

A CONSTITUENT OF CHAROTAR UNIVERSITY OF SCIENCE AND TECHNOLOGY

Vipin Vageriya, Mr.Asst. Prof. cum Head of Department
Child Health Nursing, Manikaka Topawala Institute of Nursing

Abstract

“A study to assess the effectiveness of Structured teaching Program on knowledge about the prevention of lead poisoning among the mothers of toddlers in selected rural areas of Hassan in Karnataka”.

Keywords: Lead poisoning, rural areas

Introduction

Children age between the 1- 3years are more exposure to lead poisoning. In the domestic poisoning the lead poisoning is one of the silent killers in toddlers. When it is ingested, inhaled, or absorbed through skin, lead is highly toxic to human's body. It persists in the soil, in the air, in drinking water, and in homes. Normal blood lead level in body is :

Adults:Less than 20 micrograms/dL

Children:Less than 10 micrograms/dL

At high levels, lead poisoning causes coma, convulsions and death. At low level lead poisoning in toddlers causes reductions in IQ and attention span, reading and learning disabilities, hyperactivity, impaired growth, behavioural problems, and hearing loss. Worldwide, six sources for most lead exposure are:

Gasoline additives

Food can soldering

Lead-based paints

Ceramic glazes

Drinking water systems

Cosmetic and folk remedies.

Objectives of the study

1. Assess the pre-test level of knowledge about the prevention of lead Poisoning among mothers of toddlers.
2. Assess the Post-test level of knowledge about the prevention of lead Poisoning among mothers of toddlers.
3. Evaluate the effectiveness of structured teaching program by comparing The pre-test and post-test knowledge level of mothers of toddlers.
4. Associate the post-test knowledge of mothers about the prevention of lead poisoning among mothers of toddlers with selected socio demographic variables

Hypotheses

There is a significant increase in the knowledge about the prevention of lead poisoning in toddlers after the structured teaching program than before among the mothers

Research methodology

Research design

The research design selected for this study belongs to the pre experimental design with one group pre-test and post-test design. This research design includes the manipulation, no control and no randomization. The structured teaching program on prevention and management of lead poisoning administered as a manipulation. The design carried out by non-probability convenient sampling with no control group.

Sampling technique

In this study, the non-probability convenient sampling was used. As per the procedure of the convenient sampling 60 mothers of toddlers were choose in Alur village at Hassan, Karnataka.

Criteria for the selection of the sample

Inclusion criteria

The mother of the toddler children.

Mothers those were willing to participate. .

Those who can able to read and write Kannada,Hindi.

Exclusion criteria

Those who are not available at the time of study.

Those who have sick child.

Table 1 -Distribution of overall pre test and post test level of knowledge on prevention of lead poisoning among mothers of toddlers-

	Pre test			Post test			Percentage Of Effectiveness	Paired t-Test value	P-value
	Mean	SD	%	Mean	SD	%			
Knowledge	5.91	2.57	19.66%	20.7	2.14	69%	49.30%	41.77 S***	P=0.0001

Table- 5 mean, SD and percentage comparing over all pre test and post test knowledge. N=60

* ** -Significance $P < 0.001$

Results

Over all pre-test knowledge mean 5.91 SD 2.57 and mean percentage is 19.66%

Over all post-test knowledge mean 20.7 SD 2.14 and mean percentage is 69%.

Paired t test analysis used to test the pre-tests and post-tests score of knowledge. The 't' value is 41.77 ($P < 0.001$) shows that there is significant increase in the knowledge after STP. The percentage effectiveness is 49.3%

The chi-square value shows that there is no significance association between age of the mother, educational status of the mother, occupation, type of work, types of family, religion, Type of employment of the mother, age of the child, types of house and source of information about the lead poisoning and knowledge ($P > 0.05$)

Implications of the Study

The finding of the study has implication in nursing education, nursing practice, nursing administration and nursing research.

Nursing education

The nursing curriculum should include the prevention lead and common metal poisoning in children in the child health nursing in the Basic level in diploma as well as under graduate in nursing. The post graduate level program of nursing mainly specialization in child health nursing can be included the preventive aspect of the lead and different common hazardous metallic poisoning knowledge as an essential aspect in the curriculum.

Nursing Practice

Self-instructional module and educational program about prevention of lead poisoning in children among the nursing personnel implemented through the various child health care services. The introduction of various interventional educational programs in the pediatric care homes and all pediatric specialty units will promote the wellbeing of the child and minimize the stress and incidence of lead poisoning. Nursing

Administration

Educational program about the lead poisoning as an essential component of holistic and quality nursing care to prepare children for the clinical procedure and reduce the health effects of lead. A small training course about the prevention of lead poisoning will provide guidelines for the health care workers.

Nursing Research

Research about prevention of lead poisoning in children and risks of various common metal poisoning in children helps to identify the need of educational programs in common population. This will increase thirst for the evidence based practice and effective utilization research approaches in health promotion.

Recommendation

1. The study can be replicated as a longitudinal study with follow up.
2. Comparative study can be conducted between the different populations.
3. Comparative study can be conducted between different types of educational programs
4. The study can be conducted as true experimental studies.
5. A similar study can be conducted among the nursing students.
6. A similar study can be conducted among the poisoning various common metals in children.

References:

- Krishnamurti, C. R. and Vishwanathan, Lead in the Indian environment and its human health implications, New Delhi, 1991. vol 4 page no.212-221
- The National Referral Center for Lead Poisoning Prevention in India ([NRCLPI](http://www.nrclpi.org)) April 2002 www.google.com
- Tripathi, R. M., Raghunath, R. and Krishnamoorthy, T. M., Dietary intake of heavy metals in Bombay city, India. Sci. Tot. Environ. 1997, 2008, 149–159