



A study to assess the effectiveness of computer assisted planned teaching on knowledge regarding selected water borne diseases and its preventive measures among mothers of under five children in selected area at Etawah (U.P.)

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ABSTRACT

Water borne infections are among the most emerging and re-emerging infectious diseases throughout the world. Water borne diseases are infectious diseases spread primarily through contaminated water. Though these diseases are spread either directly or through flies or filth, water is the chief medium for spread of these diseases and hence they are termed as water borne diseases. Water contamination is caused by sewage and industrial effluents, surface runoff and many anthropogenic activities that alter the physical (color, taste, and smell) and chemical characteristics of water. **Aim of the Study-**Aim of the study was to assess the effectiveness of computer assisted planned teaching on knowledge regarding selected water borne diseases and its preventive measures among mothers of under five children in selected area at Etawah (U.P.) **Methodology-** Quantitative research approach was used for the present study .Quasi experimental design was used for present study.Setting of the study was Baidpura, Saifai, Etawah and Heonra, Etawah .Population of the present study are Mothers having under five years children, residing at Baidpura, Saifai, Etawah and Heonra, Etawah. Sample consist a total number of 100 subjects (Mothers) who were having children below 5 years of age residing in Baidpura, Saifai, Etawah and Heonra, Etawah . Simple Random Sampling technique by lottery method was used for the present study.**Result-** result found that the effectiveness of Computer assisted teaching regarding knowledge of Water borne disease and its prevention among mothers of under five children. It shows that there is significant improvement in the level of knowledge, after the computer assisted teaching programme, The pretest mean knowledge score is (52.7%) and post test mean knowledge score is (84.6%) On an average, mothers are gained 31.9% of the knowledge than pretest. **Conclusion-**. This study shows a significant knowledge gain among the mothers of under five children regarding computer assisted planned teaching on water borne diseases.

Key words- Assess , Effectiveness , Computer assisted planned teaching , knowledge ,water borne diseases ,preventive measures ,mothers of under five children

Introduction

“Waterborne diseases are caused by ingestion of contaminated water from pathogens contained in human or animal excreta”. Most intestinal (enteric) diseases are infectious and are transmitted through faecal waste. Pathogens which include virus, bacteria, protozoa, and parasitic worms are disease-producing agents found in the faeces of infected persons. These pathogens travel through water sources and inter fuses directly through persons handling food and water. Hepatitis, cholera, dysentery, and typhoid are the most common water borne diseases that affect large populations in the tropical regions. Water borne epidemics and health hazards are mainly due to improper management of water resources. Water is essential for all dimensions of life. Over the past few decades, the use of water has increased, and in many places water availability is falling to crisis levels. Adequate supply of fresh and clean drinking water is a basic need for all human beings on the earth, yet it has been observed that millions of people worldwide are deprived of this. Industrial growth, urbanization and the increasing use of synthetic organic substances have serious and adverse impacts on freshwater bodies. Many areas of groundwater and surface water are now contaminated with heavy metals, POPs (persistent organic pollutants), and nutrients that have an adverse affect on health. The World Health Organization says that every year more than 3.4 million people die as a result of water related diseases, making it the leading cause of disease and death around the world. Most of the victims are young children Waterborne infections are among the most emerging and re-emerging infectious diseases throughout the world. Waterborne diseases are infectious diseases spread primarily through contaminated water. Though these diseases are spread either directly or through flies or filth, water is the chief medium for spread of these diseases and hence they are termed as waterborne diseases.

NEED FOR THE STUDY

Water borne diseases represent a major burden on human health worldwide. Every year, 1.8 million people die from diarrheal diseases, of which 1.5 million are children under the age of 5. Access to safe drinking water, basic sanitation and proper hygiene education could not only prevent diarrheal diseases by nearly 90% but furthermore lead to improved health, poverty reduction and socioeconomic development. Goal 7 of the Millennium Development goals (MDG) set by the United Nations is to halve by 2030 the proportion of people without sustainable access to safe drinking water and basic sanitation. The burden of waterborne diseases is paramount in the globe. About 4% of the global burden of diseases are attributable to water, sanitation and hygiene . Nearly 2.2 million people die every year due to diarrhoeal diseases globally. Of these, 1.8 million deaths occur alone in lowincome countries. one of the tenth leading causes of death is attributable to diarrhoea-related diseases. In Bangladesh, every year more than one hundred thousand under-five children die due to diarrhoea related diseases. On average, episodes of diarrhoea occur more than twice a year among the children. Research indicates that more than half of acute illnesses are attributable to water, sanitation and hygiene-related across all age groups. Recent research also shows that due to climate change waterborne diseases such as diarrhoea is increasing gradually. In low-income countries waterborne diseases are well-known public health problem. Although burden of

waterborne diseases is substantial in most of the low-income countries, intervention for reducing these medical conditions is fragmented. The global use of improved water sources is up to 87% but still 884 million people don't have access to safe drinking water. Along with improved water supply, proper sanitation and adequate hygiene practices are pivotal for sustaining high water quality and reduce water related diseases.

AIM OF THE STUDY

Aim of the study was to assess the effectiveness of computer assisted planned teaching on knowledge regarding selected water borne diseases and its preventive measures among mothers of under five children in selected area at Etawah (U.P.)

MATERIALS AND METHODS

Quantitative research approach was used for the present study. Quasi experimental design was used for present study. Setting of the study was Baidpura, Saifai, Etawah and Heonra, Etawah. Population of the present study are Mothers having under five years children, residing at Baidpura, Saifai, Etawah and Heonra, Etawah. Sample consist a total number of 100 subjects (Mothers) who were having children below 5 years of age residing in Baidpura, Saifai, Etawah and Heonra, Etawah. Simple Random Sampling technique by lottery method was used for the present study. Independent variable of the study are Computer Assisted Planned teaching. Dependent variable of the study are Knowledge Levels of the Mother. Extraneous variables of the study are Age, Education, Occupation, Family income, Food practice, Water, Drainage facility, and Toilet facility. Inclusion criteria are Mothers of under five children in the urban community area of Baidpura, Saifai, Etawah and Heonra, Etawah. Mothers who are willing to participate in the study, Mothers who are available at the time of data collection. Exclusion criteria are Mothers who are having children more than five years of age. And Mothers who are not willing to participate in the study. Data collection instruments & techniques divided in to two sections Section A – Demographic variable: It had 8 questions with multiple options. The study participants had to tick the appropriate boxes. It had questions related to age, education, occupation, monthly income, type of latrine facility, dietary pattern, and type of water, drainage facility available in their house. Section B – Structured Questionnaire: It was developed by the researcher, It had 14 questions with multiple options, It had questions related to the meaning, causes, treatment modalities and preventive measures of water borne diseases.

Computer Assisted Planned teaching was introduced to all the mothers who were included in the study followed by pre test. A pilot study was conducted among 10 mothers of under five year children from Saifai Etawah, in the same manner as final study. Mothers with under five children were selected using simple random sampling technique for the purpose of pilot study. They were assessed for knowledge level by the pre test using the research tools and then computer assisted planned teaching on water borne diseases and its preventive measures was given. After a week post assessment was conducted to check the knowledge level using the research tool. The tool was found to be satisfactory in terms of simplicity and clarity. Based on the findings of the pilot study it was concluded that it was feasible and practicable to conduct the main study and criterion measures were found to be effective. Data collection

procedure was done for a period of four weeks and the time taken for each subjects was 30 – 40 minutes. Pre assessment was done using structured knowledge questionnaire subsequently Computer assisted planned teaching programme given on same day for 25 minutes. On the seventh day post assessment was conducted using same structured knowledge questionnaire. Based on the criteria 6 – 8 subjects were selected each day. The subjects were explained about the purpose of the study and were assured of confidentiality of the data collected.

RESULTS

Table 1: Post-Test level of knowledge on water Borne Diseases And Its Prevention

Level of knowledge	Posttest	
	No. of mothers	%
Inadequate	0	0.0%
Moderate	20	20.0%
Adequate	80	80.0%
Total	100	100.0%

Table 1 depicts the post-test knowledge of participants, In post test none of the mothers had inadequate knowledge, 20.0% of them had moderate knowledge and 80% of them had adequate knowledge .

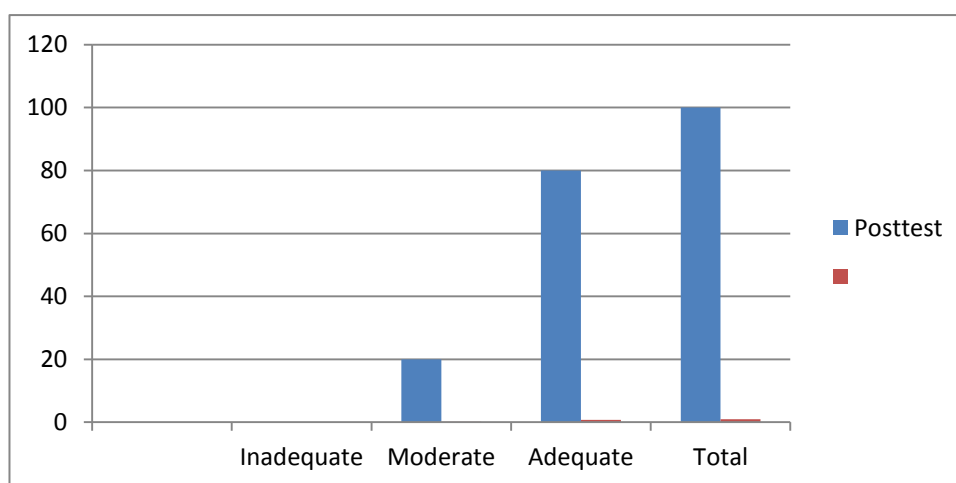
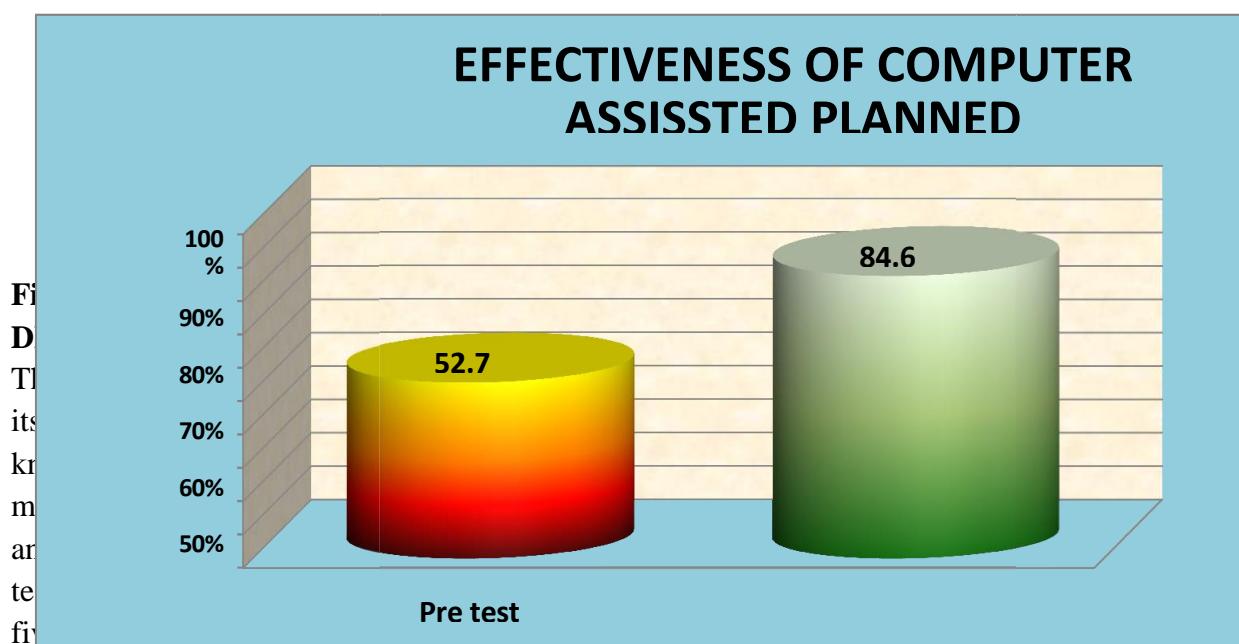


Fig no 1: Post-Test level of knowledge on water Borne Diseases And Its Prevention

Table 2: Effectiveness of computer assisted planned teaching

	Maximum score	Mean knowledge score	% of score	Gain score
Pretest	14	6.38	52.7%	31.9%
Posttest	14	10.84	84.6%	

Table 2 evaluate the effectiveness of Computer assisted teaching regarding knowledge of Water borne disease and its prevention among mothers of under five children. On an average, After Computer Assisted Planned Teaching mothers are gained 31.9% of the knowledge than pre test. This is net benefit of Computer assisted planned teaching programme.



knowledge (20.0%) of them had moderate knowledge and (80%) of them had adequate knowledge. The third objective was to evaluate the effectiveness of Computer assisted teaching regarding knowledge of Water borne disease and its prevention among mothers of under five children. It shows that there is significant improvement in the level of knowledge, after the computer assisted teaching programme, The pretest mean knowledge score is (52.7%) and post test mean knowledge score is (84.6%) On an average, mothers are gained 31.9% of the knowledge than pretest. The fourth objective was to find the association between the level of knowledge with selected demographic variables. After Computer Assisted Planned Teaching, mothers are gained 31.9% of the knowledge than pre test.. Differences between pre test and post test score was analysed using proportion with 95% CI and mean difference with 95% CI. According to the association between level of knowledge gain and their demographic variables the highlights that post test knowledge score has significant association with the age of the mother ($\chi^2=8.53$) ($P=0.04$), Family income ($\chi^2=7.76$) ($P=0.05$) and Educational status ($\chi^2=9.71$) ($P=0.02$). Statistical significance was calculated using chi square test

CONCLUSION

Mothers of under five children's are having decreased level of knowledge, regarding waterborne diseases, its causes, and its preventive measures and also they don't know the effective way of maintaining their water hygiene and practices regarding good toileting and environmental sanitation. This study shows a significant knowledge gain among the mothers of under five children regarding computer assisted planned teaching on water borne diseases. Waterborne diseases most commonly are transmitted in contaminated fresh water. Infection commonly results during bathing, washing, drinking, in the preparation of food, or the consumption of food thus infected. Various forms of waterborne diarrheal disease probably are the most prominent examples, and affect mainly children in developing countries; according to the World Health Organization, such diseases account for an estimated 4.1% of the total daily global burden of disease, and cause about 1.8 million human deaths annually. The World Health Organization estimates that 88% of that burden is attributable to unsafe water supply, sanitation and hygiene. Microorganism causing diseases that characteristically are waterborne prominently include protozoa and bacteria many of which are intestinal parasites, or invade the tissues or circulatory system through walls of the digestive tract. Various other waterborne diseases are caused by viruses.

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Conflicts of interests: No conflicts of interests.

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