

Original article

Knowledge and Attitude Toward Breastfeeding among Female Medical Students

Reema Salih^{*} , Salem Fathallah , Ziyad Mohammed , Haneen Mustafa , Esra Nouri , Tasneem Elnaje 

Department of Pediatric, Faculty of Medicine, University of Derna, Derna, Libya

Corresponding Email. drremasaleh2021@gmail.com

Abstract

Breastfeed is an optimal food for the newborn and is efficient in ensuring child survival and health. This study was conducted to assess the extent of knowledge of the fourth- and fifth-year female students of the Faculty of Human Medicine, University of Derna about breastfeeding and its benefit for the mother and child. A questionnaire based- cross-sectional investigation was carried out on 150 students from the fourth and fifth female medical students of the faculty of human medicine at the University of Derna. The research was conducted in a period from 1st of April to 1st of November 2024. Most participants in a study received breastfeeding information (98.9%) from lectures, doctors, and friends or relatives. (57.1%) agreed that benefits last only while breastfeeding, while formula-fed babies have a higher risk of being overweight (75.3). Breastfeeding is considered healthier (89.6 %), but it is also considered more convenient and cheaper (83.8%). Breast milk is considered ideal, easier to digest (90.3 %), and cheaper than bottle feeding. Most participants support breastfeeding's health benefits and convenience (79.2), while expressing mixed views on public breastfeeding and formula feeding. Breastfed babies are believed to have better immunity (86.4), promote better weight gain, and should be the first feeding for newborns (90.9). However, some participants feel neglected if breastfeeding is done in public. Undergraduate medical students have positive breastfeeding attitudes but need specific training for successful breastfeeding management and teaching to become excellent physicians.

Keywords. Breastfeeding, Newborn, Medical.

Introduction

Breastfeeding is efficient in protecting the health and survival of newborns. According to the World Health Organization (WHO), breastfeeding is the preferred method of supplying infants with the nutrients that are necessary for their healthy growth and development. Throughout the course of human history, the practice of breastfeeding has been universally considered by health professionals to be the optimal method of feeding infants. It is the initial communication between the mother and her newborn [1]. According to the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), it is recommended that all infants be breastfed exclusively for the first six months of their lives and that they continue to receive breast milk until they are two years old as a supplement to other foods to ensure that infants are healthy and grow to their full potential [2].

It was found that newborns who were not breastfed in impoverished nations have a mortality risk that is six to ten times higher in the first month of their lives compared to infants who were breastfed [3]. According to health professionals, there are a lot of factors that encourage mothers to begin and continue breastfeeding. One of these factors is the benefits that breastfeeding provides to both the mother and the infant itself [4]. Breast feeding has been shown to have several benefits for both mothers and their infants, including the provision of essential nutrients for the infants, the enhancement of the infant's immune system, the facilitation of weight loss for mothers after pregnancy, and the stimulation of the uterus to return to its position prior to pregnancy [5]. When it comes to assisting moms, initiating early breastfeeding and managing any breastfeeding issues that may arise, having a health support system that is both knowledgeable and skilled is necessary. For health professionals to properly promote breastfeeding, they need to have sufficient knowledge regarding the risks associated with weaning a child from breast milk at an early age [6].

Health care professionals have the potential to play a significant part in promoting breastfeeding. Therefore, it is essential for medical students to obtain knowledge regarding breastfeeding during their education. Even though they have a positive attitude toward breastfeeding, their knowledge is lacking and perception varied [7]. This research was conducted to assess the level of information that female students in their fourth and fifth years of study at the Faculty of Human Medicine at the University of Derna have regarding breastfeeding and the advantages that it offers to both the mother and the child.

Methods

Study design and samples

A questionnaire based- cross-sectional investigation was carried out on 150 students from the fourth and fifth female medical students of the faculty of human medicine at the University of Derna. The research was

conducted in a period from 1st of April to 1st of November 2024. Female medical students aged up to 27 years old were included in the current study. while, we exclude the 1st, 2nd, and 3rd female medical students and male medical students.

Source of data

A total of twenty items were included in the breastfeeding knowledge scale, each of which was rated on a dichotomous scale (agree/disagree). One point has been given to each participant to provide an accurate response. The possible score ranged from zero to fourteen.

Data was collected by the questioner prepared by researchers; the questioner was completed by an online link on the internet; on average, the questioner was completed in about 10 minutes; it consisted of different sections (age, marital status, college department); received information about breastfeeding; source of information about breastfeeding; breast milk is cheaper and more inexpensive than bottle feeding; breastfeeding results in better weight gain during infancy; and colostrum should be the first enteral feeding for newborns.

Ethical consideration

After providing each participant with information regarding the objectives and methodology of the study, consent has been obtained from them.

Data analysis

The collected data have been examined using the SPSS computer program. Descriptive analysis includes proportion, inferential diagnosis to find the significant difference between the observed variable, chi-square test, and t test. A P-value less than 0.005 will be taken as a level of significance. Qualitative data was presented as numbers and percentages. Variables that followed normal distribution were summarized as mean and standard deviation. Our results were interpreted in figures and tables.

Results

Table 1 shows that, regarding age, 18 participants (11.7%) ranged from 18 to 20, 15 participants (9.7%) ranged from 21 to 23, and 121 participants (80.7%) ranged from 24 to 27. Regarding marital status, 48 participants (31.2%) were married, and 106 participants (68.8%) were single. Regarding the college department, 64 participants (41.6%) were fourth-year medical students, and 90 participants (58.4%) were fifth-year medical students.

Table 1. Baseline characteristics distribution in the studied group.

Demographics	Studied group (n=154)
Age	
18-20	18 (11.7%)
21-23	15 (9.7%)
24-27	121 (80.7%)
Marital status	
Married	48 (31.2%)
Single	106 (68.8%)
College department	
Fourth	64 (41.6%)
Fifth	90 (58.4%)

Table 2 showed that most 90.9% received breastfeeding information. Main sources included lectures 27.9%, doctors 26.6%, and friends/relatives 20.8%. 57.1% agreed benefits last only while breastfeeding, 29.9% found formula more convenient, and 70.1% disagreed. 89.6% believed breastfeeding strengthens the bond, 51.9% agreed breast milk lacks iron, and 75.3% thought formula-fed babies are more likely to be obese. 62.3% viewed formula as better if returning to work, 41.6% agreed breastfeeding means missing the pleasures of motherhood, 70.1% felt women shouldn't breastfeed in public; 89.6% agreed that breastfed babies are healthier. 46.1% thought breastfed babies could be overfed, 53.9% disagreed, and 43.4% believed parents feel neglected if breastfeeding. 89% considered breast milk ideal, 90.3% found it easier to digest, 26.6% thought bottle feeding is as healthy as breast milk, 79.2% said breastfeeding is more convenient, 83.8% found it cheaper, 86.4% believed breastfeeding leads to better immunity, 75.3% thought it promotes better weight gain, and 90.9% agreed it should be the first feeding for newborns. Overall, the majority of participants supported breastfeeding's health benefits and convenience, while expressing mixed views on public breastfeeding and formula feeding.

Table 2. Distribution of Knowledge and attitude towards breastfeeding among female medical student questionnaire.

Variables	Studied group (n=154)
Received information about breastfeeding	140 (90.9%)
Source of your information about breastfeeding among female student	
• Doctors	41 (26.6%)
• Lecture or seminar	43 (27.9%)
• Social media	19 (12.3%)
• Books or magazines	13 (8.4%)
• Relative and friend	32 (20.8%)
• TV	6 (3.9%)
The benefit of breastfeeding only last as the baby breastfeeding	
• Agree	88 (57.1%)
• Disagree	66 (42.9%)
Feeding with formula is more convenient than breastfeeding	
• Agree	46 (29.9%)
• Disagree	108 (70.1%)
Breastfeeding increases the bond between mother and infant	
• Agree	138 (89.6%)
• Disagree	16 (10.4%)
Breast milk lacks iron	
• Agree	80 (51.9%)
• Disagree	74 (48.1%)
Babies who are fed Formula are more likely to be overfed and obese than babies who are breastfed	
• Agree	116 (75.3%)
• Disagree	38 (24.7%)
Feeding with formula is the best option if the plans to return to work	
• Agree	96 (62.3%)
• Disagree	58 (37.7%)
Mother who breastfeeds their children are missing one of the great pleasures of motherhood	
• Agree	64 (41.6%)
• Disagree	90 (58.4%)
Women shouldn't breastfeed in public places like restaurants	
• Agree	108 (70.1%)
• Disagree	46 (29.9%)
Breastfeed babies are healthier than formula fed babies	
• Agree	138 (89.6%)
• Disagree	16 (10.4%)
Babies who are breastfed are more likely to be overfed than babies who are formulated	
• Agree	71 (46.1%)
• Disagree	83 (53.9%)
Parents feel neglected if the mother is breastfeeding	
• Agree	53 (43.4%)
• Disagree	101 (65.6%)
Breast milk is the optimal food for babies	
• Agree	137 (89%)
• Disagree	17 (11%)
Breast milk is easier to digest than soft	
• Agree	139 (90.3%)
• Disagree	15 (9.7%)
Bottle feeding is as healthy for an infant as breast milk	
• Agree	41 (26.6%)
• Disagree	113 (73.4%)

Breastfeeding is more convenient and easier than feeding with formula	
• Agree	122 (79.2%)
• Disagree	32 (20.8%)
Breast milk is cheaper and inexpensive than bottle feeding	
• Agree	129 (83.8%)
• Disagree	25 (16.2%)
Breastfeeding contributes to healthier child with bottle with better immunity and less risk of infection	
• Agree	133 (86.4%)
• Disagree	21 (13.6%)
Breastfeeding results in better weight gain during infancy	
• Agree	116 (75.3%)
• Disagree	38 (24.7%)
Colostrum should be the first enteral feeding for new born	
• Agree	140 (90.9%)
• Disagree	14 (9.1%)

Discussion

In the lives of both the mother and the child, breastfeeding is an essential component that requires attention. It ensures that the infant receives the necessary health and care, as well as complete and balanced nutrition. This is a right that is given to every newborn [8]. Breastfeeding presents several advantages for the health of children. All newborn infants can readily access this ideal food. Mothers produce colostrum first after giving birth [9]. Specifically, it is a yellow fluid that is sticky and contains antibodies, especially IgA, IgM, and IgG. Other components include lysozymes, lactoferrin, complement, and proline-rich polypeptides. Colostrum is low in fat and contains a high concentration of carbs and proteins. Not only does colostrum protect the infant against infection, but it is also responsible for regulating the functions of the gastrointestinal system in the body [10]. In addition, breastfeeding has several positive effects on maternal health, including a reduction in breast cancer, the development of a strong bond with the infant, and the spacing of children. In addition, breastfeeding has also been shown to have positive impacts on infants over the long run. The most significant impact is on the development of cognitive abilities as well as on the reduction of immune-related diseases [11].

Breast milk is the primary source of nutrition. On the other hand, it is still not delivered to the infants in an adequate manner. The decision of the mother is not the only factor that contributes to the absence of breastfeeding; the lack of knowledge of health care professionals in this regard is also a significant contributing factor. This is because health care professionals are the individuals that the mother will approach, and as a result, their knowledge should be improved regarding the initiation of breastfeeding, its continuation, its benefits, and its continuation in special situations [12].

The present study revealed that according to baseline characteristics, regarding age, 18 participants (11.7%) ranged from 18 to 20, 15 participants (9.7%) ranged from 21 to 23, and 121 participants (80.7%) ranged from 24 to 27. There were 48 participants who were married, which accounts for 31.2% of the total, and 106 participants, which accounts for 68.8% of the total, were single. Among the participants in the college department, there were sixty-four (41.6%) who were in their fourth year of medical school and ninety-eight (58.4%) who were in their fifth year of medical school.

The findings of this research agree with those of Kazmi et al [13], who conducted a study with the objective of determining the level of knowledge, attitude, and practices toward breastfeeding among undergraduate students attending medical colleges in Karachi. They stated that 32.9% of the total number of 222 female students were in the pre-clinical group, while 67.1% were in the clinical group. In terms of marital status, 241 (74.6) were still single. On the other hand, sixty percent of the students were between the ages of twenty and twenty-two. In addition, our findings agree with those of Seema et al [14], who aimed to evaluate the perceptions of students of basic sciences and clinical sciences regarding breastfeeding, as well as to compare the levels of knowledge of breastfeeding among students of both basic sciences and clinical sciences. A total of 367 students, with 159 (43.3%) from the field of basic medical sciences and 208 (56.7%) from the field of clinical sciences, participated in this investigation. Internet-based sources of information accounted for 173 (47.1%), social media accounted for 101 (27.5%), group discussions accounted for 77 (21.0%), seminars accounted for 14 (3.8%), and other sources accounted for 2 (0.5%). Regarding age, 99.2 percent were younger than 25 years old.

In the current study we demonstrated that most 90.9% received breastfeeding information. Main sources included lectures 27.9%, doctors 26.6%, and friends/relatives 20.8%, 57.1% agreed benefits last only while breastfeeding, 29.9% found formula more convenient and 70.1% disagreed, 89.6% believed breastfeeding strengthens the bond, 51.9% agreed breast milk lacks iron, 75.3% thought formula-fed babies are more likely to be obese, 62.3% viewed formula as better if returning to work, 41.6% agreed breastfeeding means missing pleasures of motherhood, 70.1% felt women shouldn't breastfeed in public, 89.6% agreed breastfed babies are healthier, 46.1% thought breastfed babies could be overfed; 53.9% disagreed, 43.4% believed parents feel neglected if breastfeeding, 89% considered breast milk ideal, 90.3% found it easier to digest, 26.6% thought bottle feeding is as healthy as breast milk, 79.2% said breastfeeding is more convenient; 83.8% found it cheaper, 86.4% believed breastfeeding leads to better immunity; 75.3% thought it promotes better weight gain, and 90.9% agreed it should be the first feeding for newborns. Overall, the majority of participants supported breastfeeding's health benefits and convenience, while expressing mixed views on public breastfeeding and formula feeding.

According to our findings, which align with those of Seema et al [14], regarding the benefits of breastfeeding for infants, 84.6% of the clinical group and 91.8% of the basic medical group were aware that breast milk is easier to digest. Furthermore, 93.3% of the clinical group and 76.1% of the basic group knew that breastfed infants are more intelligent. It was known by 82.7% that the practice of bottle feeding should be avoided. From the clinical science group, 168 (80.8%) of respondents believe that colostrum is beneficial for infants, whereas from the fundamental medical science group, 103 (64.8%) of respondents believe the same. (95.6%) had the knowledge that breast milk is the best source of nutrients for infants. Additionally, our findings agree with those of Abdel-Hady et al [15], who aimed to highlight the knowledge of female medical students regarding breastfeeding in general as well as in special situations.

There was a total of 631 students who took part in the study, with 258 students in the preclinical grades and 373 students in the clinical grades. The students stated that practically all the students were aware that breastfeeding is inexpensive and readily available, simpler to digest, and always sterile. It was reported by more than three quarters of the students that breastfeeding is effective in preventing diarrhea, whereas bottle-feeding is associated with negative effects. Clinical students possessed a greater understanding of all questions regarding the advantages of breastfeeding. Seventy-four percent of students felt that colostrum should not be discarded away, while 88.4% believed that it is effective. In addition, our findings, which agree with Sudarsanan et al [16], indicated that 92% of interns agreed on the numerous economic advantages of breastfeeding. 82% agreed that breastfeeding strengthens the bond between mother and infant.

In terms of the optimal choice for working mothers, breast milk was selected by 57% of the participants over formula. Eighty percent of the students agreed that breast milk provides protection against atopy and allergies in children. But over two-thirds of participants thought public breastfeeding should be encouraged. Also, another study by Kazmi et al [13], determined that 149 students (67%) had the perception that breastfeeding does not make it difficult to follow the daily routine. The majority of participants supported breastfeeding's health benefits. (63.33%) reported that breastfeeding is more convenient and easier than feeding with formula. 149 students (67%) had the perception that breastfeeding does not make it difficult to follow the daily routine. 86.7% student had the proper knowledge of Colostrum. Moreover, Khriesat et al [17], conducted a study to identify the breastfeeding attitudes and knowledge among sixth-year medical students who were in their final year. It was revealed by them that there are significant educational demands in the field of breastfeeding management and breastfeeding education for medical students. The students were in complete agreement that health professionals should actively encourage all moms in their practices to begin breastfeeding their children at an early age. They also tend to disagree that breastfeeding for infants would provide more benefits than formula feeding.

Limitations

One of the limitations of this study is the lack of cooperative participants, which resulted in an inadequate sample size (the initial target was 150).

Conclusion

We have determined that undergraduate female students in medical colleges have favorable attitudes toward breastfeeding, as evidenced by our findings. Medical students have significant educational needs in the areas of breastfeeding, education and management. To enhance both breastfeeding attitudes and knowledge, additional targeted training is required. They are essential in the promotion and support of optimal breastfeeding practices, as they are the future physicians. Therefore, it is necessary that all levels of medical education include knowledge of breast feeding.

Conflicts of Interest

The authors declare no conflicts of interest

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المستخلص

الرضاعة الطبيعية هي الغذاء الأمثل لحديثي الولادة وهي فعالة ضمان بقاء الطفل وصحته. أجريت هذه الدراسة لتقييم مدى معرفة طالبات الفرقة الرابعة والخامسة بكلية الطب البشري جامعة درنة عن الرضاعة الطبيعية وفائدتها للأم والطفل. تم إجراء استبيان مقطعي على 150 طالبة من طالبات الطب الرابع والخامس بكلية الطب البشري بجامعة درنة. تم إجراء البحث في الفترة من 1 أبريل إلى 1 نوفمبر 2024. تلقت معظم المشاركين في الدراسة معلومات عن الرضاعة الطبيعية (98.9%). من المحاضرات والأطباء والأصدقاء أو الأقارب (57.1%) وافقوا على أن الفوائد تستمر فقط أثناء الرضاعة الطبيعية، في حين أن الأطفال الذين يتغذون على الحليب الاصطناعي يكونون أكثر عرضة لخطر زيادة الوزن (75.3%). تعتبر الرضاعة الطبيعية أكثر صحة (89.6%)، ولكنها تعتبر أيضاً أكثر ملاءمة وأرخص (83.8%). يعتبر حليب الثدي مثالياً، وأسهل هضماً (90.3%)، وأرخص من الرضاعة بالزجاجة. يدعم معظم المشاركين الفوائد الصحية للرضاعة الطبيعية وملاءمتها (79.2%)، بينما يعبرون عن آراء متباينة حول الرضاعة الطبيعية العامة والتغذية الصناعية. يُعتقد أن الأطفال الذين يرضعون رضاعة طبيعية يتمتعون بمناعة أفضل (86.4%)، ويعززون زيادة الوزن بشكل أفضل، ويجب أن يكونوا أول تغذية لحديثي الولادة (90.9%). ومع ذلك، يشعر بعض المشاركين بالإهمال إذا تمت الرضاعة الطبيعية في الأماكن العامة. يتمتع طلاب الطب في المرحلة الجامعية الأولى بمواقف إيجابية بشأن الرضاعة الطبيعية ولكنهم يحتاجون إلى تدريب محدد لإدارة الرضاعة الطبيعية وتدريبها بنجاح ليصبحوا أطباء ممتازين.