IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

A study to assess the effect of Planned Teaching on knowledge regarding prevention of selected health problems among children in a selected rescue home at Mumbai.

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Abstract

Background: The healthiest living condition for a child is obviously with a family who will love and nurture as well as provide food, shelter and clothing that will ensure this child's survival. The adverse effects of institutional care living have been recognized as a problem for many years. Many of these children suffer from physical neglect, poor hygiene and a lack of a nurturing environment. It is still common even in today's more modern rescue homes. The principal reason of this is a crowded living conditions and poor hygiene. An appropriate intervention of personal hygiene and appropriate sanitation measures and education are essential pre-requisites for the control of most common infections and to improve the nutritional status of child. The children should get health education to bring about desirable changes in health knowledge, attitude and in practice, and not merely to teach the children a set of rules of hygiene. **Objectives**: 1. To assess the pretest and posttest knowledge scores regarding prevention of selected health problems among rescue home children. 2. To determine an association between post-test knowledge scores regarding prevention of selected health problems among rescue home children with their selected demographic variables. **Hypothesis: H_1:** The mean posttest knowledge score is significantly higher than the mean pretest knowledge scores regarding prevention of selected health problems at 0.05 level. **H_2:** There will be significant association between the posttest knowledge scores with their selected demographic variables at 0.05 significance level. **Methodology**: The research design consisted of pre-experimental research design of one group pretest and post-test design. The population selected for the study was Children in selected rescue home of Mumbai. The study samples were 60 rescue home children were selected by using purposive sampling technique. The development of the tool involved steps of test construction i.e. preparing the blue print, selection of items, content validation and establishment of reliability. The content validity of the

questionnaire was done and modifications were done according to the suggestions given by the experts. Pre-testing and reliability of the tools were done. The reliability coefficient of the cramp score was found to be 0.893.The tool was found to be reliable. **Results**: At the time of the pre-test, most children had average knowledge (53.3%), while 35% had satisfactory knowledge, 6.67% had good knowledge, 1.67% had excellent knowledge, and 3.33% had poor knowledge. In the post-test, knowledge levels improved significantly: none were in the poor category, 5% had satisfactory knowledge, 11.67% had average knowledge, 16.67% had good knowledge, and the majority (66.67%) achieved excellent knowledge. Section-wise mean scores also increased from pre-test to post-test, indicating that the planned teaching programme was effective in improving knowledge regarding the prevention of selected health problems among children. The pre-test mean score was 11.02 (SD = 2.09), whereas the post-test mean score increased to 17.9 (SD = 4.01). The paired *t*-test value was 13.148 with a p-value of 0.001, which is less than the significance level of 0.05. Therefore, the null hypothesis was rejected, indicating that the planned teaching programme was effective in improving knowledge regarding the prevention of selected health problems among children in the selected rescue home. Regarding demographic variables (age, gender, education, religion, and treatment taken for illness), the p-values for their association with both pre-test and post-test knowledge levels were greater than 0.05 ($p > 0.05$). This indicates that there was no significant association between these demographic variables and the knowledge levels in either the pre-test or post-test. **Conclusion and Recommendations**: The result of the study clearly shows the positive effect of planned teaching on the knowledge of children regarding prevention of selected health problems. The planned teaching had markedly improved the knowledge of children regarding prevention of selected health problems.

Keywords: Effect, Planned Teaching, health problems, children, rescue home.

Introduction

The healthiest living condition for a child is obviously with a family who will love and nurture as well as provide food, shelter and clothing that will ensure this child's survival. The adverse effects of institutional care living have been recognized as a problem for many years. Many of these children suffer from physical neglect, poor hygiene and a lack of a nurturing environment. It is still common even in today's more modern rescue homes. The principal reason of this is a crowded living conditions and poor hygiene.

An appropriate intervention of personal hygiene and appropriate sanitation measures and education are essential pre-requisites for the control of most common infections and to improve the nutritional status of child. The children should get health education to bring about desirable changes in health knowledge, attitude and in practice, and not merely to teach the children a set of rules of hygiene.

The selected health problems are:

1. SCABIES

Human scabies is an infestation of the skin caused by an obligate human parasite mite sarcoptes scabiei var. hominis. The word "Scabiei" is derived from the Latin word "scabere " meaning "to scratch". The condition was first described by Aristotle as "lice in the flesh". The parasite was first extracted from a lesion in the human skin by Bonomo in 1687. Scabies is host-specific. As such, mites from animals are not a

source of human infestation. Scabies was added to the World Health Organization portfolio of neglected tropical diseases in 2017, acknowledging the need for better understanding of the disease burden and large-scale disease control action.

Symptoms typically develop two to four weeks after an initial infestation. Classic scabies is characterized by an erythematous papular eruption, burrows, and intense pruritus. The papules are multiple, erythematous, and usually 1 to 2 mm in diameter. Some of the papules may be excoriated, crusted, or scaling. Clinically, burrows appear as whitish, greyish, reddish, or brownish serpiginous thread-like elevations, approximately 0.5 mm wide and several millimetres long in the superficial epidermis.

The goals of treatment are the eradication of mites from the infected individual, prevention of the spread of scabies to other individuals, relief of associated pruritus, and recognition and treatment of complications. For eradication of scabies mites, the drugs of choice are topical permethrin and oral ivermectin. For the treatment of scabies, topical 5% permethrin cream is highly effective and has a success rate of 95 to 98% when used appropriately. The cream should be applied overnight, massaged gently into the skin, and rinsed off 8 to 14 hours after application and the process repeated one to two weeks later. Prevention recommends the application of 5% permethrin cream to all skin surfaces from the neck down to the toes. Scalp-to-toes application may be necessary.

2. PEDICULOSIS

Head lice infestation is an important social challenge, which can be developed by Pediculus humanus capitis as a human head louse. As a rapid spreading infestation, pediculosis is considered the most common contagious disease among school children afterward common cold virus. Spreading of lice is more commonly due to direct contact with the hair of infested people. However, other uncommon routes such as contact with clothing and inanimate objects and personal belongings of infested persons are reported throughout the world. Living in more crowded places including schools, orphanages, and other residual centers increase the risk of infestation. Subsequently, infested people in the mentioned centers spread lice between their families as well as societies.

Wearing clothing, such as hats, scarves, coats, sports uniforms, or hair ribbons worn by an infested person; using infested combs, brushes or towels; or lying on a bed, couch, pillow, carpet, or stuffed animal that has recently been in contact with an infested person may result in transmission.

WORM INFESTATION

The word parasite comes from the Greek word 'parasitos' which means one that stands at the meal of another. Parasites can live and reproduce for many years in human, sucking blood leaching nutrients and gradually taking over. worms may be of many shapes and sizes, from microscopic "pinworms" to tape-worms" that are several feet long. Most of these worms live in the intestinal tract. Several types of worms may live in the human body as parasites (infestation), sometimes causing mild to severe illness. These worms, which infest the blood, intestines or organs (e.g., liver, lungs), include flukes, hookworms, pinworms, tapeworm, roundworm and whipworms.

Prevalence of intestinal worm infection was found to be 49.38%. Ascaris was the most common parasite (46.88%), Cure rate was found to be 66% for Ascaris and 100% in other cases. Per year 80% children and 20% parents gets affected by worm infestation. Commonly seen worms are, round worm, hookworm and

tapeworm. Round worm infestation is caused by eating contaminated food. Round worm enter into the alimentary tract, after swallowing, the eggs reach the duodenum and then to intestines, then enters in blood stream, heart and then penetrates to alveoli of the lungs, comes to the trachea, oesophagus and then reaches the intestine where it lay eggs.

SCABIES:

In 2015, the prevalence of scabies was from 0·2% to 71·4% in the world. Findings from the Global Burden of Disease (GBD) study in 2017 reported the global prevalence and incidence cases of scabies were 175.4 million and 527.5 million, respectively. It showed that its burden is on a downward trend over the last 27 years (1990–2017). Several studies shown that outbreaks of scabies are major risk factor for kidney disease in form of acute glomerulonephritis. An estimated 5-50% of children in resource-poor areas are affected by scabies. (Ararsa et al., 2023)

Globally it is estimated to affect more than 200 million people at any time and more than 400 million children cumulatively every year. WHO classified scabies as Neglected Tropical Disease (NTD). Recurrent infestation is common. It occurs more commonly in the developing world and in a tropical climate. Approximately 300 million cases of scabies occur yearly throughout the world. It is one of the three most common skin disorders in children and is equally common in both sexes.

PEDICULOSIS:

According to Centers for Disease Control and Prevention 2023, head lice infestation is very common and is distributed worldwide. Prevalence of headlice varied from 0.7% to 59% and was higher in girls and women. Preschool and elementary-age children, 3 to 11 years of age are infested most often.

WORM INFESTATION:

Worldwide, more than 3.5 billion people are infected with intestinal worms, out of which 1.47 billion have roundworm, 1.3 billion have hookworm and 1.05 billion have whipworm. Children in the age group between 5 – 15 years have highest infection rate and highest worm burden, which contributes greatly to the contamination of the environment and poor sanitation and hygiene. It is estimated that about 400 million school-age children are infected with roundworm, whipworm and hookworm worldwide.

SELECTED HEALTH PROBLEMS IN INDIA

1. **SCABIES**

In rural community of INDIA, the prevalence rates were 13% by population and 30.9% by household. The prevalence was highest in those aged up to 19 years, both sexes being affected equally. An average morbidity duration for scabies was 64.5 days; 16.3% of the patients showed secondary pyogenic infection of the skin. (Sharma et al., 1984)

The prevalence of scabies in Goa was 9.7% by persons, 22.5% by households and 22.8% by families.

2. **PEDICULOSIS**

P. humanus capitis prevalence in India is estimated to be around 16.59%. According to Indian Market Research Bureau 2008 report, In India a total of 23 per cent of all urban households suffered from lice and 93 per cent of them were female. Over 40 per cent of the sufferers were in the age between 6-15 years. The study pointed out that the incidence of infestation was highest in South India (24 per cent). Tamil Nadu headed the list at 38 per cent. Kerala followed with 31 per cent of households reporting infestation.

WORM INFESTATION

In INDIA, as per WHO Report on STH published in 2012, there were an estimated 64% children in the age group (1-14 years) are at risk of STH, 50% in urban and 68% in rural area. The risk was estimated based on the hygiene and sanitation practices and limited STH prevalence data at that point of time. In INDIA, it is about The prevalence increases with age from infancy to 19 years and then declines. In INDIA, the prevalence of intestinal worm infestation was found to be 49.38%, Ascaris 46.88%, Taenia 2.1% and Hymenolepis nana 0.21%. (Kumar et al., 2014)

In 2014, WHO said that, India has the highest burden of STH infections in the world, with 223 million children aged 1–14 years at risk. The prevalence ranging from 0.6% to 91. Such estimates are required to determine the frequency of preventive chemotherapy. Results of two multi-site state-wide surveys in Bihar ($N = 1,279$, conducted in 2011) and Uttar Pradesh ($N = 6,421$, conducted in 2015) indicated high STH prevalence, ranging between 68% and 76%.

Material and Methods

Research approach: Evaluative Research Approach.

Research design: Pre-experimental; one group pre-test, post-test design.

Research setting: Selected Rescue homes at Mumbai.

Population: Children at selected Rescue homes at Mumbai

Sample: Children at selected Rescue homes at Mumbai.

Sampling technique: Purposive sampling technique.

Sample size: 60 Children at selected Rescue homes at Mumbai.

Criteria for selection of the sample

The criteria for sample selection are mainly depicted under two headings, which includes the inclusion and the exclusion criteria.

Inclusion criteria:

Inclusion criteria are the characteristic that the prospective sample must have if they are to be included in the research study.

In this study,

1. Children who are in the age group of 12-18 years.
2. Children who were present at the time of the study.
3. Children who are willing to participate in the study.

Exclusion criteria:

Exclusion criteria are the characteristics, which a participant may possess, that could adversely affect the accuracy of the results.

In this study, the exclusion criteria are

1. Children who are sick during the time of study.
2. Children who are having visual or hearing impairment
3. Children who are having mental illness.

Development of the tool

In this study, the tool consists following :

Tool : Structured Interview Schedule

Structured interview is a means of data collection in which the interviewer has an interview schedule in which the questions are listed in the order in which they are to be answered. Interviewers are not permitted to change the specific wording of the interview schedule questions.(Polit & Hungler, 1999)

In this study, the structured interview schedule was used to assess the knowledge of rescue home children regarding prevention of selected health problems.

The structured interview schedule has two sections namely section I and section II.

Section I

Section I has demographic data, which consists age, gender, religion, education, previous and present health problems, duration of stay in rescue home.

Section II

A structured interview schedule was prepared to assess the knowledge of children regarding prevention of selected health problems. This part of the structured interview schedule consisted twenty-two items which are multiple-choice questions with a total score of twenty-two. Each question has four options out of which one was correct. Correct response was given one mark and the wrong response got zero.

It is subdivided into seven parts such as Meaning, Causes and risk factors, Mode of transmission, Sign and symptoms, Management, Complication and Prevention

Results and Discussion

Table no 1: knowledge of children according to score grading

GROUPS	KNOWLEDGE SCORE GRADING	PRE TEST		POST TEST	
		F	%	F	%
Poor	**≤ 35%**	2	3.33	0	0.00
Satisfactory	**36-44%**	21	35.00	3	5.00
Average	**45-59%**	32	53.33	7	11.67
Good	**60%-74%**	4	6.67	10	16.67
Excellent	**75% & above**	1	1.67	40	66.67

The above table reveals the At the time of pretest level of Knowledge regarding prevention of selected health problems among children in selected rescue homes, 3.33% of them had poor knowledge, 35.0% satisfactory knowledge, 53.3% good, 6.67% had good knowledge and only 1.67% of them had excellent knowledge. At the time of post-test level of Knowledge regarding prevention of selected health problems among children in selected rescue homes, no one of them in poor knowledge category, only 5% in satisfactory, 11.67% were in average knowledge category 16.67% of them good knowledge and 66.67% were in excellent knowledge.

Table no 2: comparison of the knowledge level regarding prevention of selected health problems among children in selected rescue home (paired t test)

Test	N	Mean	SD	t value	p value
Pre-test	60	11.02	2.09	13.148	0.001
Post-test	60	17.9	4.01		

The comparisons of the pre-test and post-test means of the knowledge regarding prevention of selected health problems among children in selected rescue home were done by the paired t test. The pretest average score was 11.02 with standard deviation of 2.09. The post-test average score was 17.9 with standard deviation of 4.01. The test statistics value of the paired t test was 13.148 with p value 0.001. P value is less than significant level 0.05, hence reject the null hypothesis. It shows that Structured planed Teaching Program on Knowledge regarding prevention of selected health problems among children in selected rescue home was effective.

Conclusion

The results of the study clearly demonstrate the positive impact of the planned teaching programme on children's knowledge regarding the prevention of selected health problems. A marked improvement was observed in the post-test scores compared to the pre-test scores, indicating a substantial gain in knowledge following the intervention. The increase in mean scores and the shift of participants into higher knowledge categories further confirm the effectiveness of the teaching programme. These findings suggest that structured and well-planned educational interventions can significantly enhance children's understanding of preventive health measures. Therefore, the planned teaching programme proved to be an effective strategy for improving knowledge and promoting awareness about the prevention of selected health problems among children in the selected rescue home.

Implications of the Study

The findings of the study have implications for Research and administration. Based on the study results, the nurses can organize awareness campaign through different media to increase the awareness regarding selected health problems. Nursing professionals can make significant contribution to increase knowledge among children.

Recommendations

Based on the findings of the study, the following recommendations are proposed for future research:

1. A similar study may be conducted with a larger sample size to enhance the generalizability of the findings.
2. Further research can be undertaken to explore the perspectives of parents regarding the prevention and management of selected health problems among children.
3. Longitudinal studies may be conducted to assess the long-term effectiveness of planned teaching programmes on children's knowledge retention and their ability to manage selected health problems effectively.

4. Comparative studies can be carried out to evaluate the impact of different teaching methods (such as workshops, online courses, and hands-on training) on children's knowledge and practical skills related to the prevention of selected health problems.
5. Studies may also investigate the role of teachers' attitudes and beliefs in the successful implementation of prevention and management strategies for selected health problems among children.

Declarations

Acknowledgement: Write acknowledgement section here you should say thanks to department, university, college etc.

Conflict of interest: The authors declare that they have no competing interest.

Funding: This research received no external funding.

Informed Consent: The authors have obtained student consent and were asked to sign the consent form. All data collected were kept strictly confidential.

Ethical Approval: The proposal for the study was approved by the Institutional Review Board of the SNDT Women's University, LT College of Nursing, Mumbai.

Author Contributions: All authors contributed to the conception and design of the work, drafted the manuscript, revised it critically for important intellectual content, gave final approval of the version to be published and agreed to be accountable for all aspects of the work.

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