EFFECTIVENESS OF SKILL TRAINING PROGRAMME ON MANAGEMENT OF SELECTED PAEDIATRIC EMERGENCIES AMONG STAFF NURSES AT PRIMARY HEALTH CENTRE, PUDUCHERRY

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ABSTRACT:

Children are lovable and admirable for life, they give meaning to life and make our lives valuable and enjoyable, a family does not have happiness in the absence of a child. Children are the most adorable gifts from God, children love without any intention. Paediatric emergencies is a serious condition that thriving the life of an infant, child, teenage or young adult, they require immediate attention. Paediatric emergencies can be caused by particular illness, injury or ingestion of foreign object. Children are not like adults. Physiologic, cognitive, and psychosocial differences affect child’s perceptions, reactions to illness or injury, communication patterns and coping abilities. Foreign Body Obstruction, Drowning, Home Accidental Injury, Seizure, Scalds from hot liquids constitute maximum numbers and other due to flame burns, electrical or chemical burns. As a precaution, pot handles should be turned toward the back of the stove. The management of paediatric emergencies application in clinical settings will improve the knowledge, change the quality of care among staff nurses among children who are entering the emergency services.

Keywords: Paediatric Emergencies, Primary Health Centre, Emergency Department
I. INTRODUCTION

Children are the major consumers of health care products. Healthy children brought up in healthy surroundings are not only a source of joy to everyone, but will be India’s greatest resource.

Paediatric nurses play an important role in the emergency management of critically ill children through direct care, education and administration. Emergency nursing is one of the few specialties for which a nurse must possess skills and knowledge in a wide array of topics—from complex trauma and medical care to caring for children.

Hence it is very important that the nurses must be educated regarding managing various emergencies in paediatric age group. The initial management in most of these emergencies consists of a rapid survey, examination and initiation of emergency measures. The focus of emergency care is not only applying scientific knowledge in the physical area, but also using the caring behaviours to meet the individual’s social-psychological needs.

Paediatric emergencies is a serious condition that threaten the life of an infant, child, teenage or young adult, they require immediate attention. Paediatric emergencies can be caused by a particular illness, injury or ingestion of a foreign object. Children are not like adults. Physiologic, cognitive, and psychosocial differences affect a child’s perceptions, reactions to illness or injury, communication patterns and coping abilities. To determine a child’s health status and individual needs, knowledge of normal growth and development, careful observation of behaviour and physiologic cues, and listening to the primary caregivers is important. To facilitate positive outcomes, health care providers need to understand the unique characteristics of children.

Most of the studies reveals that many children had suffered particular Paediatric Emergencies such as drowning, seizure, burns, foreign body obstruction, home accidental injury, etc., Nursing responsibility is to provide nursing intervention which includes first aid management of paediatric emergency.

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Skin diseases are common in children and is about 30 percent of cases in a paediatric outpatient department. Children are at higher risk of burn injury than adults. Scalds from hot liquids constitute maximum numbers and other due to flame burns, electrical or chemical burns. Electrical burns represent an immediate danger to children. The children of high-risk for burns include single parent, unsupervised, neglected and less protected child especially of poor socio-economic groups. Other sources of heat, such as radiators, fireplaces, accessible furnaces, kerosene heaters, and wood-burning stoves, should have guards placed in front of them. Portable electric heaters must be placed in a high area, well out of reach of climbing young children. Hair curling irons and hot curlers may also be easily reached and can burn the hands of curious toddlers.

A seizure is defined as a sudden, paroxysmal electrical discharge from the central nervous system resulting in involuntary, motor, sensory or autonomic disturbances with or without alteration in sensorium. It is a common symptom in childhood practice. The manifestation of the seizure depends upon the threshold of the brain to manifest a clinical seizure. The age and neuro-developmental maturity status determine the clinical manifestations and type of seizure disorders encountered.

Almost 5% of children are at risk of experiencing a seizure. Half of them encounter the first seizure in infancy. Prevalence is greater in the neonatal period (almost 1% in term and 20% in preterm).

Young toddlers may explore outlets with conductive articles and wires by mouthing them. Because water is an excellent conductor, the chance for a severe circumoral electrical burn is great. Electrical outlets should have protective guards plugged into them when not in use or be made inaccessible by having furniture placed in front of if feasible.

Scald burns are the most common type of thermal injury in children. A scalding burn is often caused by high-temperature tap water which children come in contact with as a result of turning on the hot water faucet, falling into a bathtub of hot water, pulling hot pots onto themselves, or suffering deliberate abuse. Limiting household water temperatures to less than 49° C (120” F) is highly recommended. At this temperature, it takes 10 minutes of exposure to the water to cause a full-thickness
burn. Conversely, water temperatures of 54° C (130° F) the usual setting of most water heaters, expose household members to the risk of full-thickness burns within 30 seconds. Nurses can help prevent such burns by advising parents of household danger and recommending that they readjust their water heaters to a safe temperature.

Foreign body obstruction is most common during the second year of life. Children are found of putting objects their own or others due to curiosity or innocence, during their own or other due to curiosity or innocence, during the oral phase of psychosocial development and thereafter. Objects inserted into the nose, ears, anus, vagina are usually easy to manage but foreign bodies in the mouth can be difficult and often life-threatening because they may track down into the respiratory tract or in the alimentary tract. Usually, by 1 year of age, children chew well, but they may have difficulty with large pieces of food, such as meat and whole hot dogs, and with hard foods, such as nuts. Young children cannot discard pits from fruit or bones from fish. It takes practice to learn how to chew gum without swallowing it. Gel snacks that are sealed in plastic wrappers can also be difficult to manage, and the plastic wrapper can be inhaled. Therefore, parents must implement the same precautions as discussed for infants regarding food selection.

Water touches every aspect of children lives. They need it to grow, they are comforted by it, they are cleaned and cooled by it – and without it they cannot survive. Drowning is an injury that displays epidemiological patterns that change according to age group, body of water and activity. Drowning is a fatal unintentional injury which that accounts for 19% of injuries in children. Drowning and near drowning in paediatric population are a lack of supervision of younger children and infants and risk-taking behaviour. For these reasons, the highest incidence of drowning occurs in children younger than 5 years of age. Drowning is the third most common cause of death in children between the ages of 1 and 14. Toddlers intensive drive for exploration and investigation, combined with an unawareness of the danger of water and their helplessness in water makes drowning always a threat.

AIM OF THE STUDY:
The aim of the study was to assess the Effectiveness of Skill Training Programme on Management of selected Paediatric Emergencies among Staff Nurses at Primary Health Centre, Puducherry.

OBJECTIVES OF THE STUDY:

- To assess the level of Skill on the management of selected Paediatric Emergencies among Staff Nurses.
- To evaluate the effectiveness of Skill Training Programme on the management of selected Paediatric Emergencies among Staff Nurses.
- To associate the level of skill on the management of selected paediatric emergencies among staff nurses with their selected demographic variables.

HYPOTHESIS:

- \( H_1\): There is a significant difference in the level of skill among Staff Nurses on the management of selected Paediatric Emergencies before and after giving skill training programme.
- \( H_2\): There is a significant association in the level of skill among Staff Nurses on management of Selected Paediatric Emergencies with their selected demographic variables.

II. MATERIAL AND METHODS

In this study, Pre – experimental study with one group pre test and post test design was used to assess the effect of Skill Training Programme on Management of selected Paediatric Emergencies among Staff Nurses at Primary Health Centre. The study was conducted using purposive sampling technique. The result was conducted by using descriptive and inferential statistics.

Data Collection Tools:

Section - A: Demographic variables consists of (8) items like Age, gender, religion, designation, educational qualification, year of experience, previously exposure to any skill training programme on pediatric emergencies, working hours per day.
Section – B: It consists of an Observational checklist to assess the skill regarding the management of selected pediatric emergencies for Staff Nurses working in Primary Health Centres, Puducherry. The tool comprises of 5 common conditions, such as Emergencies drowning, seizure, home accidental injury, burns, foreign body obstruction. In each condition has 15 steps. Each steps has Yes or No. If yes graded as 1 and no as 0. Each checklist has mandatory step if staff nurses doesn't perform the step they will categorize as under less competent. The sample was selected by using purposive sampling technique. On the first day pre-test was conducted in which there after Skill Training Programme was conducted regarding the management of selected Paediatric Emergencies, and on the seventh day post-test was conducted among the staff nurses working in Primary Health Centre.

DATA COLLECTION PROCEDURE:

The data collection done with the permission to conduct the study was obtained from Department of Health and Family Welfare. 50 staff nurses were selected by using purposive sampling technique and according to inclusion and exclusion criteria and after introducing and explaining purpose of study. The tool consist of demographic variables and observational checklist was administered to respondence data was collected.

The researcher introduced herself and purpose of the study was explained to each staff nurses and oral consent was obtained. On the first day, pre-test data was collected by using Observational Checklist on Paediatric emergencies. After pre-test, On the same day skill training programme was conducted. Post-test was conducted on the seventh day, for the same sample by using an observational checklist.

Statistical Analysis:

The data was analyzed by using both descriptive and inferential statistics. Parameteric test and non parameteric test were used. The effectiveness of Skill training programme was analyzed by using paired ‘t’ test and chi square test is used to analyzing the association of the selected demographic data before and after administering the skill training programme. A”p” value of 0.05 was considered to be statistically significant for the interpretation of results. The analysis and graphs were

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carried out in accordance with the above data for easy comprehension. (Statistical Software Services).

### III. RESULTS AND DISCUSSION

Socio demographic variables: Out of 50 staff nurses the data shows majority 41 (82%) are in the age of above 30 years. In the aspect of the gender the data shows that majority 47 (94%) are female. In the aspect of the religion majority 48 (82%) are Hindu. In the aspect of the educational qualification majority 30 (60%) are GNM. In the aspect of the designation majority 50 (100%) are staff nurses. In the aspect of the year of experience majority 43 (86%) are above 10 years of experience. In the aspect of the previously exposure to any skill training programme on paediatric emergencies majority 30 (60%) are not exposure to any skill training programme on paediatric emergencies. In the aspect of the working hours per day majority 38 (76%) are working 6 hours per day.

**Table 1: Frequency and percentage wise distribution of level of skill regarding paediatric emergencies among staff nurses in pre and post-test.** (N=50)

<table>
<thead>
<tr>
<th>S. NO</th>
<th>LEVEL OF SKILL</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>1.</td>
<td>No competent</td>
<td>03</td>
<td>6</td>
</tr>
<tr>
<td>2.</td>
<td>Less competent</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>3.</td>
<td>Moderately competent</td>
<td>37</td>
<td>74</td>
</tr>
<tr>
<td>4.</td>
<td>Highly competent</td>
<td>00</td>
<td>0</td>
</tr>
</tbody>
</table>

**Table 1:** Shows that frequency and percentage wise distribution of level of skill regarding paediatric emergencies among staff nurses pre and post-test.

The findings reveals that out of 50 staff nurses, In pre-test 3 (06%) were no competent, 10 (20%) were less competent, 37 (74%) were moderately competent, none of them were highly competent. In post-test 3 (6%) were moderately competent, 47 (94%) were highly competent, none of them were no competent and less competent respectively.
Table 2: Frequency and percentage wise distribution of level of skill regarding paediatric emergencies wise among staff nurses in pre and post-test. (N=50)

<table>
<thead>
<tr>
<th>S.NO</th>
<th>LEVEL OF SKILL</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>1.</td>
<td>SEIZURE</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No competent</td>
<td>2</td>
<td>04</td>
</tr>
<tr>
<td></td>
<td>Less competent</td>
<td>26</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>Moderately competent</td>
<td>22</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Highly competent</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2.</td>
<td>FOREIGN BODY OBSTRUCTION</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No competent</td>
<td>4</td>
<td>08</td>
</tr>
<tr>
<td></td>
<td>Less competent</td>
<td>17</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Moderately competent</td>
<td>29</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td>Highly competent</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3.</td>
<td>HOME ACCIDENT INJURY</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No competent</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Less competent</td>
<td>23</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>Moderately competent</td>
<td>27</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>Highly competent</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4.</td>
<td>BURNS</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No competent</td>
<td>3</td>
<td>06</td>
</tr>
<tr>
<td></td>
<td>Less competent</td>
<td>19</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Moderately competent</td>
<td>28</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>Highly competent</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5.</td>
<td>DROWNING</td>
<td></td>
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<tr>
<td></td>
<td>No competent</td>
<td>1</td>
<td>02</td>
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<tr>
<td></td>
<td>Less competent</td>
<td>27</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>Moderately competent</td>
<td>22</td>
<td>44</td>
</tr>
</tbody>
</table>
Table 2: Shows that frequency and percentage wise distribution of level of skill regarding paediatric emergencies among staff nurses pre and post-test.

The findings reveals for seizure that out of 50 staff nurses, In pre-test 2(04%) were no competent, 26(52%) were less competent, 22(44%) were moderately competent, none of them were highly competent. In post-test 11(22%) were moderately competent, 39(78%) were highly competent, none of them were no competent and less competent respectively.

The findings reveals for foreign body obstruction that out of 50 staff nurses, In pre-test 4(08%) were no competent, 17(34%) were less competent, 29(58%) were moderately competent, none of them were highly competent. In post-test 7(14%) were moderately competent, 43(86%) were highly competent, none of them were no competent and less competent respectively.

The findings reveals for home accidental injury that out of 50 staff nurses, In pre-test 23(46%) were less competent, 27(54%) are in moderately competent, none of them were no competent and highly competent. In post-test 10(20%) were moderately competent, 40(80%) are in highly competent, none of them were no competent and less competent respectively.

The findings reveals for burns that out of 50 staff nurses, In pre-test 3(09%) were no competent, 19(38%) were less competent, 28(56%) were moderately competent, none of them were highly competent. In post-test 4(08%) are moderately competent, 46(92%) are in highly competent, none of them were no competent and less competent respectively.

The findings reveals for drowning that out of 50 staff nurses, In pre-test 1(02%) were no competent, 27(54%) are in the less competent, 22(44%) were moderately competent, none of them were highly competent. In post-test 8(16%) were moderately competent, 42(84%) were highly competent, none of them were no competent and less competent respectively.
Table 3: Mean, standard deviation, paired ‘t’ test of level of skill regarding paediatric emergencies among staff nurses in pre and post-test. (N=50)

<table>
<thead>
<tr>
<th>LEVEL OF SKILL</th>
<th>MEAN</th>
<th>STANDARD DEVIATION</th>
<th>PAIRED ‘t’ test</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>30.58</td>
<td>4.445</td>
<td>29.780</td>
<td>0.013*</td>
</tr>
<tr>
<td>Post-test</td>
<td>54.80</td>
<td>3.499</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Shows mean, standard deviation, paired ‘t’ test of level of skill regarding paediatric emergencies among staff nurses pre and post-test.

The findings reveals that their mean, standard deviation values are 30.58 mean, 4.445 was Standard Deviation in pre-test. In post-test their mean, standard deviation are 54.80 was mean, 3.499 was Standard Deviation. In paired ‘t’ value was t=29.780 and the P value was P=0.013* respectively.
Table 4: Mean, standard deviation, paired ‘t’ test of level of skill regarding paediatric emergencies wise among staff nurses in pre and post-test. (N=50)

<table>
<thead>
<tr>
<th>S.NO</th>
<th>DOMAIN WISE</th>
<th>MEAN</th>
<th>STANDARD DEVIATION</th>
<th>‘t’ test</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Seizure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre-test</td>
<td>5.96</td>
<td>1.511</td>
<td>2.19</td>
<td>0.33</td>
</tr>
<tr>
<td></td>
<td>Post-test</td>
<td>10.84</td>
<td>1.447</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Foreign body obstruction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre-test</td>
<td>5.90</td>
<td>1.199</td>
<td>4.01*</td>
<td>0.002*</td>
</tr>
<tr>
<td></td>
<td>Post-test</td>
<td>11.1</td>
<td>1.555</td>
<td></td>
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<tr>
<td>3.</td>
<td>Home accident injury</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Pre-test</td>
<td>6.52</td>
<td>1.054</td>
<td>1.88</td>
<td>0.05*</td>
</tr>
<tr>
<td></td>
<td>Post-test</td>
<td>10.92</td>
<td>1.688</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Burns</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre-test</td>
<td>6.06</td>
<td>1.596</td>
<td>1.625</td>
<td>0.110</td>
</tr>
<tr>
<td></td>
<td>Post-test</td>
<td>10.96</td>
<td>1.795</td>
<td></td>
<td></td>
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<td>5.</td>
<td>Drowning</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Pre-test</td>
<td>6.14</td>
<td>0.756</td>
<td>1.256</td>
<td>0.217</td>
</tr>
</tbody>
</table>
Table 4 Shows that the level of skill on seizure. The findings reveals that their mean, standard deviation value was 5.96 mean, 1.511 was Standard Deviation in pre-test. In post-test their mean, standard deviation was 10.84 mean, 1.447 was Standard Deviation this shown that the paired ‘t’ value is 2.19 and the P value is P=0.33 respectively.

The findings reveals that the level of skill on foreign body obstruction mean, standard deviation value was 5.90 mean, 1.199 was Standard Deviation in pre-test. In post-test their mean and standard deviation value was 11.1 mean, 1.555 was Standard Deviation this shown that the paired ‘t’ value is 4.01 and the P value is P=0.002*.

The findings reveals that the level of skill on home accidental injury mean, standard deviation value was 6.52 mean, 1.054 was Standard Deviation in pre-test. In post-test their mean and standard deviation value was 10.92 mean, 1.688 was Standard Deviation this shown that the paired ‘t’ value is 4.01 and the P value is P=0.05*.

The findings reveals that the level of skill on burns mean, standard deviation value was 6.06 mean, 1.596 was Standard Deviation in pre-test. In post-test their mean and standard deviation value was 10.96 mean, 1.795 was Standard Deviation this shown that the paired ‘t’ value is 1.625 and the P value is P=0.110.

The findings reveals that the level of skill on drowning mean, standard deviation value was 6.14 mean, 0.756 was Standard Deviation in pre-test. In post-test their mean and standard deviation value was 10.98 mean, 1.558 was Standard Deviation this shown that the paired ‘t’ value is 1.256 and the P value is P=0.217.
After administering skill training programme regarding the management of selected paediatric emergencies among staff nurses. The majority of staff nurses gained knowledge regarding management of selected paediatric emergencies. It represents that the effectiveness of skill training programme administered had positive outcome, it helps the staff nurses to easily understand, grasp steps and also significant increase in the skill. The staff nurses have good skill in framing the care and implementing the needs for the children during pediatric emergencies.

There was a majority of staff nurses have increase in level of skill in age are highly significant, because the staff nurses above the age group of 30 years have good level of skill. Before Skill Training Programme staff nurses are able to improve their skill regarding management of selected Paediatric emergencies for children and able predict the child clinical condition and implement the nursing care as soon as possible.

Thus the research hypothesis, there is a significant association in between the level of skill among Staff Nurses on management of Selected Paediatric Emergencies with their selected demographic variables is accepted at the p<0.047*. Hence the hypothesis H2 is accepted.

**CONCLUSION**

In conclusion it was evident that Skill training programme on assess the effectiveness of Skill Training Programme on management of selected paediatric emergencies among staff nurses was very effective. The management of paediatric emergencies application in clinical settings will
improve the knowledge, change the quality of care among staff nurses among children who are entering the emergency services.

This implies that on the content of study investigator have assessed the skill on management of selected paediatric emergencies among staff nurses, the following were drawn the most of the staff nurses have moderately competent. Investigator have given the skill training programme through this post-test the staff nurses gained skill and there is significant association between the skill regarding management of selected paediatric emergencies among staff nurses with their selected demographic variables like age.

**REFERENCE:**