CHAPTER 9

Telelactaction

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Introduction

Breast milk is a natural food that contains all the nutrients a newborn baby needs. The easiest way of breast milk intake is through breastfeeding (Boyraz & Erbil, 2023). The World Health Organization (WHO) recommends initiation of breastfeeding within the first hour after birth, exclusive breastfeeding for the first 6 months, continued breastfeeding until the age of two, and the provision of nutritionally adequate and safe supplementary foods (WHO, 2021).

Breastfeeding has long-term effects on both maternal and infant health. Perhaps no other health behavior has such significant effects. Studies have shown that breastfed infants are protected against infections, have a lower likelihood of becoming overweight or obese during childhood and adolescence, perform better on intelligence tests, and have higher rates of school attendance. For breastfeeding women, it has been observed that breastfeeding provides protection against breast cancer, improves birth spacing, and offers protection against ovarian cancer and Type 2 diabetes (Victora et al., 2016).

The WHO Global Breastfeeding 2025 targets state that the exclusive breastfeeding rate for the first 6 months should be increased to at least 50% (WHO, 2014). According to WHO data, globally, only 44% of infants aged 0-6 months are exclusively breastfed, and it's reported that three out of five infants do not receive breast milk within the first hour of life (WHO, 2022). UNICEF reported that between 2014 and 2019, 70% of infants in South Asia and 23% of infants in the Middle East and North Africa were breastfed until 20 to 23 months of age (UNICEF, 2020). According to the Turkey Demographic and Health Survey (TDHS) 2018 results, 71.3% of the most recently born children were breastfed within the first hour after birth, and 85.6% were breastfed within the first day after birth. As per the TDHS 2018 data, 40.7% of infants aged 0-5 months and 14.4% of infants aged 4-5 months were exclusively breastfed. The same report stated that while 65.6% of children were breastfed for one year, the rate for continued breastfeeding for two years was 33.5% (TDHS, 2018). These figures indicate that exclusive breastfeeding and continuation of breastfeeding for the desired duration remain below the desired levels both globally and in Turkey.

Although breastfeeding is an instinctive act, breastfeeding support is critical for breastfeeding success. Studies have shown that there is a strong positive correlation between prenatal and postnatal breastfeeding education breastfeeding support and breastfeeding duration (Özkara et al, 2016).

Telelactation

Although the utilization of technology in healthcare services dates back many years, significant developments in this field occurred in the 1990s with advancements in technology and innovations in healthcare services (Yıldız Çiltaş, 2023). According to WHO, telehealth is defined as "the provision of health services by health professionals using information and communication technologies to improve the health of individuals and their communities through the exchange of valid information for the diagnosis, treatment, and prevention of disease and injury, research and evaluation, where distance is a factor in service provision" (WHO, 2022). Telelactation refers to services that connect breastfeeding mothers with healthcare experts remotely using any real-time audio-visual technology. It is one of the most commonly used applications of telehealth (Demirci, 2019). Through telelactation, continuity in the assessment and support of breastfeeding is ensured while eliminating the barriers of time and distance (Ferraz dos Santos et al., 2019). This practice is significant, especially in situations where face-to-face counseling cannot be provided. When implemented appropriately, telelactation serves as an important tool in improving breastfeeding success and period (Uscher-Pines et al., 2019).

WHO views the support of breastfeeding through information technologies as an opportunity (WHO, 2021). Studies have shown that supporting breastfeeding through telehealth services increases the rate of exclusive breastfeeding during the first 6 months of life by 10% (Santos et al., 2020). It has been reported that women prefer telelactation services over traditional face-to-face education and that mothers who receive technology-assisted breastfeeding education have higher levels of knowledge about breastfeeding (Lewkowitz et al, 2019).

Commonly Used Telelactation Services

Telephone and Text Message Assisted Services

Telephone interventions as a part of telehealth in health services refers to the provision of health services through mobile communication technologies. Telephone support can be offered in two ways: passive and active. In passive support, support is provided only when requested, whereas active support is provided in the form of planned or unplanned calls. The medium of support can be voice calls or text messages (Lavender et al, 2013).

The use of the telephone to provide support in healthcare services emerged in 1897 when a doctor communicated via telephone to diagnose a child with croup. Within maternity care, it has been used as a means to assist pregnant women in quitting smoking, support women at risk of premature birth, and conduct birth triage (Lavender et al., 2013). In a systematic review conducted in 2018 examining studies on telephone support for pregnant and postpartum women, proactive telephone support was found to potentially prevent relapse into smoking, play a role in preventing low birth weight, increase breastfeeding duration, and aid in reducing postpartum depression symptoms (Dennis & Kingston, 2008).

Telephone-supported services related to breastfeeding are provided in the form of educational interventions, helplines, and counseling services (Sezer Yıldız & Özerdoğan, 2021). Educational interventions conducted via telephone to support breastfeeding primarily cover topics such as breastfeeding physiology, benefits of breastfeeding, common breastfeeding problems, breastfeeding techniques, assessment of breastfeeding behaviors, maternal emotional and physical health, extraction and storage of breast milk, and referral to healthcare services when needed (Oriá et al., 2018). In a study investigating the impact of telephone-based breastfeeding counseling in the postpartum period on exclusive breastfeeding during the first 6 months, it was found that the experimental group had a significantly higher rate of exclusive breastfeeding during the first 6 months compared to the control group (Moosazadeh et al., 2020).

Text messaging is the most common mobile phone activity used by all mobile phone users of all income levels as it does not require technologically advanced devices such as smartphones or tablets. In addition, text messaging is a familiar application for both adults and young people as it does not require activities such as using a new application or logging in, and a well-written text is likely to be read by people. It is also more advantageous than web-based technological support applications in rural areas and when internet access is limited (Mayberr & Jaser, 2018). Studies have found that breastfeeding support via text message contributes to ensuring continuity in counseling and positively affects breastfeeding behavior (Gölbaşı et al, 2019).

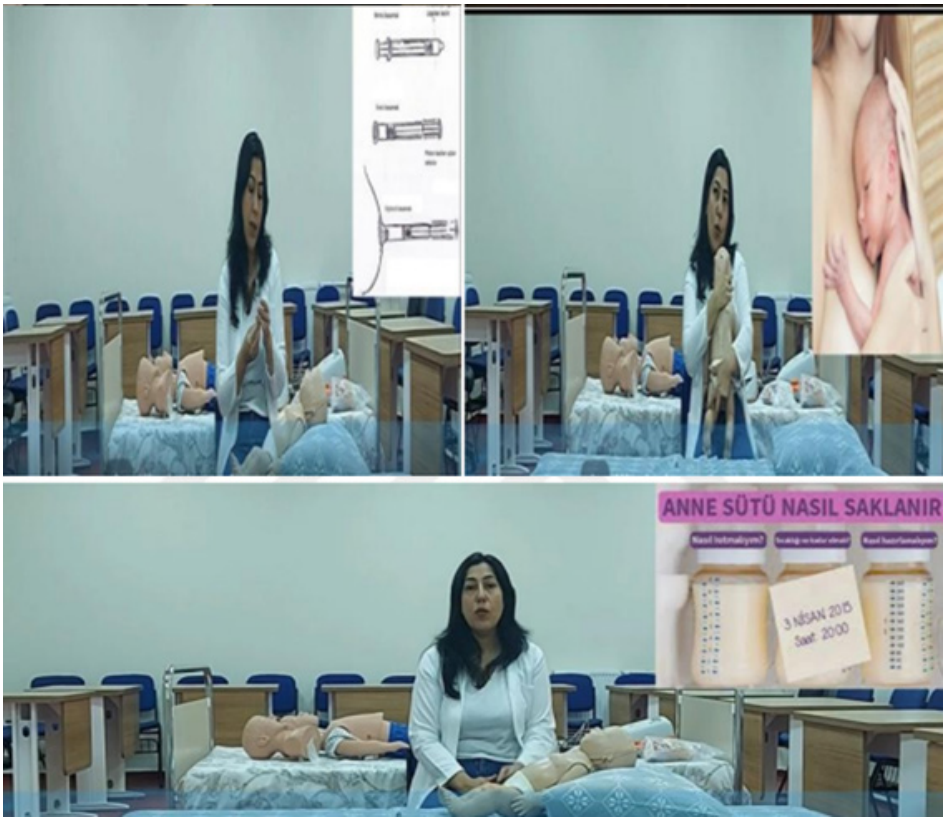
Video-Conferencing Assisted Mobile Health Applications

With the advancement of technology, smartphones have become an integral part of our daily lives. Applications that can be downloaded to smartphones and tablet computers are easily accessible tools for obtaining health-related information (Koçak & Ege, 2021). Mobile health applications are designed according to the needs of individuals. Individuals can easily overcome geographical, organizational, and attitudinal barriers between themselves and healthcare and access the information they need more quickly and at the desired level (Silva et al., 2015). While some mobile applications are available for free use, others are paid applications. In countries like the United States and the United Kingdom, numerous companies (such as Medela, American Well, Lansinoh, and Pacify Health, etc.) support breastfeeding mothers through video visits with certified lactation consultants via applications downloaded to individuals' phones (Demirci et al., 2019; Uscher-Pines et al., 2017).

Video-assisted education is widely used in health education, especially because it is more cost-effective than most other education models. Studies have shown that video-assisted breastfeeding education is more effective than face-to-face breastfeeding education (Adhisivam et al., 2017; Adam et al., 2019). These educations typically cover topics such as the benefits of breastfeeding, improving breastfeeding behavior, breastfeeding positions, initiation and continuation of breastfeeding, frequency, and duration of breastfeeding, extracting and storing breast milk, and skin-to-skin contact (Tetik Metin, 2023). In a study conducted in the United States, international lactation-certified consultants provided postpartum women with both video-based education and video calls until the fourth week after birth and the education increased breastfeeding success by 40% (Şensoy & Koçak, 2021).

Figure 1.

Images from Video Assisted Education (Tetik Metin, 2023)



In a scientific study examining breastfeeding-related videos published on social platforms in Turkey, it was observed that 63.2% of the videos included breastfeeding education, while 33.3% included correct breastfeeding techniques (Aydın & Ünlü, 2020).

In a study examining the experiences of community health workers using video education during home visits, participants expressed that health education videos were seen as an acceptable and feasible tool for women's participation in the community, leading to increased feelings of self-efficacy and self-confidence and reduced time spent in the field (Coetzee et al., 2018).

Online-Web-based counseling

The increase in personal internet usage, alongside technological advancements, has led to a greater desire to acquire health-related information online (İnci & Serçekuş, 2015). The freedom of individuals to access information anytime and anywhere has also increased the demand for counseling services provided on the web (Bulut & Gölbaşı, 2023). Studies have shown that the majority of women in the perinatal period can access the Internet using computers or mobile phones (Gao et al., 2013). When compared to face-to-face education, web-based health education is more advantageous due to its lower cost and greater accessibility to a larger number of people in a quicker manner (Şensoy and Koçak, 2021).

For web-based education to be successful, it should be designed in a user-friendly manner, meaning it should be easy to browse. To achieve this, the content should be compiled appropriately according to its purpose, with accurate and well-organized information presented effectively. Irregularly placed text and images can cause misunderstandings by making perception and communication difficult. Another criterion for the success of web-based education is readability. Readability refers to how easily the text can be understood by the reader. It is expected that educational materials

prepared for the web should be understandable at the sixth-grade level or below (İnci and Serçekuş, 2015).

Advantages of Telelactation

Accessibility

Telelactation makes breastfeeding support accessible to a broader population. It is particularly valuable for those residing in rural areas or regions with limited access to personal lactation consultants. These services aid in meeting the needs of mothers living in rural areas (Kapinos et al., 2019). In a study evaluating the impact of telelactation services on breastfeeding duration among women in rural areas, the researchers found that women receiving telelactation services breastfed at higher rates (Kapinos et al., 2019).

Telelactation services can prevent the interruption of breastfeeding and the use of formula milk, especially during situations like pandemics or disasters (Uscher-Pines et al., 2017). During the COVID-19 pandemic, the postpartum discharge periods for women have shortened, leading to a reduction in the duration of breastfeeding support and counseling. Telelactation services have become advantageous during this period for assessing and supporting the continuity of breastfeeding (Serhatlıoğlu, 2022).

Cost

Telelactation services are less costly than face-to-face counseling services. Breastfeeding counseling through telelactation can reach a larger number of women at a lower cost. Likewise, the number and frequency of counseling sessions provided to an individual can be increased at a lower cost (Uscher-Pines et al., 2017)

Convenience

Another advantage of telelactation services is that individuals can receive assistance without leaving the comfort of their homes. They do not have to travel to a healthcare facility to receive the service. They can receive the service at their convenience, within the timeframes that suit them, without the necessity of adhering to a specific appointment time. This helps reduce the stress associated with trying to meet a scheduled appointment (Uscher-Pines et al., 2017).

Real-Time Evaluation

Telelactation services allow visual assessment of the breastfeeding process through video calls and live consultations, enabling healthcare professionals to provide instant guidance and address specific issues. Healthcare professionals can meet mothers' problem-solving needs within minutes or hours and potentially prevent the cessation of breastfeeding or the need for formula supplementation (Uscher-Pines et al., 2017).

Timely Support

Breastfeeding success is a multifaceted process. Therefore, the reasons affecting breastfeeding success need to be identified quickly and accurately and intervened promptly. Telelactation services provide a means for mothers to access support at any time, which is especially important for addressing urgent issues or concerns outside regular working hours (Uscher-Pines et al., 2017).

Privacy

Some mothers might feel more comfortable discussing challenges and difficulties related to breastfeeding in a private setting, and telelactation provides this level of privacy (Uscher-Pines et al., 2017). Studies indicate concerns regarding the lack of privacy in public breastfeeding spaces (Peksoy Kaya & Uludaşdemir, 2023).

Challenges and Considerations

While telelactation offers many advantages, it is not without its challenges. These include:

Technology Barriers

Mothers requiring telelactation services need to possess a technological device that enables communication with a healthcare consultant, is suitable for receiving the service, and they should be adept at its use, usually requiring a reliable Internet connection. Not all mothers have access to the necessary technology or a reliable internet connection, which can hinder their ability to benefit from telelactation services. This situation poses a challenge, especially for women residing in rural areas. Poor internet connection affecting women in rural areas may also decrease the likelihood of benefiting from telelactation services. This negatively impacts the reduction of inequalities, one of the objectives of telelactation services (Uscher-Pines et al., 2017). In addition to internet connectivity issues, some mothers, despite having access to proper technological devices and internet connections, may encounter difficulties in using them. This creates a disadvantage for them in utilizing telelactation services (Nandula & Hudak, 2021).

Cultural Sensitivity

Breastfeeding support should be culturally sensitive, and telelactation providers need to be aware of cultural differences and preferences in breastfeeding practices. In a study, some mothers expressed reluctance to engage in video calls with an unknown person (breastfeeding consultant) or preferred using community-based breastfeeding support systems (Demirci et al., 2019). Similarly, another study aimed to describe maternal responses to breastfeeding support via video conferencing, concluding that although mothers were comfortable with technology, they were hesitant to use the service provided through a technological device (Habibi et al, 2012).

Scope and Nature of Care

There may be limitations in the types of problems that can be effectively solved through telelactation. Complex medical concerns may still require personal assessment. Rojjanasrirat et al. (2012) evaluated the feasibility of telelactation as well as maternal satisfaction with videoconferencing support. Although mothers reported a positive attitude towards telelactation consultation, they reported problems such as not being able to evaluate the breast and the baby's latch, in addition to internet connectivity issues. A potential disadvantage of written and audio phone-based support compared to video-based support is the possibility of misinterpretation (Demirci et al., 2019).

An important criterion for the success of telehealth services is its readability. Educational materials prepared in online environments must be understandable by individuals. Studies examining the readability of breastfeeding education provided on the web have found that the readability level is often at a level that the reader can hardly understand. This presents an obstacle to achieving the service's goals (İnci & Serçekuş, 2014).

Conclusion

Telelactation is a valuable tool in bridging gaps in breastfeeding support. It offers accessibility, convenience, and real-time guidance to mothers experiencing breastfeeding issues. As technology continues to advance and telehealth becomes more integrated into healthcare systems, telelactation has the potential to play an increasingly important role in promoting successful breastfeeding experiences. Ensuring its effective and responsible use is crucial to supporting the health and well-being of both mothers and infants.

Especially with the Covid-19 pandemic, there has been a positive shift in the community towards telehealth services and the compliance level of individuals has

increased. Telelactation services have been affected in the same way as other areas of telehealth. These positive effects have been evident among healthcare professionals as well. Telelactation services, which contribute positively to providing healthcare without the risk of transmitting infectious diseases and address any disruptions in service continuity, have become more accepted and utilized by healthcare personnel. Through telelactation services, the needs of breastfeeding women have continued to be met even during the pandemic.

Telelactation services should be made more accessible, and healthcare professionals' knowledge and experience in this area should be enhanced. Existing practices need to be updated or new application designs should be developed not only for mothers but also for other family members and fathers involved in infant care.

In this chapter, we examined the concept of telelactation, its advantages and challenges. Thanks to its ability to make breastfeeding support more accessible and convenient, telelactation is a promising solution to improve breastfeeding outcomes for mothers and their babies.

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