, hair follicles, and nails)⁴. The skin plays a vital role in person's physical health and is always integral to self-esteem. Adequate skin care can prevent dermatological diseases such as acne vulgaris, contact dermatitis, eczema etc and can enhance the beauty of a person.⁴

Acne, commonly known as acne vulgaris, is defined as polymorphic eruption due to inflammation of pilosebaceous units of skin. Acne is a common skin disorder of the oil glands when overactive sebaceous (oil) glands secrete too much oil (sebum) in the skin which leads to the plugged pores and outbreaks of lesions called Pimples/zits. This is characterized by the recurring formation of blackheads, white heads and pimples. Acne lesion occurs primarily on the face and sometimes on the back, shoulders, chest and arms. There are different types of acne. The most common type is acne vulgaris that develops during the adolescent period. Puberty causes hormone levels to raise, especially testosterone in both adolescent males as well as females. These changing hormones cause skin glands to start making more oil (sebum). Oil releases from the pores to protect the skin and keep it moist. Acne develops when the oil mixes with dead cells and blocks the skin pores. The bacteria can grow in this mixture and when this mixture leaks into nearby tissues, it causes swelling, redness and pus. A common name for these raised bumps is pimples.^{5,6}

Acne is the most common chronic inflammatory skin disease of the hair follicle affecting 20% of young people worldwide and is universally present in almost all adolescents students (about 95% are affected), and continues till adult age.^{7, 8} A recently published systematic review on epidemiology of acne indicated that about 64% and 43% of individuals are affected with this condition as they advance into the 20s and 30s, respectively. According to the Global Burden of Disease (GBD) study, acne was the 8th most prevalent skin disorder among young adults in 2010⁹. Despite its high burden and negative health consequences, it is mostly under recognized by global health planners, particularly in poor-resource settings. Although the etiology of acne was difficult to describe, findings from previous studies revealed that strong genetic predisposition is associated with Acne

pathogenesis and a strong correlation has been found between disease severity and pubertal maturity. Other probable risk factors outlined in prior studies were socioeconomic conditions, dietary factors (chocolate, dairy products, and high glycemic index diet), topical greasy preparations that block skin pores, humid climate, smoking, obesity, stress, popping up pimples, and bacterial infections. In recent years, evidence has emerged that western diet with high glycemic load might trigger the pathogenesis of acne.⁷

Given the fact that acne appears on the face (mostly visible) and affects appearance (inflammation leading to scarring and hyperpigmentation). Adolescent students with acne suffer more with psychological distress and emotional problems as compared to acne-free adolescent students¹⁴. The self-perceived attractiveness varies significantly among acne-sufferers; it affects the quality of life, interpersonal relationships, self confidence as well as self-esteem. Moreover, teasing by friends aggravates these sufferings and in some cases subjects are compelled into social isolation. In order to avoid social embarrassment, they often wear heavy makeup, grow their hair longer to cover their face, and are needlessly exploited at beauty parlors. Previous studies suggested that apart from cosmetic burden, adolescents with acne are more prone to social anxiety, poor self-image, depression, and suicidal tendency as compared to their acne-free counterparts. The extent of psychological co-morbidities, namely anxiety, depression, and body image perception, are probably underestimated in acne. Severity of acne increases with emotional stress in a linear fashion and significantly affects their social, vocational, and academic performances.^{14,15}

Puberty brings about dramatic physical and emotional changes that may be frightening to an unaware adolescent. It can also cause tension, confusion and on the other hand it may give a sense of happiness. All of these feelings are perfectly normal. This is the time when adolescents need guidance and supportive relationship from the family members and peers to develop a “healthy personality”. Therefore it is necessary to create an awareness regarding hormonal and skin changes among adolescents. **“Proper education and intervention is better than allowing the danger to occur”**.¹⁶

The structured teaching programme provides an opportunity for the investigator to create awareness among the adolescent students regarding acne. It helps in bringing out the positive changes in the knowledge of adolescent girls and boys regarding acne and improves their self esteem by taking precautionary measures in their day to day life.¹² Simple remedies will always help to get rid of acne vulgaris and its complications like scarring, damage to skin etc. It includes keeping the face clean, drinking plenty of water, increasing the intake of citrus fruits, increasing intake of vegetables, avoiding spicy and oily foods, avoiding use of oily cosmetics, excessive hair oil, squeezing, popping of pimples and avoiding acne lesion by touching with hands.¹

Conceptual Framework

The Conceptual framework of the present study is based on Imogene King's Goal Attainment Model or Theory. It was first introduced by Imogene King in the early 1960's. Theory describes a dynamic, interpersonal relationship in which a person grows and develops to attain certain life goals. This model is aimed at assessing the effectiveness of structured teaching programme on knowledge regarding acne among adolescent students at Caset Experimental Higher Secondary School Srinagar, Kashmir.

King's theory offers insight into nurse's interactions with individuals and groups within the environment. It highlights the importance of client's participation in decision that influences care and focuses on both the process of nurse-client interaction and the outcomes of care. Conceptual framework is a schematic representation. It provides:

- A theoretical framework of the research problem statement that has scientific base and which lays emphasis on the selection, arrangement and clarification of its concepts.
- A certain frame of reference for clinical practice, research and education.
- A direction to research for relevant question on phenomenon and points out a solution to practical problem.

King Theory describes human being as social being who are rational and sensible. Person has ability to perceive, think, feel, choose, and set goals, select means to achieve goals and to make decision. Person has three fundamental needs: need for health information, need for care that seek to prevent illness and need for care when client is unable to help them. Utilizing the capacity of clients, nurse researcher takes the opportunity to provide information. The nurse researcher examines whether the information has resulted in gain of knowledge or not with the help of feedback²⁷.

The conceptual frame work for the present study is divided into following phases.

- Perception
 - Judgment
 - Actions
 - Reaction
 - Interaction
 - Transaction.
- **PERCEPTION:** Each person's interpretation/understanding of reality. The perceptions, goals, needs of subjects and researcher influence interaction process. In this study researcher perceives that study subjects might have some knowledge regarding acne. Study subjects perceive that they have inadequate knowledge regarding acne and develop desire to gain knowledge.
 - **JUDGMENT:** The conclusion or result of person's decisions made on their perceptions. In this study, researcher identifies means to educate the study subjects and study subjects identify need for learning. Researcher's judgement is that the selected intervention will increase the knowledge of study subjects and study subjects judge that attending structured teaching programme will help them.
 - **ACTIONS:** Sequence of expected behaviors involving mental and physical actions. In this study researcher's actions are to develop self-structured questionnaire (Tool), self-structured teaching programme (STP), validation of tool and STP by experts. Actions of study subjects are developing interest and preparing self to attend structured teaching programme.
 - **REACTIONS:** Role performed by person as perceived. In this study, reactions includes, researcher taking consent from study subjects and conducting pre-test to assess existing knowledge level of study subjects regarding acne.
 - **INTERACTION:** Goal directed process of communication represented by verbal and non-verbal behaviors between person and person. In this study interaction occurs between study subjects and researcher. During this phase the structured teaching programme is administered and doubts are cleared.
 - **TRANSACTION:** It is record of proceedings of acquired knowledge due to administration of structured teaching programme. Researcher evaluates the knowledge which study subjects acquire by conducting post-test.
 - When the researcher with special knowledge communicates appropriate information to study subjects, mutual goal attainment will occur.
 - **FEEDBACK***: It refers to the mechanism by which some of the perceived goals of a system are returned back to the system. If there is inadequate knowledge among study subjects regarding acne after the implementation of structured teaching programme, then the researcher would redirect all phases. However in this study feedback was not included.²⁷

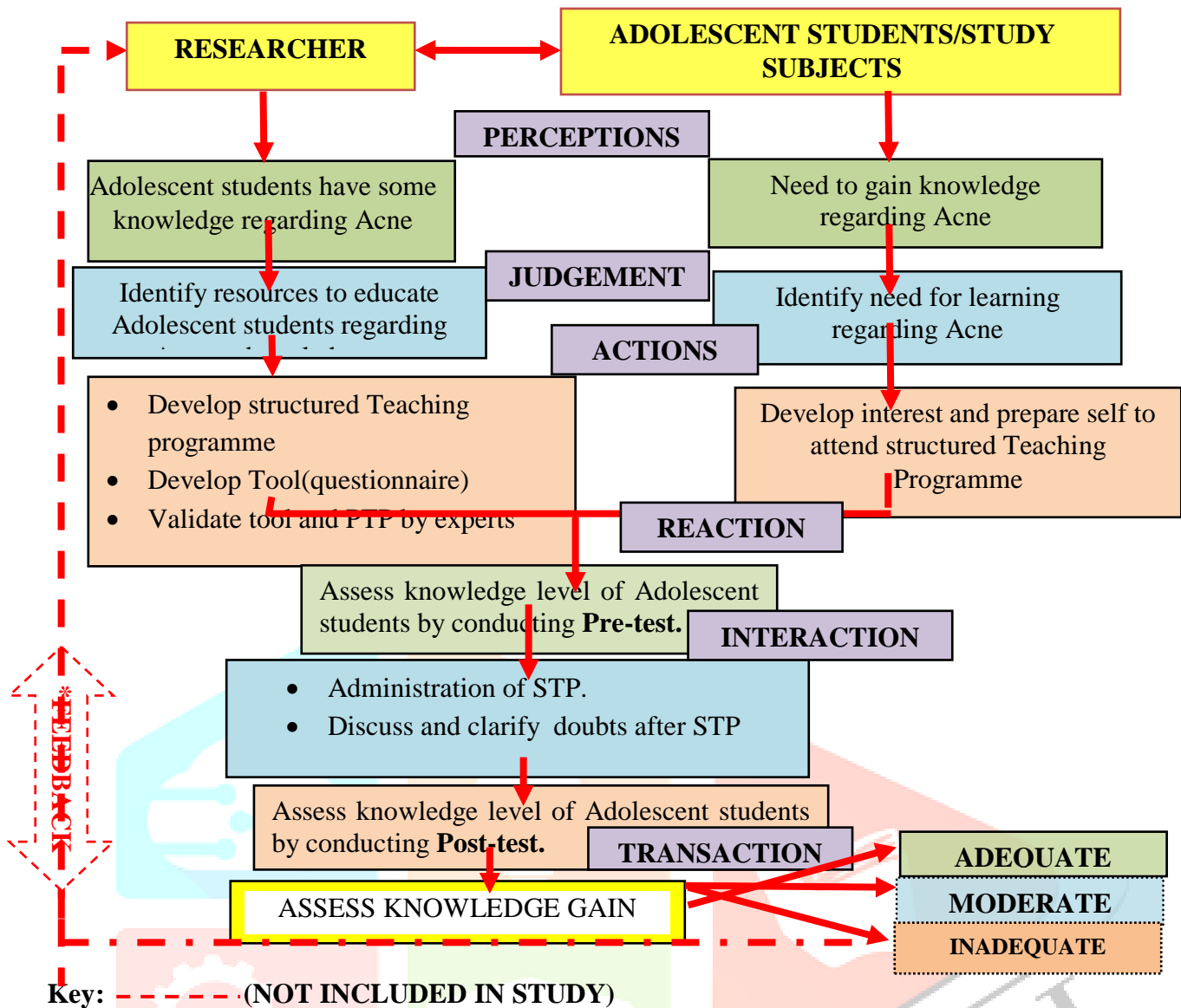


FIGURE 1; Schematic representation of Conceptual framework based on Imogene King's goal attainment model.

Research Methodology: In view of the nature of the problem under study and to accomplish the objectives of the study, quantitative research approach was found to be appropriate to assess the effectiveness of structured teaching programme on knowledge regarding acne among adolescent students of Caset Experimental higher secondary school, Srinagar Kashmir.

PRE-EXPERIMENTAL ONE GROUP PRE-TEST POST-TEST RESEARCH DESIGN was selected for the present study. The primary objective of the study was to find the effectiveness of structured teaching programme on knowledge regarding Acne among adolescent students. In the present study a structured questionnaire was administered to adolescent students of Caset experimental higher secondary school Srinagar on day 1 as a pre test measure and intervention was given in the form of structured teaching programme on knowledge regarding acne. Post-test was conducted on day 7 using same questionnaire. The design chosen for the study is presented in the fig 2 as follows

Group	Pre -test	Intervention	Post-test
Adolescent students	DAY 1	DAY 1	DAY 7
N=60	O1	X	O2

Figure 2: Schematic representation of research design

Key

- O₁ : Pre test:** Assessment of knowledge score regarding Acne among adolescent students on day 1 with the help self structured knowledge questionnaire.
- X : Intervention:** Administration of Structured Teaching Programme on knowledge regarding Acne among adolescent students on day 1.
- O₂ : Post test:** Assessment of knowledge regarding Acne among adolescent students on day 7 using same structured knowledge questionnaire
- N:** Total sample size (60)

VARIABLES UNDER STUDY:

In quantitative studies, concepts are usually called as variables. Variable is an attribute of a person that varies and it takes different values²⁸. Three types of attributes were identified in the study. They are independent, dependent variables and demographic variables.

INDEPENDENT VARIABLES

It is the stimulus or activity that is manipulated or varied by the researcher to create effect on the dependent variable⁷⁰. In the present study the independent variable was the structured teaching programme regarding acne.

DEPENDENT VARIABLE

It is the outcome or response due to the effect of the independent variable, which researcher wants to predict or explain⁷⁰. The dependent variable of the present study was knowledge regarding acne.

DEMOGRAPHIC VARIABLES

Demographic variables selected for this study were gender, educational qualification, education of parents, any previous medical care received for acne, total monthly family income and source of information.

RESEARCH SETTING

The setting is the location where a study is conducted⁷¹. The present study was conducted at Caset experimental higher secondary school Srinagar. The criteria for selecting this setting were feasibility and availability of sample.

STUDY POPULATION

A population is the entire aggregation of cases in which a researcher is interested. Population is a set of people or entities to which the results of a research are to be generalized⁷⁰. In the present study the target population consisted of adolescent students who were studying in 11th and 12th classes at Caset experimental higher secondary school, Srinagar, during the period of data collection i.e. 14-03-2018 to 21-04-2018.

SAMPLE AND SAMPLING TECHNIQUE

Sample; Sample refers to a portion of the population which represents the entire population⁷¹. For the present study sample consisted of 60 adolescent students studying at Caset experimental higher secondary school, Srinagar Kashmir.

Sampling technique; It is defined as the process of selecting representative segments of the population with which to conduct the study⁷¹. In the present study simple random sampling was used for selection of sample. Lottery method was adopted, by enumerating the roll numbers of all the students of the accessible population to develop the sampling frame. After the sampling frame was developed, slips of paper containing roll number of each student in the population was placed in a box and the sample was selected by drawing out as many slips of paper as desired by the researcher. 30 slips were drawn from class 11th and 30 from class 12th. Sampling technique of the present study is shown in figure 3:

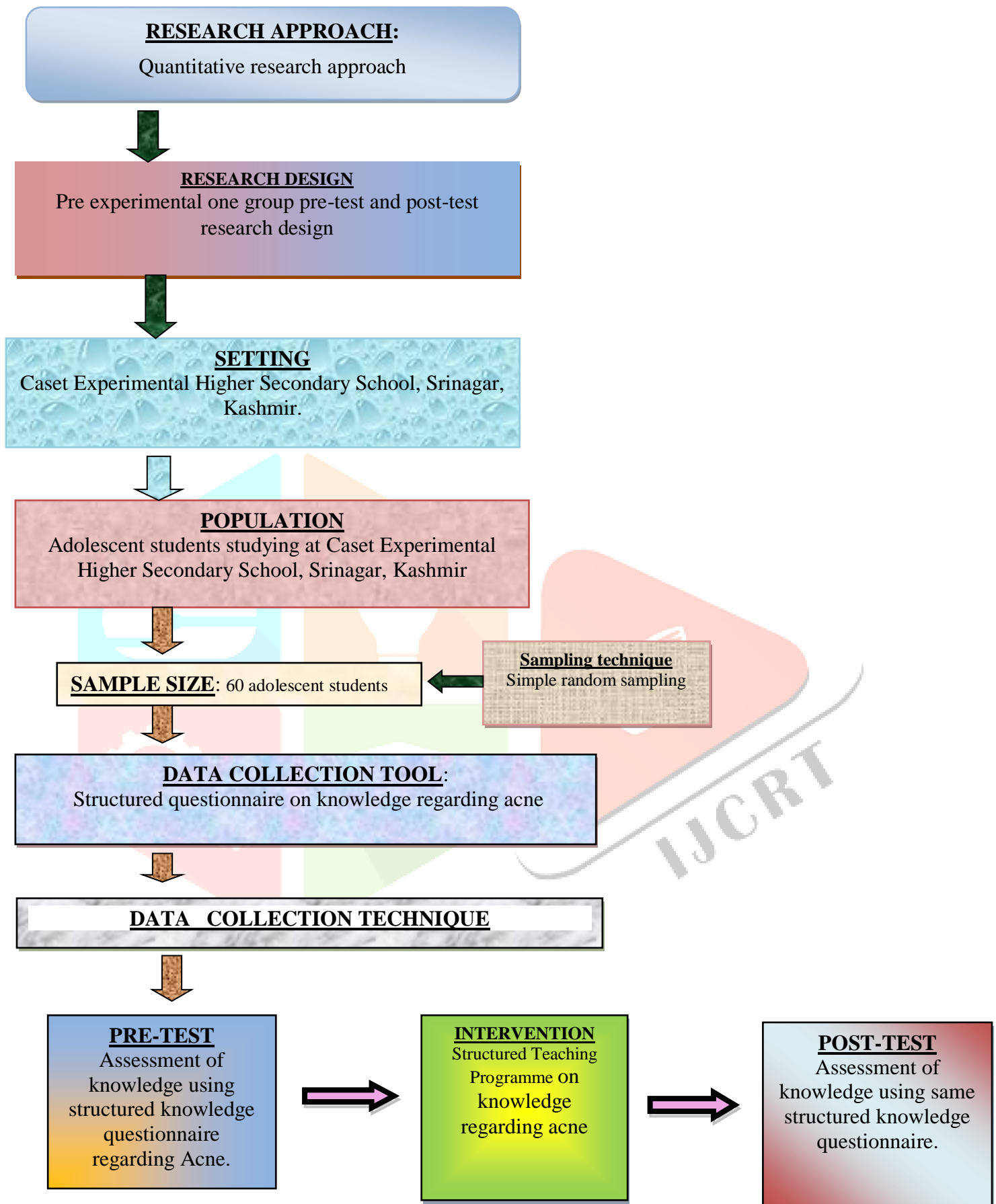


Fig: 2 Schematic diagram of research methodology.

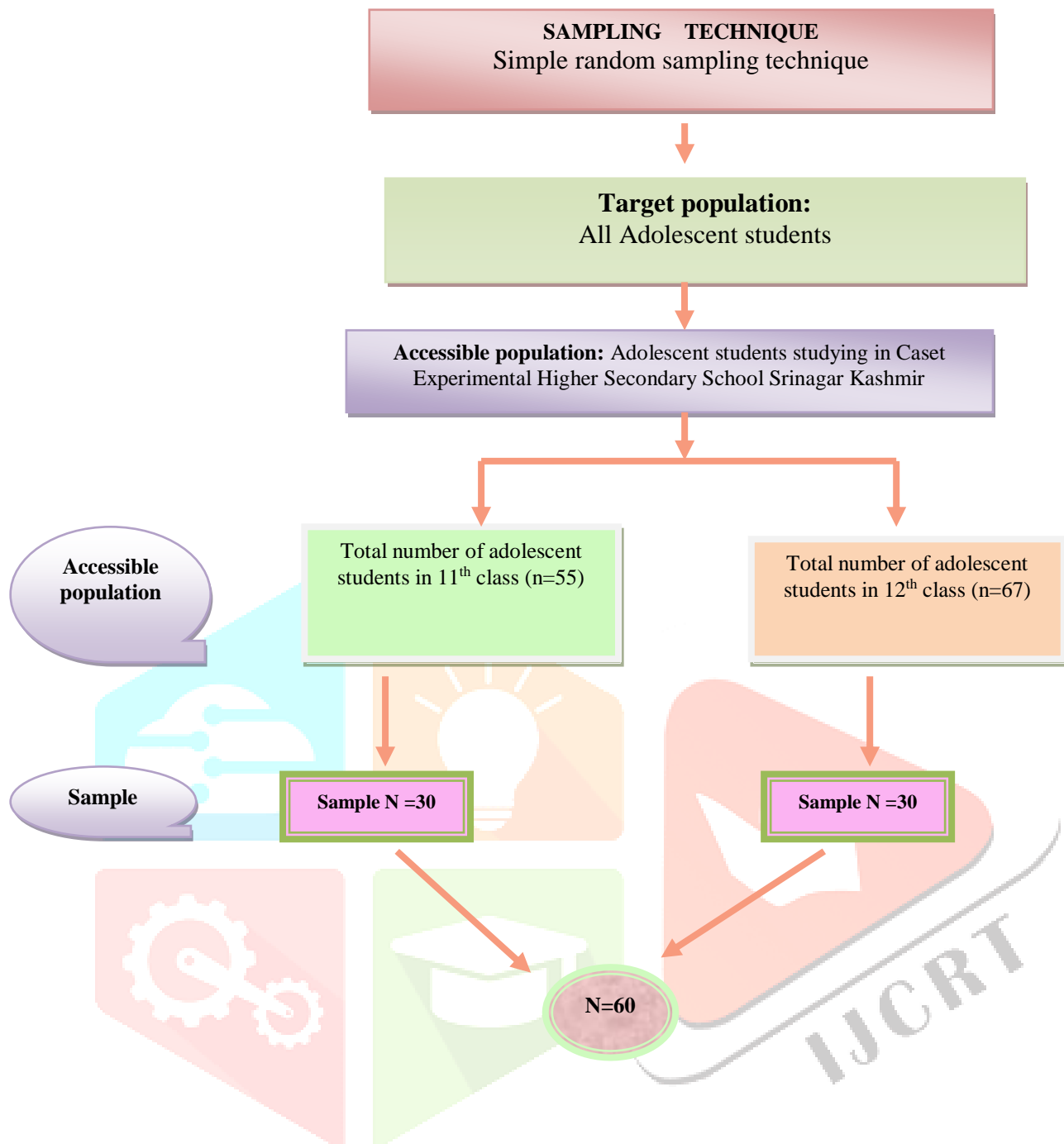


Fig 3: Diagrammatic representation of sampling technique.

ANALYSIS AND INTERPRETATION

The data analysis was done on the basis of following objectives:

1. To assess the pre-test knowledge score of adolescent students regarding acne.
2. To assess the post-test knowledge score of adolescent students regarding acne.
3. To compare the pre-test & post-test knowledge score of adolescent students regarding acne.
4. To find the association of pre-test knowledge score of adolescent students regarding acne with their selected demographic variables i.e. gender, academic qualification, education of parents, any previous medical care received for acne, total monthly family income & source of information.

On the basis of the research statement, following hypotheses were formulated:

H₁: There is significant increase in mean post-test knowledge score as compared to mean pre-test knowledge score of adolescent students regarding acne at 0.05 level of significance.

H₂: There is significant association of the pre-test knowledge score of adolescent students regarding acne with their selected demographic variables i.e. gender, academic qualification, education of parents, any previous medical care received for acne, total monthly family income & source of information at 0.05 level of significance.

The data collected were fed to an IBM computer and analyzed using the statistical Package for the Social Sciences (SPSS), version 20.0, SYSTAT and Microsoft excel. Significance of the obtained results was judged at the 5% level or at a p-value of <0.05. The findings were organized and presented in the form of tables and figures.

FOLLOWING STATISTICAL TESTS WERE USED TO ANALYZE THE DATA:

DESCRIPTIVE: - Frequency and percentage, mean, median, mode, standard deviation, range, and minimum, maximum.

INFERENTIAL:-Chi-square test and Paired t-test.

- Paired t-test was used to assess the effectiveness of structured teaching programme.
- Chi square test was used to find the association of gender, academic qualification, education of parents, any previous medical care received for acne, total monthly family income & source of information with pre-test knowledge score of adolescent students.

ORGANIZATION OF STUDY FINDINGS

The essential summary of this chapter is under the following sections.

Section I: Description of demographic variables of study subjects.

Section II: Knowledge score of study subjects before and after administration of structured teaching programme regarding acne.

Section III:

- Comparison of pre-test and post-test knowledge score of study subjects regarding acne
- Comparison of frequency and percentage distribution of correct responses of items in pre- test and post- test of study subjects.

SectionIV: Analysis and interpretation of data to find out an association of pre test knowledge score of study subjects regarding acne with their selected demographic variables.

SECTION 1: Description of demographic variables of study subjects.

This section describes the characteristics of the study subjects in terms of demographic variables which include gender, academic qualification, education of parents, any previous medical care received for acne, total monthly family income, and source of information. Each demographic variable was divided into various categories;

Table 4: Frequency and percentage distribution of study subjects according to gender

N=60

Gender	Frequency (f)	Percentage (%)
MALE	29	48
FEMALE	31	52
Total	60	100

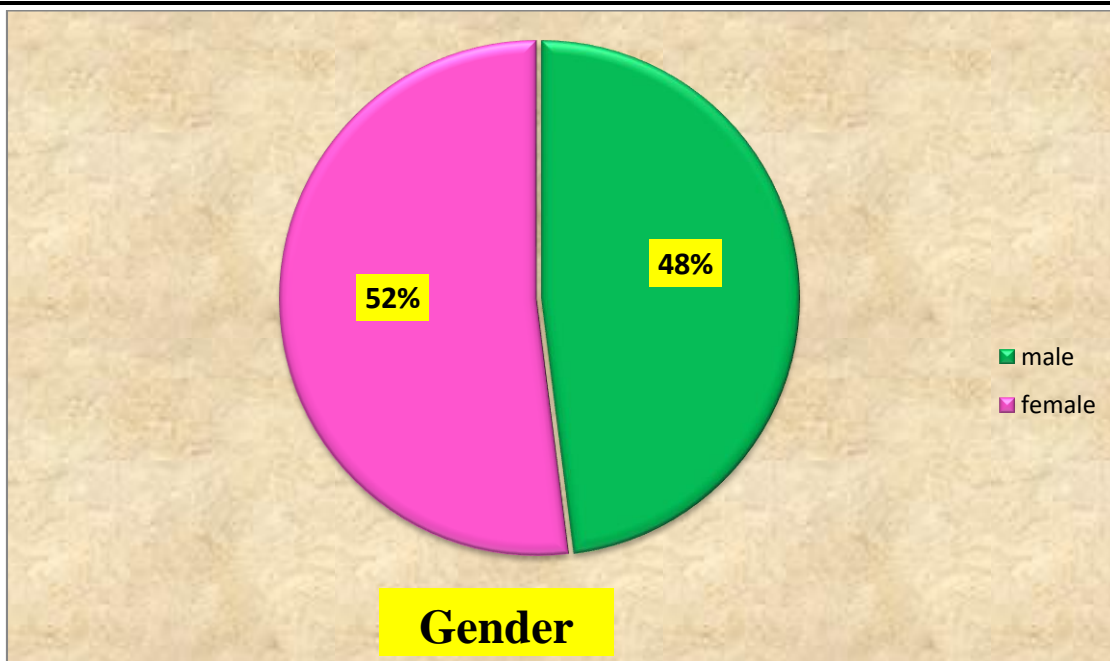


Figure 5: Pie diagram showing percentage distribution of subjects according to their gender.

The data presented in the table 4 & figures 5 revealed that majority of the study subjects (52%) were females and 48% were males.

Table 5: Frequency and percentage distribution of study subjects according to their academic qualification

N=60

Academic qualification	Frequency (f)	Percentage (%)
11 th	30	50
12 th	30	50
Total	60	100

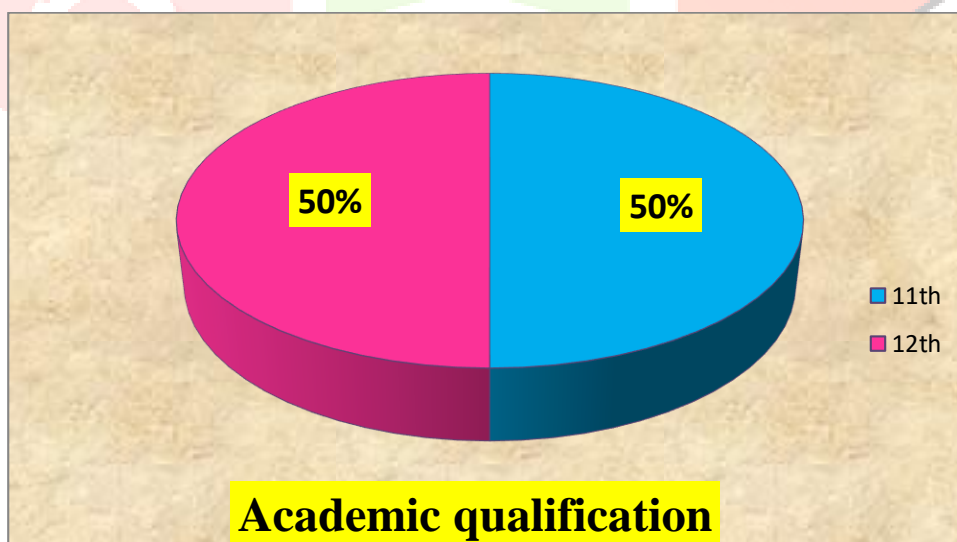


Figure 6: Pie diagram showing percentage distribution of study subjects according to their academic qualification

The data presented in the table 5 & figure 6 revealed that the percentage of both 11th and 12th class students was equal .i.e. 50%

Table 6: Frequency and percentage distribution of study subjects according to their education of mother

N=60

Education of mother	Frequency (f)	Percentage (%)
Illiterate	0	0
High school	4	7
Higher secondary	22	36
Graduate and above	34	57
Total	60	100

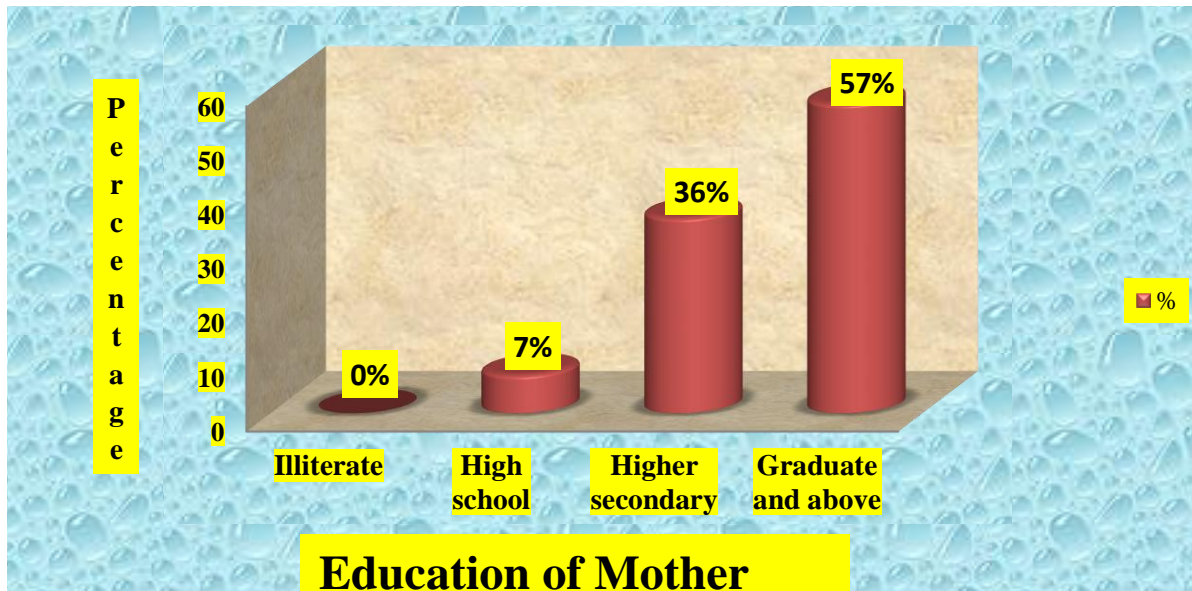


Figure 7: Cylindrical diagram showing percentage distribution of study subjects according to the education of mother.

The data presented in the table 6 & figure 7 revealed that mothers of majority of the study subjects (57%) were having qualification of graduate and above and mothers of 36% of study subjects were having qualification of higher secondary while as only (7%) belonged to high school group and none was illiterate.

Table 7: Frequency and percentage distribution of study subjects according to their education of father

N=60

Education of father	Frequency (f)	Percentage (%)
Illiterate	0	0
High school	9	15
Higher secondary	26	43
Graduate and above	25	42
Total	50	100

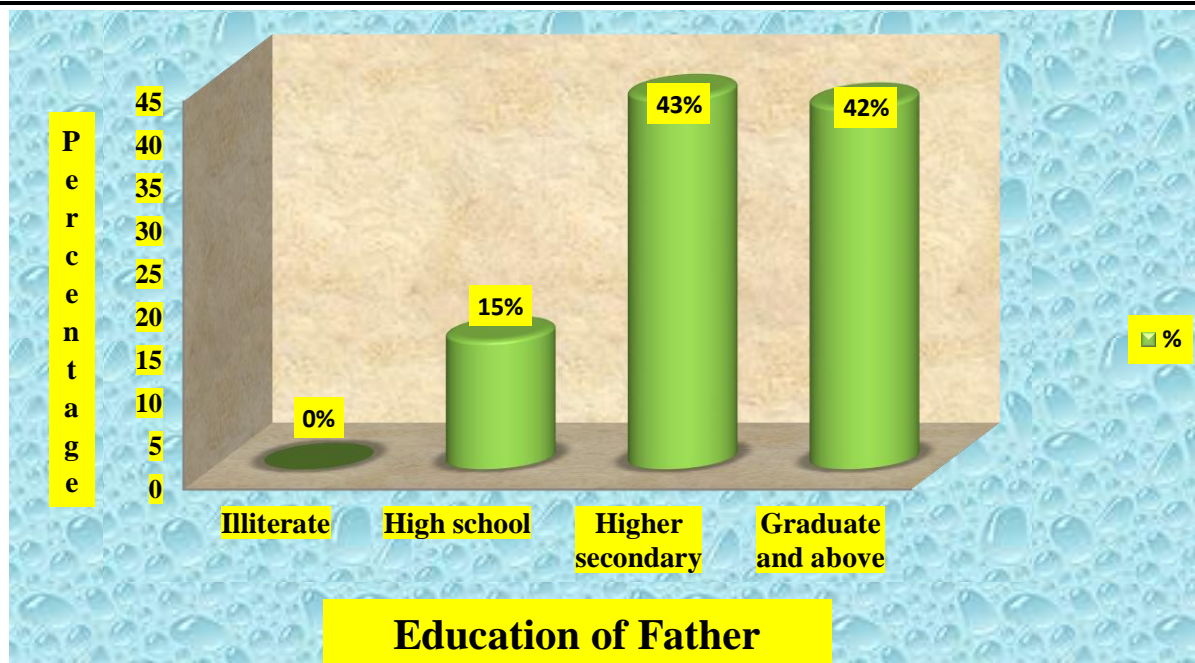


Figure 8: Cylindrical diagram showing percentage distribution of study subjects according to their education of father.

The data presented in the table 7 & figure 8 revealed that fathers of majority of the study subjects i.e. **43%** were having qualification of higher secondary followed by **42%** with graduation and above. Only **15%** were having high school qualification and **none** was illiterate.

Table 8: Frequency and percentage distribution of study subjects according to any previous medical care received for acne. N=60

Any previous medical care received for acne	Frequency (f)	Percentage (%)
Yes	10	16
No	50	84
Total	60	100

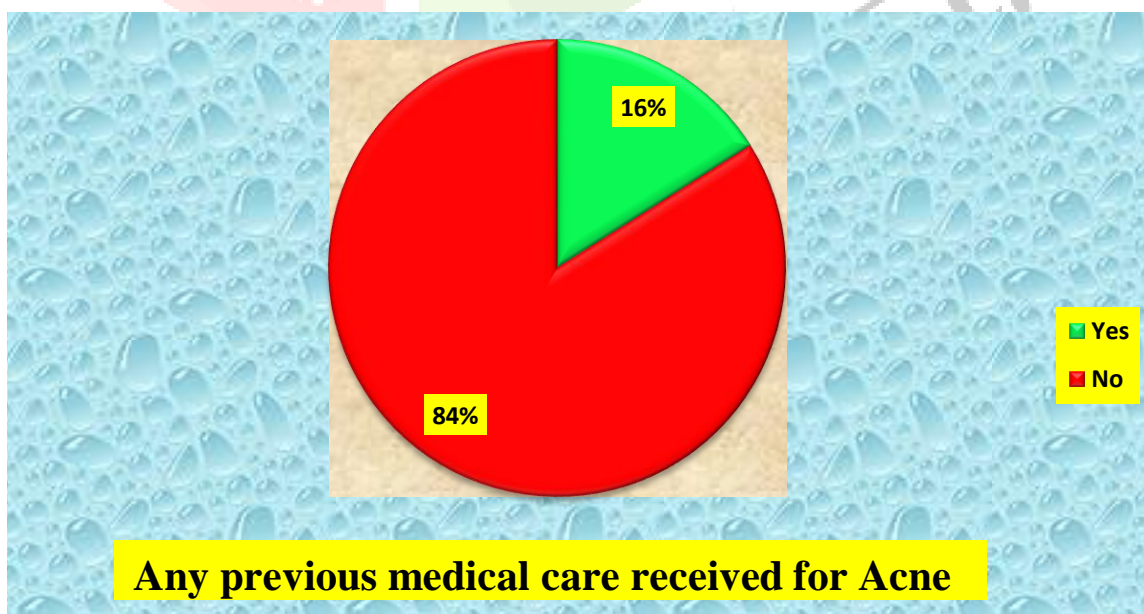


Figure 9: pie diagram showing Percentage distribution of study subjects according to any previous medical care received for acne

The data presented in the table 8 & figure 9 revealed that majority of the study subjects (**84%**) had not received any previous medical care for acne while **16%** had received previous medical care for acne.

Table 9: Frequency and percentage distribution of study subjects according to their total monthly family income N=60

Total monthly family income	Frequency (f)	Percentage (%)
Rs 10000 – 20000	11	18
Rs 20000 – 30000	23	38
Above Rs 30000	26	44
Total	60	100

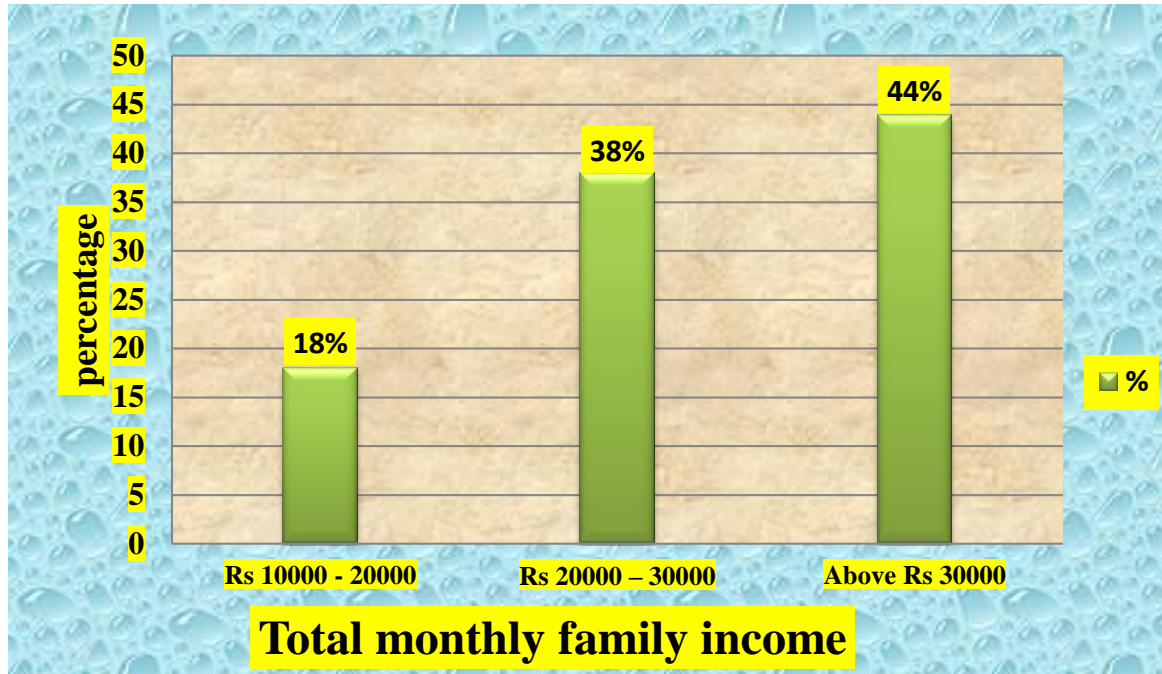


Figure 10: Bar diagram showing percentage distribution of the study subjects according to the total monthly family income.

The data presented in the table 9 & figure 10 revealed that majority of the study subjects (44%) belonged to families with a total monthly income above Rs 30,000 and 38% belonged to families having total monthly income of RS 20000-30000. While as only (18%) belonged to families with total monthly income of Rs 10000-20000

Table 10: Frequency and percentage distribution of study subjects according to source of information N=60

Source of information	Frequency (f)	Percentage (%)
Friends	09	15
Mass media	46	77
Doctor	05	08
Total	60	100

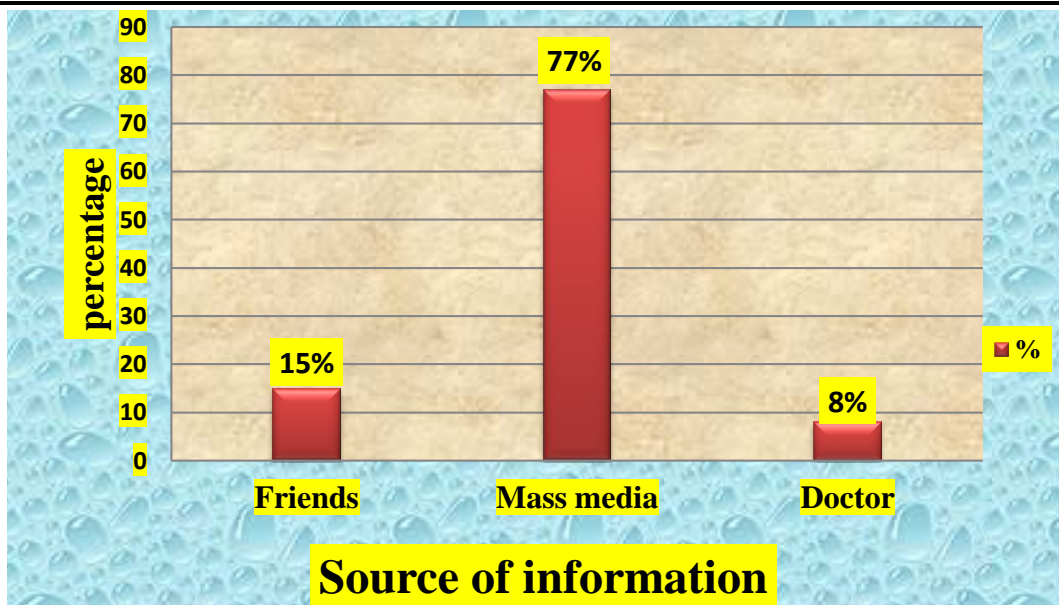


Figure 11: Bar diagram showing percentage distribution of the study subjects according to the source of information.

The data presented in the table 10 & figure 11 revealed that majority of the study subjects (77%) had mass media as source of information, 15 % had friends and only 8% had doctor as source of information.

SECTION II: Description of Knowledge Score of study subjects before and after administration of structured teaching programme regarding acne

This section includes findings related to the pre-test and post-test knowledge score of study subjects regarding acne

Table 11: Frequency and Percentage distribution of study subjects according to pre-test knowledge score. N=60

Pre – test Knowledge Score	Pre – test Knowledge level	Frequency (f)	Percentage (%)
(0-20)	In Adequate	20	33 %
(21-30)	Moderate	40	66 %
(31-50)	Adequate	0	0 %

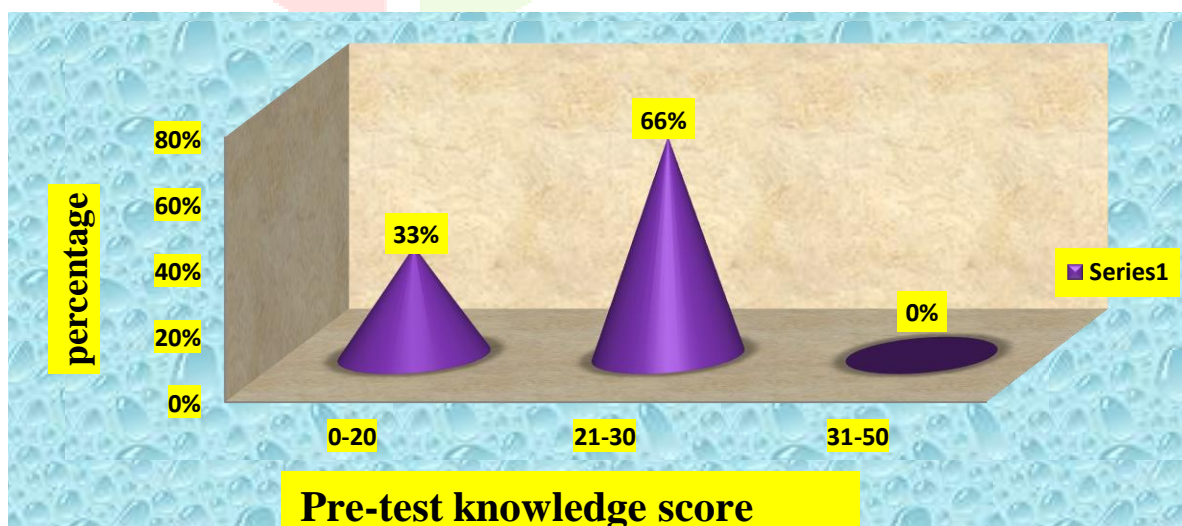


Figure 12: Cone diagram presenting percentage distribution of study subjects according to their level of pre-test knowledge.

Table 11 and fig.12 revealed that in pre-test, majority of the study subjects (66%) had moderate knowledge, 33% had inadequate knowledge and none of the study subjects had adequate knowledge.

POST – TEST KNOWLEDGE LEVEL

Table 12: Frequency and Percentage distribution of study subjects according to post-test knowledge score.

Post-test Knowledge score	Post -test Knowledge level	Frequency (f)	Percentage (%)
(0-20)	In Adequate	0	0 %
(21-30)	Moderate	2	03%
(31-50)	Adequate	58	97 %

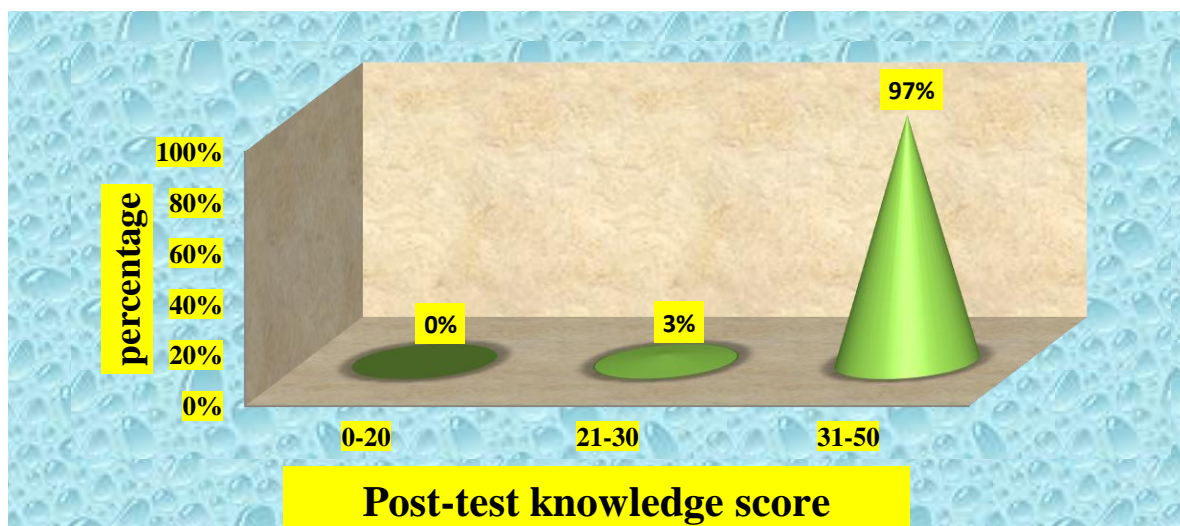


Figure 13: Cone diagram presenting percentage distribution of study subjects according to their post-test knowledge level. Table 12 and fig.13 revealed that in post-test, majority of the study subjects (97%) had adequate knowledge, 3% had moderate knowledge and none of the study subjects had inadequate knowledge.

SECTION III

Comparison of pre-test and post-test knowledge score of subjects regarding acne to assess the effectiveness of structured teaching programme.

TABLE 13: Comparison of study subjects according to pre-test and post-test knowledge score
N=60

LEVEL OF KNOWLEDGE	PRE-TEST		POST-TEST	
	Frequency	%age	Frequency	%age
Inadequate knowledge (0-20)	20	33%	0	0%
Moderate knowledge (21-30)	40	67%	2	3%
Adequate knowledge (31-50)	0	0%	58	97%
TOATAL	60	100%	60	100

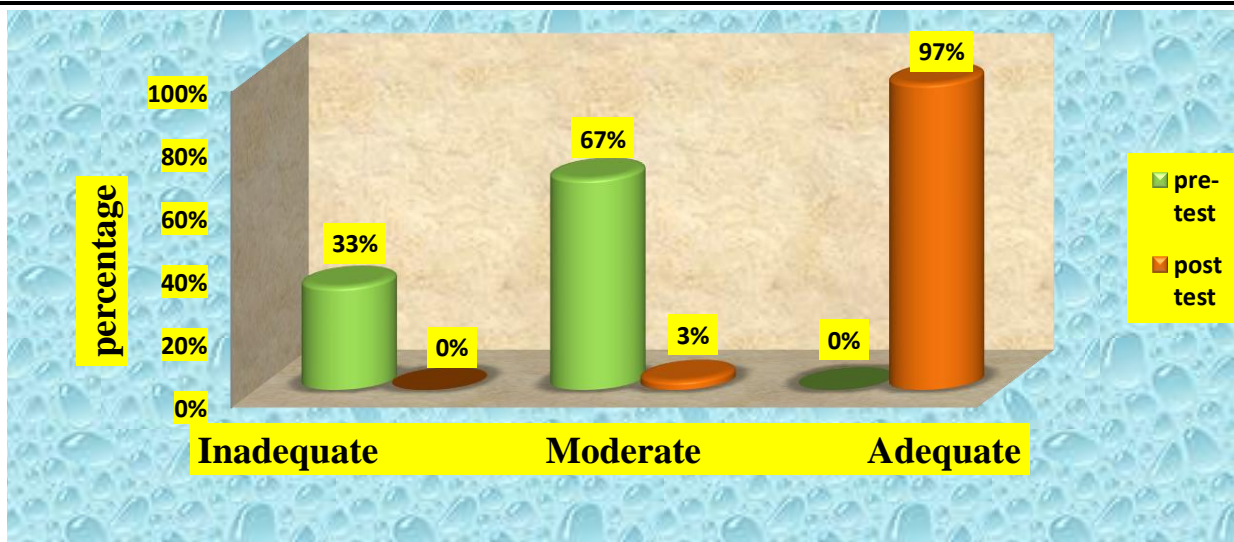


Figure 14: Cylindrical Bar diagram showing distribution of study subjects in terms of Pre-test and Post-test score of knowledge regarding acne

The data presented in the table 13 and figure 14 revealed that in pre-test, 67% of the study subjects had moderate knowledge, 33% had inadequate knowledge and none of the study subjects had adequate knowledge. Whereas in post-test, 97% of subjects had adequate knowledge and 3% had moderate and none of the study subjects had inadequate knowledge regarding acne. This indicates that most of the study subjects gained adequate knowledge after administration of structured teaching programme.

TABLE 14: Comparison between Pre-test and Post-test knowledge score and significance of difference between the Mean Pre-test and Post-test knowledge score

N=60

Knowledge assessment	Mean	Median	S.D.	Range	Min	Max	Mean difference	Paired 't' test	P value
Pre-test	21.81	21.00	2.06	7	17	24	20.22	-31.521	< .00001*
Post-test	42.033	41	4.63	16	34	50			

*Significant at 0.05 level of significance

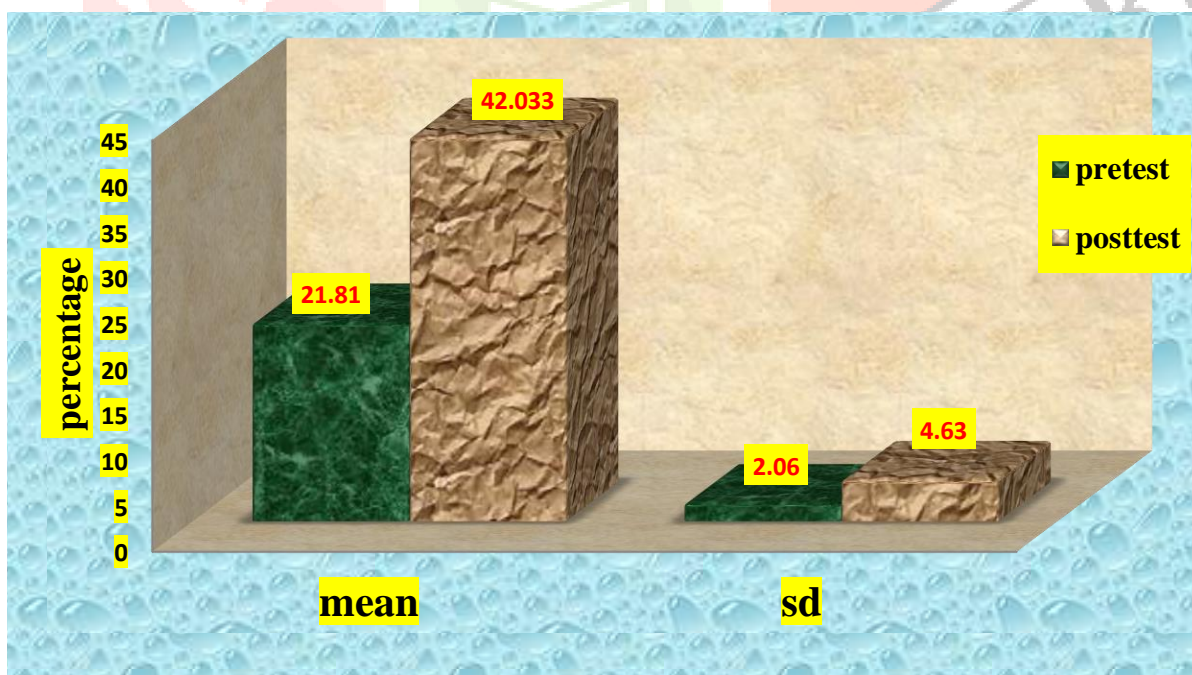


Figure 15: Bar diagram representing comparison between Pre-test and Post-test knowledge score and the significance of difference between the Mean Pre-test and Post-test knowledge score of study subjects.

The table 14 and fig.15 revealed the comparison between Pre-test and Post-test knowledge score of study subjects regarding Acne. The obtained 'P' value was found to be significant. Hence the researcher rejects the null hypothesis (H₀), and research hypothesis (H₁) is accepted which states that, "The mean post-test knowledge score of adolescent students regarding acne is higher than the

mean pre-test knowledge score”, as measured by knowledge questionnaire at 0.05 level of significance after implementation of STP which indicates that intervention was effective.

TABLE 15: Area wise distribution of correct responses of the subjects in the pre-interventional and post intervention

S.No	Areas of knowledge	Mean ± SD		Mean Difference	p value
1.	Structure and functions of skin comprising 17 items	Pre-test	24.88±14.34	24.7	0.001*
		Post test	49.68±7.67		
2.	Introduction, definition, risk factors and causes of Acne comprising 9 items.	Pre-test	27.55±15.28	24.12	0.001*
		Post test	51.67±8.45		
3.	Types, signs and symptoms, pathophysiology and grading of Acne comprising 13 items	Pre-test	24.61±13.79	21.08	0.001*
		Post test	45.69±6.39		
4.	Treatment, complications and preventive measures of Acne comprising 11 items.	Pre-test	26.27±14.59	28.18	0.001*
		Post-test	54.45±5.42		

It is evident from table 15 that for each area of the STP, the mean \pm sd of correct responses of the study subjects in the post-interventional assessment was higher than the mean \pm sd of correct responses in the pre interventional assessment. This indicates that the structured teaching program was effective in improving the knowledge of the study subjects regarding acne.

SECTION IV: ASSOCIATION OF DEMOGRAPHIC VARIABLES WITH PRE-TEST KNOWLEDGE SCORE

This section deals with the analysis and interpretation of the association between Pre-test knowledge score regarding acne among adolescent students of Caset Experimental higher secondary school with their selected demographic variables like gender, academic qualification, education of parents, any previous medical care received for acne, total monthly family income & source of information. Each demographic variable was sub-categorized into the following:

GENDER : On the basis of gender, the study subjects were categorized into Male, Female

ACADEMIC QUALIFICATION: On the basis of academic qualification, the study subjects were categorized into 11th 12th.

EDUCATION OF PARENTS

Education of mother: On the basis of education of mother, study subjects were divided into, illiterate, high school, higher secondary and graduate and above

Education of father: On the basis of education of father, study subjects were divided into, illiterate, high school, higher secondary and graduate and above

TOTAL MONTHLY FAMILY INCOME: On the basis of total monthly family income study subjects were divided into Rs 10000 – 20000, Rs 20000 – 30000 and Above Rs 30000

ANY PREVIOUS MEDICAL CARE RECEIVED FOR ACNE: On the basis of any previous medical care received for Acne study subjects were divided into Yes and No

SOURCE OF INFORMATION: On the basis of source of information study subjects were divided into friends, mass media and doctor

Association was tested by using Chi-square test (χ^2). To test the significance of association of demographic variables with pre-test knowledge score, following null hypotheses were formulated.

H₁: There is significant increase in mean post-test knowledge score as compared to mean pre-test knowledge score of adolescent students regarding acne at 0.05 level of significance.

H₂: There is significant association of the pre-test knowledge score regarding Acne among adolescent students with their selected demographic variable i.e. gender, academic qualification, education of parents, any previous medical care received for acne, total monthly family income & source of information at 0.05 level of significance.

TABLE 16: Association of pre-test knowledge score of study subjects regarding acne with their selected demographic variables.

N=60

Variables	Sub items	Adequate	Moderate	inadequate	Chi Test	P Value	df	Result
Gender	Male	7	4	12	2.52	0.238	4	S*
	Female	13	16	8				
Academic qualification	11 th	8	15	6	1.06	0.42	2	S*
	12 th	2	27	2				
Education of parents	Illeterate	0	0	0	2.527	0.60	4	S*
	High school	0	2	10				
	Hr. sec	7	3	2				
	Grad & above	8	22	8				
Any previous medical care received for acne	Yes	0	3	7	5.493	0.482	4	NS
	No	1	30	19				
Total monthly family income	Rs10,000-20,000	8	2	7	1.83	0.61	4	NS
	Rs 20,000-30,000	04	4	1				
	Above rs30,000	10	18	6				
Source of information	Friends	6	18	7	7.430	0.024	2	S*
	Mass media	4	8	4				
	Doctor	8	2	3				

S* = Significant

NS = Not Significant

The data presented in table 16 revealed that there was significant association of pre-test knowledge score of study subjects with their selected demographic variables like gender, academic qualification, education of parents and source of information. Hence, the researcher accepts the research hypothesis (**H₂**) which states that there is significant association between pre-test knowledge score of adolescent students with their selected demographic variables such as gender, academic qualification, education of parents, any previous medical care received for acne, total monthly family income and source of information at the significant level of 0.05.

However no significant association was found between pre-test knowledge score of study subjects with their selected demographic variables like, any previous medical care received for acne and total monthly family income. Hence, the researcher rejects the research hypothesis (**H₂**) and accepts null hypothesis (**H₀₂**) which states that there is no significant association of pre-test knowledge score of adolescent students with their selected demographic variables such as gender, academic qualification, education of parents, any previous medical care received for acne, total monthly family income and source of information at the significant level of 0.05.

It is thus interpreted that the demographic variables like any previous medical care received for acne and total monthly family income had no association with the pre-test knowledge score of the study subjects. Although Pre-test knowledge score of study subjects should have association with any previous medical care received for acne but the study subjects who had received previous medical care for acne were less in number.

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