Original Article

Effect of maternal occupation on breast feeding among females in Al-Hassa, southeastern region of KSA

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Received 14 July 2016; revised 28 August 2016; accepted 28 August 2016; Available online 21 October 2016

Abstract

\textbf{Objectives:} Breast feeding is a normal behaviour in humans that provides babies with the nutrients needed for growth and development. Certain factors contribute to the inability of mothers to breastfeed. This investigation explored the effect of maternal occupation on breast feeding amongst females in Al-Hassa in the southeastern region of KSA.

\textbf{Methods:} This cross-sectional study was conducted by administering a structured Arabic questionnaire to working and non-working mothers in the region. The participants were asked about their job status and whether they were breast feeding (BF), the reasons for reducing or stopping BF, and the health status of their babies. The obtained data were analysed using the chi-square test.

\textbf{Results:} A total of 124 mothers participated in the survey; 62 working mother (WM) and 62 non-working women (NWM). All of the NWM had breastfed their babies, while ninety-two percent of the WM breastfed, while the remaining 8% (12.9) of WM did not breastfeed. The results also showed that only 7% of WM practiced exclusive breast feeding (EBF), while 37% of the NWM were found to practice EBF.

\textbf{Conclusions:} Maternal occupation was not observed to be a barrier to prevent mothers from breast feeding but affected the duration and frequency of breast feeding per day and the health status of babies.
Breast feeding (BF) is defined as the method of feeding a baby with milk directly from the mother’s breast. BF could probably have started with the first baby. A BBC News magazine report indicates that for as long as there have been babies, there have been breast feeding mothers. According to a WHO report on instant feeding recommendations, BF is classified as 'an unequalled way of providing ideal food for the healthy growth and development of infants'. Another WHO report defines Exclusive Breast Feeding (EBF) as the feeding of an infant solely on maternal milk with no addition of other milk or liquids. The WHO recommendation is for the first six months of life, infants should be breastfed exclusively for optimal development, as BF is the normal way of providing young infants with the nutrients that they need for healthy growth and development. In a report by UNICEF, BF is classified as a major contributory factor to public health, playing an important role in reducing health inequalities. Exclusive breast feeding can therefore be said to play a pivotal role in determining the optimal health and development of infants, while the lack of it is associated with an increased risk of many early life diseases and conditions, such as otitis media, respiratory tract infections, diarrhoea and early childhood obesity. Maternal health is also affected by EBF. Another WHO report indicates that breast feeding reduces the risks of breast and ovarian cancer later in life, as well as helping women return to their pre-pregnancy weight faster while lowering rates of obesity. Therefore, the benefits of EBF cannot be overlooked, as researchers all over the world have reported strong evidence on the benefits of exclusive breast feeding to both mother and child. However, there are reports indicating that with all the indicated benefits, EBF is still not practiced by mothers in different regions of the world, with reasons differing from one region to another. Some researchers have looked into different breast feeding patterns and reported that these patterns varied among mothers. Ekanem et al. reported that of the 100 mothers who participated in their study, only 24 said they practiced exclusive breast feeding (EBF). In the Abha region of KSA, Al-Binali reported that of the one hundred nineteen (119) participants in their study who started breast feeding their children within one hour of delivery, exclusive breast feeding was reported only amongst 32 of the participants, six months later. Many different reasons have been attributed to this attitude. Poreddi et al. are of the view that breast feeding in India is influenced by social, cultural and economic factors, with urbanization and maternal employment outside the home being a major cause for the}

**Keywords:** Breast feeding; Exclusive breast feeding; Maternal occupation; Non-working women; Working women

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all mothers nursing healthy babies, and who responded to the questionnaire based on their experience with the youngest child. Categorized responses for each item were adapted from earlier works. Respondents were to respond as: yes, no, or don’t know.

The questionnaire was developed by the research group. The items were also translated into Arabic by the Arabic speaking members of the research group with a guide from field experts. Pilot testing has been described elsewhere, but with modifications. The survey tool was piloted on nursing mothers at the College of Medicine at King Faisal University, Al-Hassa. This step was followed with an adaptation of items through rephrasing and revision.

The female investigators who are Arabic speakers were engaged in the data collection. Questionnaires were handed out individually to respondents, who filled them out and handed them back to the investigators.

For ethical consideration, approval was obtained from the research ethics committee of the College of Medicine, King Faisal University. Participants were dually informed about the project and a verbal consent was obtained from the mothers; only those who agreed to participate in the survey were included in the study. Confidentiality was guaranteed, as respondents were allotted numbers.

The collected data were analysed using Excel Microsoft Software 2013. Comparisons were made between groups to determine significance with Student’s t-test and chi-square to test the relationship between variables. Significance level was set at p < 0.05.

Results

One hundred and twenty-four (124) women participated in the survey. Of these participants, 62 were working, and the remaining 62 were non-working mothers, as shown in Table 1. The survey results showed that there was a relationship between breast feeding (BF) and maternal occupation. Of the 62 working mothers who responded, five had stopped breast feeding at the time of the survey, as shown in Table 1, while all of the non-working mothers were still breast feeding. The results were significant with p-value = 0.0225.

When asked about the number of breast feeding times per day, the non-working mothers answered that they breastfed more than three times a day (88.7%); however, only 50% of working mothers said that they breastfed more than three times a day, the results were shown in Table 2. There was a significant difference in the number of BF times per day between the WM and NWM groups (p-value 0.000053).

The participating mothers were also asked the length of time they practiced breast feeding, and the results on this comparison in duration of BF between working and non-working mothers are shown in Figure 1. This figure shows that within the period of birth and 2 months, the difference in the number of working and non-working mothers breast feeding their babies was not significant (p-value 0.77948); however, from 3 to 5 months duration, there was a significant difference in duration, primarily due to the WM, with (p-value 0). A similar pattern is observed for mothers’ breast feeding from 9 to 11 months duration with a significant difference between working and non-working mothers (p-value 0.00042). However, with an increase in duration of 18—20 months, more of the NWM than the WM were found to still be BF, and this difference was significant (p-value 0.00544). Additionally, significantly more of the non-working mothers breastfed for up to 24 months and above (p-value 0).

The results of the relationship between maternal occupation, exclusive BF and pre-planned BF are presented in Table 3. The questionnaire sought to determine if the respondents had pre-planned to BF prior to the birth of their babies and whether they had practiced EBF. Ninety three percent of working mothers said they did not practice exclusive breast feeding, while 63% of the non-working mothers did practice EBF and these results are significant (p-value 0.001347) and are shown in Table 3. However, regarding pre-planning to BF, the results showed that most (95%) of the working mothers affirmed that they pre-planned to BF, while only 5% said no. For the non-working mothers, 90% had pre-planned to BF, prior to delivery, while 10% said they had not done so.

Questions on barriers the respondents faced, regarding breast feeding their babies, were asked in the questionnaire. Post birth, the majority of the responding mothers were BF, with only approximately 35% of working mothers (WM) continuing at the time of the study. For the non-working mothers (NWM), 68% were still breast feeding at the time of the survey. The WM who stopped, said it was due to time spent at work, 72% of who indicated that the stress from work affected their milk secretion. In contrast, 28% of these mothers said work stress did not affect their BF but that there was not sufficient time to BF.

Discussion

The results from the present survey showed that in the majority of respondents, prior to birth, there was a

| Table 1: Distribution of participants by occupation and BF. |
|-----------------|-----------------|-----------------|
| Occupation of participants | Breast feeding (BF) | No. of mothers |
|                  | Yes | No | Total |
| Working mothers (WM) | 57 | 5 | 62 |
| Non-working mothers (NWM) | 62 | 0 | 62 |
| Total | 119 | 5 | 124 |

The chi-square statistic is 5.2101. The p-value is 0.022456. This result is significant at p < 0.05.
willingness to breastfeed. However, at the time of the investigation, the majority of BF mothers were those who were non-working outside their homes. The effect of socio-economic factors on breast feeding and exclusive BF has been reported by Kok, who showed that compared to the 49.4% of high income earners who practiced EBF, 72.2% of low-income earners practiced EBF. This finding, therefore, may indicate that there is the possibility that the cost of baby formula could have been a contributing factor to continuous EBF. The only socio-economical factor considered in the present survey is occupation, in terms or working or non-working. The level of income might not be a contributing factor in the case of the present investigation. Earlier studies have shown that there was no significant relationship between level of education and the practice of exclusive breast feeding. These studies showed that there was a high correlation between BF and occupation. Ojong et al. observed that the mothers in their study who were either full-time housewives or self-employed, fed their babies on demand. Indicating that these mothers were practicing the WHO and American Academy of Pediatrics actions on feeding on demand, which is the best method of feeding a baby, as well as promoting EBF. Earlier studies had attributed mothers’ occupation, as a contributory factor to BF as well as the pattern of breast feeding. The present investigation also showed that the majority of the mothers, regardless of their occupation, had pre-planned to breastfeed their babies before birth. More of the working mothers had pre-planned to breast feed than the non-working mothers. However, post birth, the percentage of working mothers still BF had dropped considerably by the sixth month. Therefore, maternal occupation was the contributory factor in the present investigation. The data obtained also showed that while all of the NWM mothers had breastfed their babies, the percentage was lower amongst the WM. El-Gilany et al. stipulated that there are many reasons why women generally either stop breast feeding early, or do not breast feed at all and that one of such reasons is work, and the present findings support these results. In the present survey, the reasons given by the respondents for stopping BF included lack of adequate time, reduced milk and baby’s adaptation to formula milk. Most of the respondents in the present survey who breastfed their babies for more than three times a day were the mothers who did not work outside the home. Therefore, availability of time is a contributory factor. There is the need to breast feed a baby every 2–3 h, which translates into approximately 8 times of BF a day. This process was said.

### Table 3: Exclusive BF by WM and NWM.

| Participants | Exclusive breast feeding (EBF) | Pre-planned BF |
|--------------|-------------------------------|---------------|
|              | Yes % | No % | Yes % | No % |
| WM           | 4     | 7    | 53    | 93   |
| NWM          | 23    | 37   | 39    | 63   |

The chi-square statistic is 15.6356. The p-value is 0.001347. The result is significant at p < 0.05.

![Figure 1: Comparison in duration of BF between WM and NW.](image-url)
to tend to sustain a 'copious milk supply'. The absence of this BF frequency is said to make it difficult for working mothers to meet the requirements, particularly if there is no provision to breastfeed at their work place. This factor may be the reason why working mothers in the present investigation said they experienced reduced their milk production. Apart from this fact, is the issue of work stress, which is the most common problem faced by working mothers, as they have difficulties expressing enough milk for their baby’s needs during the day and that even women with an abundant milk supply can have difficulties pumping enough milk during the work day.

The respondents in the present study who stopped breast feeding used an alternative to their natural milk. The supplementation of breast feeding has been associated with a shortened BF duration and was also observed among the WM in the present investigation. El-Gilany et al. stipulated that although the relationship between the use of formula and BF was difficult to establish, the influence of the hospital can promote formula use, while indirectly shortening the duration of breast feeding. This outcome implies that the frequent use of bottles could increase the possibility that babies will become frustrated with the slower flow of breast milk, leading to breast refusal and an earlier weaning than anticipated.

Health wise, a high percentage of respondent mothers said their babies had come down with cold & flu and diarrhoea. Similar findings have been reported by Lamberti et al., who found that compared to those that had been exclusively breastfed, there was a high risk of diarrhoeal mortality among non-breastfed babies.

Conclusions

It can be concluded from the survey that for our respondents, time spent at work affects the breast feeding process of working mothers. A number of factors also contribute to this outcome, one of which is the time spent by mothers at work during the day, and work stress, which certain of the mothers said affected their milk secretion.

Recommendations

Work places may need to look into the possibility of providing baby-friendly centres, where nursing mothers could attend to their babies. An increase in the duration of maternity leave will give working mothers more time to spend with their babies, as well as enhance breast feeding. It is also recommended that training be given to working mothers on the importance of breast feeding before and after work to ensure a 'copious milk supply'.

Acknowledgements

The authors would like to thank Dr. Iptisam Ahmed for her expert contributions and all of the women who participated in the survey.

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