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Pilot Study on The effectiveness of Value Integrated Health Care Programme on Knowledge, Health Perceptions and Health Risk Behaviours among Adolescents at Selected Schools

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Abstract

Background: Adolescents' risky behaviours often result from their inadequate knowledge of and experience with such behaviours and their lack of understanding of the risks involved. **Objective**: To study the feasibility of the intervention package on knowledge, health perception and health risk behaviour among adolescents. **Materials and Methods**: A quasi experimental non-equivalent control group design was adopted for the study. 20 adolescents (10-experiemntal & 10-control) who fulfilled inclusion criteria were selected. Purposive sampling technique was used. Data was collected using health risk behaviour screening tool, structured knowledge questionnaire and health perception scale developed by the investigator. **Results**: The results showed that in pretest the mean score for knowledge, health perception and health risk behavior was 8.55, 24.90, 15.20 in experimental group whereas in control group was 8.40, 24.20, 15.05. In post test the mean score for knowledge, health perception and health risk behavior was 13.85, 38.90, 9.05 in experimental group whereas in control group was 8.80, 25.05, 14.45. Experimental group of adolescents are gained 26.50% of knowledge score, 23.33% of Health perception score and 20.50% of reduced Health risk behaviour score than the control group. **Conclusion**: The pilot study concluded that the Value Integrated Health Care Programme was effective in improving the knowledge and health perceptions and reducing health risk behavior among adolescents in the study group and also revealed that it was feasible and practicable to conduct the main study.

Keywords: value integrated health care programme, knowledge, health perception, health risk behavior

I Introduction

Adolescence is a period of transition from childhood to adulthood in which interlocking changes in the body, mind and social relationship take place. Healthy development depends on both a propitious environment and the action of adolescents themselves. Adolescent health is especially linked to behavior. If

the environment is inadequate or dangerous and the adolescent lacks self-esteem, behaviors dangerous to health are more likely to occur.[1]

There are many reasons for the growing attention to the health of adolescents. Adolescent accounts for more than 20% of a country's population. World Health Organization (WHO) Global Community Consultation with Adolescents reported that the most important health problems affecting adolescents were mental health problems (depression and anxiety), health-compromising behaviors (e.g., tobacco and alcohol use) health-compromising conditions (e.g., overweight and obesity), non-communicable diseases (e.g., asthma, diabetes) and acute conditions (e.g., fever, headache, common cold). The rankings were similar in both sexes.[2]

Sunitha S (2019) conducted a study on Health behaviors & problems among young people in India. Nearly 10-30 per cent of young people suffer from health impacting behaviors and conditions that need urgent attention of policy makers and public health professionals. Nutritional disorders (both malnutrition and over-nutrition), tobacco use, harmful alcohol use, other substance use, high risk sexual behaviors, stress, common mental disorders, and injuries (road traffic injuries, suicides, violence of different types) specifically affect this population and have long lasting impact. Multiple behaviors and conditions often coexist in the same individual adding a cumulative risk for their poor health.. Healthy life-style and health promotion policies and programmes that are central for health of youth, driven by robust population-based studies are required in India which will also address the growing tide of NCDs and injuries.[3]

Nivedita Das et al (2018) conducted a cross-sectional descriptive study based on the concept of Global School-based Student Health Survey was conducted by interviewing adolescents of one urban and one rural randomly selected school. The study of six domains of important risk behaviors among 788 school-going adolescents (rural: 436 [55.3%], urban: 352 [44.7%]), (male: 406 [51.5%], female: 382 [48.5%]) revealed that occurrence of dietary high-risk behavior was more in urban students (11.4%) than rural students (1.8%). Regarding violence, occurrence of high-risk behavior was also higher among urban students (18.8% vs. 6%). The number of mentally disturbed girls is more than boys study on health risk behavior of mid-adolescent school students in a rural and an urban area of West Bengal, India.[4]

Adolescents' risky behaviours often result from their inadequate knowledge of and experience with such behaviours and their lack of understanding of the risks involved. As the general portrait indicated, a few areas of risk-taking pose the most serious threats to adolescents: sexual risk-taking, substance use, illegal behavior, and risky driving. The investigator being interested in adolescent health devised value integrated health care programme to improve the health status of adolescents and prevent them from risky behavior.

Statement of the problem

A Quasi Experimental study to assess the effectiveness of Value Integrated Health Care Programme on knowledge, health perceptions and health risk behaviours among adolescents at selected schools.

Objectives of the study

To study the feasibility of the intervention package on knowledge, health perception and health risk behaviour among adolescents.

Materials and methods

A quasi experimental non-equivalent control group design was adopted for the study. The independent variable was value integrated health care programme and the dependent variables were health risk behaviour, knowledge and health perception. 20 adolescents (10-experiemntal & 10-control) who fulfilled inclusion and exclusion criteria were selected. The pilot study setting was shristi Matriculation higher secondary School. Vellore. Purposive sampling technique was used. Adolescents between 13-16 years of age were included in the study. Adolescents who could understand Tamil or English, Parents who were willing to allow their children to participate in the study, who had mild, moderate and severe health risk behaviour were included in the study.

The tool constructed in this study has four parts: Part A comprising a tool to screen the health risk behaviour among adolescents, Part B consisting demographic variables and lifestyle factors, Part C consisting a structured knowledge questionnaire to assess the knowledge and Part D consisting health perception scale to assess the health perception, Part E consisting an intervention tool prepared by the investigator that is Value integrated health care programme.

Ethical considerations

The study proposal and plan was granted formal ethical approval by the International Centre for Collaborative Research, which is the official ethics review board of Omayal Achi College of Nursing. Consent was obtained from the Principal, shristi Matriculation higher secondary School, Vellore to conduct the study. Written informed assent and parental consent was obtained from the participants and parents after a clear explanation of the study purpose, type of data required, nature of commitments, participation, procedure and potential benefits, and the rights to withdraw from the study at any point of time were also explained. Confidentiality of all personal details disclosed by the samples and full privacy was assured. Equality and justice was ensured by administering the intervention to the control group at the end of the post-test. After getting formal permission from the school principal and ICCR, informed consent and assent was obtained from the parents and adolescents to participate in the study.

Phase 1: Assessed the health risk behaviour among adolescents by using health risk behaviour screening tool developed by the researcher.

Phase 2: By using purposive sampling technique, 10 adolescents were each selected for the study group and for the control group. The demographic data was collected and the pre- test level of knowledge and health perception was assessed by using the structured knowledge questionnaire and health perception scale respectively, in study and control groups. On the same day for experimental group value integrated health care programme was administered for 40 – 45 minutes by PowerPoint presentation and organized parents and teachers interaction on positive ways of caring adolescent children for a period of one hour and individual counseling of adolescents on positive perceptions and practices for healthy behaviour on the second day.

Phase 3: Post test level of knowledge, health perception and health risk behaviour was assessed after 20 weeks. A similar scheme of data collection was implemented for the samples in the control group with the exception of interventions by the investigator. After the post-test, the same intervention package was executed for the control group.

Statistical analysis

Descriptive statistics such as mean and standard deviation and inferential statistics such as Karl Pearson correlation co-efficient, chi square, Mann Whitney U test, Wilcoxon signed rank test were used for analyzing the data.

III Results

Regarding demographic variables, 35% of the adolescents were in the age group of 14 years and 16 years in both the groups. 75% of them were boys and 25% of there were girls in both the groups. 50% of them were studying 9th standard, 35% were studying 10th standard and 15% of them were studying 11th standard in experimental group whereas in control group 35% of them were studying 9th and 10th standard and 30% of them were studying 11th standard.

With regard to religion, 50% of them belonged to Hindu, 30% belonged to Christian and 20% belonged to Muslim in experimental group. In control group 40% belonged to Hindu, 35% belonged to Christian and 25% belonged to Muslim religion. Regarding diet pattern, 95% of them were non-vegetarian and 5% of them were vegetarian in both the groups. In regard to type of family, 85% of them belonged to nuclear family and 15% of them belonged to joint family in both the groups. .

Table 1: Percentage distribution of level of knowledge among adolescents in experimental and control group

N=20

Level of knowledge	Experimental Group		Control Group	
	Pre test (%)	Post test (%)	Pre test (%)	Post test (%)
Poor	0.00	0.00	0.00	0.00
Average	80.00	0.00	85.00	75.00
Good	20.00	70.00	15.00	25.00
Excellent	0.00	30.00	0.00	0.00

Table 2: Percentage distribution of level of health perception among adolescents in experimental and control group

N=20

Level of health perception	Experimental Group		Control Group	
	Pre test (%)	Post test (%)	Pre test (%)	Post test (%)
Poor	0.00	0.00	0.00	0.00
Average	75.00	0.00	85.00	75.00
Good	25.00	70.00	15.00	25.00
Excellent	0.00	30.00	0.00	0.00

Table 3: Percentage distribution of level of health risk behaviour among adolescents in experimental and control group

N=20

Level of health risk behaviour	Experimental Group		Control Group	
	Pre test (%)	Post test (%)	Pre test (%)	Post test (%)
No health risk behaviour	0.00	0.00	0.00	0.00
Mild health risk behaviour	10.00	65.00	10.00	25.00
Moderate health risk behaviour	90.00	35.00	90.00	75.00
Severe health risk behaviour	0.00	0.00	0.00	0.00

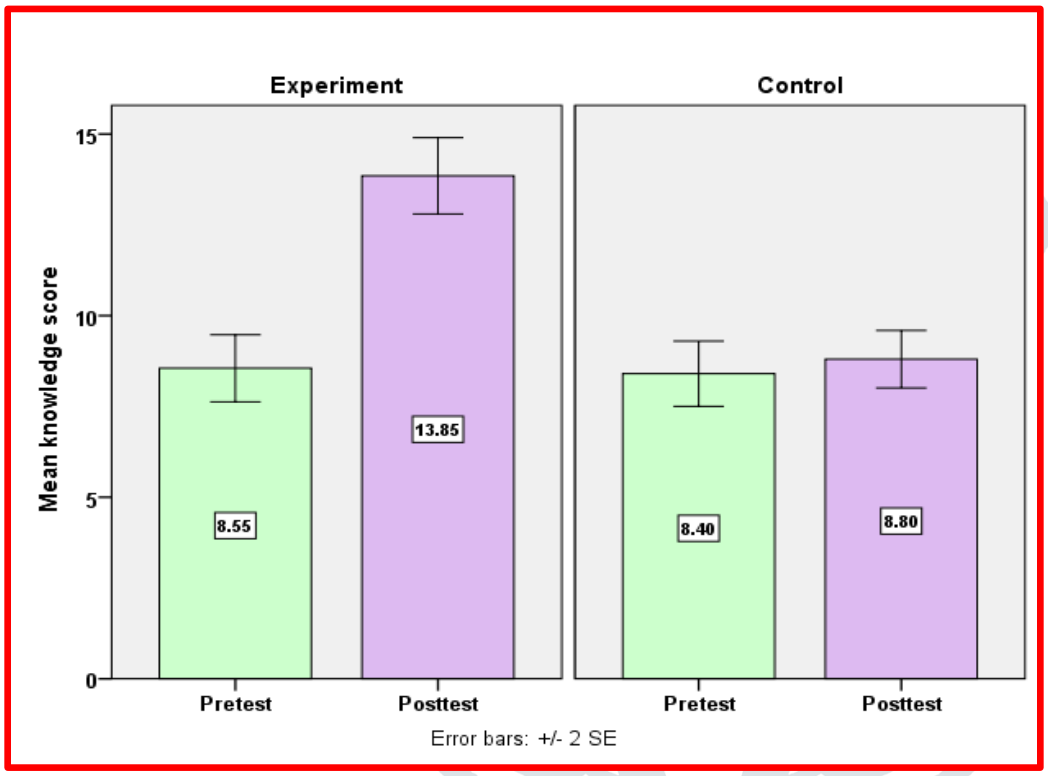

Figure 1: Comparison of Knowledge mean score between experimental and control group

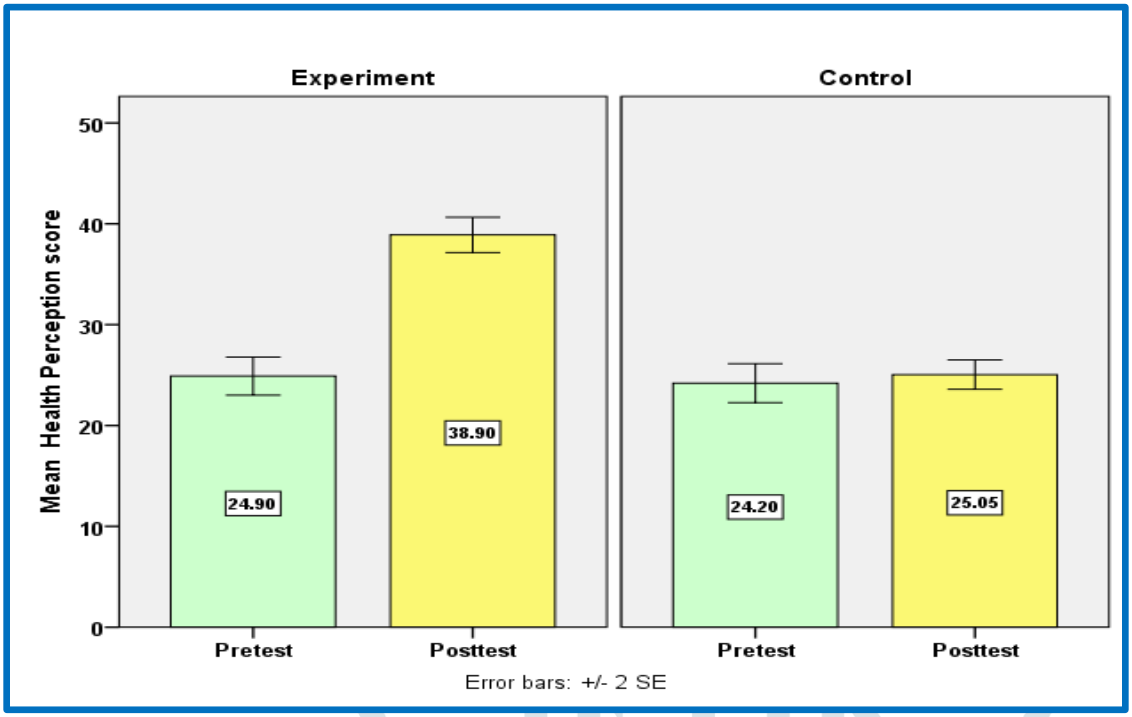

Figure 2: Comparison of health perception mean score between experimental and control group

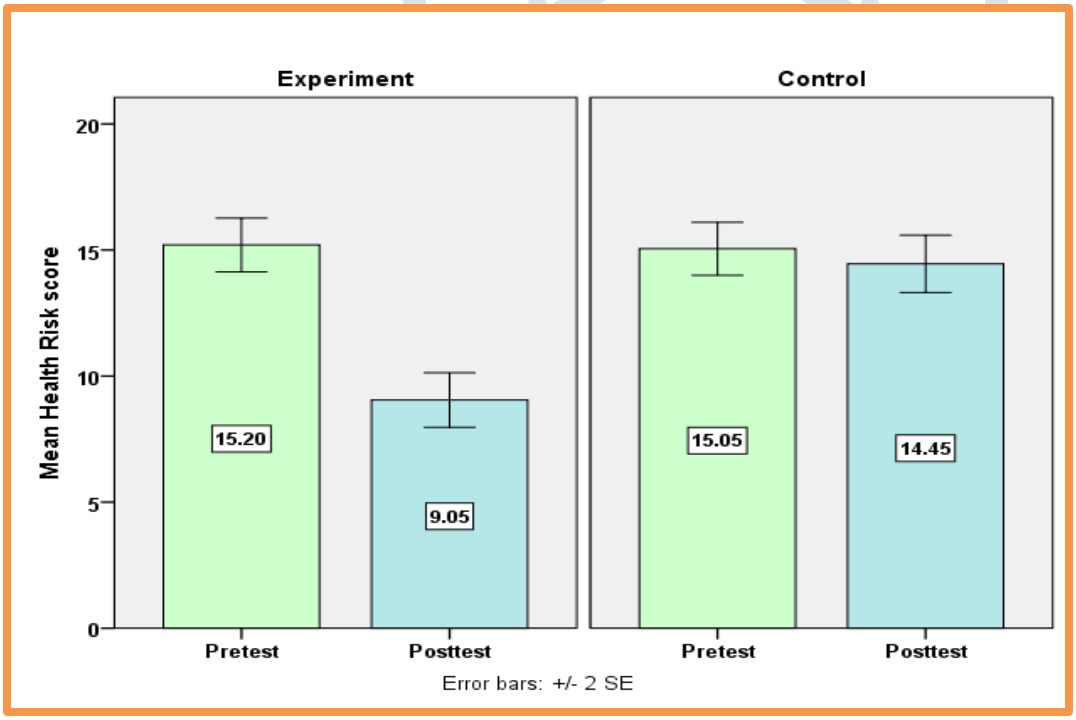

Figure 3: Comparison of health risk behaviour mean score between experimental and control group

Table 3: Correlation between mean differed level of knowledge, health perceptions and health risk behaviour among adolescents in the experimental group

Correlation between	Mean ± SD	Karl pearson Correlation coefficients	Interpretation
Knowledge gain score Vs Health perceptions gain score	5.30±2.64Vs 14.00±5.89	r= 0.35 P=0.01**	Positive, Fair correlation
Knowledge gain score Vs Health risk behaviourreduction score	5.30±2.64Vs 6.15±2.94	r= 0.30 P=0.01**	Positive,, Fair correlation
health perceptions score Vs Health risk behaviour reduction score	14.00±5.89Vs 6.15±2.94	r= 0.24 P=0.05*	Positive, Fair correlation

Age, standard, mother's education, mothers occupation and academic performance of adolescents had significant association with mean knowledge score. Age, standard, mothers education, mother's occupation and involvement in school activities of adolescents had significant association with mean health perception score. Age, standard, family members, mother's occupation and involvement in school activities of adolescents had significant association with mean health risk behaviour score.

IV Discussion

This results of the study clearly indicates that the Value integrated health care programme was effective in improving the knowledge and health perception and reducing the health risk behaviour among adolescents in the study group than in the control group.

The study findings were consistent with the study conducted by Gurung D, Thapa B and Paudel A (2020) assessed the effectiveness of educational package on knowledge regarding substance use disorders among adolescents. The result showed that in pre-test most of the adolescents had inadequate knowledge about substance use disorders. But in the post-test, forty percentages of the adolescents had moderately adequate knowledge and remaining sixty percentages had adequate knowledge on substance use disorders. The result also revealed that there was significant improvement in knowledge after the intervention. The study concluded that adolescents were in great risk for substance use disorders. After implementation of the educational package on substance use disorders, adolescents gained adequate knowledge regarding the disorder. Study supported that educational package was effective in improving the level of knowledge regarding substance use disorders among adolescents.[5]

The findings also supported by another study conducted by Robert Patton, Paolo Deluca, Eileen Kaner (2015) regarding the evidence base on alcohol screening and brief intervention for adolescents. Motivational interventions are effective at reducing levels of consumption and alcohol-related harm. The study concluded that research to develop age-appropriate screening tools needs to be undertaken. Screening and brief intervention activity should be undertaken in settings where adolescents are likely to present.[6]

The reliability of the data collection tools was assessed using test-retest and Cronbachs alpha method. The correlation coefficient r–value obtained was 0.85 for the structured knowledge questionnaire and 0.86 for health perception scale and 0.82 for health risk behaviour screening tool. The correlation coefficients are high and it is a good tool to evaluate the effectiveness of value integrated health care programme on knowledge, health perception and health risk behaviour among adolescents at selected schools in Vellore.

V Conclusion

The pilot study concluded that the Value Integrated Health Care Programme was effective in improving the knowledge and health perceptions and reducing health risk behaviour among adolescents in the study group and also revealed that the data collection tools used were reliable, feasible and appropriate to be applied to the samples in the main study.

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VIII Conflict of interest: None declared

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X Contributors

GPVS: Conceptualization of the study, collection, analysis of the data, writing the manuscript, finalized the manuscript and will act as the guarantor of the paper; **CD**: Conceptualization of the study, analysis of the data, writing the manuscript, finalized the manuscript, edited and critically evaluated the manuscript.