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Awareness and practices regarding dental health among pregnant women attending antenatal clinics in Sri Jayewardenepura General Hospital, Sri Lanka

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Abstract

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Dental health is an important aspect of health. Further, teeth related dilemmas are common in pregnancy and thus has influences on the growing fetus. The study was conducted to assess awareness and practices regarding dental health among pregnant women, who attended the antenatal clinic at Sri Jayewardenepura General Hospital, Sri Lanka in 2018. A descriptive cross-sectional study was conducted with the participation of randomly selected 150 pregnant women who attended antenatal clinic, by using pre-tested interviewer administered questionnaire. Knowledge and practices scores were developed based on the maximum and minimum marks allocated for each section. Pearson Chi-square test was performed to determine the associations. Of the participants, 70% (n=105) were aware regarding the fact that hormonal imbalances during pregnancy may affect their dental health. However, only 21.3% (n=32) had awareness regarding the fact that frequent vomiting during pregnancy period is a risk factor for dental erosion. Further, 56.7% (n=85) of the participants were knowledgeable regarding the influence of mother's dental health on their growing fetus. Most frequent source of knowledge regarding the importance of dental health during pregnancy was the family doctor (40%, n=60) in participants, 54% (n=81) had good knowledge regarding dental health during pregnancy. Regarding overall level of dental care practices, only 33.3% (n=50) had good dental care practices. Age (p=0.02), level of education (p=0.01) and monthly income (p=0.01) showed a significant association with dental care knowledge while, the level of education (p=0.01) showed significant association with dental care practices among participants. Although more than half of the participants had good knowledge regarding dental health, less than one fourth of individuals were following proper dental practices. This study emphasizes the importance of conducting health education programmes to reduce the knowledge practice gap and to highlight the importance of dental care practices during pregnancy for better health outcome towards mother and baby.

Keywords: Awareness, Practice, Dental health, Pregnant women, Patriarchy

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Introduction

Oral health consists of different aspects including speaking ability, smile, smell, chew, swallow, touch and express different emotions through facial expressions confidently without any pain, discomfort or craniofacial complex disease (Glick et al., 2016). Pregnancy is a unique period during a woman's life and is characterized by complex physiological changes, which may adversely affect oral health. At the same time, oral health is key to overall health and well-being.

Changes in salivary composition in late pregnancy and during lactation may temporarily predispose to dental caries and erosion (Laine, 2002). Further, the number of salivary cariogenic microorganisms may increase in pregnancy, concurrently with the decrease in salivary pH and buffer effect (Laine, 2002). Study in 2012 reports that pregnant women in rural areas had a significantly higher experience of decayed and filled teeth. It was also reported that untreated dental caries was twice that when compared with urban women (Karunachandra, 2012).

There are significant barriers to request dental care in pregnant mothers including limited access to affordable dental services and lack of knowledge about the importance of maternal oral health (George et al., 2013). Results of another recent study conducted in South India revealed that despite the presence of pain due to dental causes, utilization of dental services by pregnant women was poor (Shenoy & Chaco, 2013). Previous reports suggest that knowledge related to oral health of pregnant women during pregnancy is low and needs to be improved. Further, oral health practice was also not sufficient and therefore proper health education is necessary to maintain good oral health. Additionally, attitude towards dental visit also needs to be improved (Leelavathi et al., 2018). Many studies have been conducted regarding knowledge and practices on dental health care among pregnant women in developed countries. However, there is a lack of epidemiological data regarding above matter in Sri Lankan context. Therefore, the findings of this study are helpful to identify, level of knowledge and practice regarding dental health practices among pregnant women and to implement measures to improve individual's knowledge and practices on dental health maintenance during pregnancy. Collectively these will enable to enhance the quality of life of pregnant women and lead to healthy newborns.

Methods

A descriptive cross-sectional study was conducted among pregnant women attending antenatal clinic of Jayewardenepura General Hospital in 2018. The objective of the study was to assess the awareness regarding dental health among pregnant women who attended the antenatal clinic of Sri Jayewardenepura General Hospital. Simple random sampling method was used to collect the sample from all the clinic attendees. Pre-tested interviewer administered questionnaire was used to collect data regarding demographic and personal characteristics, awareness regarding dental health maintenance and dental health problems. Both descriptive and inferential analyses (Chi square test) were performed on SPSS 23.0 software. Questionnaire results were numerically coded for questions on knowledge and practices regarding dental health.

The total maximum mark which could be obtained for knowledge section was twelve with a minimum of zero. The total score was categorized into three groups. Individuals who scored 0-3 were considered as having poor knowledge, those who scored 4-6 points, were considered as having moderate knowledge and those who scored 7-12 points, were considered as having good knowledge. Regarding practice score, the total maximum mark which could be obtained was 10 with a minimum of 0. Ethical approval was obtained from Ethics Review Committee of KIU (KIU/ERC/18/32) and permission was obtained from Director of Jayewardenepura General Hospital, relevant consultants and clinic heads. Written informed consent was obtained from the participants as well. Data collection was done without interfering with treatment and clinic follow up activities. Safety and the confidentiality of the data were ensured.

Results and discussion:

Of the 150 participants, majority (58%, n=87) were in the age group of 18-30 years. Of them, 18.7% had education up to ordinary level. Among the participants, 46.7% (n=70) were employed. Of the pregnant women 60% (n=90) were in their 3rd trimester of pregnancy while 10.7% (n=16) were in the 1st trimester of pregnancy (Table 1).

Table 1: Socio-demographic and personal characteristics of the study sample (n=150)

Demographic characteristic	Frequency (n=150)	Percentage (%)
Age category / Years		
18-30	87	58.0
31-40	60	40.0
41-45	3	2.00
Education level		
Up to grade 05	1	0.667
Grade 5 to 11	5	3.33
Passed GCE O/L	28	18.7
Passed GCE A/L	116	77.3
Occupation		
Yes	70	46.7
No	80	53.3
Family income per month (LKR)		
Less than 10,000	1	0.667
10,000-15,000	1	0.667
15,000-20,000	10	6.67
More than 20,000	138	92.0
Trimester of pregnancy		
Less than 03 months	16	10.7
Between 03-06 months	44	29.3
More than 06 months	90	60.0

Of the participants, 56.7% (n=85) knew that untreated long-term periodontitis results in premature birth. However, only 26% (n=39) were aware about influence of untreated dental caries on the health of the child. Of the participants 21.3% (n=32) have identified that, frequent vomiting during pregnancy causes dental erosion in the mother, while 70% (n=105) were knowledgeable that hormonal imbalance during pregnancy affect the mother's dental health. In this study, 20.7% (n=31) had received the information from the obstetrician on the impact of oral health in pregnancy. This is higher than a study conducted in India which reported that, only 4% of pregnant women had received such information from their obstetrician

(Gupta et al., 2015). The discrepancy of these results shows the difference of obstetrician client contacts between the two countries and a better health education system seems to be in place for Sri Lankan pregnant women visiting anti natal clinics compared to India. However, the percentage is less than a study conducted in USA, which reported 54.9% awareness regarding importance of dental health during pregnancy to seek dental care during pregnancy (Gaffield et al., 2001). The study by Gaffield et al highlights that pregnant women in developed countries are concerned regarding dental health maintenance than their counterparts in developing countries.

Most of the participants had a moderate level of overall knowledge about dental health maintenance during pregnancy (62.7%, n=94). Only 34.7% (n=52) of participants had good overall knowledge regarding dental health (Fig. 1). Percentage of individuals having overall good oral health knowledge (34.7%) is higher than 12% which has reported in a study conducted in Sudan (Ibrahim et al., 2016) which shows more exposure to antenatal education and improved maternal health care in Sri Lanka than in Sudan. However, the percentage of participants with overall good knowledge is lower than a study on the topic of oral health status, practices and knowledge among pregnant women in Sydney, which determined 79.1% were knowledgeable regarding dental care (George et al., 2013). This difference may be due to demographic and educational differences of the individuals in the two countries including educational resources. The data from this study highlights the importance of improving antenatal education facilities as in developed countries.

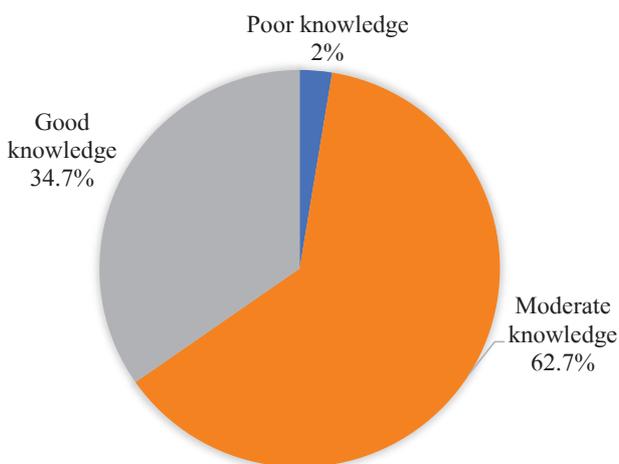


Fig. 1: Level of overall knowledge regarding dental health (n= 150)

There were statistically significant associations of overall knowledge regarding dental care with age (p=0.02), educational level (p=0.01) and monthly income (p=0.01). The findings are contradictory to a study conducted among Nigerian women which showed no statistically significant association of knowledge regarding dental health with age (p=0.166) or level of education (p=0.079) (Abiola et al., 2011). The reason may be that Nigerian women's accessibility to antenatal educational services may be low irrespective of the age or level of education.

Of the participants 90% (n=135) of pregnant women reported that they brushed their teeth twice a day, while 6.7% (n=10) brushed their teeth more than

twice a day. This finding is higher than findings of a study in Nigeria which revealed only 32.9% women brushed their teeth twice a day and 1.5% for more than twice a day (Abiola et al., 2011). Reason for the disparities between the studies may be because Sri Lankan pregnant women are more concerned and knowledgeable regarding personal hygiene than African women.

More than half of the participants (60%, n=90) had moderate level of practice about dental health. Only 33.3% (n=50) of participants were following good practice regarding dental health (Fig. 2). Level of education (p=0.01) showed a significant association with dental care practices. The association is consistent with the finding of a study conducted in India (Payal et al., 2017) which revealed that educational status showed a significant association with dental care practice. In this study, there was no statistically significant association of dental care practices with age or poor hygienic habits. However, associations were found with age and poor hygiene habits in a study (Payal et al., 2017) in India.

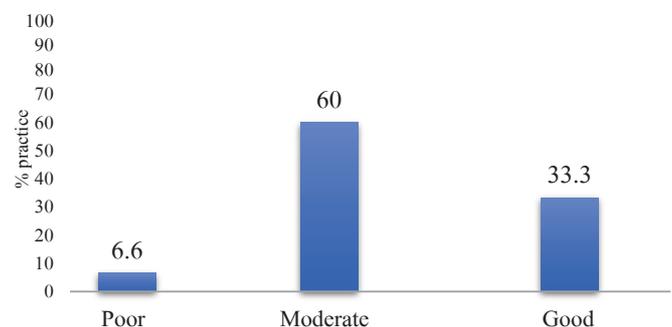


Fig. 2: Dental care practices (n=150)

Conclusion

Although most women surveyed showed moderate level of knowledge, the results highlight important gaps in their oral health practice. This study emphasizes the importance of conducting programmes to reduce the knowledge practice gap and to highlight the importance of dental care practices during pregnancy to reduce the knowledge, practice gap for better health outcome towards mother and baby.

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