

# Assessment of the Knowledge of Senior Secondary School Students Regarding Cancer, Its Warning Signs and Treatment Modalities Among Selected Schools of District Faridkot, Punjab in a View to Develop Self-Instructional Module Regarding Prevention of Cancer

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## Abstract

Cancer is an curtail global health problem, touching every region and socioeconomic level. Today, cancer accounts for one in every eight deaths worldwide more than HIV/AIDS, tuberculosis, and malaria combined. The aim of this study is to assess the knowledge of senior secondary school students regarding cancer, its warning signs and treatment modalities in the selected senior secondary schools Faridkot district. A descriptive, cross-sectional, study was conducted on students of Senior Secondary Schools in District Faridkot, Punjab. Sample was 240 students of senior secondary schools. Convenient sampling technique was used to select 120 students from two government schools and 120 students from two private schools. 60 senior secondary school students, 30 students from 10+1 (15 from arts and 15 from science) and 30 students from 10+2 (15 from arts and 15 from science) were taken from each govt. and private school. Self-structured questionnaire related to assessment of knowledge of senior secondary school students regarding cancer, its warning signs and treatment modalities were used for data collection. The findings of the study revealed that (89.6%) students had adequate knowledge and (10.4%) students had inadequate knowledge regarding cancer, its warning signs and treatment modalities. The mean score of students was 22.46. In sub-content areas, (83.30%) study subjects had adequate knowledge regarding cancer, 75% of students had adequate knowledge regarding its warning signs and 97.5% of students had adequate knowledge regarding treatment modalities. 84.2% students of govt. school had adequate knowledge and 95% students of private school had adequate knowledge. Mean score of govt. school was 21.81 and 23.12 of private school. The t-test value was  $-2.773$  and p-value was 0.000. It is significant at  $p < 0.05$ . So there was significant difference between the knowledge of government and private senior secondary school students. The private school had more knowledge than govt. school. Chi square test was computed to find the relationship of knowledge of senior secondary school regarding cancer, its warning signs and treatment modalities with selected variables i.e. gender, age, school, class, stream, religion, place of living, types of family, education status of father, education status of mother, occupation of father and mother, family income, heard about cancer and sources of knowledge of cancer. The knowledge about cancer, its warning signs and treatment modalities was found to be significant at p value 0.05 with the religion, education of father, family income and type of school. The knowledge of private school students was found significantly higher than government school students.

**Keywords:** cancer, knowledge, senior secondary school students, warning signs and treatment modalities

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## INTRODUCTION

The term cancer is an umbrella word used to describe a group of more than 100

diseases in which cells multiply and spread without control, destroying healthy tissue and endangering life. More than 60% of all

cancer deaths occur in low- and middle income countries, many of which lack the medical resources and health systems to support the disease burden of the population. The future burden may be further increased by the adoption of behaviors and lifestyles associated with economic development and urbanization (e.g., smoking, poor diet, physical inactivity, and reproductive patterns) in low- and middle-income countries. Cancer is one of the leading causes of adult deaths worldwide. Rates of cancer deaths are expected to rise, particularly, from increases in the age-specific cancer risks of tobacco smoking, which increase the incidence of several types of cancer.<sup>[1]</sup> India is a culturally diverse country, with huge regional and rural-to-urban variation in lifestyles and in age-specific adult death rates.

Thus, understanding the geographical and social distribution of specific cancers is essential to target cancer control programmers and further research into the causes of cancer. Cancer has become one of the ten leading causes of death in India. Cancer is a group of over one hundred diseases characterized by abnormal, uncontrolled cell growth.<sup>[2]</sup>

### **OBJECTIVES OF THE STUDY**

1. To assess the knowledge of senior secondary school students regarding cancer, its warning signs and treatment and its prevention.
2. To compare the knowledge of students of govt. senior secondary school and private senior secondary school regarding cancer, its warning signs and treatment modalities.
3. To determine the association regarding knowledge of cancer, its warning signs and treatment modalities with selected variables like gender, age, arts and science students, private and govt. schools, etc.
4. To develop the module of prevention of cancer.

### **PURPOSE OF THE STUDY**

The purpose of this study is to assess the knowledge regarding epidemiological trend in incidence of cancer and to identify the factors regarding carcinogenesis. Teenagers are the future of the country. Their knowledge and attitude can bring changes in the society. Since the prevalence of cancer is high in Malwa Belt, there is a need to assess young generation's knowledge about cancer. So the researcher decided to conduct this study in higher secondary school students.<sup>[3]</sup>

### **METHODOLOGY**

A non-experimental descriptive survey approach was found suitable for the present study. A cross sectional design was considered appropriate. The present study was conducted at Balbir Govt. Senior Secondary School, Govt. Girl's Seniors Secondary School and Private S.D. Senior Secondary School, New Model Senior Secondary School, Faridkot. Study variables: knowledge. Socio-demographic variables: gender, age, school, class, stream, religion, place of living, types of family, education status of father, education status of mother, occupation of father and mother, family income, heard about cancer and sources of knowledge of cancer. The population of the present study comprised of school students studying in 10+1 and 10+2 arts and science subjects at selected schools of district Faridkot. Total population was comprised of approximately 460 students in arts and science streams. Total sample size was 240 students; who were conveniently selected from Govt. Balbir Senior Secondary School (60), 30 student's from 10+1 (15 from arts and 15 from science) and 30 students from 10+2 (15 from arts and 15 from science).<sup>[4]</sup> Govt. girls senior secondary school school (60), 30 students from 10+1 (15 from arts 15 from science) and 30 from 10+2 (15 from arts and 15 from science). Private S.D. senior secondary school (60) 30 students

from 10+1 (15 from arts and 15 from science) and 30 from 10+2 (15 from arts and 15 from science). New Model Senior Secondary School (60) 30 students from 10+1 (15 from arts and 15 from science) and 30 from 10+2 (15 from arts and 15 from science). To accomplish the objective of the study, a structured questionnaire was constructed to assess the knowledge of cancer, its warning signs and treatment modalities. Analysis of the data was done in accordance with the objectives. It was done by using the descriptive and inferential statistics.[5]

### DATA ANALYSIS

1. Sample characteristics.
2. To assess the knowledge of senior secondary school students regarding cancer, its warning signs and treatment modalities.
3. To compare the knowledge of students of govt. senior secondary school and private senior secondary school regarding cancer, its warning signs and treatment modalities.
4. To determine the association regarding knowledge of cancer, its warning signs and treatment modalities with selected variables like gender, age, arts and science students, private and govt. schools, etc.

### Presentation of Sample Characteristics

*Socio-demographic profile of the respondents:* A total of 240 students were taken for study. The results indicated that, 125 respondents (52.1%) were male and respondents 115 (47.9%) were females. Maximum (69.6%) school students were in the age group of 15–17 years, followed by (30.4%) in the age group of 18–20 years. The result indicated that 120 respondents (50.0%) were from private school and respondents 120 (50.0%) were govt. school. The result indicated 122 respondents (50.8%) were studying in 10+1 and respondents 118 (49.2%) were

10+2. The result indicated that 120 respondents (50%) were arts and respondents 120 studying in (50%) were science. As per religion, majority of students; 183 (76.3%) belong to Sikh religion, respondents 55 (22.9%) was from Hindu religion and other respondents 2(0.8) belong to other religion.<sup>[6]</sup> The results indicated that 119 respondents (49.6) were rural area and 121 respondents (50.4) were from urban. The result indicated that 133 respondents (55.4) were from joint family and 107 respondents (44.6) belong to nuclear family. Regarding parental education 35 students' fathers (14.6%) were illiterate, 29 students' fathers (12.1) were educated up to primary school, 41 students' fathers (17.1%) were educated upto middle class, 81 students' fathers (33.7) with metric, 26 students' fathers (10.8%) were qualified up to senior secondary, 28 students' fathers (11.7%) were graduates and above.

### Objective-1

Assessment of knowledge of senior secondary school students regarding cancer, its warning signs and treatment modalities in total content area.

*Mean and Standard Deviation of Knowledge Score of Subjects:* Maximum possible score was 36. Maximum obtained score by the students was 33 and minimum obtained score was 11. Mean knowledge score was 22.46, standard deviation was 3.706. Majority of students were having adequate knowledge towards cancer, warning signs and treatment modalities.

*Distribution of Knowledge Score of Senior Secondary School Students:* knowledge score of senior secondary school students regarding cancer, its warning signs and treatment modalities in total content area. 89.6% students had adequate knowledge regarding cancer, its warning signs and treatment. And 10.4% students had inadequate knowledge.

*Percentage Distribution of Knowledge Score of Students Regarding Cancer:* majority of the study subjects' i.e. 180 (83.30%) were having adequate knowledge regarding cancer and 60 (16.70%) students had inadequate knowledge.

*Percentage Distribution of Student's Knowledge Score Regarding Warning Signs of Cancer:* 180 (75%) of senior secondary students had adequate knowledge and 60 (25%) of senior secondary students had inadequate knowledge regarding warning signs of cancer.

*Percentage Distribution of Knowledge Score Regarding Treatment Modalities:* 234 (97.5%) had adequate knowledge and 60 (2.5 %) of senior secondary students had inadequate knowledge regarding treatment modalities of cancer.

### **Objective-2**

To compare the knowledge of students of govt. senior secondary school and private senior secondary school regarding cancer, its warning signs and treatment modalities.

*Percentage Distribution of Knowledge Score of Government School Regarding Cancer, Warning Signs and Treatment Modalities:* govt. school students 101 (84.2%) had adequate knowledge regarding cancer warning signs and 19 (15.8%) students had inadequate knowledge.

*Knowledge Score of Private School Regarding Cancer, Warning Signs and Treatment Modalities:* score of private school students 114 (95%) had adequate knowledge regarding cancer, warning signs and treatment modalities and 6 (5%) students had inadequate knowledge. In comparison, it is seen that upon the basis of frequency and percentage of govt. school and private school. Private school

students had more knowledge than govt. school.

### **Objective-3**

Association of knowledge score of senior secondary school regarding cancer, warning signs and treatment modalities with selected variables.

Male students had knowledge score 114 whereas score by female students was 101. The difference of knowledge score was found statistically non significant at  $p < 0.05$  level.

- Knowledge score was 149 highest in the students who belong to age group 15–17 years and followed by 66 in the age group 18–20 in 110 years. The difference of knowledge score was found statistically non significant at  $p < 0.05$  level.
- Knowledge score was maximum 104 of private school student, minimum 101 of govt. school students. The difference of knowledge score was found statistically significant at  $p < 0.05$  level.
- Knowledge score maximum was 110 of 10+1 and minimum was 105 of 10+2. The difference of knowledge score was found statistically non significant at  $p < 0.05$  level.
- Knowledge score maximum was 109 arts stream, minimum 106 of science stream. The difference of knowledge score was found statistically non-significant at  $p < 0.05$  level.
- Sikh students had knowledge score of 169 and score by Hindu students was 44. Other religion had knowledge score 2. The difference of knowledge score was found statistically significantly at  $p < 0.05$  level.
- Students belonging to rural background obtained knowledge score was maximum knowledge score was 94 of agriculture, followed by 42 of govt. employees, followed by 42 of self employees, followed by 18 of

private employ, followed by 17 of daily wager and followed by 2 of unemployed. The difference of knowledge score was found statistically non significant at  $p < 0.05$  level.

- Students whose mother occupation had maximum knowledge score was 181 of house wife, followed by 15 of govt. employees, followed by 6 of private employees, followed 5 of self employees, followed by 5 of daily wager and followed by 3 of unemployed. The difference of knowledge score was found statistically non significant at  $p < 0.05$  level.
- Students with family income of Rs. 5001–10,000 had higher knowledge score (69) and, followed by 66 of <5000, followed by 33 of 10,001–15,000, followed 27 of above 20,000 and followed by 20 of 15,001–20,000. The difference of knowledge score was found statistically significant at less than  $p < 0.05$ . So, there is significant difference between the knowledge of government and private senior secondary school students. The private school had more knowledge than govt. school. Variables those are not significantly associated with cancer, warning signs and treatment modalities were gender, age, class, stream, place of living, types of family, education of mother, Occupation of father, occupation of mother, heard about cancer 69 and sources of knowledge of cancer.<sup>[7,8]</sup> The knowledge about

cancer, warning signs and treatment modalities was found to be significant with the religion, education of father, family income and type of school. The knowledge of private school students was found significantly higher than government school student.

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