



EDUCATION INTERVENTION ABOUT THE KNOWLEDGE OF TEETH AND GUM DISEASE DURING PREGNANCY AMONG IN A SELECTED COMMUNITY IN DHAKA CITY

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Abstract

An educational intervention study was carried out among the women of kathal began slum area of Dhaka city, from April to June 2009. The objective was the study was to plan, implement and evaluate the health education intervention on the knowledge of teeth and gum disease during pregnancy and assess the effectiveness of the programme. The total sample size was 60 respondents who were selected purposively. At first baseline survey was conducted to assess the level of knowledge of the respondent. On the basis of baseline findings educational intervention programme was planned and organized, using group discussion as method and flash card, leaflet, model, and picture was used as a media, post-intervention data were collected with the same questionnaire to see the effect of health education intervention programme .pre and post-intervention data composed and analysis by SPSS. The study shows that the knowledge was not progressing about the teeth and gum disease before intervention but after educational intervention programme the knowledge level of women was found good.

Keyword: Teeth and Gum Disease, Pregnancy

Introduction: Pregnancy is one of the most important times in a woman's life. During this period of time, a pregnant woman does everything to prevent

exposure of the developing fetus to harmful substances and diseases. There are many things such as maternal substance abuse, high blood pressure, infection,

inflammation (oral), diabetes etc that may cause complications of pregnancy as well as preterm delivery of low birth weight (LBW) infants. It is estimated that roughly 15% of the woman who delivers premature 4 microorganisms from gum infection that have migrated to the amniotic fluid¹. Starting in the second or third month of pregnancy approximately 50% of woman experience gum inflammation called pregnancy gingivitis. This is partly related to the increased amount of progesterone circulating throughout the body and can become a more serious problem if good oral hygiene is not maintained. During pregnancy, the gum tissue is more sensitive to the plaque. When this happens, gums may appear red and puffy and may bleed more easily. Pregnancy gingivitis usually subsides after the child is born. The important things to remember that regardless of hormone levels, pregnancy gingivitis is caused by the expectant mother's immune response to the bacterial plaque that accumulates from poor oral hygiene. Certain stages in the menstrual cycle and with the use of oral contraceptive, hormonal change can also cause the woman to be more sensitive to this bacterial plaque. Regular dental checkup and good oral hygiene are the best

ways to prevent oral infection and any potential risk to the developing fetus². The mouth should not be isolated from the rest of the body, it is part of the whole body system. Now the dentists and obstetricians recognize that there might be a link between inflammation in the body and premature birth. The goal is to eliminate all oral inflammation before and during pregnancy. Researchers thought that inflammation of the gum may increase the risk for complications for pregnancy. It is important that infection and inflammation may cause preterm delivery, asthma, low IQ, cerebral palsy and poor motor skills. Gum disease is a common problem for pregnant women during pregnancy hormone change can cause sensitive gums, pregnant women with gum disease are seven times more likely to have a premature birth or deliver a low birth weight baby. It is really important to know the knowledge about teeth and gum disease during pregnancy time for the birth of the healthy child.

Materials and methods:

This interventional pre and post-test study design were carried out in the slum area of katha began Dhanmondi under the district of Dhaka. A total of 60 pregnant women

whose age 15- 45 years were selected for the study who were willing to give the interview. The sample was collected by purposive sampling technique. A pretested structured questionnaires and checklist were used for collection of data. Data were collected by direct interview of the respondent. Data analysis was done using SPSS.

Intervention Approach: After baseline survey on analysis of the baseline data, areas, where educational intervention was needed, were found out, an Educational program was developed. The lesson plan, flip chart, and posters were prepared. The group members conducted the educational session by group approach. For intervention, the group members visited all the households (selected) and informed regarding intervention program on knowledge of Importance of dental checkup during pregnancy. The entire respondents were requested to be present at a selected place to participate in the group education. The education intervention on the importance of dental checkup was conducted on 1st May and 3rd May 2009 on the different group. Flip chart and posters were used. After completion of the session, feedback was taken from the respondents by asking questions.

Post-intervention Evaluation:

The post-intervention evaluation was done on 15th and 17th May 2009 by using a questionnaire. The researcher went house to house of the respondents for post-intervention evaluation. The evaluation was done in person to person interview.

Result:

The study was conducted among 60 women in a selected community. The data was collected from 60 respondents. The results are shown in the following table

Table 1: Socio-demographic features of the respondents. (n=60)

Variable	Frequency	Percent
Age		
<20 years	8	13.3
21-25 years	18	30.0
26-30 years	11	18.3
31-35 years	13	21.7
>35 years	10	16.7
Educational Qualification		
Illiterate	13	21.7
Only can sign	18	30.0
Primary	21	35.0
Secondary	7	11.7
Higher secondary	1	1.7
Occupation of respondents		
Business	5	8.3
Service	8	13.3
House wife	22	36.7
Day labor	1	1.7

Maid servant	19	31.7
Others	5	8.3
Total	60	100.0

The table shows that out of 60 respondents, majority 30% was in the age group of 21-25 years, 21.7% was in 31-35 years group. On other hands, 16.7% was above 35 years and the rest by of 13.3% were below 20 years. The majority of the 35% respondents were off of education, followed by 30% can only sign, 21.7% illiterate, 11.7% were secondary and 1.7% in higher secondary. About 36.7%

of the respondents were the housewife, 31.7% were the maidservant, 13.3% were services holder followed by 8.35% businessman and only 8.3% were others include sweeper, Beggars etc. The table 2 shows that before intervention 88.3% had no correct knowledge about the care of teeth and gum during pregnancy and after intervention 95% of women had correct knowledge about the importance of dental check-up during pregnancy

Table 2: Distribution of the respondents by their Care of Teeth & gum disease during Pregnancy. (n=60)

Knowledge of Teeth & gum disease during Pregnancy	Pre-Intervention		Post-Intervention	
	Frequency	Percent	Frequency	Percent
Yes	7	11.7%	57	95%
No	53	88.3%	3	5%
Total	60	100.0%	60	100%

Discussion

The purpose of this study was to assess the knowledge of teeth and gum disease during pregnancy in a selected slam area of Dhaka city. It is a serious problem in Bangladesh nowadays. It is a medical and at the same times social problem. The discussion section is the section of the study and should explain the importance and relevance to the findings. In this study, the research question was that the most of the women, especially

Slam women have inadequate knowledge about the importance of dental checkup and health education intervention program can improve their knowledge. The current study showed that all of the slam women had an adequate knowledge about the importance of dental checkup; a health education intervention program could improve their knowledge and practice. Most of the women were 21.7% illiterate about the dental checkup in pregnancy so that they need the

knowledge about its causes, and sign/symptoms risk trimester of dental treatment. For this study, a short educational intervention program (lecture, poster, flash card, tooth model, photocopy, etc) were prepared which consisted of a clear conception of it. Health education related dental disease in pregnancy was impaired following a reselected lesson plan among Group of the respondent. Group discussion was the method of intervention. An intervention test based on the answer of pre and a post-test questionnaire was done in order to assess the improvement of their knowledge through the imparted training than it was at the baseline.

In this study Mean age is 28.88; SD = ± 7.279 , The out of 60 respondents, majority 30% was in the age group of 21-25 years, 21.7% was in 31-35 years group. On the other hands, 16.7% was above 35 years. And the rest by of 13.3% were below 20 years. Among the respondent majority of the 35% respondents were of the primary level of education, followed by 30% can only sign, 21.7% illiterate, 11.7% were secondary and 1.7% in higher secondary.

There was a study conducted by Orhun et al, Periodontitis by the year 2005 state that, dental treatment should be received when women are pregnant Good oral health care is

vital during pregnancy. Continue with regular dental cleaning and check to avoid oral infections that can affect the fetus, such as gingivitis and periodontal disease. (7). So there is a similarity in this study. Out of 60 respondents before intervention 83.3% had no knowledge on the relation of the problem of gum about the problem of teeth and gum during pregnancy and after intervention most of the respondent 58(96.7%) have acquired correct knowledge on the same. Dr. Dan Peterson in the year of 2005 found that periodontal treatment significantly reduced the risk of having a pre-term birth or low birth weight infant, Periodontal therapy reduced pre-term premature birth and low birth weight infant rates by 68% in women with pregnancy-associated delivery gingivitis. Mothers with gum disease have six times greater risk of delivering preterm, low-birth-weight babies (6). Bush RB, Paju in 2003 December, state that Periodontal disease as a risk factor for adverse pregnancy outcomes Periodontal diseases is a risk factor for adverse pregnancy outcomes such as premature and low birth weight (8). Another study that is similar to this by Lopez et al. J Periodontology 2002 Link Examined Between Gum Disease and Early Births In a study of 1,313 pregnant women, researchers at the University of Alabama

found that women with severe Periodontal disease, in their second trimester of pregnancy tended to give birth anywhere from 3 to 8 weeks before their due dates (10) Among the respondents before intervention 26.1% had knowledge of symptom about redness and swelling of gum and also severe pain due to cavity of teeth and 21.7% had knowledge of blood and pus discharge from gum and rest of 17.4% and 8.7% had knowledge of foul smelling of mouth and sensitivity of tooth. And after intervention 45% get knowledge of severe pain due to cavity of tooth, 26.7% get knowledge of redness and swelling of gum, and followed by knowledge of 16.7% on the foul smelling, and 11.7% have of pus and blood discharge from gum. D. Q. Taani et al state that Periodontal treatment can reduce the risk of some pregnancy complications.

Pregnant women who receive treatment for their periodontal disease can reduce their risk of giving birth to a low birth-weight or preterm baby. In a study of 400 pregnant women aged 18 to 35 with the advanced periodontal disease, half of the subjects were given periodontal treatment before the end of the second trimester while the other half were treated after giving birth. Treatment included scaling and root planning, instruction in good oral hygiene habits and

antimicrobial mouth rinse for daily use. Of the women who received treatment during pregnancy, 2 percent gave birth to either a low birth-weight or pre-term infant. By comparison, 10 percent of the women who received treatment after birth had either a low birth-weight or pre-term baby (13) So there is similarity of this study.

The table-18 shows that before intervention only 2 women out of 60 had knowledge of the safe time of dental treatment during pregnancy. And after intervention 43 respondents 71.7% acquired correct knowledge about the safe time of dental treatment during pregnancy.

The table-22 shows that before intervention 87.8% of the respondent uses of normal toothpaste and only 2.4% respondent uses of fluoride toothpaste and 9.8% not use any paste to clean the teeth of mouth. And after intervention 88.3% respondent uses of fluoride toothpaste during pregnancy to clean the mouth and 13% are the use of normal toothpaste and 7% don't know what type of paste is to be used to clean the mouth during pregnancy.

The information in our country where the government is spending a large proportion of money in the health sector, But there should any awareness about the pregnancy, up. And there should not be any other NGO

or other private programs that for awareness about the importance of dental checkup.

In these study data was collected by two times, one before intervention and other was after the intervention. Before the intervention, there was poor knowledge about the dental check-up taking dental treatment before, during and after pregnancy. They only knew about the dental pain, and that for extraction of teeth. But they don't know about the necessity of dental treatment, safe drug may be taken in pregnancy, safe period, hat is 2nd time stat of pregnancy is safe, about the dangers symptoms of gum and teeth disease, there may be an oral problem arise due to hormonal changes , the adverse outcome of newborn, like, premature child, preterm child, brain damage child and may abortion can occur due to any teeth and gum disease like, gingivitis, periodontitis, calculus, pregnancy epulis etc, and taking of different drugs, tobacco, etc. They also don't know what type of paste is necessary for cleaning of mouth like fluoride tooth paste. But after the intervention, they acquired good knowledge about the importance of dental checkup. By the given of health education program using the different type of media, lecture, discussion, lift let, poster, tooth model, a different type of picture by the

researcher.

CONCLUSION

The study was conducted to assess and compare the improvement of knowledge of dental disease through an organized educational intervention programmed. The aim of any intervention programme is that there should be some degree of change in knowledge, attitude, and behavior. From the intervention programme knowledge of women (slum area) were upgraded. Educational intervention programme can play an important role to increase the level of knowledge regarding the importance of dental check-up during pregnancy.

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