A Study to Assess the Effectiveness of Near Peer Learning on Knowledge and Habit Making on Prevention of Water-Borne Diseases Among Primary School Children – The Protocol

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ABSTRACT

Introduction: Near peer learning is an educational practice in which students interact with other students to attain educational objectives. It is becoming increasingly popular as a learning methodology in schools and colleges. It involves students exposed to similar circumstances, from the same educational programme, but at different levels.

Objective: This study aims to assess the effectiveness of near-peer learning on knowledge and practices related to the prevention of water-borne diseases, among primary school children.

Methods: An evaluative research approach with one group pre-test post-test is designed to assess the effectiveness of Near Peer Learning on knowledge and habit making on prevention of water-borne diseases among primary school children. In this study, students of 13-14 years age group will be selected and the researcher will teach them regarding the prevention of water-borne diseases. Primary school children of age group 9-12 years, constituting both boys and girls will also be selected through a convenient sampling technique. Then one elder child will be teaching 10 younger children regarding the same. Pretest and post-test will be done. The questionnaire comprises demographic Performa, knowledge questionnaire, and practice checklist for hand washing and personal hygiene. Knowledge and practice Mean pretest score and mean post-test knowledge score will be compared.

Conclusion: Near peer learning is helpful for students to learn effectively. Health education can also be imparted using a near-peer learning strategy in all settings, and especially among school students. At a time when health resources are stretched and demands upon health personnel are increasing, it offers students the opportunity to learn from each other. It gives them considerably more practice than traditional teaching and learning methods in taking responsibility for their health.

Key Words: Near peer learning, Waterborne diseases, Hand washing, Personal hygiene.
peer learning can take place in a formal or informal teaching-learning environment. It can take place in small groups or even online. Learners are more comfortable and relaxed, and ready to learn when the teacher is their peer, whom they know and understand. At the same time, it develops communication skill, leadership skills and confidence in public dealings in the teacher peer. In this study Near peer learning means a senior student is teaching regarding prevention of waterborne diseases to junior students.

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**OPERATIONAL DEFINITION**

**Assess**
According to the oxford dictionary, Assess means Evaluate or Estimate the nature, ability, or quality of something. In this study, it refers to deciding the worth of child to child health education program by the significant difference in pre and post-test scores of children.

**Effectiveness**
According to the oxford dictionary, Effectiveness means the degree to which something is successful in producing the desired result. This study, it indicates the gain in knowledge as determined by the significant difference in pre and post-test scores of the children.

**Near Peer learning**
IT is an instructional method in which senior students temporarily assume the role of coach or instructor. It has been referred to as tiered or pyramidal or hierarchical learning. Senior learners solidify learning & develop additional skills by teaching peers. In this study, it refers to the elder child (13-14 years) teaching younger children (9-12 years) regarding prevention of selected water-borne diseases with the help of a pictorial booklet, songs, stories and demonstrations

**Prevention**
According to the oxford dictionary prevention means the action of stopping something from happening. Preventive aspects like hand washing and personal hygiene in the prevention of waterborne diseases will be part of this study.

**Waterborne diseases**
According to the oxford dictionary, water-borne diseases means diseases that are Conveyed by, travelling on, or involving travel or transport on water. In this study waterborne diseases refers to diarrhoea, and worm infestation.

**Knowledge**
According to the oxford dictionary, knowledge means facts, information, and skills acquired through experience or education. This study refers to the correct responses of the children to the questions related to waterborne diseases.

**Habit making**
According to Wikipedia, A Habit is a routine of behaviour that is repeated regularly and tends to occur subconsciously. New behaviours can become automatic through the process of habit making or habit formation. In this study, habit making refers to the initiation of habit formation related to practices of handwashing and personal hygiene.

**Primary school Children**
According to Wikipedia, the primary school offers primary education which is typically the first stage of compulsory education. The children of age group 6-15 years generally enrolled in these schools. This study refers to children of age group 9-12 years studying in Primary school in rural areas of Wardha district.

**OBJECTIVES OF THE STUDY**

1. To assess the existing knowledge regarding the prevention of water-borne diseases among primary school children.
2. To assess the existing practices regarding the prevention of water-borne diseases among primary school children.
3. To assess the effectiveness of Near-peer learning on knowledge regarding the prevention of water-borne diseases among primary school children.
4. To assess the effectiveness of near-peer learning on practices related to the prevention of water-borne diseases, among primary school children.
5. To find out the association between pre-test knowledge scores of children regarding the prevention of water-borne diseases with selected demographic variables among primary school children.
6. To find out the association between pre-test practice scores of children regarding the prevention of water-borne diseases and selected demographic variables among primary school children.

**HYPOTHESIS**

H$_1$ - There is a significant difference in pre-test and post-test knowledge scores of children receiving Near-Peer learning.

H$_0$ – There is no significant difference in pretest and post-test scores of children receiving Near-Peer learning.

H$_2$ - There is a significant difference in pretest and post-test
practice scores of children receiving Near-Peer learning.

\[ H_0 \] – There is no significant difference between pre-test and post-test practice scores of children receiving Near-Peer learning.

**CONCEPTUAL FRAMEWORK**

Conceptual framework, conceptual models or conceptual scheme (We use the terms interchangeably here) represent a less formal attempt at organizing phenomena than theories. As the name implies, conceptual framework deals with abstract concepts that are assembled by their relevance to a common theme. It refers to concepts that offer a framework of proposition for conducting research. The conceptual framework set up for the study is modified stuffle beam’s evaluation model of the planned programme. Stuffle beam’s “CIPP model” prescribes four types of evaluation, context, Input, process, and product. It provides a comprehensive, systematic and continuously ongoing framework for programme evaluation. The model is adopted in a modified form for the present study. According to model content identifies discrepancies between intended and actual programme outcome and evaluators can develop a causal explanation for the discrepancies. Step I: context evaluation, step II: input evaluation, step III: process evaluation, step IV Product evaluation. The core value for the present study is enhancing knowledge regarding the prevention of waterborne diseases among primary school children.

**MATERIALS AND METHODS**

**Research approach** - Evaluative research approach will be used in this study

**Research Design** - one group pretest-posttest design will be used in this study.

**Near Peer learning:** It will be composed of two phases.

Phase 1 – (selection and training of elder children who will act as inducing agents in the study)

Selection of 13-14 years children via purposive sampling, who are attending the school in a rural community, according to their academic abilities, group activities, and communication as reported by their teacher.

Prevention of selected water-borne diseases will be taught to them by the researcher, (with the help of pictorial booklet, stories, songs and demonstration). The teaching will be repeated till they learn properly. (I.e. till they score adequate knowledge and practice scores).

Inducing agents assessed by making them do rehearsals to the investigator and the same questionnaire was given to them to determine their adequate level of knowledge on the next day. If the knowledge and demonstration score were moderate or inadequate, inducing agents encouraged to do the rehearsals again until they score adequately. Once they score adequate, they were ready to teach younger children.

One selected topic at a time was taught to inducing agents, after which they will teach the same to younger children.

**Phase 2 (trained elder children taught younger children, pretest and post-test done by the researcher)**

O1 X O2  
O1— pretest regarding knowledge and practice of prevention of selected water-borne diseases among primary school children. (One topic at a time)

X- Near – peer learning. (As per plan given below)

(Elder child will teach younger children, with the help of charts, flashcards, songs and demonstrations.)

One elder student will teach 10 younger students about one selected topic at a time for 30 minutes a day for 3 alternate days a week.

O2 – post-test to assess the effectiveness of Near-peer learning.

It will be done on the 7th day after the completion of the teaching of one selected topic.

**DETAILED METHODOLOGY**

First step - Training of inducing agents (elder children) regarding prevention of Diarrhoea.

Second step- These inducing agents will teach primary school children regarding the prevention of diarrhoea.

Third step- Training of inducing agents (elder children) regarding prevention of worm Infestations.

Fourth step- These inducing agents will teach primary school children regarding the prevention of worm Infestations.

Fifth step- Training of inducing agents (elder children) regarding personal hygiene and Handwashing technique.

Sixth step- Inducing agents will teach primary school children regarding personal hygiene and Handwashing technique.

The pre-test is done before starting the teaching of primary school children regarding each selected topic and Post-test done on the 7th day after the completion of the teaching of the selected topic.

Observation of study participants done 6 times at an interval of 15 days to evaluate whether they are practising correct hand washing technique and maintaining personal hygiene.
SAMPLE

Students of age group 9-12 years, studying in primary school in rural areas of Wardha district.

Sample selection criteria

Inclusion Criteria
Both male and female students of the age group 9-12 years at selected school.

Exclusion Criteria
Students who were absent on the day of data collection.
Students who attended a similar type of health education program.

Sampling technique- non-probability convenience sampling technique used to select samples.

Sample size- 400

Data collection tool
Structured questionnaire to assess demographic variables of samples. A structured questionnaire will be used to assess knowledge and practices related to the prevention of childhood diseases i.e. Diarrhea, and worm infestation. The structured observational checklist will be used to assess the practice of Handwashing and Personal Hygiene. Concealed observation technique with an observational checklist as a tool will be used to do follow up observation.

Protection of human subjects
The written permission will be obtained from the Principal of selected schools.
Informed consent will be obtained from the Parents of school children, regarding their ward’s participation in this study.

RESULT AND DISCUSSION

In community paediatrics, Near Peer learning and teaching is an approach towards disease prevention and health promotion. Health-promoting change in the behaviour of children can be brought through this initiative. Children can be the change agent for bringing positive behavioural changes among their peers. Peer education is the teaching or sharing of health information, Values or behaviour in educating others who may share similar social background or experiences. This type of teaching and learning is cost-effective and feasible in community settings. It is believed that peers are in the best position to encourage healthy behaviour in each other, as they have a larger influence on each other. The proximity of age and recent similar experiences of peer tutors provides an added benefit as near-peer teachers have a better appreciation of the knowledge held by junior peers and can therefore target teaching at an appropriate level.

This paper reflected on the design, implementation, and evaluation requirements of near-peer learning at schools to create awareness regarding healthy lifestyle and behaviour to prevent waterborne diseases. Participation in the near-peer learning programme will help students to recognise and develop their future health behaviours. The skill of teaching is best acquired through a sequence of training, practice and feedback. And so in this study special attention is given to teaching elder students by teaching them regarding prevention of waterborne diseases and then by evaluating their knowledge and practice before they will be allowed to teach the younger children.

CONCLUSION

Near peer learning is helpful for students to learn effectively. Health education can also be imparted using a near-peer learning strategy in all settings, and especially among school students. At a time when health resources are stretched and demands upon health personnel are increasing, it offers students the opportunity to learn from each other. It gives them considerably more practice than traditional teaching and learning methods in taking responsibility for their health. Developing near peer learning related to health awareness in the classrooms, neighbourhood, families and community can be instrumental in the attainment of optimum health for all. This study emphasizes utilizing elder children to impart health education regarding the prevention of waterborne diseases to younger children. Apart from increasing knowledge of children regarding the prevention of waterborne diseases, the study also aims to improve the health practices of children, specifically practices related to handwashing and personal hygiene.

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