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A Quasi-Experimental Study to Assess the Effectiveness of Structured Teaching Program in Terms of Knowledge Regarding Road Safety Measures Among School Going Students in Govt. Girls Sen. Sec. School Portmore, Shimla, (H.P.)

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ABSTRACT

Background: An undesirable or unfortunate happening that occurs unintentionally and usually results in harm, injury, damage, or loss; casualty; mishap on road is known as road accidents. There are some road safety measures to reduce the chances of road accidents which should be followed by individuals. The Aim of the study is to assess the effectiveness of structured teaching program in terms of knowledge regarding road safety measures among School going Students.

Objectives: To assess the knowledge regarding road safety measures among school going children,To develop and administer structured teaching program on knowledge regarding road safety measures among school going children,To assess the effectiveness of structured teaching program on knowledge regarding road safety measures among school going children,To find out the association of knowledge regarding road safety measures among school going children with selected demographic variables.

Methodology: Quantitative approach was adopted using the Quasi- experimental research design.60 sample were selected to collect the data by convenient sampling technique. The tools was used for the study was self structured questionnaire consisting of socio demographic characteristics and knowledge questionnaire. After conducting pre test, structured teaching programme on road safety measures was administered to the participants. Post test was conducted after gap of seven days.

Result: The result of the study revealed that total of 60 subject were enrolled by using convenient sampling technique and data gathered from school going children regarding road safety measures. In pre test (0%) of school going children having adequate knowledge in terms of road safety measure, (95%) of school going children having moderate knowledge in terms of road safety measures,(5%) of school going children having inadequate knowledge in terms of road safety measures In post test (96.7%) of school going children having adequate knowledge in terms of road safety measure (3.3%) of school

going children having moderate knowledge in terms of road safety measures. The study reveals that the structured teaching programme was effective in terms of improving the knowledge regarding road safety measures among school going students in Govt. Girls Sen. Sec. School Portmore,Shimla,H.P.

Keywords: Road Safety Measures ,Structured teaching program, Knowledge, School Going Students

1. Introduction

According to WHO estimate's road side accident is the 9th.leading cause of death as per on the basis of daily. It is estimated that 1 million death and 15 million road side accidents occur on road every year. In 2013 global state report on road safety, they estimate that more than 231 ,000 people killed in road traffic accident in India every year. approximately half of the deaths in country on road are among vulnerable road users -motorcyclists, cyclists. About 58.1% and 38.2% were aware that penalty for driving without a helmet can be imposed among those who attend and didn't attend any program on road safety measures· In Himachal Pradesh, The Shimla district saw the maximum number of accidents at 973 (32%) , followed by district Mandi at 425 (14%). Chamba and Sirmaur districts witnessed 306 (10%) accidents. Children are at risk for road traffic injuries for a number of reasons. Younger children are limited by their physical, cognitive, and social development, making them more vulnerable in road traffic than adults (**Chaurasiya SK2020**)

Objectives

1. To assess the pretest knowledge score regarding road safety measures among School going Students in Govt. Girls Sen. Sec. School Portmore, Shimla (H.P.)
2. To develop and administer structured teaching program in terms of knowledge regarding road safety measures among School going Students in Govt. Girls Sen. Sec. School Portmore, Shimla (H.P.)
3. To assess the effectiveness of structured teaching program in terms of knowledge regarding road safety measures among School going Students in Govt. Girls Sen. Sec. School Portmore, Shimla (H.P.)
4. To find out the association of knowledge regarding road safety measures among school going students with their selected demographic variables.

2. Methodology

Quantitative approach was adopted using the Quasi- experimental research design.60 sample were selected to collect the data by convenient sampling technique. The tools was used for the study consists of two sections.

Section-A: It includes socio -demographic profile of the participants. Age, family type, area of residence ,educational status of parents, occupation of parents, family income,mode of travelling to school,outdoor games, source of knowledge regarding road safety measures

Section-B: It include self- structured knowledge questionnaire consists of 30 items regarding road safety measures.To ensure the validity of tool, it was submitted to 13 experts. Approval was taken from ethical committee of Shimla Nursing College,Shurala, Shimla. Apart from this, written informed consents were taken from each study participants. Confidentiality and privacy of the study subjects was maintained.

3. Result

Frequency and percentage distribution of demographic variables revealed the major findings that out of

60 school going students, (61.7%) of subjects were having age group of 14-15 years. (100%)are of 10th class students (66.7%) of school students lives in a nuclear family, (31.7%) of school students live in joint family, (43.3%) of fathers educational status is secondary education**,** (33.3%) fathers are self employed,private job,(41.7%) mothers having higher secondary education, (73.3%) mothers are homemaker,(63.3%)school students mode of travelling is public transport,(88.3%) school students play outdoor games, (93.3%) having previous knowledge regarding road safety measures.

Table –1.1: Frequency & Percentage distribution of pre-test level of knowledge

CRITERIA MEASURE OF PRETEST KNOWLEDGE SCORE	
SCORE LEVEL(N= 60)	PRE TEST f(%)
INADEQUATE KNOWLEDGE.(0-10)	3(5%)
MODERATE KNOWLEDGE.(11-20)	57(95%)
ADEQUATE KNOWLEDGE.(21-30)	0(0%)
Maximum Score=30 Minimum Score=0	

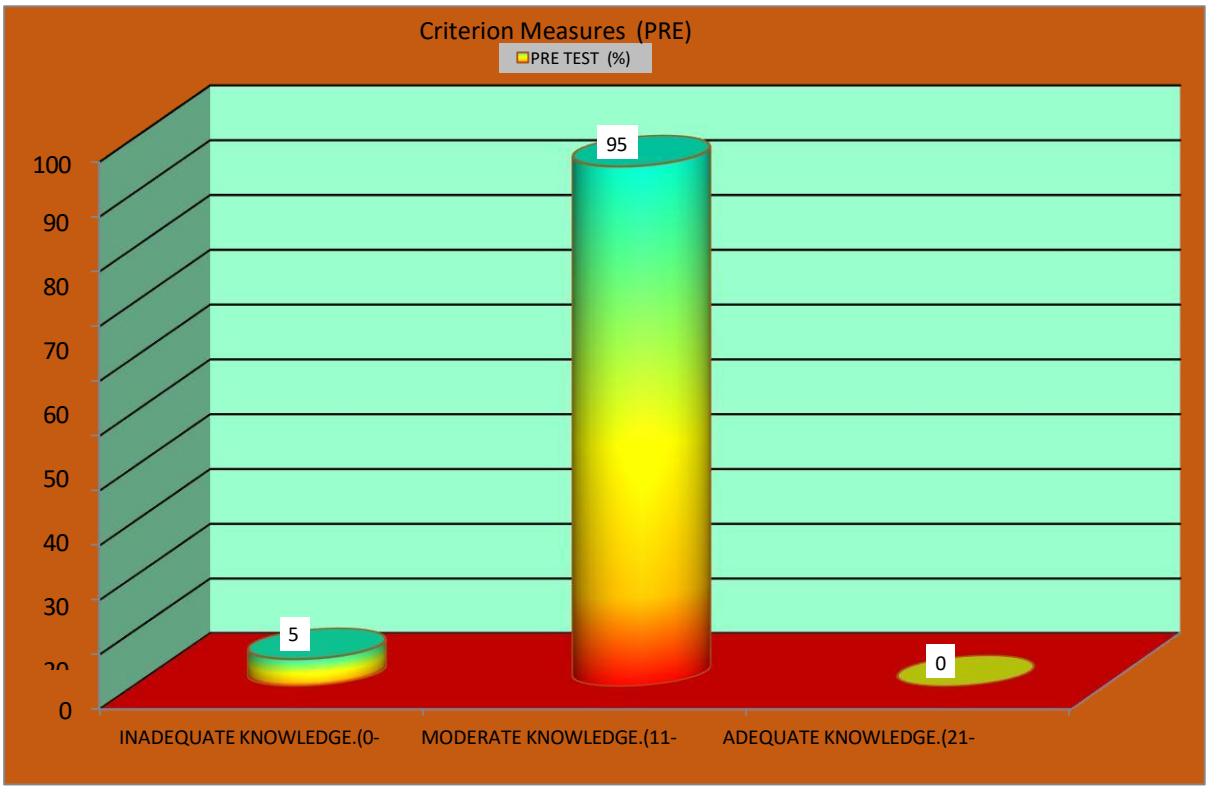

Figure no.1 : Bar diagram showing the percentage distribution of pre-test knowledge

Table –1.2: Descriptive statistics of pre-test level of knowledge

Descriptive Statistics	Mean	S.D.	Median Score	Maximum	Minimum	Range	Mean%
PRETEST KNOWLEDGE	16.13	3.089	17	20	6	14	53.80
	Maximum=	30	Minimum=	0			

Table 1.2 Represents the descriptive statistics of pretest level of knowledge. It was found that the mean value was 16.13, median score was 17, maximum score was 20, minimum score was 6, range of score was 14 and mean percentage was 53.80 %.

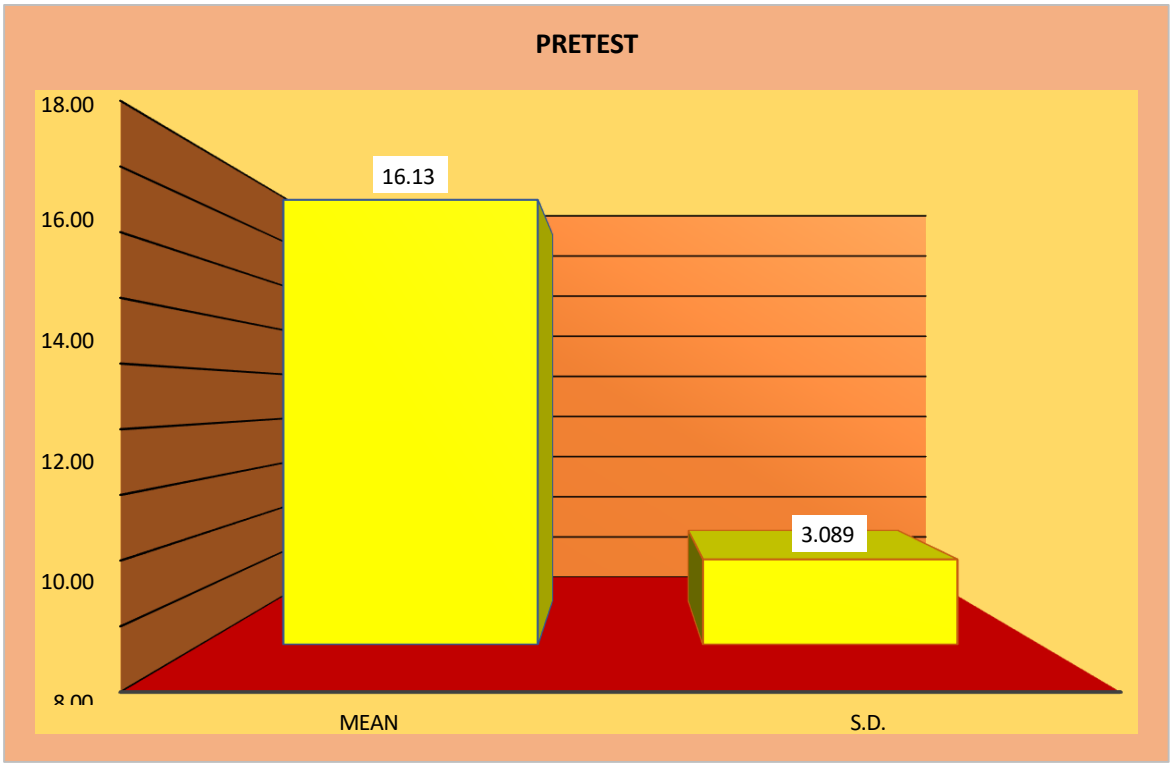

Figure no.2: Bar diagram representing descriptive statistics of pre-test level of knowledge

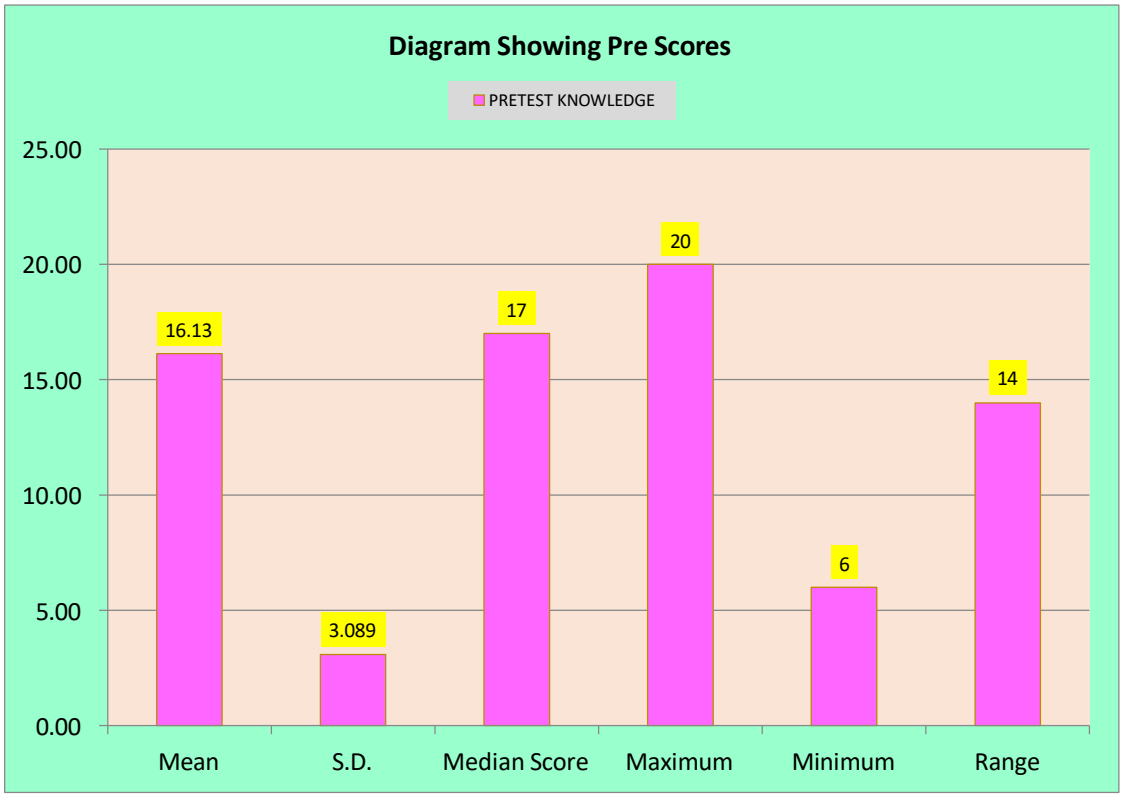

Figure3: Bar diagram representing descriptive statistics of pre-test level of knowledge

Table – 1.3: Frequency & Percentage distribution of post-test level of knowledge

CRITERIA MEASURE OF POSTTEST KNOWLEDGE SCORE	
SCORE LEVEL(N= 60)	POST TEST f(%)
INADEQUATE KNOWLEDGE.(0-10)	0(0%)
MODERATE KNOWLEDGE.(11-20)	2(3.3%)
ADEQUATE KNOWLEDGE.(21-30)	58(96.7%)
Maximum Score=30 Minimum Score=0	

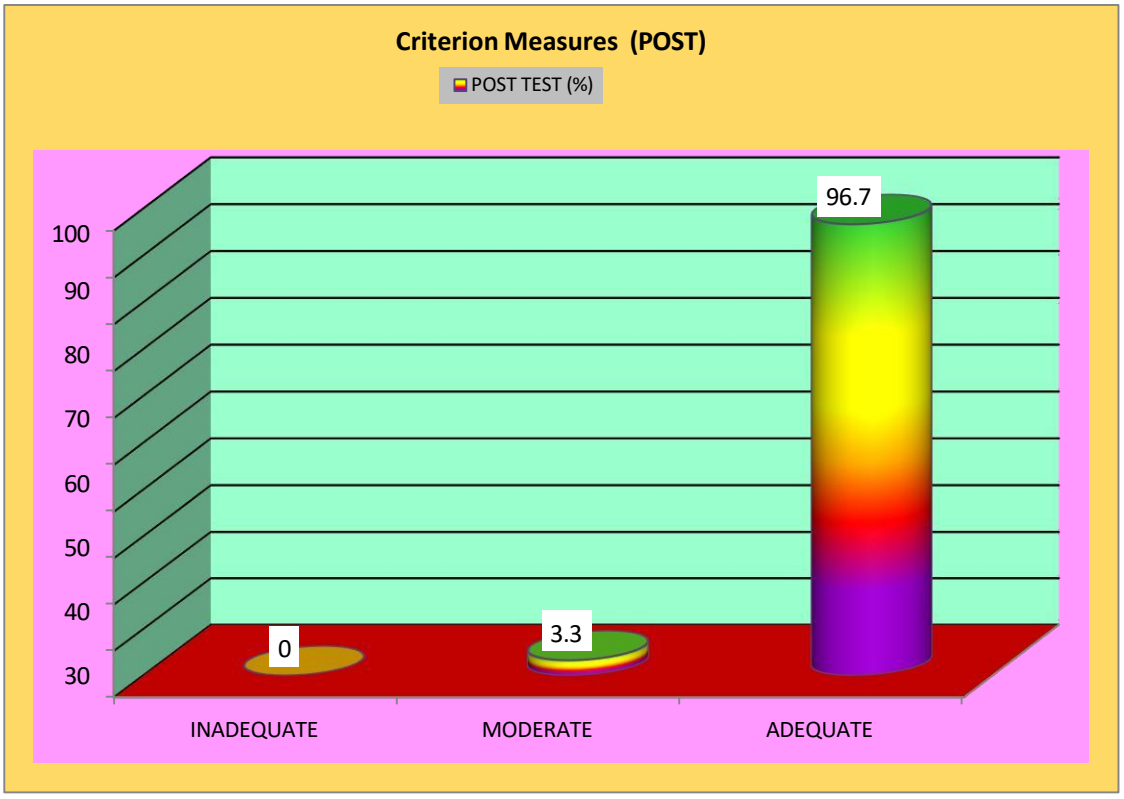

Figure no. 4: Cylindrical Shaped diagram representing percentage distribution of post-test level of knowledge

Table – 1.4: Descriptive statistics of post-test level of knowledge

				N=	60		
Descriptive Statistics	Mean	S.D.	Median Score	Maximum	Minimum	Range	Mean%
POSTTEST KNOWLEDGE	27.97	2.255	28	30	19	11	93.20
	Maximum=	30	Minimum=	0			

Table 1.4 Represents the descriptive statistics of post-test level of knowledge. It was found that the mean value was 27.97, median score was 28, maximum score was 30, minimum score was 19, range of score was 11& mean percentage was 93.20%

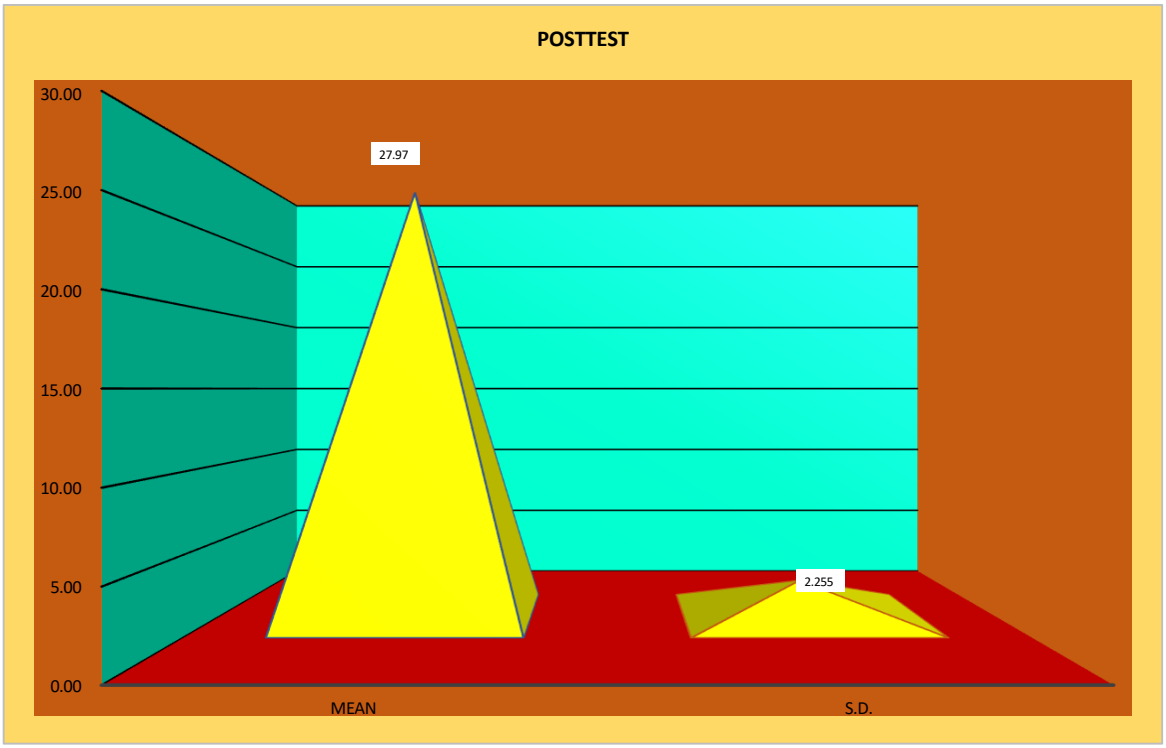

Figure no. 5: Triangle Shaped diagram representing descriptive statistics of post-test level of knowledge

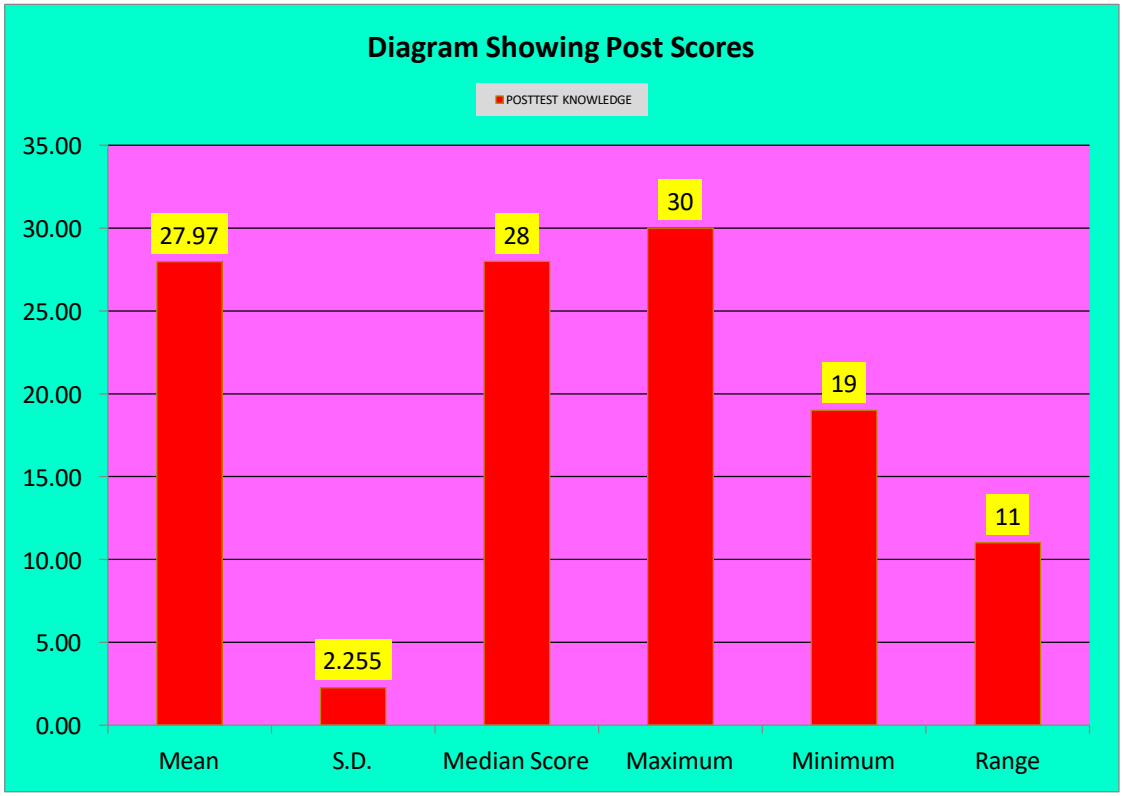

Figure no. 6: Bar diagram representing descriptive statistics of post-test level of knowledge

Table – 1.5: Comparison of frequency & percentage distribution of pre-test and post-test level of knowledge

CRITERIA MEASURE OF KNOWLEDGE SCORE		
SCORE LEVEL(N= 60)	PRE TEST f(%)	POST TEST f(%)
INADEQUATE KNOWLEDGE.(0-10)	3(5%)	0(0%)
MODERATE KNOWLEDGE.(11-20)	57(95%)	2(3.3%)
ADEQUATE KNOWLEDGE.(21-30)	0(0%)	58(96.7%)
Maximum Score=30 Minimum Score=0		

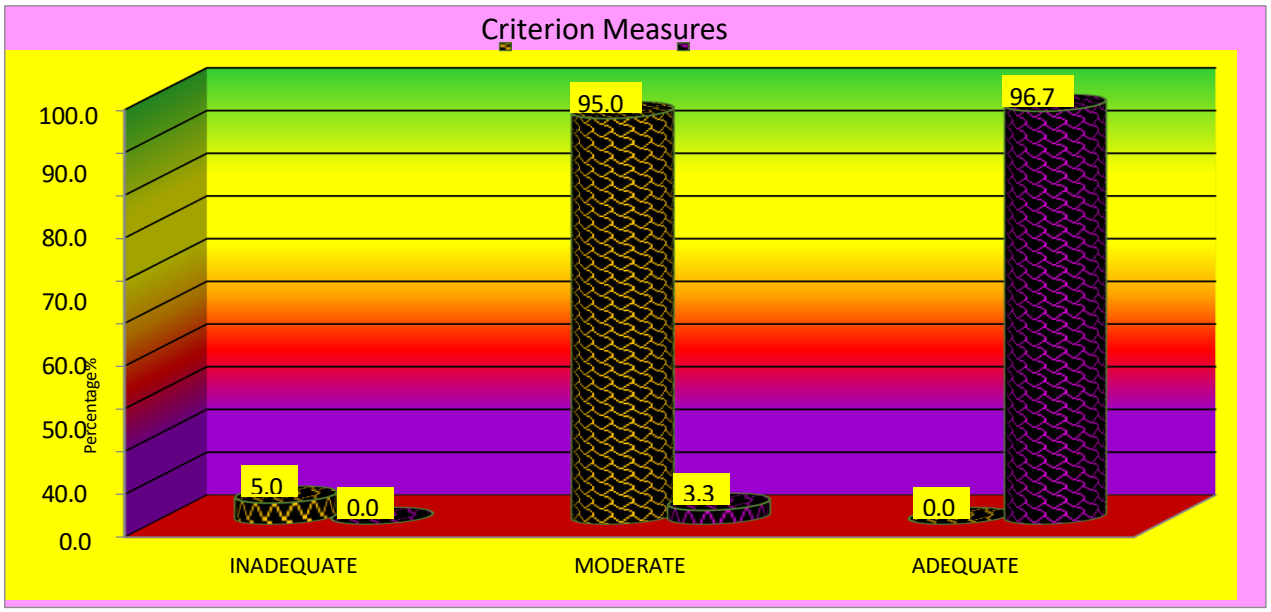

Figure no7: Cylindrical Shaped diagram representing comparison of percentage distribution of pre-test and post-test level of knowledge

Table – 1.6: Comparison of descriptive statistics of pre-test and post-test Scores of knowledge

					N=60		
Paired T Test	Mean±S.D.	Mean%	Range	Mean Diff.	Paired T Test	P value	Table Value at 0.05
PRETEST KNOWLEDGE	16.13±3.089	53.80	6-20				
				11.840	24.918 *Sig	<0.001	2.00
POSTTEST KNOWLEDGE	27.97±2.255	93.20	19-30				
** Significance Level 0.05 Maximum=30 Minimum=0							

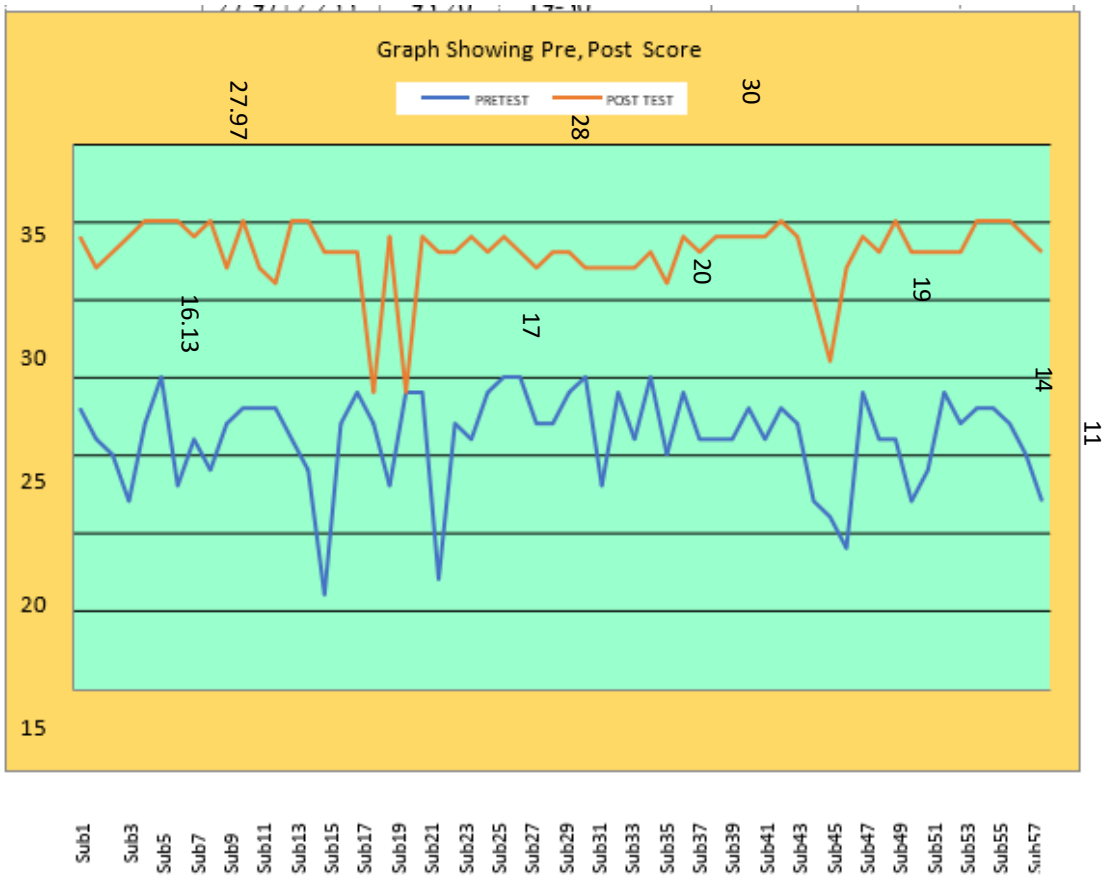

Figure No. 8: Line diagram showing Individual Scores

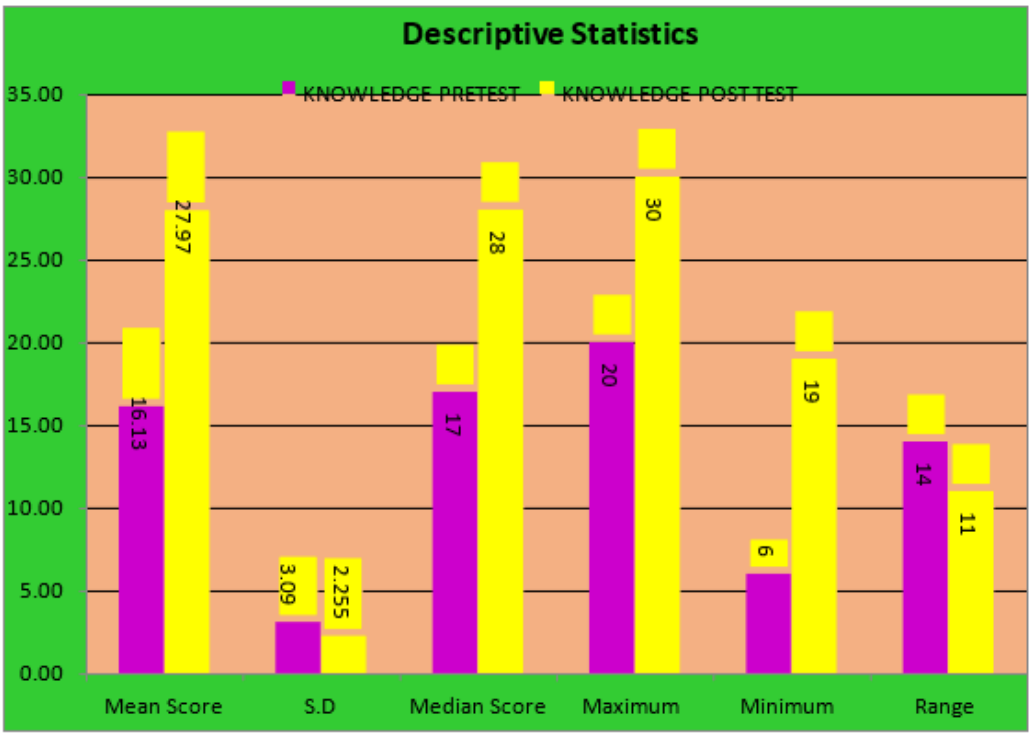

Figure no9: Bar diagram representing comparison of descriptive statistics of pre-test and post-test knowledge scores

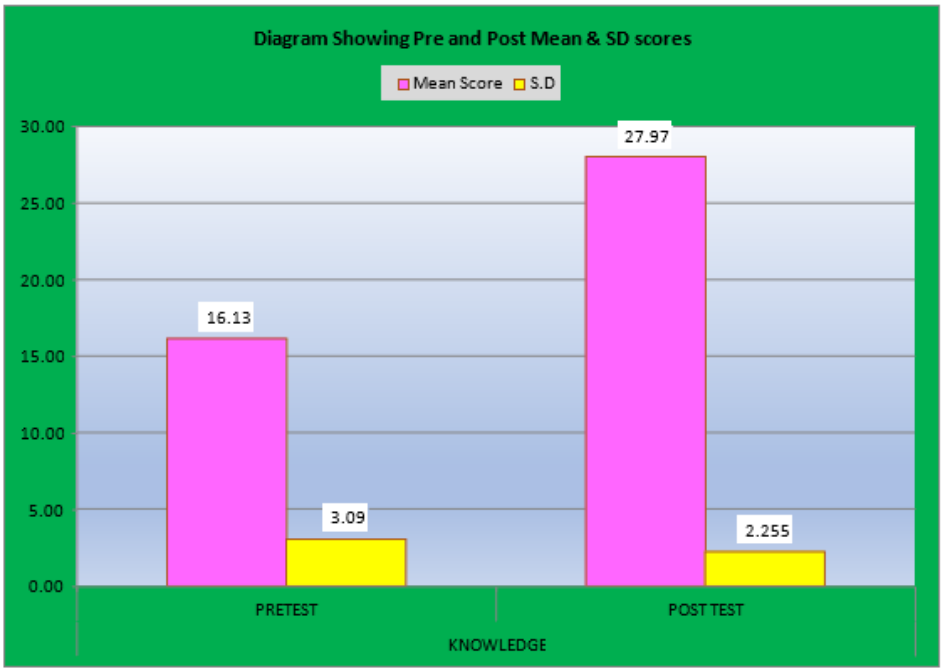

Figure . 10 Bar diagram representing Mean & SD of pre-test and post-test knowledge scores

Table – 1.7: Comparison of descriptive statistics of pre-test and post-test Scores of knowledge

DIAGRAM SHOWING INDIVIDUAL SCORE GAIN (EFFECTIVENESS))						
Mean%	PRE-TEST KNOWLEDGE	POST TEST KNOWLEDGE	DIFFERENCE	PRE-TEST KNOWLEDGE SCORE %	POSTTEST KNOWLEDGE SCORE %	DIFFERENCE %
Average	16.13	27.97	11.83	53.78	93.22	39.44

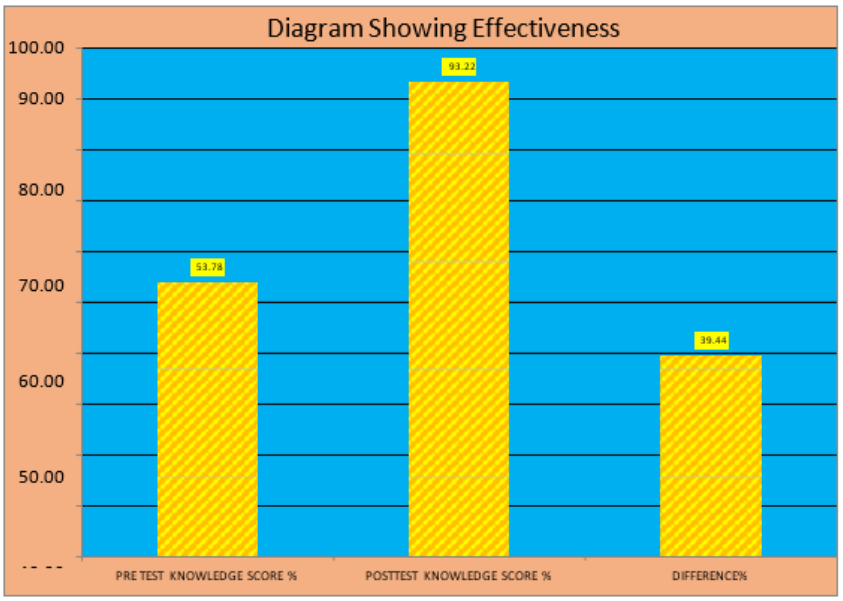

Figure no. 11: Bar diagram representing comparison of pre-test and post-test level of knowledge representing effectiveness

Table No 1.8: Table Showing Association of Scores and Demographic Variables.

This section deals with the findings related to the association between score and selected demographic variables. The chi-square test was used to determine the association between the score levels and selected demographic variables

ASSOCIATION OF PRETEST KNOWLEDGE SCORES WITH SELECTED SOCIO-DEMOGRAPHIC VARIABLES.									
Variables	**Opts**	**ADEQUATE KNOWLEDGE**	**MODERATE KNOWLEDGE**	**INADEQUATE KNOWLEDGE**	**Chi Test**	**P Value**	**df**	**Table Value**	**Result**
Age (Years)	11-12 Years	0	0	0	0.737	0.692	2	5.991	Not Significant
	12-13 Years	0	0	0					
	13-14 Years	0	10	0					
	14-15 Years	0	35	2					
	15-16 Years	0	12	1					
Gender	Male	0	0	0		N.A		N.A	
	Female	0	57	3					
Class	6th	0	0	0		N.A		N.A	
	7th	0	0	0					
	8th	0	0	0					
	9th	0	0	0					
	10th	0	57	3					
Father's Educational Status	Primary Education	0	5	0	1.020	0.796	3	7.815	Not Significant
	Secondary Education	0	25	1					
	Graduate	0	23	2					
	Post-Graduate	0	4	0					
	Illiterate	0	0	0					
Mother's Educational Status	Primary Education	0	9	0	1.088	0.780	3	7.815	Not Significant
	Secondary Education	0	23	2					
	Graduate	0	23	1					
	Post-Graduate	0	2	0					
	Illiterate	0	0	0					

	Government job	0	15	2	2.848	0.416	3	7.815	
Father's Occupational Status	Private job	0	19	1					Not Significant
	Semi government	0	3	0					
	Own business	0	20	0					
Mother's Occupational Status	Government job	0	3	2	14.163	0.003	3	7.815	Significant
	Private job	0	10	0					
	Semi government	0	1	0					
	House maker	0	43	1					
Type Of Family	Nuclear family	0	38	2	0.055	0.973	2	5.991	Not Significant
	Joint family	0	18	1					
	Extended family	0	1	0					
Residential Area	Nuclear family	0	15	0	1.353	0.508	2	5.991	Not Significant
	Joint family	0	39	3					
	Extended family	0	3	0					
Mode Of Travelling To School	Pedestrian	0	19	1	0.111	0.946	2	5.991	Not Significant
	Cycle	0	0	0					
	School vehicle	0	2	0					
	Public transport	0	36	2					
Do You Play Outdoor Games	Yes	0	50	3	0.417	0.518	1	3.841	Not Significant
	No	0	7	0					
Any Previous Knowledge About Road Safety	Yes	0	53	3	0.226	0.635	1	3.841	Not Significant
	No	0	4	0					

The Chi-square value shows that there is significance association between the score level and demographic variables (With no Significant Variables names). The calculated chi-square values were more than the table value at the 0.05 level of significance.

There is no significance association between the level of scores and other demographic variables (Age (Years), Gender, Class, Father's Educational Status, Mother's Educational Status, Father's Occupational Status, Mother's Occupational Status, Type of Family, Residential Area, Mode of Travelling To School, Do You Play Outdoor Games, Any Previous Knowledge About Road Safety) The calculated chi- square values were less than the table value at the 0.05 level of significance.

Post Score

Table No 1.9: Table Showing Association of Scores and Demographic Variables.

This section deals with the findings related to the association between score and selected demographic variables. The chi-square test was used to determine the association between the score levels and selected demographic variables

ASSOCIATION OF POSTTEST KNOWLEDGE SCORES WITH SELECTED SOCIO-DEMOGRAPHIC VARIABLES.									
Variables	**Opts**	**ADEQUATE KNOWLEDGE**	**MODERATE KNOWLEDGE**	**INADEQUATE KNOWLEDGE**	**Chi Test**	**P Value**	**df**	**Table Value**	**Result**
Age (Years)	11-12 Years	0	0	0	1.286	0.526	2	5.991	Not Significant
	12-13 Years	0	0	0					
	13-14 Years	10	0	0					
	14-15 Years	35	2	0					
	15-16 Years	13	0	0					
Gender	Male	0	0	0		N.A		N.A	
	Female	58	2	0					
Class	6th	0	0	0		N.A		N.A	
	7th	0	0	0					
	8th	0	0	0					
	9th	0	0	0					
	10th	58	2	0					
Father's Educational Status	Primary Education	4	1	0	5.379	0.146	3	7.815	Not Significant
	Secondary Education	26	0	0					
	Graduate	24	1	0					
	Post-Graduate	4	0	0					
	Illiterate	0	0	0					
Mother's Educational Status	Primary Education	8	1	0	2.621	0.454	3	7.815	Not Significant
	Secondary Education	24	1	0					
	Graduate	24	0	0					
	Post-Graduate	2	0	0					
	Illiterate	0	0	0					
	Government job	17	0	0	1.034	0.793	3	7.815	Not Significant
	Private job	19	1	0					

Father's Occupational Status	Semi government	3	0	0					
	Own business	19	1	0					
Mother's Occupational Status	Government job	5	0	0	1.740	0.628	3	7.815	Not Significant
	Private job	9	1	0					
	Semi government	1	0	0					
	House maker	43	1	0					
Type of Family	Nuclear family	38	2	0	1.034	0.596	2	5.991	Not Significant
	Joint family	19	0	0					
	Extended family	1	0	0					
Residential Area	Nuclear family	15	0	0	0.887	0.642	2	5.991	Not Significant
	Joint family	40	2	0					
	Extended family	3	0	0					
Mode of Travelling To School	Pedestrian	18	2	0	4.138	0.126	2	5.991	Not Significant
	Cycle	0	0	0					
	School vehicle	2	0	0					
	Public transport	38	0	0					
Do You Play Outdoor Games	Yes	51	2	0	0.273	0.601	1	3.841	Not Significant
	No	7	0	0					
Any Previous Knowledge About Road Safety	Yes	54	2	0	0.148	0.701	1	3.841	Not Significant
	No	4	0	0					

The Chi-square value shows that there is significance association between the score level and demographic variables (With no Significant Variables names). The calculated chi-square values were more than the table value at the 0.05 level of significance.

There is no significance association between the level of scores and other demographic variables (Age (Years), Gender, Class, Father's Educational Status, Mother's Educational Status, Father's Occupational Status, Mother's Occupational Status, Type of Family, Residential Area, Mode of Travelling To School, Do You Play Outdoor Games, Any Previous Knowledge About Road Safety) The calculated chi- square values were less than the table value at the 0.05 level of significance.

4. Conclusion

The present study assessed the knowledge level regarding road safety measures among school going students in Govt. Girls Sen. Sec School Portmore ,Shimla H.P. The knowledge level of school students prior structured teaching programme was moderate. After the implementation of structured teaching programme, there was a significant improvement in the knowledge level regarding road safety measures among school going students in Govt.GirlsSen.Sec.School Portmore,Shimla,H.P.

5. Future Scope

NURSING EDUCATION

Although education regarding road safety measures is given during nursing course, more emphasis needs to be laid on prevention of road traffic accidents. School going students can keep themselves safe from road safety measures.There must be adequate guidance, supervision and evaluation of school going students to ensure proper implementation of road safety measures regarding reducing incident of road traffic accidents.

NURSING RESEARCH

Research is essential for the maintenance of good practice – more the field expands, the more research becomes necessary.There is intense growth in road traffic accidents in school going children with associated problems such as neurological damage as well as physiological damage to the body. Due to which school going children can get permanent disabilities.

6. Reference

1. Chaurasiya SK, Jain PK, Kumar S, Bajpai PK, Ali N. Awareness and behavior patterns regarding road safety measures among undergraduate medical students of western Uttar Pradesh: a cross-sectional study. International journal of community medicine and public health (Gujarat). 2020;7(3):933-7.