Introduction

Infancy is the period from birth till 1 year of age.[1] Appropriate infant care practice is crucial for the health and wellbeing of infants. In 2018, the World Health Organization (WHO) reported 4 million infant deaths globally, which represent 75% of all under-five deaths.[2] In Saudi Arabia, infant mortality rate has declined over the past 20 years, from 19.80 deaths per 1000 live births in 1999 to 5.97 death per 1000 live births in 2018.[3]

Good infant care practice is the best way to guarantee the survival and healthy growth of infants. Although breastfeeding stays the mainstay of infant care, there are other important elements affecting the infant care outcomes, such as vaccination, sleep practice, pacifier use, and vitamins and other supplementation. Infants who lack exclusive breastfeeding have a higher mortality rate from pneumonia and diarrhea compared to exclusively breastfed infants.[4] WHO recommends exclusive breast feeding beginning from the first hour of life till 6 months of age as the optimal method of infant feeding. Breastfeeding should be

Infant care practices among mothers attending well-baby clinics at primary health care centers in Unaizah city

Hoor M. Alobaysi¹, Saulat Jahan²

¹Research and Innovation Unit, ²Family Medicine Academy, Qassim Health Cluster, Saudi Arabia

ABSTRACT

Background: Infant care, crucial for the well-being of infants, is an inherent human practice. Although there are important implications of infant care practices on infant health, there is a dearth of comprehensive studies covering all important aspects of infant care in an individual study. Objectives: To determine practices regarding infant feeding, infant sleep, use of pacifiers, and immunization, and to explore the association of these practices with mother’s demographic data. Methods: A cross-sectional study was conducted using a self-administrated questionnaire distributed among mothers attending well-baby clinics in Primary Health Care Centers (PHCCs), Unaizah city, Qassim region, Saudi Arabia. By using the two-stage cluster sampling method, 50 women participated from each of the four selected PHCCs, leading to a total of 200 participants. The survey was conducted from December 2020 to February 2021. Data were analyzed using SPSS software. Results: A total of 124 (62%) respondents were between the ages of 26 and 35 years, 64% had a bachelor’s degree, and 69.5% were housewives. Breastfeeding was practiced by 88% of women, 48% began infant weaning at 6 months of age, and 49% put their infant to sleep on their back. Up-to-date vaccination was reported for 188 (94%) infants. Infant pacifier use was reported by 58% of the respondents, and 82.5% of the participants had been offered formula milk for the newborn at the hospital. Vaginal delivery, absence of complications during pregnancy or labor, presence of a housemaid, and family income of more than 10,000 Saudi Riyals were significantly associated with better infant care practices. Conclusion: The study participants have good practices for certain infant care aspects such as immunization; however, improvement is needed for other practices, including weaning at the proper age, infant sleep position, and the use of pacifiers. Administrative measures are required to monitor the use of formula milk at hospitals and to enhance health education for mothers.

Keywords: Breastfeeding, infant care practices, infant sleep, pacifier, Saudi Arabia
continued along with semi-solid food till infants are 2 years of age.\textsuperscript{[5]} Introducing semi-solid food or weaning before age of 4–6 months has been associated with developing food allergies.\textsuperscript{[6]} Placing infants on their back during sleep is important for safe sleeping and to reduce risk of sudden infant death syndrome.\textsuperscript{[7]} The use of pacifiers by infants has been linked to otitis media and breastfeeding issues.\textsuperscript{[8]} Most of the serious diseases such as polio, measles, rubella, and smallpox can be prevented by vaccination. Thus, it is crucial for all infants to have an up-to-date vaccination status.

Although there are several studies documenting individual infant care practice, such as breastfeeding and infant immunization, there is dearth of literature regarding a comprehensive study covering all important aspects of infant care. Such a study is needed to provide an overall picture of quality of infant care. In this context, the current study was designed with the objectives to determine infant feeding and sleep practices, pacifier use by infants, and immunization status of infants of mothers attending well-baby clinics at PHCCs in Unaizah city. Moreover, the study determined the factors associated with infant care practices.

**Subjects and Methods**

It was a cross-sectional study conducted in the well-baby clinic of 4 PHCCs out of a total of 16 PHCCs in Unaizah city, Qassim Province, Saudi Arabia. Mothers of children 1 month–2 years of age attending well-baby clinics were included in the study. Mothers of infants with hereditary or congenital diseases, illiterate mothers, and care-taker other than a mother attending a well-baby clinic were excluded.

The sample size was calculated using Open Epi software.\textsuperscript{[9]} The following criteria were used for calculating the sample size:

Number of infants attending a well-baby clinic at PHCCs in Unaizah city: 2267 (data from Qassim Health Affairs Department, Ministry of Health)

Expected prevalence of exclusively breastfed mothers: 14%\textsuperscript{[10]}

Confidence level: 95%

Margin of error: ±5%

The calculated sample size was 172 participants. The sample size was enhanced to 200 to account for missing data and data-collection issues.

Two-stage cluster sampling method was used. In the first stage, four PHCCs were selected by simple random sampling using Microsoft Excel. In the second stage, mothers meeting the inclusion criteria were asked to participate after they exit the well-baby clinic of PHCCs.

Data were collected using a self-administrated, semi-structured questionnaire. The questionnaire was developed by reviewing relevant literature and adapting validated questions relevant to our study.\textsuperscript{[11-14]} The questionnaire was designed in English and translated into Arabic. It was back-translated to check for the accuracy of the translation. The questionnaire consisted of three parts including questions regarding demographic characteristics, mother’s health during the antenatal and postnatal periods, and practices of mothers regarding infant care. The survey was conducted from December 2020 to February 2021.

Data were entered and analyzed using Statistical Package for Social Sciences (SPSS) Version 21. For comparisons, Chi-square for categorical variables and \( t \) test and ANOVA for quantitative variables were used. \( P \leq 0.05 \) was considered significant for all inferential analyses.

Each infant care practice was scored according to the international recommendations.\textsuperscript{[5-8,15]} For each infant care practice, the ideal recommended option was given the highest score [Table 1]. The maximum total score for overall infant care practices was

| Infant Care Practice                          | Score |
|----------------------------------------------|-------|
| Breast feeding initiation time:              |       |
| First 2 hours                                | 4     |
| 3–23 hours                                   | 3     |
| 24–72 hours                                  | 2     |
| 72 hours–1 week                              | 1     |
| I didn’t breast-feed at all                  | 0     |
| First 6 months feeding practice:             |       |
| mother milk only                             | 2     |
| mother milk and some vitamins and medicine   | 2     |
| mother milk and other liquids                | 1     |
| mother milk and artificial milk              | 1     |
| artificial milk only                         | 0     |
| Wearing age:                                 |       |
| 3–4 months                                   | 0     |
| 5 months                                     | 1     |
| 6 months                                     | 2     |
| 7–8 months                                   | 1     |
| 9–12 months                                  | 0     |
| Pacifier use:                                |       |
| No                                           | 1     |
| Yes                                          | 0     |
| First 6 months sleep location:               |       |
| Separate bed, same room                      | 1     |
| Next to mother in the same bed               | 0     |
| Separate bed, other room                     | 0     |
| Sleep position:                              |       |
| On back                                      | 1     |
| On belly                                     | 0     |
| Side                                         | 0     |
| Crib content:                                |       |
| Nothing                                      | 1     |
| Toys/Blanket                                 | 0     |
| Pillow                                       | 0     |
| Up-to-date vaccination:                      |       |
| No                                           | 0     |
| Yes                                          | 1     |
13, indicating the best infant care practice, while the minimum score was 0.

Total infant care score was categorized into

- **Poor (1–4) points**
- **Fair (5–8) points**
- **Good (9–13) points**

Ethical approval was obtained from Qassim Research Ethics Committee. Before data collection, permission was obtained from the directors of selected PHCCs. Consent was taken from all study participants, and the questionnaire was kept anonymous.

**Results**

Responses were received from 206 out of the total 290 invited mothers, resulting in a response rate of 71%. Six questionnaires were excluded because of incompleteness, leading to a total of 200 study participants included in the final analysis.

More than half of the participants (62%) were between the ages of 26–30 years (n = 62, 31%) and 31–35 years (n = 62, 31%). A total of 128 (64%) respondents had a bachelor’s degree. The majority (n = 139, 69.5%) of the participants were housewives, and monthly household income of more than one-third of the participants (n = 77, 38.5%) ranged between 5000 and 10,000 Saudi Riyals [Table 2]. More than two-thirds of the participants had a normal vaginal delivery (n = 140, 70%), and the majority (n = 122, 61%) were delivered in a governmental hospital. Around one-quarter (n = 51, 25.5%) of the participants had a complication during pregnancy. Eleven (5.5%) participants reported being diagnosed with post-partum depression [Table 3].

Health education was received by 46.5% (n = 93) of the respondent mothers during the antenatal and post-natal periods. The sources of health education included health care providers (67.5%); mothers, sisters, and relatives (20.8%); and social media (11.7%).

Breastfeeding was practiced by 88% (n = 179) of the respondent mothers, while 12% (n = 24) did not breastfeed at all [Figure 1].

After delivery at the hospital, most of the participants (n = 195, 82.5%) were offered artificial milk for the infant. A total of 28 (14%) study participants had initiated breastfeeding during the first 2 h after birth. The most common infant feeding practice during the first 6 months was a combination of mother milk and artificial milk (n = 91, 45.5%). Approximately half (n = 96, 48%) of the participants began to give solid food to their infants at 6 months of age, while 23% introduced solid food before 6 months [Table 4].

In response to the question regarding the type of fluids given to the infants, the most frequently consumed liquids were herbal fluids (anise, mint, cumin, fenugreek), dates in warm water, juices, baby tea, and yogurt.

Table 5 displays the study participants’ practices regarding infant sleep. For the first 6 months of the infant’s life, 77% (n = 154) were placing the infant on a separate bed in the same parent room. Infant sleep position was reported as on the back (n = 98, 49%), on either side (n = 82, 41%), and on belly (n = 20, 10%).

On enquiring about the use of pacifiers, 116 (58%) respondents reported the use of pacifiers by their infants. Regarding vaccination, a total of 188 (94%) respondents responded that their infants were vaccinated up to date; however, 12 (6%) could not keep up with the vaccination schedule.

Out of the total 13, the mean infant care practice score was 7.36 ± 2.07 with a minimum of 1 and a maximum of 12. The infant care practice scores were categorized into poor (1–4 points), fair (5–8 points), and good (9–13 points). Figure 2 shows infant care practice categories among study participants. The majority (80%) of participants had fair infant care practices.

Family income of more than 10,000 Saudi Riyals (P = 0.047) and availability of a housemaid (P = 0.019) were significantly associated with better infant care practice scores. The

---

**Table 2: Demographic characteristics of participant mothers (n=200)**

| Demographic characteristic | Number | Percentage |
|----------------------------|--------|------------|
| **Age (years)**            |        |            |
| Less than 25               | 19     | 9.5        |
| 26-30                      | 62     | 31.0       |
| 31-35                      | 62     | 31.0       |
| More than 35              | 57     | 28.5       |
| **Education**              |        |            |
| Primary and Intermediate   | 8      | 4.0        |
| High school                | 55     | 27.5       |
| Bachelor                   | 128    | 64.0       |
| Diploma and Master degree  | 9      | 4.5        |
| **Occupation**             |        |            |
| Housewife                  | 139    | 69.5       |
| Teacher                    | 23     | 11.5       |
| Student                    | 6      | 3.0        |
| Health care provider       | 6      | 3.0        |
| Office work and business   | 26     | 13.0       |
| **Housemaid**              |        |            |
| No                         | 158    | 79.0       |
| Yes                        | 42     | 21.0       |
| **Family income (Saudi Riyal)** |    |            |
| Less than 5000             | 39     | 19.5       |
| 5000-10,000                | 77     | 38.5       |
| 11,000-15,000              | 43     | 21.5       |
| More than 15,000           | 41     | 20.5       |
| **Working hours of employed participants (mean±SD)** | 6.57±1.04 |
| **Number of Children (mean±SD)** | 2.82±1.67 |
respondents with a history of post-partum depression had significantly ($P = 0.020$) lower mean infant care scores ($6.79 \pm 1.93$) as compared to those who did not report a history of post-partum depression ($7.56 \pm 2.09$). Although not statistically significant ($P = 0.788$), those with a higher education level (bachelor and above) had better infant care mean scores ($7.38 \pm 2.07$) than those who had a lower level of education ($7.30 \pm 2.07$). Similarly, employed mothers had a higher mean score ($7.61 \pm 1.76$) as compared to the house-wife mothers ($7.25 \pm 2.19$); this difference was not statistically significant ($P = 0.26$).

On exploring the association of infant care practices scores with intra-natal and post-natal factors, vaginal delivery ($P < 0.0001$), absence of complications during pregnancy or labor ($P = 0.028$), and being breastfed ($P < 0.0001$) were significantly associated with better infant care practice scores. Although not statistically significant, respondents delivering after 37 weeks of gestation, those delivering in a private hospital, and those having a neonate without any complication had better infant care practice scores than their counterparts.

Factors that were significantly associated with practicing breastfeeding were family income above 10,000 SR ($P = 0.007$), vaginal delivery ($P = 0.001$), and delivery in a private hospital ($P = 0.017$). In contrast, delivery by cesarean section was negatively associated with breastfeeding practice. Factors that were significantly associated with less use of pacifiers were housemaid presence ($P = 0.025$), being a full-term infant ($P = 0.016$), and up-to-date vaccination status ($P = 0.015$). Offering artificial milk at the hospital ($P = 0.018$) and post-partum depression ($P < 0.0001$) were significantly associated with more pacifier usage.

The factors that were significantly associated with the correct positioning of the infant in the bed as recommended (on his/her back) were higher education (bachelor’s degree and above) ($P = 0.001$), absence of complications during pregnancy or labor ($P = 0.004$), and absence of post-partum depression ($P = 0.011$). Delivery in a private hospital was significantly associated with both correct infant sleeping position ($P = 0.024$) and place ($P = 0.006$) during the first 6 months as recommended (separate bed in the same room with parents).
of the study participants were not sure if they had post-partum depression and 11 participants (5.5%) reported having post-partum depression. In contrast to our study, a meta-analysis computed the prevalence of post-partum depression as 27%.[16] This possible under-estimation of post-partum depression in our study highlights the importance of screening for post-partum depression. As post-partum depression has serious implications on infant care, it is important to create awareness regarding post-partum depression among expectant mothers. Moreover, the health care workers also need to be trained on screening for post-partum depression.

In the present study, health education was received by less than half of the respondent mothers. Health education not received by more than half of the mothers is a matter of concern. It may be attributed to the crowdedness of the primary health care center and the shortage of health care providers. In our study, the sources of health education included health care providers (67.5%); mothers, sisters, and relatives (20.8%); and social media (11.7%). A local study found that 22.2% of the mothers had not received any health education. Similar to our study, their sources of health education were mainly healthcare staff (44.9%), relatives (26.8%), and media (17.8%).[17]

Breastfeeding and weaning are important aspects of infant care and play a vital role in the healthy development of an infant. In our study, breastfeeding was practiced by 88% of the respondent mothers. A study from Saudi Arabia reported that 96% of mothers exclusively breastfed their infant during the first 48 h of life; however, this percentage decreased to 82.7% when the infant was one month of age.[18] This may be explained by the infant formula advertising and hospital practice to offer bottle feeding as we found that 82.5% of study participants were offered artificial milk during the hospital stay. In accordance with our study, a study conducted in Riyadh, Saudi Arabia found that cumulatively, 83.7% of the mothers introduced artificial milk during the first 6 months of their infants’ life. However, in contrast to our study, the use of other liquids was relatively high (94.3%), although the same types of liquids were used, including water, baby tea, herbs, and dates with water and sugar.[19] This similar pattern can be attributed to cultural beliefs and traditions. In the current study, 48% of the participants began solid food for their infants at the age of 6 months, which is the recommended practice. Similar findings are reported by a study done in Saudi Arabia, which found that half of the mothers (50%) introduced solid food at 4–6 months of age, and 33% of the mothers started giving solid food after 6 months of age.[17] This finding of not following the recommended age for infant weaning by almost half of the participants underscores the importance of health education for mothers.

Discussion

Good infant care practices are vital for healthy physical and mental growth of infants. Infant care practices are affected by the antenatal and intranatal conditions and the health education provided during the antenatal and post-natal periods. In our study, the majority (61%) of the participants had delivered in a governmental hospital. This may be attributed to the high quality of care and free-of-charge deliveries at governmental hospitals in Saudi Arabia. An important finding in our study was that 21% of the study participants were not sure if they had post-partum

### Table 4: Breastfeeding and infant weaning practices of participant mothers (n=200)

| Variable | Number | Percentage |
|----------|--------|------------|
| Artificial milk offered at the hospital: | | |
| No | 35 | 17.5 |
| Yes | 165 | 82.5 |
| Breast feeding initiation time: | | |
| First 2 hours | 28 | 14.0 |
| 3-23 hours | 85 | 42.5 |
| 24-72 hours | 37 | 18.5 |
| 72 hours-1 week | 26 | 13.0 |
| Did not breast-feed at all | 24 | 12.0 |
| 1st 6 m feeding practice: | | |
| mother milk only | 22 | 11.0 |
| mother milk and some vitamins and medicine | 4 | 2.0 |
| mother milk and other liquids | 14 | 7.0 |
| mother milk and artificial milk | 91 | 45.5 |
| artificial milk only | 69 | 34.5 |
| Weaning age: | | |
| 3-4 months | 11 | 5.5 |
| 5 months | 35 | 17.5 |
| 6 months | 96 | 48.0 |
| 7-8 months | 50 | 25.0 |
| 9-12 months | 8 | 4.0 |
| Breast feeding duration in months (mean±SD) | 5.99±6.45 |

### Table 5: Participant mothers’ practices regarding infant sleep (n=200)

| Variable | Number | Percentage |
|----------|--------|------------|
| First 6-month sleep location: | | |
| Separate bed, same room | 154 | 77.0 |
| Next to mother in the same bed | 45 | 22.5 |
| Separate bed, other room | 1 | 0.5 |
| Sleep position: | | |
| On back | 98 | 49.0 |
| Side | 82 | 41.0 |
| On belly | 20 | 10.0 |
| Reason of preferring the practiced position: | | |
| Safe | 110 | 55.0 |
| Infant preference | 54 | 27.0 |
| Fear of choking | 29 | 14.5 |
| Health care provider advice | 3 | 1.5 |
| Other | 4 | 2.0 |
| Crib content*: | | |
| Pillow | 124 | 62.0 |
| Toys/Blanket | 55 | 27.5 |
| Nothing | 47 | 23.5 |

*Crib content; Total is more than sample size (n=200) because participants were allowed to provide multiple responses
of participants kept nothing in the infant crib, which is the recommended practice. These findings related to infant sleep practices highlight the importance of focusing on all aspects of infant care during mother health education.

Pacifier use among infants has been linked to various health issues. In the current study, 58% of respondents reported the use of pacifiers by their infants. A study in Brazil stated a similar percentage (50%) of infants using pacifiers. Although a study found the use of pacifiers to be associated with a lower incidence of sudden infant death syndrome, it also linked pacifier use with otitis media, latex allergy, reduced duration of exclusive breastfeeding, and dental deformities. Because of the hazards related to the use of pacifiers, it is important to create awareness among mothers to avoid their use. The findings of a large proportion of women using pacifiers for their infants underscores the importance of health education for the women during the antenatal and postnatal periods as well as during their visits to the well-baby clinic.

In our study, 94% of respondents reported that their infants were vaccinated up to date. This high proportion of up-to-date vaccinated children in spite of Covid-19 circumstances is remarkable and reflects the well-conducted vaccination program and health care policies in Saudi Arabia. Also, a study done in Jeddah, Saudi Arabia found that 91% of infants received their vaccination on time and for the rest, the delay was due to physician advice while the others had a real contraindication.

In our study, family income of more than 10,000 Saudi Riyals was significantly associated with better infant care practice scores. The presence of a housemaid may also be linked to better household income, and both these factors may lead to more time and facilities for the mothers to take care of their infants, leading to better infant care practice scores. The finding that those with a history of post-partum depression had significantly lower mean infant care scores as compared to those who did not report a history of post-partum depression underscores the importance of post-partum health care and screening for depression during the post-partum visit. Diagnosing and managing a mother’s depression will lead to better maternal health as well as improved infant care and well-being.

Factors that were significantly associated with practicing breastfeeding were family income above 10,000 Saudi Riyal, vaginal delivery, and delivery in a private hospital. In contrast, delivery by cesarean section was negatively associated with breastfeeding practice. In contrast to our study, a study done in Pakistan found that low socioeconomic status was associated with higher breastfeeding practice. However, the same study found that cesarean section was associated with lower breastfeeding practice, as was noted in our study. A local study from Saudi Arabia also reported a similar finding of lower breastfeeding practice in mothers with cesarean section. An interesting finding in our study was the statistically significant association of breastfeeding with delivery in private health care facilities. Further research is needed to explore the factors in government and private health care facilities that lead to the promotion of breastfeeding.

Infant care is one of the main aspects of primary health care physicians’ practice. Our study provides comprehensive information about infant care practices, which play a vital role in child health and safety. This information will help the primary health care physicians to create awareness and educate the mothers regarding optimum infant care practices.

The current study has certain limitations. The infant care practices were self-reported, and the study was done in the primary health care centers. Thus, social desirability bias cannot be ruled out, and the mothers might have reported some practices which are not actually practiced but are perceived as medically correct. Moreover, this study was conducted in a single city, limiting the generalizability of the study.

**Conclusion**

The study participants had good practices for certain infant care aspects such as vaccination; however, improvement is needed for other practices such as infant sleep position, weaning at the proper age, and use of pacifiers. Vaginal delivery, absence of complications during pregnancy or labor, being breastfed, presence of a housemaid, and family income more than 10,000 Saudi Riyals were significantly associated with better infant care practice scores, while post-partum depression was associated with lower infant care practice scores. Factors significantly associated with correct sleep positioning of the infant were mother’s higher education, absence of complications during pregnancy or labor, and absence of post-partum depression. Health care system support for breastfeeding and administrative monitoring of the use of artificial milk at hospitals is recommended. Moreover, comprehensive health education covering all aspects of infant care practices is recommended for mothers.

**Acknowledgments**

We would like to thank all the respondents who participated in this study. We are grateful to the primary health care staff for facilitating the data collection for our study.

**Authors’ contribution**

HMA designed the study, collected the data, performed data analysis, and drafted the manuscript. SJ participated in the design of the study, data analysis, and critically revised the manuscript for its intellectual content. HMA had the final responsibility to submit for publication. Both authors approved the final version of the manuscript for publication.

**Financial support and sponsorship**

Nil.
Conflicts of interest

There are no conflicts of interest.

References

1. CDC. Child development: Infants (0-1 years). CDC.gov. 2021. Available from: https://www.cdc.gov/ncbddd/childdevelopment/positiveparenting/infants.html. [Last accessed on 2021 Nov 14].
2. Infant mortality. Who.int. Available from: https://www.who.int/data/gho/data/topics/indicator-groups/indicator-group-details/GHO/infant-mortality. [Last accessed on 2021 Dec 01].
3. Saudi Arabia. Who.int. Available from: https://www.who.int/data/gho/data/countries/country-details/GHO/saudi-arabia?countryProfileId=05e416f4-8a29-404f-835c-d2352e3bf803. [Last accessed on 2021 Dec 01].
4. WHO | Breastfeeding. 2018. Available from: https://apps.who.int/nutrition/topics/exclusive_breastfeeding/en/index.html. [Last accessed on 2021 Dec 02].
5. Breastfeeding. Who.int. Available from: https://www.who.int/health-topics/breastfeeding. [Last accessed on 2021 Dec 01].
6. Fiocchi A, Assa’ad A, Bahna S. Food allergy and the introduction of solid foods to infants: A consensus document. Ann Allergy Asthma Immunol 2006;97:10–20; quiz 21, 77.
7. Parents and caregivers. Cdc.gov. 2021. Available from: https://www.cdc.gov/sids/Parents-Caregivers.htm. [Last accessed on 2021 Nov 14].
8. Rovers MM, Numans ME, Langenbach E, Grobbee DE, Verheij TJ, Schilder AG. Is pacifier use a risk factor for acute otitis media? A dynamic cohort study. Fam Pract 2008;25:233–6.
9. Dean AG, Sullivan KM, Soe MM. OpenEpi: Open Source Epidemiologic Statistics for Public Health, Version. Available from: www.OpenEpi. [Last accessed on 2021 Nov 14].
10. Nafee Elsayed HM, Al-Dossary LA. Exclusive breastfeeding, prevalence and maternal concerns: Saudi and Egyptian mothers. J Educ Pract 2016;7:5-11.
11. Al-Binali AM. Breastfeeding knowledge, attitude and practice among school teachers in Abha female educational district, southwestern Saudi Arabia. Int Breastfeed J 2012;7:10.
12. Gosadi IM, Daghreeri HH, Madkhali JM, Mokhasha AI, Althwani ZA, Ageeli MH, et al. Factors associated with mothers’ care of their newborns in Saudi Arabia. Ann Glob Health 2019;85:105.
13. Alyousefi NA, Alharbi AA, Almuqerah BA, Alajmi NA, Alayashi SM, Alharbi SS, et al. Factors influencing Saudi mothers’ success in exclusive breastfeeding for the first six months of infant life: A cross-sectional observational study. Int J Med Res Health Sci 2017;6:68–78.
14. Chung-Park MS. Knowledge, opinions, and practices of infant sleep position among parents. Mil Med 2012;177:235–9.
15. Michaelson KF. Feeding and nutrition of infants and young children: Guidelines for the who European region, with emphasis on the former soviet countries. Europe, UK: WHO Regional Office for Europe; 2000.
16. Alshikh Ahmad H, Alkhath A, Luo J. Prevalence and risk factors of postpartum depression in the Middle East: A systematic review and meta-analysis. BMC Pregnancy Childbirth 2021;21:542.
17. Al-Jassir MS, El-Bashir BM, Moizuddin SK, Abu-Nayan AAR. Infant feeding in Saudi Arabia: Mothers’ attitudes and practices. East Mediterr Health J 2006;12:6-13.
18. Alzaheb RA. Factors influencing exclusive breastfeeding in Tabuk, Saudi Arabia. Clin Med Insights Pediatr 2017;11:1–8.
19. Al-Hreashy FA, Tamim HM, Al-Baz N, Al-Kharji NH, Al-Amer A, Al-Ajmi H, et al. Patterns of breastfeeding practice during the first 6 months of life in Saudi Arabia. Saudi Med J 2008;29:427–31.
20. Buccini GDS, Pérez-Escamilla R, Venancio SI. Pacifier use and exclusive breastfeeding in Brazil. J Hum Lact 2016;32:NP52-60.
21. Cinar DN. The advantages and disadvantages of pacifier use. Contemp Nurse 2004;17:109–12.
22. Hasanain FH, Jan MM. Delays in primary vaccination of infants living in Western Saudi Arabia. Saudi Med J 2002;23:1087–9.
23. Ashraf S, Din Ahmed M, Mushtaq MH, Singh G, Khan A. KAP survey in mothers towards infant care and feeding in Pakistan. Am J Epidemiol Public Health 2017;1:001–7.