Effectiveness of Child-to-Child Approach on Knowledge and Practices of Personal Hygiene in Children Studying at Selected Schools

Jasmine Kaur, Dr. Mukesh Chandra Sharma

Abstract: The ancient Greek spent many hours in the bath using fragrance and make-up, in an effort to make them beautiful and be presentable to others. Personal hygiene may be described as the principle of maintaining cleanliness of the body. Children should be taught the importance of hygiene as early as possible. Hence, caregivers (or) elder children can teach children regarding personal hygiene like dental care, eye care, hand care & skin care. The child to child approach in newly introduced concept, which has great importance in the health aspect. Aim of the study was to evaluate effectiveness of child-to-child approach on knowledge and practices of personal hygiene in children. Methodology: A quasi experimental study was conducted on 90 school children selected by purposive non probability sampling technique in Government Schools of Gajjukhera, Rajpura, Distt. Patiala, Punjab. Data were collected by using structured knowledge questionnaire and structured observational checklist on procedure of tooth brushing, hand washing and personal hygiene. Findings revealed that there was significant increase in mean post-test knowledge and practices scores of experimental group I & II (Child to child approach and planned teaching programme) than control group regarding personal hygiene. The computed values of post test knowledge scores, practice of tooth brushing, hand washing technique & regarding personal hygiene (F 87 =117.055: p<0.052) (F 87 =307.959: p<0.58) (F 87 =340.797: p<0.825), (F 87 =225.97: p<0.052) respectively which shows it is significant. It revealed that child to child is effective in increasing knowledge and practices of personal hygiene of schoolchildren age 10-12 years.

Keywords: Effectiveness, child-to-child approach, personal hygiene

1. Introduction

The word “hygiene” is derived from “Hygeia”, the Goddess of health in Greek mythology. She is represented as a beautiful woman holding in her hands a bowl from which a serpent is drinking and testifies the art of healing which symbol has even retained today. Hygiene is the science of preserving and promoting health. Healthy child makes healthy generation. There is a meaningful truth in saying that Nation marches on the tiny feet of young children."Virginia Henderson", who is one of the most influential nursing theorist and public health scientists, has given the importance to keep body clean and well groomed in his proposed total fourteen components of theory. Good personal hygiene entails more than just being clean. Lack of personal hygiene increased the risk of diarrheal and respiratory infection, which causes one child death every 30 seconds.

The Child-to-Child approach was designed by a group of health and education professionals at the University Of London, UK as a way for school children to learn about and pass on basic health messages. It has been successfully implemented since 1978.

The Child-to-Child approach is based on two assumptions. The first recognizes that in addition to their primary caregivers, young children are strongly influenced by other children– typically older siblings, playmates or minders with whom they interact daily. Second, by involving older primary school students, education systems can build on this phenomenon to systematically influence school readiness and on-time entry. Role-plays are used in the context of raising awareness and in encouraging interaction between groups of children who previously did not know each other. They can be used to illustrate situations from everyday life in order to raise awareness about common hygieneproblems. The Child-to-Child approach is a way of teaching about health which encourages children to participate actively in the process of learning and to put into practice what they learn. It is based on the principle that children enjoy learning through active participation. Children enjoy being involved and it helps them to learn better. This makes teaching interactive and effective.

1.1 Aim of the study

The purpose of study is to evaluate the effectiveness of child-to-child approach on knowledge and practices of personal hygiene in children studying at selected schools of District Patiala, Punjab.

1.2 Objectives

- To assess the knowledge of children on personal hygiene in both experimental and control groups.
- To assess the practices of children on personal hygiene in both experimental and control groups.
- To evaluate the effectiveness of child to child approach on knowledge and practices by comparing mean knowledge and practices personal hygiene scores of experimental and control groups.

1.3 Operational Definitions

a) Effectiveness In this study it refers to the extent to which the child to child approach in teaching personal hygiene leads to the gain in knowledge and practices
b) Planned teaching programme: it refers to systematically developed teaching aid designed to improve the knowledge and practice on personal hygiene of schoolchildren age 10-12 years.

c) Child-to-child approach - In this study it refers to health information or knowledge and healthy practices, which are imparted to one child, is transmitted to another child by role-play, may be to a younger child, or peer group as measured by using a structured questionnaire and structured observational checklist.

d) Knowledge: it refers to responses of the schoolchildren to the knowledge items in the structured knowledge questionnaire regarding personal hygiene.

e) Practice: it refers to the activities performed by schoolchildren of age 10-12 years in relation to personal hygiene.

f) Children: In this study it refers to the children who are studying in 5th to 7th standard of selected schools in the age group of 10 to 12 years.

g) Personal hygiene In this study refers, taking care of and maintaining a clean germ free, sanitary body, including dental, skin, hairs, nails, hands and feet and perineal area.

**Hypotheses**

H1: Post-test knowledge scores regarding personal hygiene will be significantly higher than the pre-test knowledge scores of experimental groups.

H2: Post-test practices scores regarding personal hygiene will be significantly higher than the pre-test practices scores of experimental groups.

H3: Post-test knowledge and practices scores of experimental groups will be significantly higher than control group regarding personal hygiene.

**Delimitations**

This study was limited to government school of Gajjukhera, District Patiala. This study will be limited to 10-12 years of age group.

**Research design**

In the view of the nature of the problem selected for the present study, the research design selected was a quasi-experimental study, pre-test post-test control group design with two experimental groups.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Pre Test</th>
<th>Treatment</th>
<th>Post Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>Group 1</td>
<td>O1</td>
<td>X1</td>
</tr>
<tr>
<td>Group 2</td>
<td>O3</td>
<td>X2</td>
<td>O4</td>
</tr>
<tr>
<td>Control</td>
<td>O5</td>
<td>---</td>
<td>O6</td>
</tr>
</tbody>
</table>

**Research setting**

The study was conducted in selected government schools: government middle school and government high school Gajjukhera, of district Patiala. These schools are under the Punjab School Education Board (PSEB) came into being under an act of Legislation in 1969 amended in 1987. Now the Principal of Government high school is Baldev Singh. These schools were striving to inculcate their students a strong sense of social responsibility and good achievement in education. The total strength of children was 400 in both respective schools. This setting was chosen based on investigator’s feasibility, in terms of availability and accessibility of children in schools.

**Target population**

The population for present study comprises of schoolchildren of government school, district Patiala with age group 10 – 12 years.

**Sample size and sampling technique**

90 schoolchildren of age 10-12 years were selected by using purposive nonprobability sampling. 30 samples were assigned in each experiment group, group I (child-to-child approach) and group I (planned teaching). 30 samples were assigned in control group.

**Inclusion Criteria**

Schoolchildren of age group 10-12 years and who were able to read.

**Exclusion Criteria for sampling**

1) School children other than age group of 10-12 years.
2) Children whose parents allowed them to participate in the study.
3) Children who were absent at the time of data collection.

**Selection and development of tool**

Structured questionnaire prepared to assess the knowledge on personal hygiene and structured observational checklists used for assessing the practices of personal hygiene in children age of 10-12 years.

**Development of tools**

Preliminary draft prepared after an extensive review of literature on relevant topic. It included the preparation of the demographic data, structured knowledge questionnaire and structured observational checklists. Tools were sent to the different experts and changes were made according to their consultation and suggestions. Final draft of the tools was prepared regarding the topic.

**Description of tool**

The data collection was done by use of three sets of parts.

**Part 1: Demographic data**

This part deal with demographic variables of school children age 10-12 years such as gender, age, educational status, type of family, mothers education, father’s education, mother’s occupation, father’s occupation, religion and sources of information regarding personal hygiene.

**Part 2: Structured knowledge questionnaire**

This part consists of the total 44 questions in different areas such as personal hygiene and its importance, skin and hair hygiene, eye hygiene, ear hygiene, oral hygiene, hand feet & nail hygiene and perineal hygiene. This instrument was used to identify the knowledge of children age 10-12 years.

**Scores interpretation**

The correct responses were given the score of one and wrong responses were given the score of zero. The maximum scores were 44.

**Part 3: Structured observational checklists**

There are three subsets of structured observational checklists. One is to determine the correct tooth brushing procedure, second is to determine the correct hand washing...
The data were collected by self-report and observational methods. Samples were selected by using purposive non-probability sampling technique in selected government middle and high school of Gajukhera, District Patiala (Punjab). The research design was quasi-experimental design based on two experimental groups and one control group. On first day, the pre-test knowledge and practices of 60 samples of experimental and 30 samples of controlled group were assessed by using structured questionnaire and structured observational checklist respectively. At second visit, experimental group I 30 children received child-to-child approach interventions by role playing with each other on personal hygiene and experimental group II of 30 children received planned teaching programme interventions by investigator through lecture-cum-discussion and lecture-cum-demonstration method with the use of charts, poster and black board. These interventions were not given to control group and they were part of routine teaching learning activities of school. On the seventh day, post-test carried out in both experimental and control group by using same structured questionnaire and structured observational checklist. Analysis of data was based on descriptive and inferential statistics.

**Ethical consideration**

Ethical Clearance was obtained from ethical committee of GianSagar Medical College and Hospital, Ram Nagar, Rajpura, District Patiala. Permission was obtained from Principal of government middle and high schools, Gajukhera of District. Patiala Assurance was given to the study participants regarding the confidentiality of data collected.

### 2. Result

Table 1 shows frequency and percentage distribution of Schoolchildren according to demographic variables. It is evident that majority of 16 (53.3%) were males in experimental group I and only 14 (46%) were females. In experimental group II, 15 (50%) were males and 15 (50%) were females. In control group 19 (63.33%) were males and remaining were girls. In relation to age, majority of the children belonged to 10 years of age in experimental group I, 11 (36.66%), and experimental group II, 13 (43.33%) and in control group 12 (40%) of children were 12 years old. In all the three groups, experimental I, II & control, majority of children 14 (46.66%), 13 (43.33%), 14 (46.66%) respectively were in 6th class. Majority of subjects 17 (56.66) in experimental I, 19 (63.33%) in experimental II & 14 (46.66%) in control group were from nuclear family.

### Section-A: Demographic characteristics of subjects

<table>
<thead>
<tr>
<th>Demographic characteristics</th>
<th>School children</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experimental I (child to child)</td>
</tr>
<tr>
<td></td>
<td>f</td>
</tr>
<tr>
<td>1) Gender</td>
<td></td>
</tr>
<tr>
<td>1.1) male</td>
<td>16</td>
</tr>
<tr>
<td>1.2) female</td>
<td>14</td>
</tr>
<tr>
<td>2) Age (in years)</td>
<td></td>
</tr>
<tr>
<td>2.1) 10</td>
<td>11</td>
</tr>
</tbody>
</table>

**Table 1: Frequency and percentage distribution of sample characteristics- N=90**

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Regarding mother’s education, in the two group’s majority of mother’s studied upto primary to middle 14 (46.66%) & 18(60%) as in experimental group I & II, whereas most of the mother’s education in control group was matric-secondary 16 (53.33%). In all the three groups majority of father’s studied upto primary-middle 21 (70%), 18 (60%) & 26 (86.66%) respectively. In all the three groups majority of children’s father had employment 22(73.33%), 14(46.66%) & 30 (100%) respectively. Regarding religion, in experimental group I and II majority of children belong to Hindu family,16 (53.33%) & 19 (63.33%) but in control group most of the children were from Sikh family 29 (96.66%). In experimental group I &experimental group II children received the information about personal hygiene from the parents 30 (100%), 26 (86.66%) where as in control group 18(60%) of children received information about personal hygiene fromfriends.

Section B: Assessment of the knowledge of children on personal hygiene.

Table 2 Range, Mean and standard deviation of pre and post-test knowledge scores on personal hygiene among school children age 10-12 years.

<table>
<thead>
<tr>
<th>Group</th>
<th>Range</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>12-21</td>
<td>21.63</td>
<td>21.7</td>
</tr>
<tr>
<td>Child to child</td>
<td>17-14</td>
<td>22.97</td>
<td>3.7</td>
</tr>
<tr>
<td>Experimental I</td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
</tr>
<tr>
<td>Planned teaching</td>
<td>20-16</td>
<td>23.17</td>
<td>4.79</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2 shows that post-test mean knowledge scores of experimental group I (child to child approach) (33.93+3.78) & II (planned teaching), (35.75+4.32) were higher than the control group of mean knowledge scores (21.70+3.43)

Section C: Assess the practices of children on personal hygiene.
This section deals with the practices scores in experimental I (child-to-child approach), II (planned teaching) and control group regarding personal hygiene among children age 10-12 years.

Table 3 Frequency and percentage distribution of pre-test and post test scores practice of tooth brushing, hand-washing and personal hygiene among schoolchildren.
The hand washing (10.13±0.73) and control group (4.97±1.066) are also significantly higher as compared to experimental group. Analysis revealed that there is significant difference in the means scores of two experimental group (child to child approach) and II (planned teaching) and control group. Tooth brushing, hand washing and personal hygiene practices were good in experimental group I and II as compared to average practices in control group.

**Section D:**
Evaluate the effectiveness of child to child approach on knowledge and practices of personal hygiene. This section deals with the knowledge and practice scores in experimental I (child to child approach), 2 (planned teaching) and control group regarding personal hygiene among children age 10-12 years.

Table 3 shows that the majority of the frequency and percentage distribution in post-test tooth brushing practices scores of experimental group I (child to child approach) and II (planned teaching) and control group. Tooth brushing, hand washing and personal hygiene practices were good in experimental group I and II as compared to average practices in control group.

<table>
<thead>
<tr>
<th>Grading of Observational Checklist</th>
<th>Experimental I</th>
<th>Experimental II</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pre mean</td>
<td>post mean</td>
<td>pre mean</td>
</tr>
<tr>
<td>Poor (0-3)</td>
<td>0 (0)</td>
<td>00 (0)</td>
<td>00 (0)</td>
</tr>
<tr>
<td>Average (4-7)</td>
<td>30 (100) 00 (0)</td>
<td>30(100) 00 (0)</td>
<td>30(100) 30(100)</td>
</tr>
<tr>
<td>Good (8-10)</td>
<td>0 (0)</td>
<td>30 (100)</td>
<td>0 (0)</td>
</tr>
</tbody>
</table>

**Tooth Brushing**
Poor (0-4) 8(26.66) 00 (0) 08 (26.66) 00 (0) 10(33.33) 10 (33.33)
Average (5-8) 22 (73.35) 00 (0) 22 (73.35) 00 (0) 20(66.66) 20 (66.66)
Good (9-11) 00 (0) 30 (100) 0 (0) 30 (100) 00(00) 00(00)

**Hand washing**
Poor (0-8) 00 (0) 00 (0) 00 (0) 00 (0) 00(0) 00(0)
Average(9-13) 30 (100) 00 (0) 30 (100) 00 (0) 30(100) 30 (100)
Good(14-25) 00 (0) 30 (100) 00 (0) 30 (100) 00(0) 00(0)

**Personal hygiene**
Poor (0-8) 00 (0) 00 (0) 00 (0) 00 (0) 00(0) 00(0)
Average(9-13) 30 (100) 00 (0) 30 (100) 00 (0) 30(100) 30 (100)
Good(14-25) 00 (0) 30 (100) 00 (0) 30 (100) 00(0) 00(0)

Table 3 Mean, standard deviation, Mean difference and F-test of post-test knowledge and practices scores regarding personal hygiene.

<table>
<thead>
<tr>
<th>Table 4:</th>
<th>Mean standard deviation, Mean difference and F-test of post-test knowledge and practices scores regarding personal hygiene. N=90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent Variable</td>
<td>Group</td>
</tr>
<tr>
<td>1. Knowledge regarding Personal hygiene</td>
<td>Child to child</td>
</tr>
<tr>
<td>Planned Teaching</td>
<td>35.73±3.323</td>
</tr>
<tr>
<td>Control</td>
<td>21.7±3.436</td>
</tr>
<tr>
<td>2. Practices of Personal hygiene</td>
<td>Child to child</td>
</tr>
<tr>
<td>Planned Teaching</td>
<td>9.33±0.547</td>
</tr>
<tr>
<td>1) Regarding tooth brushing</td>
<td>Control</td>
</tr>
<tr>
<td>Child to child</td>
<td>10.13±0.73</td>
</tr>
<tr>
<td>Planned Teaching</td>
<td>10±0.788</td>
</tr>
<tr>
<td>Control</td>
<td>4.97±1.066</td>
</tr>
<tr>
<td>3) Practices of personal hygiene</td>
<td>Child to child</td>
</tr>
<tr>
<td>Planned Teaching</td>
<td>20.63±1.52</td>
</tr>
<tr>
<td>Control</td>
<td>13.4±1.453</td>
</tr>
</tbody>
</table>

F tab (2, 27)=3.35 * significant

Table 4 MANOVA was used to test the differences between the means scores of two experimental group and control group. Analysis revealed that there is significant difference in post-test mean practices scores of tooth brushing in experimental group I (child to child approach) (9.50±0.63) and control group (5.83±0.743) and there is also the significant difference in post-test mean practices scores of hand washing (10.13±0.73) and control group (4.97±1.066). The post-test mean practices scores of personal hygiene (21.63±1.903) is also significantly higher as compared to control group (13.4±1.453).

The mean difference in knowledge scores regarding personal hygiene between the experimental group I & II, experimental group I & control and experiment II & control are (-1.8, 12.23 & 14.03) respectively. Whereas the mean difference in tooth brushing practices scores regarding personal hygiene between the experimental group I & II, experimental group I & control, experiment II& control are (0.17, 3.67 & 3.5) respectively. The mean difference in hand washing technique scores regarding personal hygiene between the experimental group I & II, experimental group I & control and experiment II& control are (0.13, 5.16 & 5.03) respectively. The mean difference in personal hygiene...
hygiene scores regarding personal hygiene between the experimental group I & II, experimental group I & control and experiment II& control are (01,8.23 & 7.23) respectively. The computed “F” value of post-test knowledge scores is (F 2, 27 =170.055; P). Findings revealed that child to child approach teaching is effective in improving knowledge and practices of personal hygiene in children.

The study of Leenak.c. & D'souza Jacinta supported the present study found a significant improvement in the mean knowledge scores of children of two different groups i.e health education group- I (t=5.61, p<0.05), child to child group II (t=6.42, p<0.05). A significant difference in the post health education knowledge scores were observed (t=2.06, p<0.05). Effectiveness of child-to-child approach to health education on prevention of worm infestation among children of selected primary schools. Significant difference in the pretest (5.20± 3.19) and posttest (18.03 ± 1.87) knowledge score on prevention of worm and t value (-18.96) which is significant at p<0.05.

One another study conducted by Mwape and Serpell, which supported the findings of this study was that in which child-to-child techniques led to a dramatic improvement in educational outcomes for girls. In child-to-child classrooms, the qualification of participating students for admission to secondary school improved to74%, with girls accounting for two-thirds, in contrast to averages of 33% and 29% for two non-child-to-child classrooms.

References


