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A Study to Assess the Knowledge on Lead Poisoning Among Students of Selected Colleges at Bangalore Urban With a View to Develop an Information Booklet

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INTRODUCTION

Lead poisoning is also called as plumbism, saturnism or painter's colic. Lead poisoning occurs when blood lead levels are equal to or more than 10 micrograms per decilitre. The world health organisation says 120 million people are over exposed to lead and 99% of the most serious cases are in the developing world.

The population of developing nations like India is particularly more susceptible to lead poisoning because of the problem of environmental contamination. Scientific studies have been conducted all over the world including India to determine the extent of knowledge on lead poisoning, but the available data do not reflect a true scenario about the knowledge of lead poisoning among the general public. The greatest risk of injury from lead poisoning is to children. Prevention remains the best option for reducing childhood lead exposure, however knowledge, attitude and practice to lead exposure in many developing countries are not known.

Thus the investigator felt the need to conduct a study to assess the knowledge of lead poisoning among the youngsters and educate them regarding the symptoms and prevention of lead poisoning as they are the glue that holds the country together and spread the knowledge gained far and wide through peer group influence.

OBJECTIVES

- To assess the knowledge of college students regarding lead poisoning.
- To determine the relationship between the baseline variables (age, sex, and a stream of study) and the knowledge level.
- To develop an information booklet for college students regarding causes and prevention of lead poisoning

CONCEPTUAL FRAMEWORK

The conceptual framework for this study is based on Pender's Model of Health Promotion. The Health Promotion Model is a competence or approach-oriented model that depicts the multidimensional nature of persons interacting with their interpersonal and physical environments as they pursue health. In the present study, the model helps to show the various characteristics of the college students and depicts the behavioural modifications of them to prevent lead poisoning after gaining awareness of the various aspects of lead poisoning.

METHODOLOGY

A descriptive study design was used to conduct the study. Stratified random sampling technique was used to select 300 students from five different colleges of Bangalore urban who have selected science and arts group as their stream of education.

Data collection tool consisted of a structured questionnaire for assessing the knowledge on lead poisoning. It consisted of 30 items and the items were categorized as knowledge (6 items-20%) comprehension (17 items-57%) and application (7 items-23%)

DATA COLLECTION

Five urban colleges at Bangalore were randomly selected after obtaining formal permission from college authorities and samples were stratified based on the stream of education [Science (PCMB) / Arts (HESP)] and the students who were willing to participate in the study were identified and selected by random sampling technique. The selected students were explained about the study and their consent was obtained. After that, a structured questionnaire was administered to the students for 45 minutes and was collected on the same day.

The data were analysed and interpreted in terms of objectives using descriptive and inferential statistics like frequency, percentage, mean, standard deviation, range, mean percentage, t test, Pearson's correlation and cronbach's alfa for significance.

FINDINGS OF THE STUDY

The results of the study showed that 190 (63.3%) of the students had inadequate knowledge, 110 (36.7%) of the students had the moderate knowledge and none possessed adequate knowledge regarding the various characteristics of lead poisoning. Data revealed that there was an association between the knowledge score and the stream of education based on the knowledge score categorization ($\chi^2 = 20.727$, $p < 0.001$) and also based on the various content area ($t = 4.83$, $p < 0.001$), but there was no association between the knowledge score and other baseline variables like age and gender.

RECOMMENDATIONS

Comparative studies could be done in private and Government colleges.

A comparative study could be done between urban and rural colleges.

The experimental study could be done to find the effectiveness of information booklet prepared by the investigator.

Knowledge attitude and practice study could be done.

CONCLUSION

Nursing education should lay emphasis on preparing prospective nurses, to impart health information and assist the community in developing their self care potentials. This can be done by incorporating health information dissemination and client counselling using advanced educational technology. Health promotion and primary prevention should be integrated as the main component in all aspects of community health nursing practice by means of focusing on nursing education curriculum. The curriculum should provide an opportunity for students to acquire knowledge on lead poisoning so that students working in various community health setting could be successful in providing information to clients about lead poisoning at home environment and at work place.

National referral centre for lead poisoning in India (NRCLPI) has already placed a stepping stone. Education must be given to nursing personnel so that they can educate the patients they come in contact with in the ward situation. Health education regarding preventive aspects should be emphasized.

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