

EXAMINING SOCIOCULTURAL INFLUENCES ON BREASTFEEDING ATTITUDES AMONG SYRIAN AND HUNGARIAN FEMALE STUDENTS

PhD thesis

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1. Introduction

Breastfeeding is the most natural and effective way to provide infants with the nutrition they need for healthy growth and development. It protects children against illness, supports cognitive development, and benefits mothers by lowering the risk of certain chronic diseases and promoting physical and emotional recovery after childbirth.

Despite its proven benefits, exclusive breastfeeding for the first six months remains below global recommendations in many countries. In Syria, the rate is around 29 %, while in Hungary it is approximately 35%, both below the desired target.

Cultural and historical contexts shape breastfeeding practices. In Syria, breastfeeding has strong roots in religion and family tradition, with extended family members often providing support and encouragement. However, recent conflict and displacement have weakened these support systems, creating new challenges for mothers. In Hungary, historical traditions of extended breastfeeding have been influenced by social change, urbanization, and the promotion of formula feeding during the 20th century. Today, structured healthcare services and national initiatives aim to improve breastfeeding rates, yet social and cultural influences remain significant.

This study compares breastfeeding attitudes and behaviors among female university students in Syria and Hungary, focusing on how culture, history, and education influence these views. By examining Syrian and Hungarian students, the research aims to identify differences and similarities that can guide culturally sensitive strategies to encourage and support breastfeeding, ultimately contributing to improved maternal and child health outcomes in both countries.

2. Objectives

The main objective of this study is to explore and compare breastfeeding attitudes and behaviors among female university students in Syria and Hungary. The research focuses on understanding how cultural, historical, and social factors shape these attitudes.

The specific objectives are to:

1. Compare breastfeeding attitudes between Syrian and Hungarian students using standardized assessment tools.
2. Assess the influence of cultural and historical contexts on breastfeeding-related perceptions.
3. Provide recommendations for culturally appropriate interventions and educational strategies to promote breastfeeding in both settings

3. Methods

3.1. Participants

Phase 1 (Syria): Conducted at Damascus University (Faculties of Arts & Humanities and Pharmacy) between October and November 2022, the sample was 317 female students.

Phase 2 (Hungary): Conducted at Semmelweis University (Faculty of Pharmacy) and Eötvös Loránd University (Faculty of Arts) in Budapest, between April and May 2023; the sample was 303 female students

Participants were from both medical and non-medical faculties, at BSc, MSc, and PhD levels. All responses were voluntary and anonymous, with ethics approval obtained in both countries.

3.2. Study Design

Two validated tools were used:

1. **Breastfeeding Behavior Questionnaire (BBQ):**

- Developed by M. Kay Libbus in 1992
- Includes 12 scenarios representing real-life breastfeeding situations
- Responses measured on a 6-point Likert scale (“strongly disagree” to “strongly agree”)

2. **Iowa Infant Feeding Attitude Scale (IIFAS):**

- Developed by De La Mora & Russell in 1999
- Includes 17 statements covering attitudes toward breastfeeding and formula feeding
- Responses measured on a 5-point Likert scale with a “not sure” option

Questionnaires were translated into Arabic and Hungarian using professional translators and a back-translation method to ensure accuracy and cultural suitability.

3.3. Data Analysis

- **Descriptive statistics** are used to summarize demographic characteristics and scale responses.
- **Factor analysis** is used to identify underlying dimensions of attitudes and behaviors.
- **Cluster analysis (hierarchical + K-means)** was used to group participants into distinct attitude profiles.
- **Comparative tests:** ANOVA, chi-square, and logistic regression applied to explore differences between

nationalities, educational backgrounds, and socio-demographic variables.

Analyses conducted using IBM SPSS Statistics (version 25.0) with significance set at $p < 0.05$.

4. Results

Nationality-Based Comparison (Syria vs. Hungary)

4.1. BBQ

BBQ Findings:

- Syrians are more influenced by religion, tradition, and family/partner opinions.
- Hungarians are more pragmatic, focusing on work convenience and lifestyle.
- Both support public breastfeeding with discretion.
- Syrians are more willing to continue breastfeeding after returning to work despite shorter maternity leave.

BBQ Factor & Cluster Analysis:

- Four main factors identified: Pragmatic/Formula-Friendly attitudes, Public & Family Influence, Public Discomfort, and Social/Environmental Pressure.
- Syrians scored higher on External Pressure Influence; Hungarians scored higher on Pragmatic and Public Influence factors.
- Cluster patterns: Syrians are mostly in External Pressure Choosers; Hungarians are mostly in Pragmatic Bottle-Feeding Supporters.

4.2. IIFAS

IIFAS Findings:

- Both groups value the health and bonding benefits of breastfeeding.
- Syrians are more likely to agree that breast milk is easier to digest.
- High uncertainty in both groups about breastfeeding and alcohol safety guidelines.

IIFAS Cluster Analysis:

- Attitudes are grouped into strong Pro- Breastfeeding, Balanced, and Flexible/formula-leaning.
- Syrians are overrepresented in Pro-Breastfeeding clusters; Hungarians are more in Balanced and Flexible clusters.

5. Conclusions

5.1. Research Hypotheses Examination

H1: Syrian university students will show significantly more positive overall attitudes toward breastfeeding, as measured by the total IIFAS score, compared to Hungarian students.

This hypothesis was confirmed partially. While Syrian students were expected to report significantly higher overall attitudes toward breastfeeding, the results showed that both Syrian and Hungarian students documented generally positive attitudes, with statistically significant differences in the total IIFAS scores between the two groups. Some statements discovered positive attitudes among both Syrians and Hungarians, while other statements showed noticeable differences in attitudes, confirming this hypothesis partially with the study results.

H2: University students with lower income levels will show significantly more positive attitudes toward breastfeeding and less support for formula feeding, as measured by the IIFAS, compared to students with higher or sufficient income.

This hypothesis was totally confirmed by the results since the low-income students tended to be in the Supporters of Breast Milk group, while students with high income were more prevalent in Supporters of Formula Feeding and Flexible Thinkers.

H3: A higher level of education is associated with greater support for breastfeeding.

This hypothesis was not confirmed by the results we had. Contrary to expectations, the results showed that as educational level increased, support for breastfeeding decreased. Breastfeeding support was highest among bachelor's degree participants and lower among participants with postgraduate degrees (MSc and PhD).

H4: Married participants are more supportive of breastfeeding than formula, more than unmarried participants.

This hypothesis was not confirmed by the results we had. Although marital status influenced cluster membership. Nearly half of the total married participants tended to be in the "External Pressure Choosers" group, whereas the highest percentage of unmarried respondents fell into the Dedicated Breastfeeding Supporters group, which supports breastfeeding the most.

H5: Participants who live in rural areas prefer breastfeeding more than those who live in urban areas.

Confirmed. In the cluster analysis, we observed that the place of residence played a role; respondents living in urban areas most frequently tend to be in the Dedicated Breastfeeding Supporters cluster and External Pressure Choosers, while among participants from rural areas, the most prominent clusters were in the Dedicated Breastfeeding Supporters.

H6: Participants from both nationalities will generally support breastfeeding in the presence of a female visitor, but will be less supportive when both male and female visitors are present.

This hypothesis was confirmed partially. While Hungarian participants demonstrated significantly stronger support for continuing breastfeeding in the presence of a female visitor compared to Syrian participants, both groups generally support breastfeeding in front of a female visitor. Moreover, Syrian participants are more likely to oppose breastfeeding when both male and female visitors are present than Hungarian participants.

5.2. The cross-cultural conclusion

This study used the Breastfeeding Behavior Questionnaire (BBQ) and the Iowa Infant Feeding Attitude Scale (IIFAS) to compare breastfeeding attitudes and behaviors among Syrian and Hungarian female university students. Focusing on two culturally and socially distinct populations revealed how religion, tradition, social norms, education, and practical considerations combine to shape infant feeding preferences.

Figures 1 and 2 summarise the results and highlight areas of agreement and disagreement among Syrian and Hungarian participants based on both the BBQ and IIFAS scales.

Key conclusions:

Cultural influence: Syrians demonstrated stronger breastfeeding support, driven by religious beliefs, cultural traditions, and family influence. Hungarians were more pragmatic and influenced by lifestyle and work considerations.

Similarity: Both groups valued the health benefits and emotional bonding associated with breastfeeding and supported public breastfeeding with discretion.

Differences: Syrians expressed greater willingness to continue breastfeeding after returning to work despite shorter maternity leave. Hungarians, despite more extended leave, were less likely to do so.

Cluster profiles: Distinct attitude groups were identified in national and educational comparisons, ranging from strong breastfeeding advocates to formula-tolerant moderates and public normalization supporters.

Implications:

In both contexts, awareness campaigns should target myths (e.g., breast size affects milk supply, crying always means hunger) and knowledge gaps (e.g., safe breastfeeding after alcohol).

Future directions:

Qualitative research should explore how evolving social structures, workplace environments, and health systems influence breastfeeding attitudes in different cultural settings.

6. Bibliography of the candidate's publications

6.1. Publications related to the thesis:

Al Kamsheh, M., Bornemissza, K. A., Zimonyi-Bakó, A., & Feith, H. J. (2025) Examining Sociocultural Influences on Breastfeeding Attitudes Among Syrian and Hungarian Female Students. *Nutrients*, 17(2), 288.

<https://doi.org/10.3390/nu17020288>

Kamsheh, M. A., Bornemissza, K. A., Zimonyi-Bakó, A., & Feith, H. J. (2025) Breastfeeding Attitudes Among Female Students in Syria and Hungary. *Nutrients*, 17(13), 2121.

<https://doi.org/10.3390/nu17132121>

Manar Al Kamsheh, Alexandra Zimonyi-Bakó, Helga Judit Feith (2025) Cultural differences in breastfeeding practices: A comparative study of Syria and Hungary. *KALEIDOSCOPE: MŰVELŐDÉS- TUDOMÁNY- ÉS ORVOSTÖRTÉNETI FOLYÓIRAT* 15: 30 Paper: 1008, 15 p.

<http://www.kaleidoscopehistory.hu/index.php?subpage=cikk&cikkid=1008>

6.2. Lectures/Posters Related to Thesis

Manar Al Kamsheh, Dr. Feith Helga Judit Ph.D. Assessing Exclusive Breastfeeding Intentions Among Health Visitor Students at Semmelweis University Using the IFI Scale, PhD scientific days 7-9 July 2025, Semmelweis University, *Poster - Award-winning presentation (1st place)*

Manar Al Kamsheh, Dr. Feith Helga Judit Ph.D. The Intention of Exclusively Breastfeeding among Syrian and Hungarian

Female Students, The 32nd Semmelweis Symposium, Semmelweis University, 11-13 November 2024, *Poster*

Manar Al Kamsheh, Dr. Feith Helga Judit Ph.D. The Breastfeeding Behavior among Hungarian Health Visitor Female Students, PhD scientific days 2024, Semmelweis University, 9 and 10 July 2024, *Poster*

Manar Al Kamsheh, Dr. Feith Helga Judit Ph.D. The Impact of Socio-Cultural Factors on the Behaviors toward Breastfeeding in Syrian and Hungarian Female Students, Semmelweis Symposium, Semmelweis University, December 11-13, 2023, *Poster*

Manar Al Kamsheh, Breastfeeding Behaviors, Attitudes and Intention Among Female Students in Syria, PhD scientific days 2023, Semmelweis University, 22-23 June 2023, *Presentation*