

Knowledge of Egyptian Women About Uses of Breast Milk and Effectiveness on Hair Growth in Neonates

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Abstract

Background: It is still common for mothers in Egypt to accept and use traditional practices. Breast milk practice (using breast milk to prevent body hair growth in the neonate) is one of these practices that needs more clarification and explanation. **Aim:** To measure the extent of women's knowledge about breast milk practice and its effectiveness on body hair growth in neonates. **Methods:** An exploratory descriptive design was used to achieve the study goal. A purposive sample (only included participants who have personal experience with breast milk practices) of 233 participants were selected from Qena hospitals. A semi-structured questionnaire was used to collect the necessary data. A face-to-face interview method involved 233 participants (cases=135, applied person=98) who were recruited from the included sittings. Descriptive statistics mainly percent and frequency by used to represent the study tables. **Results:** The source of used milk was the mother in most cases, but in 23% of the cases, the milk was brought from the case's breast him/herself. Breast milk practice is usually done at birth in 65% of the cases, they mainly (54%) use milk to prevent facial hair growth. Most of the participants agreed that breast milk prevents body hair growth and recommended it to others (in the cases; agree=57.78%, recommend it=75.55%, and the applied persons; agree=60.20%, recommend it 80.61% respectively). **Conclusions:** Breast milk practice is acceptable in Upper Egypt, they strongly believe that this practice prevents body hair growth, especially facial hair. **Recommendation:** Another study with a large sample size in different locations in Egypt to measure the extent of this practice among Egyptian women.

Keywords: breast milk, body hair, hair growth, hair removal.

Introduction

Perhaps the most significant functional food known to science is breast milk. It is a nutritious and healthful diet that is dynamic for newborns and babies. Strong immune-boosting qualities found in breast milk save newborns from gastrointestinal disorders, middle ear infections, and respiratory illnesses. It is now recognized that breastfeeding protects against diabetes mellitus, obesity, hyperlipidemia, hypertension, cardiovascular disorders, autoimmunity, and asthma. Breastfeeding also

offers long-term health benefits. (Kramer, 2010).

But breast milk is also a well-liked medicinal treatment that has long been used in traditional, natural pharmacopeia and ethnomedicine. The benefits of using fresh colostrum and breast milk as a therapy for conjunctivitis, chapped nipples, rhinitis, and infections of the skin and soft tissues have been documented by public health nurses. Researchers are becoming more interested in breast milk as a natural medication as a result of the finding of growth factors, cytokines, and a

diverse population of cells in human milk, including stem cells, probiotic bacteria, and the HAMLET-complex (human alpha-lactalbumin-made deadly to tumor cells). (Witkowska-Zimny, et al., 2019). Many different kinds of evidence-based study have focused on breast milk in recent years. Numerous studies have shown that topical application of human milk can effectively cure diaper rash, atopic eczema, diaper dermatitis, and separation of the umbilical cord (Allam, et al., 2015 and Mahrous, et al., 2012 and Arroyo, et al., 2010).

In places like impoverished nations where mothers and infants may not always have easy access to medicine, breast milk plays a crucial function in both protecting and treating babies. In these cases, the survival and recovery of the newborn are frequently determined by milk treatment. This is the reason why low- and middle-income nations in Asia and Africa are the primary sources of clinical trials and research on mothers' milk. Numerous components of breast milk are now being evaluated in clinical settings after showing promise in preclinical research. Translational medicine has a lot of prospects thanks to research on breast milk. However, because of the dearth of research and the underlying ideological disparities in healing, complementary and alternative medicine (CAM) therapies frequently perform poorly when examined through the lens of evidence-based practice (EBP) (Witkowska-Zimny, et al., 2019).

In addition to therapy uses of breast milk, there are other sides to non-nutritional usage of breast milk. Some women in Egypt use breast milk to prevent body hair growth. They rub the newborn body with breast milk after birth or during the first month of age (milking practices). It is believed that this method has already been mentioned in an ancient Egyptian papyrus (Smith, 1930). No scientific evidence or previous study mentioned or investigated this method. So, this study has two purposes; to measure the extent of women's knowledge about this method, and to assess its effectiveness in the prevention of hair growth.

Significance of the study

Other related ideas, such as biomedicalization, have been proposed as a result of the expansion of study and thought on medicalization. These instruments can be characterized as supporting a "bionic society" and may prove valuable in the examination of human augmentation. Medicalization carries the risk of ignoring how natural remedies, socioeconomic variables, and ethnomedicine influence people's health. However, in situations where people lack easy access to medicine—especially in developing nations—knowledge, abilities, and practices derived from indigenous theories and experiences of various cultures are employed in both the preservation of health and the avoidance, amelioration, and treatment of disease. These practices may or may not be explicable. This study will also provide baseline data to the scientific community, which will serve as a foundation for future research initiatives including *in vitro* and *in vivo* investigations. It is undeniable that integrating both conventional and contemporary evidence-based medicine (EBM) into the official healthcare system is crucial and is probably going to be accomplished in many nations. Mothers' milk has the potential to be useful in evidence-based medicine and human health because of its accessibility, cheap cost, and lack of side effects.

Operational definitions

- Milking practices: the process of rubbing the newborn body with his/her breast milk as they believe that will prevent body hair growth. Breast milk can be from the mother of the newborn or sometimes they use milk that comes from the newborn nipples shortly after birth (newborn galactorrhea/neonatal milk/witch's milk).
- Cases: persons whose breast milk was used for them when they were newborns.
- Applied person: the person who rubbed a newborn body with breast milk, usually that person is the mother or grandparent.

Aim of the study

To measure the extent of women's knowledge about breast milk practice and its effectiveness on body hair growth in neonates.

Research question

1. Is the milking process a real practice?
2. What is women's knowledge about the milking process?
3. What is the effectiveness of the milking process in preventing body hair growth?

Material and Methods

Study design

It's an exploratory descriptive quantitative research design that was used to obtain the required information for this study. One of the primary purposes of exploratory design is to find a problem area that has never been researched or identified before. 2) To investigate a thoroughly researched idea. As a result, the exploratory descriptive design fits the aim and objectives of the current study.

Sample/Setting

To achieve generalizability of the sample, the participants were recruited from different places such as Qena General Hospital (Pediatric outpatient clinic and inpatient department), through online chat, or phone calls. Qena General Hospital is the only public hospital in Qena City, so it is the destination of all patients from all over Qena City. Not all the asked women were recruited, so a purposive sample of women was selected to obtain accurate information about the milking process.

This means that only women who have a personal experience with the investigative method (using breast milk to prevent body hair growth) were interviewed, whether was the case (the neonate which breast milk was used for) or the person who used breast milk for the newborn infant. thus, to get more explore that practice from different points of view either the cases or the applied person's opinion and point of view. Accordingly, we have two types of samples in this study; type one (the cases) persons were breast milk used for them when they were newborns. And type two (applied person) persons who used breast milk for a newborn (the mother or grandparent). So only 233 out of more than 903 women were interviewed in detail. The 233 participants were categorized into the cases were equal to 153(57.93%) and the applied persons were equal to 98(42.06%) (see Figure 1, 2). All convenience-eligible women were asked to provide oral consent for participation in the study.

Tool

Due to a lack of previous similar literature, the researcher developed the questionnaire after discussion with experts, scientific researchers, and some women has personal experience with breast milk practice. A total of 36 revised questions were used in the questionnaire which was divided into two separate sheets:

Sheet (1): designed for the applied persons and contains two parts: Sociodemographic data and 19 questions focused on understanding this practice such as how did you excrete milk from newborn breasts? Was that harmful to the newborn? Does that cause any health problems for the newborn? did you

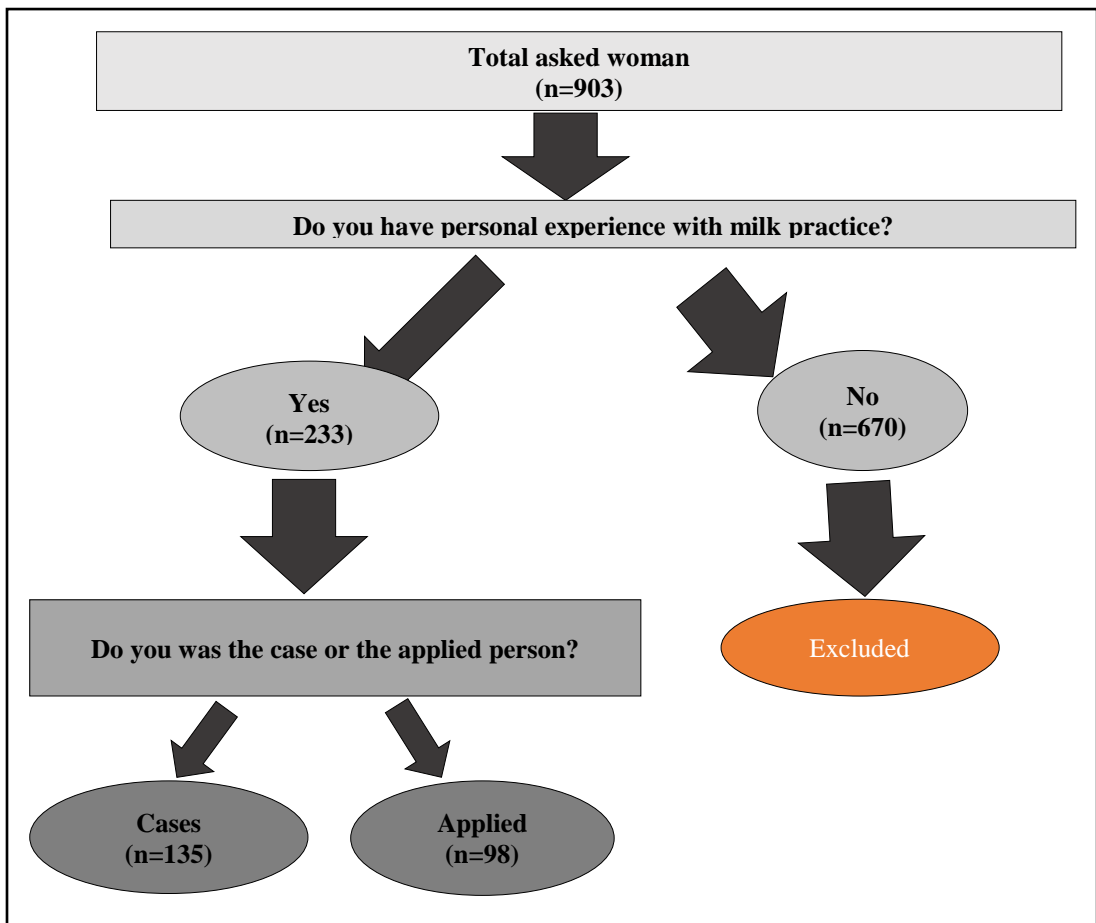


Figure 1: Sampling Steps

use pure breast milk or add something to it? how did you use breast milk? How did you remove it from the newborn body?

Sheet (2): designed for the cases and includes sociodemographic data in addition to a list of questions designed for the cases and contains 17 questions.

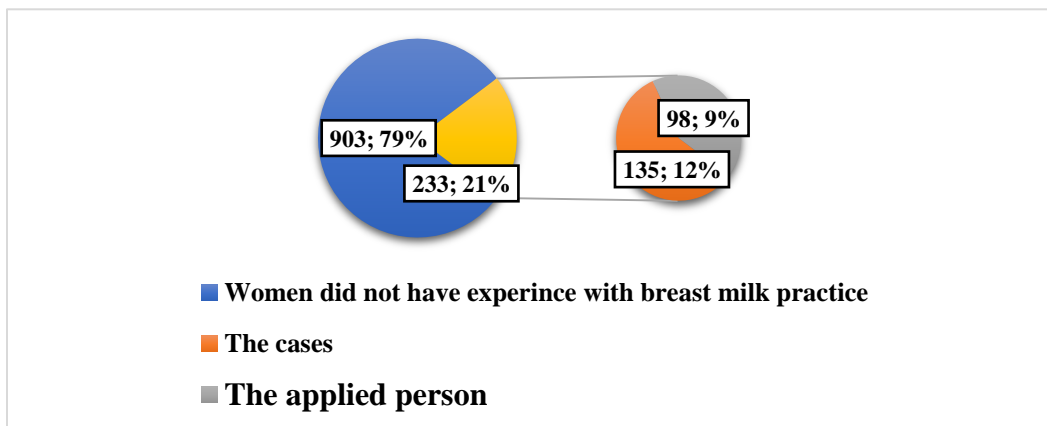


Figure 2: Sampling Process

Such as Who did milking practice for you? How old were you at that time? How does this practice affect your body hair condition? Do you have a sibling(s) hairless naturally without using breast milk for them? (see the index).

In addition, the following steps were done to ensure the accuracy and feasibility of the used tool:

- Face and content validity, face validity was obtained to answer the question does this content appear to be suitable to the tool's aim?. Content validity was measured to investigate the tool content in deep to assess whether these contents measure what is supposed to be measured. Both types of validity were evaluated by 5 experts in the related fields (one statistician, three pediatric professors, and one scientific researcher). Modifications and accommodations were made to obtain a final validity score equal to 96%.

- Pilot study, thirty women were included in the pilot study to assess the feasibility and applicability of the tool. The pilot was very essential in this study as little is known about the investigated practice (milking practices) and more information and exploration are needed before the actual data collection stage. Modifications and adjustments were made to the tool accordingly.

- Reliability and internal consistency were assessed to determine the stability and consistency of the tool through the participants. Internal consistency was estimated by using Cronbach's Alpha test, and it was equal to 0.89 for the used tool.

Study Procedure

Ethical approval

This study has been approved form the Ethics Committee at the related Faculty of Nursing South Valley University at August 2023 by code (SVU-NUR-PED-7-4-9-2023). Eligible participants were asked to give oral consent for participation in the study after they were informed about the study's objectives, and methodology of the study and assured about the confidentiality and anonymity of the obtained

information. The anonymity of the data was preserved by leaving out the participants' names. The interview participants were made aware that they might end it at any time without any adverse effect. The research included every person who expressed a willingness to take part.

Statistical analysis:

Responses were coded and entered into SPSS for Windows, version 20, for statistical analysis. The descriptive portion of the findings was displayed using basic frequencies with percentages in the relevant 4 tables.

Results

A total of 233 participants were interviewed in this study. The cases were equal to 57% of the total sample size. Most of the sample were from rural areas with age mean is 49.81 and 55.82 in the cases and the applied person respectively. Most of the cases received secondary education while about 53.06% of the applied persons were illiterate or at least can read and write (Tables 1 and 2).

Table 3 shows the milking practices of the cases. In about 65.93 of the included cases, breast milk was applied for them at birth or shortly after birth. In 54.07 of the participants, breast milk was used for the face, with 25.93 breast milk had been used for their whole body. More than half of the participants 54.81% believe that breast milk prevents facial hair growth, and just decreases hair growth for the other body parts. So, 57.78% of the cases see that breast milk prevents body hair growth and recommend it to others.

All women reported that milk was not mixed with any substance and was used pure.

Table 4 in most of the cases, the mothers and grandparents were the persons who applied breast milk for their neonates (52.04 and 44.90 respectively). In 76.53 of the cases, breast milk was from the mother, interestingly 23.47 used breast milk of the neonate himself. In the case of the neonate's breast milk, more than 97.96 of the participants see that it has no adverse effect on the neonate's health. Breast milk is usually used more than one time (twice=24.49%, three

times=45.92%, and for the first 40 days of life=13.27%). About 60.20 of the participants agreed that breast milk prevents hair growth and 80.61 of them recommend it.

Table 1: The cases Sociodemographic Data (n=135)*			Table 2: The Applied Persons Sociodemographic Data (n=98)**		
Variables	Mean (SD) / f	%	Variables	Mean (SD) / f	%
Residence:			Residence:		
Urban	64	47.40	Urban	27	27.55
Rural	71	52.59	Rural	71	72.45
Age	49.81(1.52)		Age	55.82 (1.76)	
Education			Education:		
Illiterate/read and Write			Illiterate/read and Write	52	53.06
Primary	34	25.19	Primary	37	37.76
Secondary	32	23.70	Secondary	6	6.12
University	51	37.78	University	3	3.06
	18	13.33			

*= table represent the cases data; **= table represent the applied persons data;

f = frequency, % = percentage, SD = standard deviation

Table 3: The Cases Milking Practices (n=135)

Items	f (%)
Onset:	
At birth	89 (65.93)
at 1 st week	32 (23.70)
at 1 st month	14 (10.37)
Used for:	
Face	73 (54.07)
Axillary and pubic	27 (20.00)
Whole body	35 (25.93)
Its effect on body hair growth:	
Prevent effect on face& decrease effect on the body	74 (54.81)
Decrease effect on face& no change on the body	34 (25.19)
Prevent hair growth (whole body)	8 (5.93)
No change	19 (14.07)
Breast milk prevents body hair growth:	
Strongly agree	39 (28.89)
Agree	78 (57.78)
Neutral	6 (4.44)
Disagree	12 (8.89)
Strongly disagree	0 (0.0)
Recommend it:	
Strongly agree	24 (17.78)
Agree	102 (75.55)
Neutral	9 (6.67)
Not agree	0 (0.0)
Strongly not agree	0 (0.0)

f = frequency, % = percentage

Table 4: The Applied Persons Milking Process Practices (n=98)

Items	f (%)
Kinship to the neonate:	
The mother	51(52.04)
The grandparent	44 (44.90)
Neighbor	3 (3.06)
Source of milk:	
The mother's breast milk	75 (76.53)
The neonate's breast milk*	23 (23.47)
(In the case of the neonate breast milk) any adverse health effects:	
No	96 (97.96)
I can't remember/I don't know	2 (2.04)
Frequency:	
Once	16 (16.32)
Twice	24 (24.49)
Three times	45 (45.92)
For the first 40 days of life	13 (13.27)
Breast milk prevents body hair growth:	
Strongly agree	11 (11.22)
Agree	59 (60.20)
Neutral	6 (8.12)
Not agree	22 (22.44)
Strongly not agree	0 (0.0)
Recommend it:	
Strongly agree	12 (12.24)
Agree	79 (80.61)
Neutral	2 (2.04)
Not agree	5 (5.10)
Strongly not agree	0 (0.0)

f = frequency, % = percentage. *= They squeeze the neonate's breast to get the milk.

Discussion:

Traditional practices and medicine are still used and accepted in Egypt, particularly in Upper Egypt. One of these practices is using breast milk to prevent the growth of body hair (Osman, et al., 2018). A total of 233 participants were included in the study, divided between the cases and the individuals applying breast milk to the neonates (135 and 98, respectively). To investigate this practice deeply and to gain different perspectives and views, it is necessary to include both the persons whether the cases and the applied persons. As a result of the natural distribution of people in Qena Governorate, most participants came from rural areas. One of the Upper Egypt regions, it is recognized by rural areas. Consequently, 37% of the cases had secondary education, while most applicants were illiterate or had limited reading and writing skills. As we can see from the age ranges of the participants, older people are more likely to believe in traditional practices and their effectiveness (Aldebsawi, et al., 2021 and Aragaw, et al., 2020).

Women in the current study explain that they used their mother's breast milk to prevent body hair growth. They revealed that a newborn's body should be rubbed by breast milk shortly after birth for 30 days or some time for the first 40 days of the infant's life. They believe that neonate's skin after birth is pure and its pores are open so its absorption ability is high. They follow the same practice for girls or boys' neonates, in some cases, they rub the axillary and pubic area only. It is believed that this practice came from an ancient Egyptian papyrus (Smith, 1930). No previous study investigated the effect of breast milk on body hair growth, while there are studies investigating the effect of breast milk on the following health problems:

- Skin Problems: Atopic Eczema and Diaper Dermatitis. Recently, a few research on the topical anti-inflammatory properties of human breast milk in the management of skin conditions such as diaper dermatitis and atopic eczema have been published. (Kasrae, et al., 2015 and Chaumeil, et al., 1994 and Mohammadzadeh, et al., 2005). Findings of

separate two studies done by Seifi et al. and Kasrae et al. suggest that breast milk can improve atopic eczema without the side effects and cost (Seifi, et al., 2017 and Kasrae, et al., 2015). On the other hand, a small pilot research by Berents and colleagues found no improvement in eczema areas treated with topical application of fresh breast milk. This clinical trial does, however, have certain restrictions. Six children made up the relatively small research group. Secondly, two of the youngsters received treatment using their mother's milk, which was meant for a younger sibling. The children ranged in age from 4 to 32 months, with a mean of 18.5 months (Berents, et al., 2015).

- Nipple Problems. Mothers who struggle to breastfeed frequently have sore nipples. Traditionally, topical therapy with expressed breast milk has been used to help nursing mothers with their nipple pain without the use of pharmaceuticals. Clinical experiments were conducted by Abou-Dakn et al. to compare the effectiveness of lanolin vs breast milk in treating sore and injured nipples during breastfeeding. (Abou-Dakn, et al., 2010). Breast milk was less efficient than lanolin in terms of mending nipple injuries more quickly. In contrast, after four to five days of therapy, the women who applied expressed breast milk reported considerably less nipple soreness than the women who used lanolin. Nevertheless, following six to seven days of therapy, this positive outcome was no longer present (Pugh, et al., 1996).

- Eye Problems. breast milk was originally used by mothers to cure infectious conjunctivitis and has been described in ancient Egyptian, Roman, Greek, and Byzantine manuscripts as a treatment for ocular surface diseases. Colostrum has been demonstrated by Ghaemi et al. to have positive protective benefits on 89 nursing newborns against neonatal conjunctivitis (Ghaemi, et al., 2014). Diego et al. found that in the dry-eye mouse model, breast milk could maintain the thickness of the corneal epithelium. After four days of milk therapy, there was a reduction in epithelial damage. Diego et al. (2016) conducted a study that was the first to show that corneal epithelial thickness could be preserved in a dry-eye model using human milk, and that this preservation was on par with topical cyclosporine. Also,

Asena et al., support Diego et al., results and conclude that the rich contents of breast milk may be an alternative to epithelial healers and artificial tears (Asena, et al., 2017).

- Umbilical Cord Care. Numerous papers have demonstrated that breast milk is frequently utilized for umbilical cord care in poor nations. The World Health Organization has advised a study on the use of breast milk and colostrum in umbilical cord care, but since 1998, it has promoted the use of dry umbilical cord care in high-resource countries. (World Health Organization, 1998). There are several reports of the effectiveness of applying mother's milk in assisting umbilical cord separation (Karumbi, et al., 2014 and Aghamohammadi, et al., 2012). But between 2010 and 2018, there were just three randomized controlled trials in the PubMed database. Aghamohammadi et al. examined the effects of topical breast milk application and dry cord care on umbilical cord separation time. In the group that applied topical human milk, the median period of cord separation was less than the median hours in the control group by about 30 hours. The same finding was reported by Abbaszadeh et al. and Golshan et al., who state that breast milk speeds up cord repair by three days (Abbaszadeh et al., 2016 and Golshan & Hossein, 2013). According to all this research, the umbilical cord stump may be easily, affordably, naturally, and noninvasively cared for by applying the mother's milk topically. This method also reduces the length of time it takes for the chord to separate.

Our initial assumption before data collection was that the used milk was the neonate mother's breast milk. Interestingly, we discovered during data collection that some mothers and grandparents excreted the used milk from neonate's breasts (Witch's milk) see Figure 3. Some neonates have milk in their breasts after birth and that is called 'Neonatal Milk'. Its secretion is considered a normal physiological occurrence and no treatment or testing is necessary (Devidayal, 2005 and Madlon-Kay, 1986). Up to 2% of infants secrete milk until 2 months of age (Madlon-Kay, 1986). The participants in this study clarified that they milked the neonate's breast to get milk and then rubbed his/her body with that

milk. No previous study report similar practices. While this practice could be risky as would force bacteria into the milk gland cause infection and may result in complications such as mastitis and breast abscess (**Rudoy, Nelson, 1975 and Wammanda, 2004**). In none of the situations has unexpectedly milking neonate breast practices resulted in injury or health problems for the newborn. None of the cases or the applied person reported any infection-related complications or adverse effects on any

infant resulting from the act of milking and squeezing the newborn's breast.

Most of the studied women applied breast milk on the face, with less percent of the women using it for axillary or whole-body hair growth. Thus, this can be noticed during the data collection phase as the investigator observes the effect of breast milk on facial hair for some children of different ages.



Figure 2: Neonatal Milk (Witch's Milk) (**Epomedicine,2022**)

They look smooth without hair on their faces. However, we are not able to provide any photos as shared evidence here due to anonymity issues and it was difficult to obtain permission to take a picture for the participants or use it for publication. The mechanism of action of how breast milk inhibits body hair is unclear and unmentioned in any previous study or review. Although most of the participants agreed that milk practices prevent hair growth and recommend this practice to others, according to their answers to other questions milk effects differ from one body part to another. As breast milk prevents facial hair growth, but just decreases hair growth (decreases hair density) in other body parts such as the axillary or pubic. Some participants reported no hair changes at all.

Conclusion

Breast milk practice is a real and true practice that is still used and accepted by many families in Egypt. This practice is common among older generations of women and girls, while younger women do not have enough information about milk practices or do not have as strong beliefs about its effectiveness as older women have. According to their personal experience, some people hold strong beliefs. There is a strong belief among the participants that breast milk prevents or at least decreases body hair growth. This practice raised a problem when some participants used the neonate's milk. While the participants did not mention any harm that occurred from milking the neonate's breasts.

Recommendation

Other surveys with a larger sample size are recommended to investigate if there has been any harm reported with any cases, especially in situations where they milk neonate's breasts to get the used milk.

Declarations

Ethics approval and consent to participate: The study was performed following the ethical principles of the Declaration of Helsinki. The study was reviewed and approved by the Research Ethics Review Committee of the Faculty of Nursing, South Valley University, Qena, Egypt. We followed the ethical principles of the Faculty of Nursing and South Valley University Hospital for autonomy. Informed consent for participation was obtained from all the participants and maintained the anonymity and privacy of the study participants.

Consent for publication: NA

Availability of data and materials: Any datasets used can be accessed through a request to the corresponding author.

Competing interests: The authors declare that they have no competing interests.

Funding: The authors declare that no funds, grants, or other support were received during the preparation of this manuscript.

Acknowledgments: The authors wish to thank all the participants.

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