International Journal of Research In Paediatric Nursing

E-ISSN: 2664-1305
P-ISSN: 2664-1291
www.paediatricnursing.net
IJRPN 2025; 7(2): 13-17
Received: 09-05-2025
Accepted: 12-06-2025

Jyothi VJ
Associate Professor, Department of Paediatric Nursing, Rajiv Gandhi University of Health Science College, Sree Siddhartha Institute of Nursing Science and Research Centre, Karnataka, India

Corresponding Author:
Jyothi VJ
Associate Professor, Department of Paediatric Nursing, Rajiv Gandhi University of Health Science College, Sree Siddhartha Institute of Nursing Science and Research Centre, Karnataka, India

To assess the effectiveness of planned teaching programme on prevention of road traffic accidents among adolescents

Jyothi VJ

DOI: https://www.doi.org/10.33545/26641291.2025.v7.i2a.232

Abstract
To evaluate the effectiveness of planned teaching programme on knowledge regarding prevention of road traffic accidents among adolescent students. Quasi experimental study one group pre test and post test research design were used. 60 samples were selected from the college by using simple random techniques based on the criteria. Structured knowledge questionnaire was used. After the pretest, the planned teavhing programme was given to the college students. After the intervention post test was conducted. The data was analyzed for frequency, percentage, mean, standard deviation. The effect of PTP was analyzed by using paired t- test. Association between pre-test knowledge score and demographic variables was analyzed by using chi-square test. There was significant increase in the post test level of knowledge as compared to the pre-test level of knowledge and the increase was significant at $p < 0.05$. There was ststistically significant association between the pre test score and selected socio-demographic variables like sex, birth order of child, occupation of parents. The sudy findings suggests that planned teaching programme is effective in improving the knowledge on prevention of road traffic accidents among adolescent puc students.

Keywords: Road traffic accidents, planned teaching programme, adolescent students, knowledge improvement, quasi-experimental design

Introduction
Injuries are now a major cause of death and disability among the adolescents in the world. These may include unintentional injuries, such as involvement in road traffic accidents, injuries resulting from violence towards self, such as suicides or injuries from interpersonal violence, such as involvement in physical fights [1].
Road accidents are the main cause of death of young men worldwide, and approximately 195,000 adolescents are killed each year in traffic accidents, more than 60% are boys.[16] Another 10% are severely disabled for life. Accidents were the major cause of death, with the male-female ratio being 3.4:1 among the accident cases [17].
In India every year road traffic accidents accounts for over 100,000 deaths,2million hospitalization, 7.7 million minor injuries and an estimated loss of 55,000 corers or nearly 3% of the GDP every year. If the present scenario is continued, it is projected that deaths due to road traffic accidents will be 150,000 and 2.8million victims will be hospitalized by 2015. 185,000 deaths and 3.6million victims will be hospitalized by 2020 [18].
The WHO Mortality Database states that over 90 percent of all fatal road accidents happen in low-or middle-income countries where road planning often doesn't give enough thought to pedestrians and cyclists. They have to share transport space with cars, trucks, and buses, which increases the likelihood of being involved in a collision [7]. In order to create awareness, WHO's theme for 2004 was "Road safety is no accident". The timely quality care provided to the victims will definitely alleviate their pain and limit the disability associated with accident [9].

Materials and Methods
Quasi-experimental research approach under a one group pre-test and post-test design was adopted to evaluate the effectiveness of planned teaching programme on knowledge regarding prevention of road traffic accidents among adolescent students in selected pre-university colleges, tumkur.

Prior permission obtained from the college principal and consent obtained from students. 60 samples were selected from the college by using simple random technique.

Group	Pre-test	Intervention	Post test
Students of PUC	Knowledge regarding prevention of road traffic accidents before administration of PTP	Planned teaching programme	Knowledge regarding prevention of road traffic accidents after administration of PTP
	0_1	X	0_2

The schematic representation of research design is shown in figure:

Data collection tool

Section 1: demographic profile like age, gender, religion, birth order of child, parents educational status, occupation of parents, health information,type of family.

Section 2: It consist of structured knowledge questionnaire which consist of 30 questions in which one mark was given for correct answer and zero mark for incorrect answer. 30 marks were given to assess the knowledge level. The knowledge level has been arbitrarily divided into three categories based on the knowledge score.

- Adequate knowledge: 21 - 30 score
- Moderately adequate knowledge: 11 - 20 score
- Inadequate knowledge: 0 - 10 score

Results and discussion

Demographic variables are analyzed by using frequency and percentage distribution, knowledge score were analyzed by computing frequency, percentage, mean, standard deviation, effectiveness of PTP is evaluated by paired t test and association analyzed by chi square test.

Section I: a) Pretest knowledge level

Table 1: Pre-test knowledge scores with frequency and percentage (n=60)

Knowledge score	Pre test	
	Frequency(f)	Percentage %
Inadequate(0-10)	20	33.33%
Moderately adequate (11-20)	30	50%
Adequate(21-30)	10	16.67%
Total	60	100%

The data presented in Table 9 depicts that in the pre-test majority of the subjects 30(50%) had moderately adequate knowledge and 20(33.33%) had inadequate knowledge and only 10(16.67) having adequate knowledge on prevention of road traffic accidents.

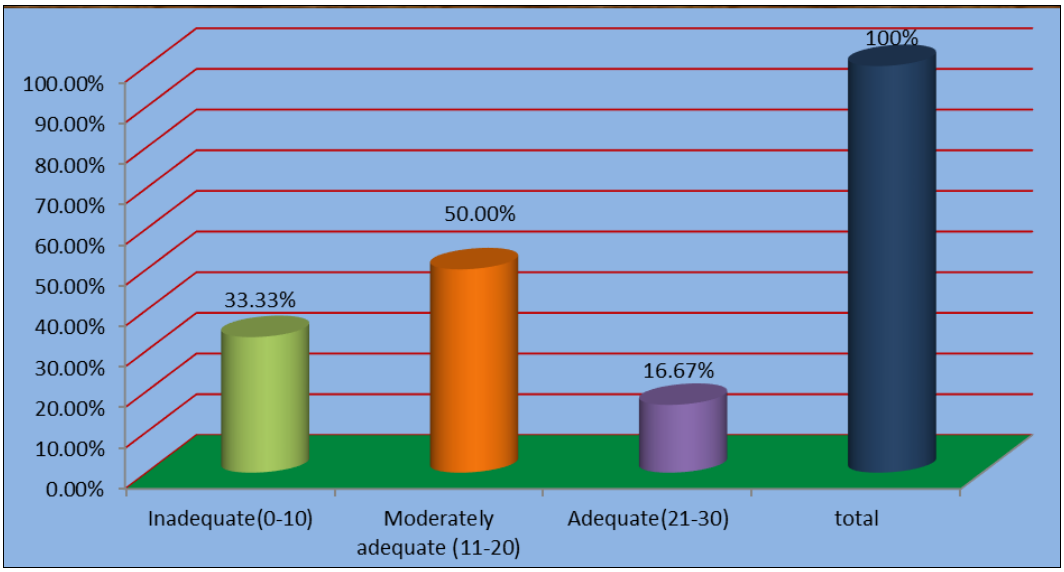

Fig 1: Pre-test knowledge scores with frequency and percentage

The data presented in figure 11 depicts th at in the pre-test majority of the subjects 30(50%) had moderately adequate knowledge and 20(33.33%) had inadequate knowledge and only 10(16.67) having adequate knowledge on prevention of road traffic accidents.

Section II: Post-test knowledge level

Table 2: Post-test knowledge scores with frequency and percentage. (n=60)

Knowledge score	Post test	
	Frequency(f)	Percentage (%)
Inadequate (0-10)	0	0%
Moderately adequate (11-20)	05	8.3%
Adequate (21-30)	55	91.7%
Total	60	100%

The data presented in Table 2 and Figure 2 represents that in the post-test majority of the subjects 55(91.7%) had adequate knowledge and 5(8.3%) had moderately adequate knowledge. None of the subjects possessed inadequate knowledge on prevention of road traffic accidents.

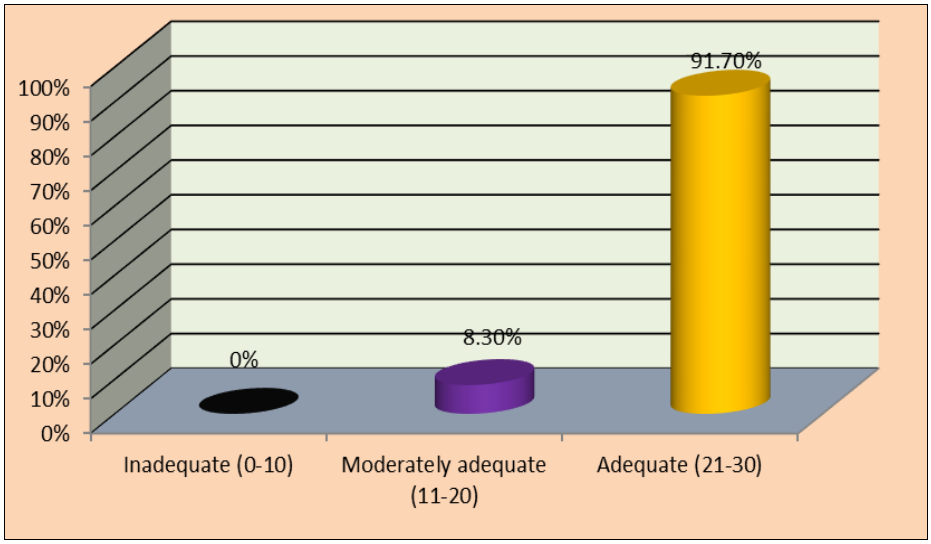

Fig 2: Posttest knowledge scores with frequency and percentage.

Section III: Effectiveness of PTP on prevention of road traffic accidents among student of PUC

This section deals with the analysis and interpretation of the data to evaluate the effectiveness of PTP on prevention of road traffic accidents among students of PUC comparing the pre-test scores with the post-test scores, it was found that all the subjects scored higher in the post-test than pre-test. This indicates that the PTP was effective in increasing the knowledge of prevention of road traffic accidents among students of PUC.

Table 3: Comparison of pre-test and post-test knowledge score of the PUC students on prevention of road traffic accidents (n=60)

Knowledge score	Pre test		Post test	
	Frequency (F)	Percentage (%)	Frequency (F)	Percentage (%)
Inadequate (0-10)	20	33.33	0	0
Moderately adequate (11-20)	30	50	5	8.3
Adequate (21-30)	10	16.67	55	91.7

Maximum score = 30

The data presented in Table 3 and Figure 3 depicts that in the pre-test majority of the subjects 30(50%) had moderately adequate knowledge on prevention of road traffic accidents and 20(33.33%) had inadequate knowledge and 10(16.67) had adequate knowledge. In the post-test it was observed that 55(91.7%) subjects had adequate knowledge, 5(8.3%) had moderately adequate knowledge and no one had inadequate knowledge on prevention of road traffic accidents.

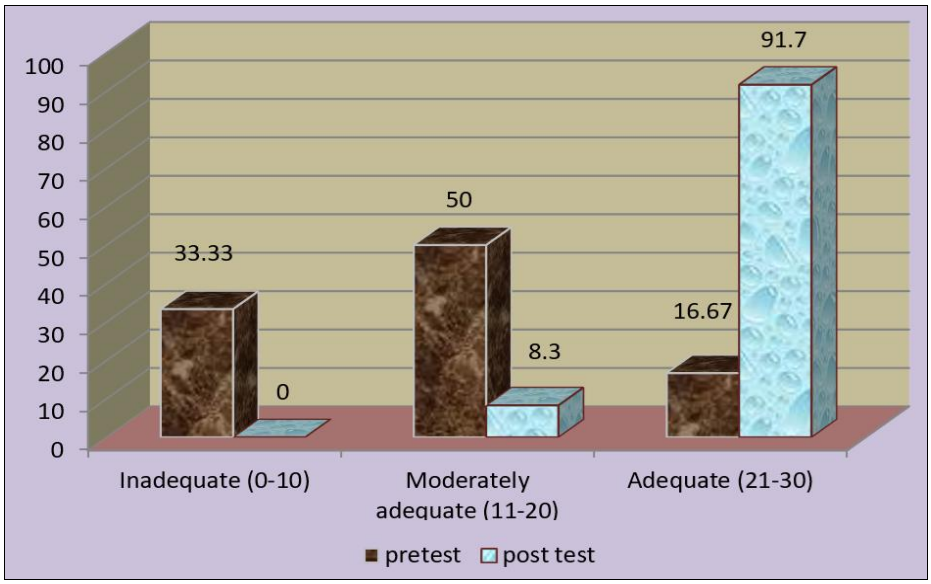

Fig 3: Comparison of pre- and post-test knowledge score of PUC students on prevention of road traffic accidents.

Table 4: Range, mean, median and standard deviation of pre-test and post-test knowledge score of the PUC students on prevention of road traffic accidents. (n = 60)

Knowledge	Range	Mean	Median	SD
Pre-test	4 - 25	12.6	12	5.65143
Post-test	12 - 30	24.21	24	3.50805

Maximum score = 30

The data presented in Table 4 reveals that the subject's knowledge score was higher in the post-test (range: 12-30) than that in the pre-test (range: 4-25). It is also evident that the mean post-test knowledge score (24.21±3.50805) was higher than that of the pre-test (12.6±5.65143).

Table 5: Paired 't' test showing the significance of mean difference between pre-test and post-test knowledge score of the PUC students regarding prevention of road traffic accidents. (n = 60)

Group	Knowledge	Mean	SD	t-value	P-value	Result
PUC Students	Pre test	12.6	5.65143	3.8454	2.000	*P*<0.05 sig
	Post test	24.21	3.50805			

Maximum score = 30

It is evident from the data presented in Table 5 that the calculated't' (3.8454) value was greater than the table value. Hence the null hypothesis was rejected at 0.05 level of significance. And H1 is accepted. The mean difference between pre-test and post-test knowledge score was a true difference and not a chance difference. This indicates that the PTP was significantly effective in increasing the knowledge of PUC students.

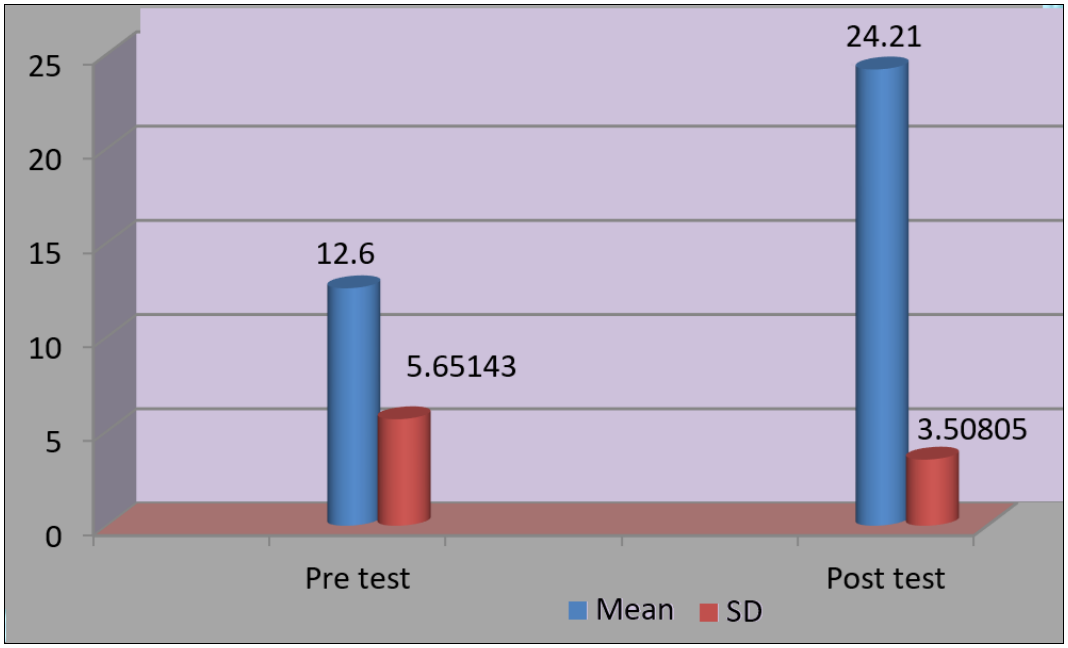

Fig 5: Significance of mean difference between pre-test and post-test knowledge scores

Table 6: Chi-square values showing the association between pre-test knowledge score of the PUC students and selected socio demographic variables (n=60)

Variables	Below mean (<M)	Above mean (>M)	Df	(χ^2)Chi-square value	P-value	Result
1. Age (in years)						
17	08	12	1	2.72	3.84	*P*>0.05 NS
18	25	15				
19 and above	00	00				
2. Sex						
Male	32	28	1	60.26	3.84	*P*<0.05 Sig
Female	00	00				
3. Religion						
Hindu	28	22	1	0.1212	3.84	*P*>0.05 NS
Muslim	05	05				
Christian	00	00				
4. Birth Order Of Child						
1	00	10	1	12	3.84	*P*<0.05 Sig
2 or above	30	20				

5. Parents Educational Status						
Literate	00	02	1	2.213	3.84	*P*>0.05 NS
Illeterte	31	27				
6. Occupation Of Parents						
Employed	00	04	1	5.238	3.84	*P*<0.05 S
Un employed	33	23				
7. Health Information						
Audio aids	00	00	1	60.26	3.84	*P*>0.05 S
AV aids	32	28				
8. Type of Family						
Nuclear	00	10	1	16.855	3.84	*P*<0.05 S
Joint	35	15				

Table 6 shows that the calculated chi-square value was more than the table value and *P*>0.05 hence there was significant association between pre-test knowledge score and selected socio-demographic variables such as sex (χ^2=60.26), Birth Order Of Child (χ^2 =12), Occupation Of Parents (χ^2 =5.238), Health Information (χ^2 =60.26), Type Of Family (χ^2 =16.85) at 0.05 level of significance. Thus the (H2) hypothesis is accepted.

Discussion

Pre test results prior to intervention shows that out of 60 students in the pre-test majority of the subjects 30(50%) had moderately adequate knowledge and 20(33.33%) had inadequate knowledge and only 10(16.67) having adequate knowledge on prevention of accidents. It shows that Knowledge of PUC students regarding the prevention of accidents was inadequate before the administration of planned teaching programme.

The calculated‘t’ (3.8454) value was greater than the table value at 0.05 level of significance. The mean difference between pre-test and post-test knowledge score was a true difference and not a chance difference. This indicates that the planned teaching programme was significantly effective in increasing the knowledge of PUC students.

The calculated chi-square value of some demographic variables were more and some were less than the table value and *P*>0.05 hence there was significant association between pre-test knowledge score and selected socio-demographic variables. It shows that there was significant association between the gain in knowledge scores and selected demographic variables.

Conclusion

Based on the analysis of the findings, the study proved that, majority of the students had inadequate knowledge regarding prevention of road traffic accidents and the planned teaching programme helped to improve the knowledge level of students regarding prevention of road traffic accidents in adolescents.

References

1. Grover VL, Sharma R. Health risk behaviors related to road safety among adolescent students. Indian Journal of Medical Sciences. 2007;61:656-692. Available from: http://www.indianjmedsci.org
2. Allianz. Mobility: Road accidents—the biggest killer of teens. Available from: http://www.knowledge.allianz.com/mobility/transportation-safety/437
3. Health Action. World Health Day theme: Road safety is not accident. Health Action. 2004; p. 4-13.
4. Peden M, Smin Key L. World Health Organization dedicates World Health Day to road safety injury prevention. 2004;10:67.
5. World Health Organization. World health report 2002. Geneva: WHO; 2002.
6. World Health Organization. Orientation programme on adolescent health for health-care providers. Geneva: WHO; 2003.
7. Wilf-Miron R, Gurvich R, Barell V. Cause-specific mortality among Israeli adolescents in the 1980s. Journal of Adolescent Health. 1994;15:186-191.
8. Government of India, World Health Organization India Country Office. Road traffic injury prevention in India: Collaborative programme 2004-2005.

How to Cite This Article

Jyothi VJ. To assess the effectiveness of planned teaching programme on prevention of road traffic accidents among adolescents. International Journal of Research in Paediatric Nursing. 2025;7(2):13-17.