



A STUDY TO ASSESS THE EFFECTIVENESS OF A STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING HIV/AIDS AND ITS PREVENTION AMONG HIGHER SECONDARY STUDENTS IN SELECTED SCHOOLS OF VADODARA DISTRICT

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ABSTRACT

Background: HIV/AIDS is an important public health concern, and adolescents require accurate knowledge regarding HIV/AIDS and its prevention. Schools provide an appropriate setting for structured health education. Objective: To assess the effectiveness of a structured teaching programme (STP) on knowledge regarding HIV/AIDS and its prevention among higher secondary students in selected schools of Vadodara district and to determine the association between pre-test knowledge and selected demographic variables. Methods: A quantitative evaluative approach with a pre-experimental one-group pre-test post-test design was used. Sixty higher secondary students from selected schools of Vadodara district were selected. Data were collected using a 25-item structured knowledge questionnaire. The STP was administered immediately after the pre-test using lecture and audiovisual aids, and a post-test was conducted on the seventh day. Descriptive statistics, paired t-test and chi-square test were used for analysis. Results: The mean pre-test knowledge score was 10.18 ± 2.48 , whereas the mean post-test score was 21.10 ± 1.86 . The improvement was statistically highly significant ($t = -14.111$, $p < 0.001$). A statistically significant association was found between pre-test knowledge and type of family ($\chi^2 = 6.399$, $df = 2$). No significant association was found with age, gender, class, area of residence or source of information. Conclusion: The structured teaching programme was effective in improving knowledge regarding HIV/AIDS and its prevention among higher secondary students. School-based structured health education can therefore be used to strengthen adolescents' knowledge and awareness regarding HIV/AIDS prevention.

Index Terms: HIV/AIDS, structured teaching programme, knowledge, higher secondary students, adolescents, school health education, prevention.

I. INTRODUCTION

HIV/AIDS continues to be a significant public health concern. Adolescence is an important period for developing health-related knowledge and attitudes, and inadequate or inaccurate information can affect awareness regarding HIV/AIDS and its prevention. Schools are an important setting for health education because they provide access to adolescents in a structured learning environment.

The present study was undertaken to assess the effectiveness of a structured teaching programme on knowledge regarding HIV/AIDS and its prevention among higher secondary students in selected schools of Vadodara district. The study focused on measuring knowledge before and after the educational intervention and identifying selected demographic factors associated with pre-test knowledge.

II. OBJECTIVES OF THE STUDY

1. To assess the pre-test level of knowledge regarding HIV/AIDS and its prevention among higher secondary students.
2. To assess the post-test level of knowledge regarding HIV/AIDS and its prevention among higher secondary students after administration of the structured teaching programme.
3. To determine the effectiveness of the structured teaching programme on knowledge regarding HIV/AIDS and its prevention.
4. To determine the association between pre-test knowledge regarding HIV/AIDS and its prevention and selected demographic variables.

III. RESEARCH METHODOLOGY

Research approach and design: The study used a quantitative evaluative research approach and a pre-experimental one-group pre-test post-test design.

Setting and participants: The study was conducted among 60 higher secondary students from selected schools of Vadodara district. Participants were adolescents in the 15–18-year age group.

Sampling: Simple random sampling was used for selection of the study participants.

Data collection tool: Data were collected using a structured questionnaire consisting of 25 knowledge items regarding HIV/AIDS and its prevention, along with a demographic information section.

Intervention: A structured teaching programme on HIV/AIDS and its prevention was administered immediately after the pre-test using lecture and audiovisual aids. The post-test was conducted on the seventh day.

Data analysis: Frequency and percentage were used to describe demographic characteristics. Mean and standard deviation were used to describe knowledge scores. A paired t-test was used to compare pre-test and post-test knowledge scores, and chi-square test was used to determine associations between pre-test knowledge and selected demographic variables.

Ethical considerations: Permission was obtained from the concerned school authorities. Informed consent was obtained from participants/guardians, and anonymity and confidentiality were maintained.

IV. RESULTS AND DISCUSSION

Among the 60 participants, 26.7% were aged 16 years, 25% were aged 15 years, 25% were aged 17 years and 23.3% were aged 18 years. The sample included equal proportions of male and female students (50% each). Regarding class, 51.7% were studying in 11th standard. A majority (53.3%) belonged to nuclear families. The participants were from rural (35%), urban (35%) and semi-urban (30%) areas. Sources of information included teachers, parents and the internet (20% each), while 3.3% reported health workers as a source.

Table 1. Comparison of pre-test and post-test knowledge scores (N = 60)

Assessment	Mean	SD	Paired t-test / p-value
Pre-test	10.18	2.48	$t = -14.111$; $p < 0.001$
Post-test	21.10	1.86	Statistically highly significant

The mean pre-test knowledge score was 10.18 ± 2.48 , while the mean post-test knowledge score increased to 21.10 ± 1.86 . The paired t-test value was -14.111 with $p < 0.001$, indicating a statistically highly significant improvement in knowledge following the structured teaching programme. These findings demonstrate that the educational intervention produced a substantial improvement in the participants' knowledge scores.

Table 2. Association between pre-test knowledge and selected demographic variables

Variable	χ^2	df	Interpretation
Age	6.800	3	Not significant
Gender	1.669	1	Not significant
Class	1.087	1	Not significant
Type of family	6.399	2	Significant
Area of residence	0.251	2	Not significant
Source of information	3.968	5	Not significant

The association analysis showed that type of family was significantly associated with pre-test knowledge ($\chi^2 = 6.399$, $df = 2$). Age, gender, class, area of residence and source of information did not show statistically significant associations with pre-test knowledge in this sample.

V. DISCUSSION

The study findings showed a clear increase in knowledge scores after administration of the structured teaching programme. The pre-test mean score of 10.18 increased to 21.10 in the post-test, and the paired t-test demonstrated a highly significant difference ($p < 0.001$). The findings are consistent with the studies cited in the thesis, which reported inadequate or limited baseline knowledge among adolescents and improvement after structured educational interventions.

The present study also found a significant association between pre-test knowledge and type of family. However, no significant association was observed with age, gender, class, area of residence or source of information. These findings should be interpreted in the context of the sample size and the selected schools.

VI. CONCLUSION

The study concluded that the structured teaching programme was effective in improving knowledge regarding HIV/AIDS and its prevention among higher secondary students. The statistically significant improvement between pre-test and post-test scores supports the use of structured school-based health education for strengthening adolescents' knowledge and awareness regarding HIV/AIDS prevention.

VII. LIMITATIONS

1. The study was conducted among a relatively small sample of 60 students.
2. The study used a pre-experimental one-group pre-test post-test design without a control group.
3. The study was conducted in selected schools of Vadodara district; therefore, generalization should be made cautiously.
4. The outcome assessed was knowledge, not actual preventive behaviour.

VIII. RECOMMENDATIONS

1. Similar studies may be conducted with larger samples and multiple schools.
2. A quasi-experimental or randomized controlled design may be used in future studies.
3. School health programmes may include regular structured education on HIV/AIDS and related prevention topics.
4. Future research may assess retention of knowledge and changes in preventive attitudes or behaviours using appropriate validated measures.

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