

Effectiveness Of Structured Teaching Programme On Knowledge Regarding Prevention Of Road Traffic Accidents Among Adolescents (13-18 Years) In Selected Schools Of Baramulla Kashmir”

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Abstract: Purpose: The aim of the study was to assess the effectiveness of structured teaching program on knowledge regarding prevention of Road Traffic Accidents (RTAs) among Adolescents (13-18years) in selected schools of Baramulla Kashmir. **Method:** Pre-experimental one group pre-test and post-test research design were used. The Sample was 62 adolescents studying in selected schools of district Baramulla selected by stratified simple random sampling technique and data was collected by administering structured knowledge questionnaire. **Results:** Data was analyzed and interpreted by using both descriptive and inferential statistics. **Using SPSS:** V-20, all the inferences were checked at 0.05 level of significance. The mean pre-test knowledge score was (19.40) which improved to (35.25) in post-test at ($p < 0.001$). A significant association was found between Age ($p \leq 0.010$), Education ($p \leq 0.004$), Residence ($p \leq 0.001$), Occupation of Father ($p \leq 0.014$), Monthly family income ($p \leq 0.010$) of study subjects and the pre-test knowledge scores. Whereas no association was found between Gender, Occupation of mother and the pre-test knowledge scores ($p > 0.05$). **Conclusion:** Structured teaching program improved the knowledge of adolescent students regarding prevention of RTAs.

Keywords: Adolescents, Knowledge, Road traffic accidents, Structured teaching programme.

1. Background:

Adolescence is like a bridge between childhood and adulthood, during which the individual is gaining further physical maturity, further education and training that will enable him/her to fulfill a useful role in adult society.^[1] Road Traffic accident is a sudden unexpected event or injury occurring without any forewarning or it is a sudden cause of death or an emergency of the victim.^[2] RTAs are considered as one of the important public health problems around the world. According to Global Status Report on Road Safety-2009, over 1.2 million people die each year on the roads worldwide and between 20 and 50 million suffer non-fatal injuries. Currently, RTAs are the 9th leading cause of death and are predicted to become the 5th leading cause of death by the year 2020. The problem of RTAs is compounded by the fact that, the age groups primarily involved in RTAs belong to the most productive age group of 15-40 years.^{[3]-[4]} India alone accounts for 73% of RTA burden. Because of poor roads, ill-managed vehicles, improper rash driving, highway being the sites for play of children and inadequate teaching of traffic rules as well as its inadequate incorporation in school curriculum that leads to increased involvement of children in RTAs.^[5]

2. Need of the study:

Bhat (2013)^[6] conducted an epidemiological study of Road Traffic accidents in Kashmir Valley. The findings revealed that 97.6% were grievously hurt and 60% had head injuries. Also the recommendations of the study were that young people and students should remain the priority target group for a comprehensive educational program on driving principles, traffic rules & regulations, adoption of safe driving behavior. As per **Police records in J&K** RTAs have emerged as a major global public health problem of this

century and are now recognized as “veritable neglected pandemic”. In 2011, a total of 6644 RTAs were reported of which 1120 persons were killed and 10108 were injured in **J & K**. During 2011 in **Kashmir valley** alone 2164 road accidents were reported in which 326 persons killed and 3113 persons were injured whereas in 2009 and 2010, 319 and 264 people were killed and 3050 and 2077 persons were injured in 2076 and 1677 RTAs respectively.^[7] The health care provider is supposed to educate the youth in order to prevent accidents. As Nurses, we have dual role to play by creating public awareness to follow the traffic rules and dealing with patients, casualties of road accidents, and help them recuperate from the trauma of suffering with moral support.^[8] From these studies, recommendations & incidence, the researcher was inspired to conduct the study among adolescents regarding prevention of RTAs. Also by observing children after their school timing, walking as they like, getting shouting by vehicle drivers, performing heroic stunts on two wheelers, researcher felt the need to conduct the study. During clinical experience, researcher attended number of patients who were RTA victims and that too were adolescents. Majority of them lost their lives and some remained disabled throughout their life. Being a health care provider, researcher is supposed to prevent accidents among youth by educating them to follow traffic rules & regulation likewise wearing helmets, avoiding cell phones while driving. So the researcher was inspired to take up this issue for study.

3. Objectives:

- 3.1. To assess the existing knowledge regarding prevention of road traffic accidents among adolescents before implementation of structured teaching programme [pre-test].
- 3.2. To assess the knowledge regarding prevention of road traffic accidents among adolescents after implementation of structured teaching programme [post-test].
- 3.3. To compare the pre-test and post-test knowledge scores regarding prevention of road traffic accidents among adolescents.
- 3.4. To determine the association of pre-test knowledge scores regarding prevention of road traffic accidents among adolescents with their selected demographic variables i.e. Age, Gender, Education, Residence, Occupation of parents and Monthly family income.

4. Hypothesis:

- 4.1. **H1:** There is significant difference between the mean pre-test and post-test knowledge scores of adolescents regarding prevention of road traffic accidents at p ≤ 0.05% level of significance.
- 4.2. **H2:** There is significant association of pre-test knowledge scores of adolescents regarding prevention of road traffic accidents with their selected demographic variables i.e. Age, Gender, Residence, Education, Occupation of parents and Monthly family income at p ≤ 0.05% level of significance.

5. Materials and Method:

- 5.1. **Research design:** Pre-experimental one group pre-test and post-test research design.
- 5.2. **Setting:** Study was conducted in Government Higher secondary school Dangiwacha and Government Higher secondary school Behrampora of district Baramulla.
- 5.3. **Population:** Adolescent students from class 9th to 12th between the ages of 13-18 years studying in selected schools of Baramulla.
- 5.4. **Sample size:** 62
- 5.5. **Data collection Tool:** Structured Knowledge questionnaire comprised of two sections.
 - 5.5.1. **Section I:** Demographic variables on 6 items i.e. Age, Gender, Education, Residence, Occupation of parents (Father and Mother) and Monthly family income.
 - 5.5.2. **Section II:** This consists of 38 multiple choice questions related to basic knowledge of RTAs, causes, prevention and Traffic rules & signs.

Structured Teaching Programme covered meaning and definition of RTAs, types of roads, types of RTAs, location of RTAs, causes or factors leading to RTAs, Prevention of RTAs and traffic rules & signs.

6. Score Interpretation:

Each correct response was given a score of (1) and incorrect or unanswered response was given a score of (0). According to the scores attained the following criterion of interpreting the scores was developed.

Table 1: Scoring System

Score	Amount of Knowledge
0-19 (≤ 50%)	Inadequate Knowledge
20- 29 (51- 75%)	Moderately Adequately Knowledge
> 30 (> 75%)	Adequate Knowledge

7. Reliability:

Reliability of the tool was established by using test re-test method. Scores of the tool administered at two different occasions were compared and calculated by using the formula of **Karl Pearson's correlation coefficient**

$$r = \frac{\sum_{i=1}^n (X_i - \bar{X})(y_i - \bar{Y})}{\sqrt{\sum_{i=1}^n (X_i - \bar{X})^2 (Y_i - \bar{Y})^2}}$$

Where 'r' is reliability co-efficient. The reliability of questionnaire was found **r=0.96**

8. Data analysis:

Descriptive and inferential statistics were used. Descriptive statistics such as frequency and percentage was used to describe sample characteristics. Mean, S.D, Median, Minimum, Maximum and Range was used to assess the knowledge of study subjects. In Inferential statistics, Paired 't' test was used to compare pre-test & post-test knowledge and ANOVA used to determine the association of pre-test knowledge scores with selected demographic variables

9. Results:

Out of 62 study subjects, in pre-test 31 (50%) of the subjects had inadequate knowledge, 30 (48.39%) had moderately adequate knowledge and only 1 (1.61%) had adequate level of knowledge regarding prevention of RTAs. In post-test, majority of the subjects 61 (98.38%) had adequate knowledge, only 1(1.61%) subject had moderately adequate level of knowledge and none had inadequate level of knowledge regarding prevention of RTAs (Table -2). The mean pre-test knowledge score was (19.40) which improved to (35.25) in post-test at (p < 0.001) shown in Table-3. A significant association was found between Age (p ≤ 0.010), Education (p ≤ 0.004), Residence (p ≤ 0.001), Occupation of father (p ≤ 0.014), Monthly family income (p ≤ 0.010) of study subjects and the pre-test knowledge scores. Whereas no association was found between Gender, Occupation of mother and the pre-test knowledge scores (p > 0.05) shown in Table-4.

Table-2: Level of Subject Knowledge N=62

Knowledge Level	Pre-test		Post-test	
	(f)	%	(f)	%
Adequate(30-38)	1	1.61%	61	98.39%
Moderately Adequate(20-29)	30	48.39%	1	1.61%
Inadequate(0-19)	31	50%	0	0.0%

Table-3: Pre and post knowledge mean score N=62

Knowledge Score	Mean/Standard Deviation	Mean Difference	p-value
Pre-test knowledge score	19.40 ± 4.66	15.85	<0.001 *S
Post-test knowledge score	35.25 ± 2.51		

*S- Significant

Table-4: Association of other factors with knowledge

Variables	Category	Mean/ S.D	Mean Difference	p-value
Age	≤15 years	20.90± 4.36	3.0	0.010 *S
	>15 years	17.90 ± 4.54		
Gender	Male	19.50 ± 5.24	0.30	0.748 NS
	Female	19.20± 3.25		
Residence	9 th	19.20 ± 4.54	3.48	0.004 *S
	10 th	22.68 ± 3.40	2.2	
	11 th	17.00 ± 5.11	0.53	
	12 th	18.67 ± 3.79	5.68 4.01 1.67	
Occupation	Rural	17.65± 4.21	5.72	< 0.001 *S
	Urban	23.37± 2.93		
Occupation of father	Employee	22.90 ± 4.01	3.87	0.014 *S
	Business	19.03 ± 4.72	4.96	
	Farmer/Labourer	17.94 ± 4.04	1.09	
Occupation of Mother	Employee	23.00± 3.86	3.91	0.072 NS
	Housewife	19.09 ± 4.63		
Monthly family Income	≤20,000	17.64 ± 4.309	3.43	0.010 *S
	20,000-50,000	21.07 ± 4.69	4.11	
	50,000	21.75 ± 1.50	0.68	
	>50,000			

NS- Not Significant ($p > 0.05$) * S- Significant ($p \leq 0.05$)

10. Discussion:

The first objective of the study was to assess the existing knowledge regarding prevention of RTAs among adolescents before implementation of structured teaching programme [pre-test] as in Table 1. These findings are supported by a study conducted by **Nirmala, Padmaja (2012)**^[9] to assess the effectiveness of Planned Health Education on Prevention of RTAs among School Children at Tirupati. Out of 50 children (in **pre-test**), 86% (43) had inadequate knowledge, 14% (7) had moderately adequate knowledge and none were having adequate knowledge. The second objective of the study was to assess the knowledge regarding prevention of RTAs among adolescents after implementation of structured teaching programme [post-test] in Table 1. The findings have been supported by the same study conducted by **Nirmala, Padmaja (2012)**^[9] to assess the effectiveness of Planned Health Education on Prevention of RTAs. Out of 50 children (in **post-test**), 2% (1) had inadequate knowledge, 12% (6) had moderately adequate knowledge and 86% (43) had adequate knowledge. Which indicates the effectiveness of health education on knowledge regarding prevention of

RTAs at ($p < 0.01$) level of significance. The third objective of the study was to compare the pre-test and post-test knowledge scores regarding prevention of RTAs among adolescents (Table -2). The findings are supported by a study conducted by **Jayavel, Lizy (2014)**^[10] to assess effectiveness of structured teaching programme on prevention of RTAs among 150 adolescent students in Sri Krishna international school and PU College ITI colony at Bangalore. The average pretest knowledge score was found 34.753. After the STP, the mean posttest knowledge score was 49.033. The mean difference between pre-test & post-test knowledge score was 14.28. This was statistically significant at ($P < 0.001$). The fourth objective of the study was to determine the association of pre-test knowledge scores regarding prevention of RTAs (Table -3). These findings are supported by a study conducted by **Shampalatha S.P (2006)**^[11] with purpose to assess the knowledge on Road safety among 100 primary school children at selected urban & rural schools of Bangalore. The results of the study revealed that there was significant association between knowledge scores and selected demographic variables i.e. Age, sex, number of siblings, medium of instruction, family income and education of mothers ($F = 8.95, 6.37, 5.87, 50.06, 6.72, 11.04$), The F test value revealing significance at 5% level ($p < 0.05$). While no association found between knowledge score and residence ($F = 0.32$). But in present study, researcher found significant association between pre-test knowledge scores and residence of study subjects at $p \leq 0.001$ level of significance. Results may vary because of small sample size.

11. Conclusion:

The study concluded that structured teaching programme improved the knowledge of adolescent regarding prevention of RTAs.

12. References:

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Author Profile



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