

The relationship between breastfeeding success and maternal personality traits

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Abstract

Context: Studies demonstrate that it is essential to identify mothers at risk of weaning their babies too early and support their process of breastfeeding in the postpartum period. The impact of maternal personality traits on breastfeeding is not sufficiently well understood.

Aims: The objective of this study was to investigate the relationship between breastfeeding success and maternal personality traits.

Setting and Design: The research was a descriptive, correlational study and was conducted in the maternity ward of a university hospital located in the East of Turkey between September 2018 and March 2019.

Materials and Methods: The convenience sampling method was used in the study and the sample consisted of 208 primiparous women within the first 48 h postpartum. Four forms were used in the collection of data. These were as follows: a demographic information form, a breastfeeding questionnaire, the ten-item personality inventory, and the LATCH breastfeeding assessment tool.

Statistical Analysis Used: The data were analyzed using the descriptive statistics (mean, standard deviation, and frequency). The mean scores for the LATCH Breastfeeding Assessment Tool were compared according to mothers' personality traits using Kruskal–Wallis variance analysis. In *post hoc* analysis, multiple comparison was performed using the Tamhane t^2 -test.

Results: The mean score on the LATCH breastfeeding assessment tool was found to be 5.45 ± 1.44 . A statistically significant difference was found between the mean LATCH Breastfeeding assessment success score according to the women's personality traits (KW: 21.929, $P < 0.000$). The highest and lowest LATCH scores were seen in people with the extraversion (6.2 ± 1.2) and agreeableness (5.0 ± 1.2) personality traits.

Conclusions: It was determined that the women's personality traits affected their breastfeeding success and that extraverted individuals had higher breastfeeding success scores.

Keywords: Breastfeeding success, Breastfeeding, Trait personality

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INTRODUCTION

Breastfeeding is the natural way to provide infants with the nutrition they need to grow and develop in a healthy way.^[1] It prevents obesity, supports babies' digestive systems, protects them from infection, and can protect them from later chronic diseases such as obesity and diabetes.^[2] Babies should be fed exclusively on breast milk for the first 6 months of their lives and should continue receiving breast milk as a form of complementary feeding along with other suitable foods until they are 2 years old or older.^[1,2] Despite all the potential benefits, the rate of initiation of breastfeeding within the 1st h of birth is 42% worldwide, and the percentage of infants aged 0–5 months who are exclusively breastfed is 41%.^[2] The proportions of those aged 0–5 months who are exclusively breastfed in various regions worldwide are as follows: South Asia: 57%; East and Southern Africa: 56%; Eastern Europe and Central Asia: 42%; and North America 35%.^[2] In Turkey, the proportion of infants of 0–5 months receiving only breast milk is low, at approximately 30.1%.^[2] This shows that despite the known benefits of breast milk, breastfeeding does not occur at the desired level in the many parts of the world. It is important to investigate the reasons for this and to find the ways of encouraging mothers to breastfeed their infants. Increasing the amount of information available about the factors which affect breastfeeding may help to identify which women are at risk of stopping breastfeeding early, as well as to create programs which will extend women's period of breastfeeding.^[3]

Breastfeeding success has been defined as “an interactive process that results in the mutual satisfaction of the needs of both mother and baby.”^[4] One of the factors that may affect successful breastfeeding is maternal personality traits.^[3,5-9] Understanding that the mother's personality affects breastfeeding may be of benefit in recognizing women who need extrasupport and providing them with this in the antenatal period.^[7] However, few studies have investigated the effect of maternal personality traits on breastfeeding. One study showed that a mother's desire to carry on or continue breastfeeding was related to the maternal personality, and that being open to experiences had a positive effect on a long period of breastfeeding.^[9] Another study found that mothers who had generally open and agreeable personalities breastfed for longer, while those with neurotic personality traits breastfed for a significantly shorter period.^[8] Furthermore, another study showed that being extraverted and open to new experiences had a positive effect on the decision to start breastfeeding, while introverted women more often chose to feed their babies with baby formulas.^[5] These studies show that it is

necessary to identify those mothers who are at risk at an early stage and to support them in breastfeeding in the postpartum period.

In short, not enough is known of the effect of maternal personality traits on breastfeeding. The effect of personality traits on the decision to start breastfeeding has been examined in previous studies,^[5,7-9] but the effect of these personality traits on successful breastfeeding is not known. In addition, those studies which have been conducted on the effect of personality traits on breastfeeding tend to reflect the situation in developed Western countries,^[5,7,8] while little is known about developing countries such as Turkey. The objective of this study was thus to examine the relationship between success in breastfeeding and maternal personality traits.

MATERIALS AND METHODS

Design

This was a descriptive, correlational study.

Settings and participants

The study was conducted in the maternity ward of a university hospital located in the East of Turkey between September 2018 and March 2019. The sample consisted of primiparous women who were hospitalized in the maternity ward between September 2018 and March 2019. The inclusion criteria were as follows: who were within the first 48 h postpartum, who were aged between 18 and 35 years, who had had a healthy pregnancy and had given birth to a single baby at a healthy term, who could speak Turkish, and who agreed to take part in the study. Pregnant women who were over the age of 35 years and under the age of 18 years, who had twin pregnancies, high-risk pregnancies, were unable to speak Turkish, and had been hospitalized for more than 48 h postpartum were not included in the study. The exclusion criteria were as follows: women who filled the forms incompletely and have psychiatric disorders. A convenience sampling method was used in the study. Using the G * Power statistics program, and based on the analysis of variance, the sample size was calculated with a 0.05 significance level, 80% power and medium effect size (0.25), and was determined to be 200. Due to the possibility of samples being lost, 230 people were included in the study.^[10]

Data collection

Four forms were used by the researchers to collect the data using the face-to-face interview method.

Demographic information form

This form was prepared by the researchers. It contained

questions on the mothers' sociodemographic (age, education level, employment status, and economic status) and obstetric characteristics (gestational age, pregnancy planning, type of birth, and Type of anesthetic).

Breastfeeding questionnaire

This form was prepared by the researchers with the help of the literature^[7,8] and consisted of four questions about breastfeeding, such as the duration and frequency of breastfeeding ten-item personality inventory (TIPI): This was developed by Gosling *et al.* based on the five-factor personality model. The scale consists of ten items, each containing two adjectives of a similar meaning.^[11] Each personality dimension is measured by two items. All items are rated on a 7-point Likert-type scale ranging from 1 ("strongly disagree") to 7 ("strongly agree"). The TIPI scale scoring is as follows ("R" denotes reverse-scored items): Extraversion: 1, 6R; Agreeableness: 2R, 7; Conscientiousness; 3, 8R; Emotional Stability: 4R, 9; and Openness to Experiences: 5, 10R. The internal consistency ratio was determined as 0.462 by Gosling *et al.*^[11] The validity and reliability study of the Turkish form of the scale was performed by Atak.^[12] Language validity was tested, with correlations of between 0.92 and 0.97, and exploratory factor analysis yielded 10 items and a five-factor model explaining 65.21% of the variance. The scale consists of five sub-scales, openness to experiences, agreeableness, emotional stability, conscientiousness, and extraversion. The internal consistency coefficients were found to be high: Openness to experiences: 0.83; agreeableness: 0.81; emotional stability: 0.83; conscientiousness: 0.84; and extraversion: 0.86.^[11] The TIPI was chosen because it can be applied in a shorter time and is easier to understand than other scales developed or adapted to measure the five-factor personality model. LATCH breastfeeding assessment tool: This is a diagnostic tool developed by Jensen *et al.* with a scoring method similar to the APGAR scoring system.^[13] The LATCH breastfeeding assessment tool is a standard systematic evaluation tool which describes the establishment and development of the act of breastfeeding, helps to indicate breastfeeding problems and areas where mothers need support, and is effective in maintaining breastfeeding. The scale contains five assessment criteria. Each letter of the acronym LATCH denotes one area of assessment. L: latches onto the breast; A: audible swallowing; T: mother's nipple type; C: mother's level of comfort; and H: amount of help the mother needs to hold her infant to the breast. Each criterion forming the LATCH breastfeeding assessment tool is awarded 0, 1, or 2 points. Breastfeeding success is assessed by adding up the scores. The highest score attainable on the scale is 10, whereas the lowest is 0. A high score on the scale indicates breastfeeding success.^[12] There is no classification

and cutoff point for the LATCH breastfeeding assessment tool. It is completed in the first 24–48 h of the early postpartum period by monitoring and observing different instances of breastfeeding.^[12,13] The validity of the Turkish version of the assessment tool was examined and it was found to be a reliable tool. The Cronbach's alpha value of the LATCH breastfeeding assessment tool was found to be 0.95 by Yenil and Okumuş.^[14]

Ethical considerations

Institutional approval was obtained from the university hospital where the research was to be conducted. Ethical approval was obtained from the Noninterventional Clinical Research Ethics Committee of the Faculty of Medicine at Dicle University, with an approval date and number of 04.07.2018/224. All the women included in the sample were given information about the study, and it was explained to them that their participation was voluntary and that they could withdraw at any time. The oral and written permission of all the participants was obtained.

Data analysis

Descriptive statistics were assessed using numbers, percentages, means, and standard deviations. Kolmogorov–Smirnov normality tests were utilized to investigate whether the data showed normal distribution. The mean scores of the LATCH breastfeeding assessment tool were compared according to mothers' personality traits using Kruskal–Wallis Variance Analysis. The data were analyzed using the Statistical Package for the Social Sciences software 16.0 (SPSS Inc., Chicago, IL, USA) was used. software version 22.0. The significance value was considered to be $P < 0.05$ in this study.

RESULTS

This study included 230 primiparous women, of whom 208 successfully filled out all the forms. Twenty-two women (11.3%) did not complete the study because their forms were incompletely filled out.

The sociodemographic, obstetric, and breastfeeding characteristics of women are given in Table 1. Most of the participants had primary education level, housewife and middle income level at the time of the study. Most of the women had a vaginal birth, unplanned pregnancy, and had no anesthesia. With regard to the characteristics of the women's breastfeeding, it was found that most of the women breastfed the baby within 31–60 min, breastfed the baby whenever it wanted and planned to feed the baby only on mother's milk for a period of 6 months.

Table 1: The women's sociodemographic, obstetric, and breastfeeding characteristics (Turkey, 2018–2019)

Sociodemographic characteristics	n (%)
Education level	
Primary school	141 (67.8)
High school	34 (16.3)
Higher education	33 (15.9)
Employment status	
Unemployed	183 (88.0)
Employed	25 (12.0)
Economic status	
Income less than expenditure (low)	31 (14.9)
Income equal to expenditure (medium)	165 (79.3)
Income more than expenditure (high)	12 (5.8)
Mean age ($\bar{x}\pm$ SD)	23.09 \pm 3.60
Obstetric characteristics	
Pregnancy planning	
Planned	76 (36.5)
Not planned	132 (63.5)
Type of birth	
Vaginal birth	125 (60.1)
Cesarean	83 (39.9)
Type of anesthetic	
Spinal anesthetic	83 (39.9)
No anesthesia	125 (60.1)
Gestational age (weeks) ($\bar{x}\pm$ SD)	38.62 \pm 0.97
Baby's birth weight (g) ($\bar{x}\pm$ SD)	3195.69 \pm 71.04
Breastfeeding characteristics	
Time planned to give only mother's milk	
6 months	175 (84.1)
Unplanned	33 (15.9)
First breastfeeding	
Immediately after birth	11 (5.3)
In the first 30 min	21 (10.1)
Within 31–60 min	108 (51.9)
>1 h later	68 (32.7)
Frequency of sucking	
When the baby wants	148 (71.2)
Every 1–2 h	57 (27.4)
Every 3 h	1 (0.5)
Other	2 (1)
Length of time sucking	
As much as the baby wants	132 (63.5)
5–10 min	33 (15.9)
10–20 min	30 (14.4)
20–30 min	13 (6.2)
Total	208 (100)

SD: Standard deviation

The mean LATCH Breastfeeding Assessment Tool score was 5.45 ± 1.44 points (minimum: 0 and maximum: 10). Examining the factors which might have affected the women's breastfeeding success, it was showed the most frequencies were related to receive breastfeeding education, education by a nurse/midwife and support breastfeeding by fathers [Table 2].

Arranging the women's LATCH breastfeeding assessment success scores from highest to lowest according to their personality traits, they were found to be as follows: extraverted, conscientious, emotionally stable, open to experiences, and agreeable. In the analysis, a statistically significant difference was found between the mean

LATCH Breastfeeding Assessment Success scores according to the women's personality traits (KW: 21.929, $P < 0.001$) [Table 3].

In the *post hoc* analysis, multiple comparison of the women's LATCH scores according to their personality traits was performed using the Tamhane F^2 -test. It was found that the LATCH breastfeeding success scores of extraverted individuals were significantly higher than those of individuals with the personality traits of openness to experiences (MD:-0.94 $P = 0.041$) and agreeableness (MD:-1.20, $P = 0.003$). No significant difference was found between the other personality traits and the LATCH breastfeeding success score.

DISCUSSION

The women's mean LATCH score in this study was determined to be 5.45. Another study in Turkey found that the women's mean LATCH score was 6.55 and this score was considered to be at a medium level.^[14] In a study performed in Italy, the score was at a medium level of 7.3,^[15] while in a study performed in Singapore, the women's breastfeeding success scores were at a high level of 9.06.^[16] The low level of breastfeeding success in the present study may have derived from the women's low level of education. Another reason may be that the breastfeeding education received by the women may have been inadequate. In Turkey, childbirth education classes are very limited.^[17] Women receive education about breastfeeding as part of routine antenatal care. This routine antenatal care takes 15–20 min and includes taking a history, a physical examination, an ultrasound scan and antenatal education. Having an inadequate amount of time set aside for breastfeeding education may have a negative effect on mothers' breastfeeding success.

One of the factors affecting breastfeeding is maternal personality traits.^[3,5-9] It was determined in this study that the women's personality traits affected their breastfeeding success. The breastfeeding success scores were associated with, in order from the highest to the lowest scores, extraversion, conscientiousness, emotional stability, openness to experiences, and agreeableness. The breastfeeding success of extraverted individuals was found to be higher than that of individuals who had personality traits of openness to experiences or agreeableness. Extraverted individuals have the tendency to display the characteristics of sociability, warmth, adventurousness, and excitement-seeking, as well as

Table 2: Factors affecting women's breastfeeding success

Characteristics	n (%)
Breastfeeding education	
Had education	157 (75.5)
Did not have education	51 (24.5)
Education source (n= 157)*	
Nurse/midwife	141 (67.8)
Doctor	20 (9.6)
Childbirth education class	3 (1.4)
Internet/book	10 (4.8)
TV	4 (1.9)
Father's support of breastfeeding	
Supportive	206 (99.0)
Undecided	2 (1.0)
Father's preference regarding infant's food	
Mother's milk	190 (91.3)
Formula feeding	3 (1.4)
Mother's milk + formula feeding	5 (2.4)
Decision left to mother	10 (4.8)

*More than one response was given

Table 3: The women's' breastfeeding success based on the LATCH score by their personality traits

Personality trait	n (%)	*LATCH score (M±SD)	Statistical Significance
Openness to experiences	73 (35.1)	5.3±1.3	**KW:
Agreeableness	76 (36.5)	5.0±1.2	21.929
Emotional stability	18 (8.7)	5.7±1.6	P: 0.000
Conscientiousness	19 (9.1)	6.2±1.6	
Extraversion	22 (10.6)	6.2±1.2	

*LATCH breastfeeding assessment tool, **KW: Kruskal Wallis. SD: Standard deviation

having positive feelings toward life. Conscientious individuals tend to be self-disciplined, productive, and often have a sense of mission. Individuals who are open to experiences are those who regard new ideas and events positively, while agreeable individuals are those who have a humanitarian outlook and are friendly and optimistic.^[18] Similar to the current study, a study in the United States found that having an extraverted personality had a positive effect on the decision to start breastfeeding, while introverted women tended to choose to use baby formulas.^[5] One 2015 study in particular showed that women with a high rate of breastfeeding had the personality traits of openness, optimism, and agreeableness, while women with traits of neuroticism, anxiety, and hostility had low breastfeeding rates.^[19] Another study found a significant correlation between breastfeeding duration and an optimistic personality in Australian women.^[3] In a study in the UK, it was found that the personality traits of extraversion, emotional stability, and conscientiousness were correlated with breastfeeding duration, and that breastfeeding success and continuing to breastfeed were less likely in mothers who were introverted or who had a high

level of anxiety.^[7] It has been shown that in Spain women who were open to experiences,^[9] and in Croatia that women who were open to experiences and who demonstrated the trait of agreeableness, breastfed for longer, while those with a degree of neuroticism breastfed for a significantly shorter time.^[8] These findings show that individuals with introverted or neurotic personality traits need to be given more breastfeeding support than other women. Programs providing support for breastfeeding are known to have positive effects in such cases.^[20-22] Individual programs may also be helpful for these individuals.

The current study has some limitations: the samples could not be randomly selected and the study was conducted in a single center. Therefore, the results of this study cannot be generalized.

CONCLUSION

This study determined that the women's mean breastfeeding success scores were at a medium level and that their personality traits affected their breastfeeding success. Extraverted women had greater levels of breastfeeding success. There is a need for more studies on the effects of culture and personality traits on breastfeeding. It is also important that the obstacles to exclusive breastfeeding be studied, in order that they can be removed.

Conflicts of interest

There are no conflicts of interest.

Authors' contribution

	Contributor 1	Contributor 2	Contributor 3	Contributor 4
Concepts	X			
Design	X			
Definition of intellectual content	X	X	X	
Literature search	X	X	X	
Clinical studies	X	X		
Experimental studies				
Data acquisition	X	X		
Data analysis		X	X	
Statistical analysis			X	
Manuscript preparation	X	X	X	
Manuscript editing	X	X	X	
Manuscript review	X	X	X	
Guarantor	X	X	X	

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