

Annelerin İnfantil Kolik İçin Kullandıkları Uygulamalar ve Yararları Konusundaki Algıları The Practices Used by Mothers to Infantile Colic and Their Perceptions on the Benefits of The Practices

¹Birsen MUTLU, ²Zeynep ERKUT, ³Şerife AVCI, ⁴Sıdıka Sümeyye GİRGİN, ⁵İsmail GÖNEN

¹Istanbul University-Cerrahpaşa, Florence Nightingale Faculty of Nursing, Department of Pediatric Nursing, Istanbul, Turkey

²Istanbul University, Institute of Health Sciences, Graduated from Pediatric Nursing Doctoral Program, Istanbul, Turkey

³Koç University Hospital, Istanbul, Turkey

⁴Zeynep Kamil Women and Child Diseases Training and Research Hospital, Istanbul, Turkey

⁵Istinye University Faculty of Medicine, Department of Child Health and Diseases, Istanbul, Turkey

Birsen Mutlu: <https://orcid.org/0000-0002-8708-984X>

Zeynep Erkut: <https://orcid.org/0000-0002-7299-787X>

Şerife Avcı: <https://orcid.org/0000-0001-7406-7230>

Sıdıka Sümeyye Girgin: <https://orcid.org/0000-0003-4094-4885>

İsmail Gönen: <https://orcid.org/0000-0002-5311-5368>

ÖZ

Amaç: Bu araştırma infantil kolik olan bebeklerin annelerinin kolik azaltmaya yönelik yaptığı uygulamaları ve yararları hakkındaki algılarını belirlemek amacıyla yapılmıştır.

Materyal ve Metot: Tanımlayıcı tipte olan araştırmanın örneklemini İstanbul'da bulunan iki Aile Sağlığı Merkezi'nde takip edilen geçmişte kolik tanısı almış, 4-12 aylık 257 bebeğin annesi oluşturdu. Araştırmanın verileri, annelerin infantil kolik oluşumunu azaltmak için kullandıkları uygulamaları işaretleyebilecekleri 26 sorudan oluşan bir anket formu aracılığıyla toplandı.

Bulgular: Anneler tarafından en yararlı algılanan uygulamalar; annenin gaz yapıcı yiyecek ve içecek tüketmekten kaçınması (%97), pozisyon (%96,7), karına masaj (%95,7), saç kurutma makinesi sesi dinletme (%95,2) ve karına sıcak uygulamadır (%91,7).

Sonuç: Sonuç olarak anneler etkin ve geçerli metodlar kullanmakla birlikte, yararlanma oranı çok yüksek olan bazı metodların kullanım sıklığının az olduğu saptanmıştır. Bu araştırma sonuçlarına göre çocuk sağlığı izlemlerinde yaşı 2 hafta-4 ay olan bebeklerin annelerine kolik azaltmak amacıyla kullanılacak etkin ve geçerli metodlar konusunda bilgi verilmesi yararlı olacaktır.

Anahtar Kelimeler: algılama, anne, infantil kolik, uygulamalar, yararlanma

ABSTRACT

Objective: This study investigated the practices used by mothers of babies with infantile colic to reduce infantile colic and the mothers' perceptions on the effectiveness of these practices.

Materials and Methods: The sample of this descriptive study consisted of the mothers of 257 babies aged 4-12 months who were being monitored by two Family Health Centres in Istanbul. The data of the study was collected through a 26-item questionnaire on which the mothers could mark the practices they used to reduce infantile colic.

Results: The methods that were found the most useful based on the perception of the mothers were the mother's avoidance of consumption of foods and drinks that produce gas (97%), changing positions (96.7%), massage (95.7%), listening to the sound of a hair dryer (95.2%) and warmth treatment to the abdomen (91.7%).

Conclusion: Consequently, the mothers performed effective and valid practices. However, it was found that the frequency of performing some practices that have high utilisation rates was low. Accordingly, it would be useful to inform the mothers of babies who are at the ages of 2 weeks-4 months at the time of their paediatric health monitoring about the effective and easily performed practices for reducing colic.

Keywords: Benefit, infantile colic, mothers, perception, practices

Sorumlu Yazar / Corresponding Author:

Birsen MUTLU

Florence Nightingale Nursing Faculty Abide-i Hürriyet Cad. Çağlayan 34381 Şişli İstanbul, Turkey

Telefon: +90-212-440 00 00 / 27114

E-mail: bdonmez@istanbul.edu.tr

Yayın Bilgisi / Article Info:

Gönderi Tarihi/ Received: 27.06.2019

Kabul Tarihi/ Accepted: 22.10.2019

Online Yayın Tarihi/ Published: 31/03/2020

INTRODUCTION

Infantile colic is a syndrome that is seen in the first months of healthy babies' lives that is characterised by uncontrollable crying episodes accompanied by pulling the legs towards the abdomen, clenching the fists and passing gas.¹

Colic-related crying is defined to be high-pitched and excessive and seen typically in the afternoon and evenings. This situation starts in the 2nd-3rd weeks of life, increases in the 6th-8th weeks and disappears by itself when the baby is 3-4 months old. Various studies have reported the frequency of encountering colic as 3-40%.²⁻⁴ While the aetiology of infantile colic is not completely understood, it is believed that it has a multifactorial reason. Potential risk factors for colic include organic and psychosocial reasons such as food allergy/intolerance (cow milk, soy protein, etc.), gas, intestinal hormone abnormalities, constipation, gastroesophageal reflux, irregularity of the nervous system, insufficient or unsuitable mother-baby interaction, smoking by the mother and anxiety in the mother.^{1,5-7}

While it is seen as a mild and widespread phenomenon that will disappear in time by many healthcare professionals, parents mostly perceive the care for a baby with colic as a crisis situation.⁸ Sleepless nights and being unable to calm down the baby with colic are stressful especially for couples who are becoming parents for the first time. Being unable to manage colic successfully may lead significant problems in parents such as learned helplessness, maternal depression and unreliable mother-baby bonding. Therefore, parents look for various and solution methods for colic in the first 3-4 months of the postpartum period.^{6,9} Solution methods that are frequently used by parents include giving sugary water, feeding the baby herbal teas, playing music, vibration, massage, spinal manipulation, picking up the baby, rhythmic rocking, swaddling/covering, patting, giving a pacifier and the mother's own regulation of her diet.^{5,9}

MATERIALS AND METHODS

mothers of 257 babies aged in the range of 4-12 months who were being monitored by two Family Health Centres in Istanbul. As the population of the study was not completely known, the sample size was determined with the formula $n = t^2 \times p \times q / d^2$. While making the calculations based on the formula, the frequency of infantile colic was chosen as 20% based on the literature.²⁻⁴ According to the calcula-

tion, it was seen that at least 246 people should be included in the study. 257 mothers who agreed to participate in the study were included in the sample.

In order to conduct the study in the Family Health Centres, permission was received from the Public Health Institution of Turkey, the Turkish Ministry of Health. Ethical suitability of the research protocol was approved by the Clinical Research Ethics Board of the Cerrahpaşa School of Medicine, Istanbul University (Date: June 7, 2016 No: 59491012-604.01.02). The mothers who agreed to participate in the study provided verbal consent.

The data of the study were collected by a descriptive information questionnaire that was prepared by the researchers based on a literature review^{2-4,9,10-12} and a form in which the mothers would mark the practices they carried out. The questionnaire included 9 questions in relation to the descriptive characteristics of the baby (sex, age of the baby, age of the mother, educational status of the mother, the number of children in the family, and states of the mother's burping of the baby after feeding, the mother's information about methods that reduce infantile colic, the source of such information, and the mother's visits to the hospital due to the baby's gas pain). In order to determine the practices carried out by the mothers to reduce infantile colic and their states of utilising these practices, a literature review was conducted, and all practices that could be performed by the mothers for reducing infantile colic were listed. The mothers were asked to mark the practices they performed and their state of utilisation of these practices. They were asked to add other practices that were not on the list but they could prefer to include by adding an 'other' slot. The interventions used by the mothers on themselves were avoiding consumption of flatulent foods and drinks, keeping the feet warm, exercise, walking, warmth treatment for the abdomen, massaging the abdomen, consumption of herbal supplements, teas, etc. The methods that were used on the babies to reduce infantile colic were applying warmth to the abdomen, pulling the legs towards the abdomen, picking up the baby, picking up the baby and walking, rocking, giving position, patting, giving a pacifier, swaddling/covering, singing a lullaby, white noise/music for gas, making the baby listen to hair dryer, vacuum cleaner or washing machine sounds, etc., walking with a stroller, travelling in a car, pushing on a swing along music, picking up the baby and walking outside, giving the baby

warm water, sugary water, lemon water and herbal teas. The data collection forms were filled out by the mothers of babies at the ages of 4 to 12 months who visited the centres where the study was conducted for vaccination and child care visits.

The data were analysed on the computer environment with the help of the SPSS (Statistical Package for the Social Science) 16.0 software. The data analysis utilised the descriptive statistics of means, standard deviations, frequencies and percentages.

RESULTS

[Table 1](#) shows the descriptive characteristics of the sample. 45.9% of the babies were female, 54.1% were male, and their mean age was 7.81 ± 2.45 months. The mean age of the mothers was 27.48 ± 4.89 years. 51% of them were high school graduates and 74.7% were not working. The mean number of children in the families was 2.00 ± 1.17 . 91.1% of the mothers stated that they burped the baby after feeding, and 67.7% stated that they collected information about methods for reducing gas pain. Their sources of information were ranked as doctors by 52.9%, nurses by 19.5%, family by 17.2% and the internet by 10.3%. 44.7% of the families visited the hospital due to gas pain.

[Table 2](#) shows the practices carried out by the mothers on themselves to reduce infantile colic and their perceptions on their utilisation of these practices. The vast majority of the mothers avoided consumption of flatulent foods and drinks for themselves to reduce the colic in their baby (89.5%), while this was followed by keeping the feet warm (35.4%), consuming herbal supplements-teas (34.6%), massaging the abdomen (33.9%), exercise, walking (20.2%) and applying warmth to the abdomen (11.7%). The most frequently consumed herbal supplements used by the mothers may be listed as fennel by 53.9%, olive oil by 18%, anise by 14.6%, herbal tea by 9% and cumin by 4.5%. The state of utilisation of the practices the mothers performed was stated by the participants as avoiding consumption of flatulent foods and drinks (97%), massaging the abdomen (96.6%), keeping the feet warm (93.4%), applying warmth to the abdomen (93.3%), herbal supplement, tea (89.9%), exercise, walking (82.7%).

When the practices that were applied on the baby by the mother with the purpose of reducing infantile colic and the mothers' perceptions on their utilisation of these practices were investigated, it was seen

that applying massage to the abdomen of the baby was the most frequently preferred method which was also found the most useful by the mothers ([Table 3](#)). Additionally, while the practices which have application rates in the range of 10-30% but were reported to be useful by over 90% included applying warmth to the baby's abdomen, picking up the baby, positioning the baby and getting the baby to listen to machine noises (hair dryer, vacuum cleaner, etc.). The practice that was found the most suitable by the mothers was positioning. The positions given to the babies were mostly face down (88.3%), on their left (6.7%) and on their right (5%). The practices that did not have high application rates among the mothers but were reported to be useful in the range of 80-90% were pulling the baby's legs towards its abdomen, having the baby listen to white noise, travelling with the baby in the car, rocking the baby on a baby sling and giving the baby fennel tea.

DISCUSSION AND CONCLUSION

This retrospective study investigated the practices employed by mothers to reduce their babies' colic and their perception of own states of utilisation of these practices. Infantile colic was reported to be seen more frequently in baby boys.^{9,12} Most of the babies with colic in this study were also male (54.1%).

In this study, the top method that was used by the mothers on themselves to reduce colic in their babies was avoiding consumption of flatulent foods and drinks, and 97% found it useful. Other studies also stated that maternal hypoallergenic diet for breastfeeding mothers (all foods containing dairy products, soy, wheat, eggs, peanuts, tree nuts, and fish from their diet) reduced the duration of the baby's crying, therefore was effective in relieving colic.^{7,13-16} Johnson et al.¹⁷ reported that elimination of allergens (e.g., cow's milk, eggs, fish, peanuts, soy, tree nuts, wheat) from the diet of breastfeeding mothers is effective in relieving colic symptoms on the evidence level of A (consistent, good-quality patient-oriented evidence). A study stated that, in traditional Iranian medicine, the primary and main treatment approach for colic management is mother's avoidance of foods that cause flatulence and usage of herbal flatulence-relieving product.¹⁸

The most frequently practiced and found to be useful one among the practices performed by the mothers to reduce colic in this study was abdominal massage. It was reported that massage has beneficial effects

on hormones that affect the mother-baby interaction, sleep, crying levels and stress levels.^{19,20} Çiftçi and Arıkan⁹ reported that 80.9% of the mothers massaged their baby's abdomen to relieve colic and 46% found it useful, while Uğurlu et al.²¹ reported the rate of performing this practice as 77.6% and Demirel et al.²² stated it as 74%. It is stated that, in traditional Iranian medicine, one of the most effective methods in colic management is a massage performed by using herbal supplements and oils.¹⁸ Çetinkaya and Başbakka³ reported that a massage given by using lavender oil is effective in reducing the symptoms of colic. It was observed that the mothers in our study also utilised massaging, which agreed with the result of other studies.

According to the results of our study, the mothers in our study frequently applied warmth treatment on the abdomen, picking up the baby, rocking the baby and positioning. A study found that the vast majority of mothers (87.6%) aimed to reduce colic by preferring abdominal massage, pushing and pulling the legs, rubbing the back, picking up, rocking in a crib or on the chest, trying to warm up or putting things like warmed up towels on the abdomen.¹² Previous studies reported the utilisation of pulling legs toward the abdomen^{9,21,23} and positioning the baby.²² Sezici and Yiğit²⁴ found that rocking babies reduced their duration of crying. In our study, 7% of the mothers used swaddling, and 38.9% of those who did so stated that it reduced the symptoms of colic. Similarly, Balci²⁵ found that 36.7% of mothers found swaddling useful. Van Sleuwen et al.²⁶ reported that swaddling babies younger than 8 weeks old provided a statistically significant reduction in durations of crying. About 1/5 of the mothers in our study aimed to reduce colic symptoms singing a lullaby for the baby, getting the baby to listen to sounds of a hair dryer, etc., while 1/10 utilised getting the baby to listen to white noise and found it useful to a high extent. Other studies also determined that getting a baby with colic to listen to white noise decreased durations of crying.^{24,25} The study by Demirel et al.²² determined that mothers preferred getting the baby to listen to white noise and machine noises in similar rates with the purpose of reducing infantile colic. Moreover, McRury and Zolotor²⁷ found videotaped instruction of behavioural interventions (swaddling, face down or side position, playing white noise, giving a pacifier or breastfeeding) to be ineffective in reducing crying among new-borns. Although the

rate of using auditory stimulants in our study was low, it had a high rate of usefulness perceived by the mothers. There is a need for comprehensive studies that will assess the effectiveness of auditory stimulants such as white noise, machine sounds, singing a lullaby and playing music.

In our study, a small number of mothers stated that they gave their babies sugary water, and 25% those who did so found this practice useful. Akcam and Yilmaz²⁸ compared a 30% glucose solution to placebo, and reduction in colic symptoms was observed in babies that were given the hypertonic glucose solution. Arıkan et al.⁶ determined a statistically significant reduction in the crying durations of babies that were given sucrose in comparison to their initial durations. It was stated in the literature that more and strong evidence and advanced studies are needed on this matter.^{3,10} Attention should be paid to the practice of giving the baby sugary water due to its risk of reducing the baby's breastmilk intake, and mothers should be directed towards other methods that are found more useful.

In our study, 6.2% of the mothers got their baby to consume fennel, and 81.25% of those who did so found it useful. Other studies also determined that fennel is effective in reducing colic symptoms and crying durations.^{4,6,29,30} Savino et al.³⁰ also noted several adverse effects such as vomiting, sleepiness, constipation and loss of appetite among infants that were given phytotherapeutic agents. Moreover, it is known that herbal supplements calm babies down by reducing abdominal distension. However, the dosage of these supplements must be carefully adjusted to prevent this practice from affecting the amount of breast milk that the baby consumes.²⁰ Therefore, it is stated that herbal supplements are utilised to reduce colic symptoms, but more evidence is needed to be able to recommend these,¹⁷ and parents may use these products under medical supervision.²⁰

According to the results of this study, the most frequently performed practices among the mothers for reducing colic were avoiding consumption of flatulent foods and drinks, massaging the baby's abdomen, positioning the baby and warmth treatment to the abdomen. These methods that were frequently preferred by the mothers to reduce colic are effective, costless methods that do not harm the baby and are easily-applicable by mothers. Consequently, while the mothers used effective and valid methods in managing infantile colic, the usage rates of some

highly effective methods were low. Based on the results of the study, it will be beneficial to inform the mothers of babies in the age range of 2 weeks-4 months who are monitored at child care visits about the effective and costless methods that can be easily applied by mothers without the risk of harming the baby that may be used to reduce colic.

The limitation of this study is that it is a retrospective study. Therefore, only the information provided by the mothers was relied on, and the colic symptoms in the babies could not be monitored. It is recommended that prospective studies where the effects of practices that reduce colic symptoms on babies are analysed by monitoring are conducted, and the perceptions of mothers on the usefulness of these practices are assessed during observations.

Ethics Committee Approval: Our study was approved by the Clinical Research Ethics Board of the Cerrahpaşa School of Medicine, Istanbul University (Date: June 7, 2016 No: 59491012-604.01.02).

Conflict of Interest: No conflict of interest was declared by the authors.

Author Contributions: Concept - B.M., Z.E.; Supervision - B.M., Z.E., Ş.A., S.S.G.; Materials - B.M., Z.E., Ş.A., İ.G.; Data Collection and/or Processing - Ş.A., S.S.G.; Analysis and/ or Interpretation - B.M., Z.E.; Writing - B.M., Z.E.

Peer-review: Externally peer-reviewed.

REFERENCES

1. Çetinkaya B, Başbakkal Z. The effectiveness of aromatherapy massage using lavender oil as a treatment for infantile colic. *International Journal of Nursing Practice*. 2012;18:164-169.
2. Karabel M, Karabel D, Tayman C, Tonbul A, Tatlı MM. İnfantil kolikte risk faktörlerinin ve farmakolojik tedavi yaklaşımlarının değerlendirilmesi. *Turkish J Pediatr Dis*. 2010;4:12-17.
3. Savino F, Tarasco V. New treatments for infant colic. *Curr Opin Pediatr*. 2010;22:791-797.
4. Perry R, Hunt K, Ernst E. Nutritional supplements and other complementary medicines for infantile colic: a systematic review. *Pediatrics*. 2011;127:720-733.
5. Leung AK, Lemay JF. Infantile colic: a review. *The Journal of The Royal Society for the Promotion of Health*. 2004;124:162-166.
6. Arıkan D, Alp H, Gözüm S, Orbak Z, Çifçi E. Effectiveness of massage, sucrose solution, herbal tea or hydrolysed formula in the treatment of infantile colic. *Journal of Clinical Nursing*. 2008;17:1754-1761.
7. Pace CA. Infantile colic: what to know for the primary care setting. *Clinical Pediatrics*. 2017;56:616-618.
8. Ellett MLC, Bleah DA, Parris S. Feasibility of using kangaroo (skin-to-skin) care with colicky infants. *Gastroenterol Nurs*. 2004;27:9-15.
9. Çiftçi EK, Arıkan D. Methods used to eliminate colic in infants in the eastern parts of Turkey. *Public Health Nursing*. 2007;24:503-510.
10. Savino F. Focus on infantile colic. *Acta Paediatrica*. 2007;96:1259-1264.
11. Salisbury AL, High P, Twomey JE, et al. A randomized control trial of integrated care for families managing infant colic. *Infant Ment Health J*. 2012;33:110-122.
12. Alagöz H, Ertekin V. Türkiye'nin doğusunda infantil kolik insidansı, etyolojisindeki risk faktörleri ve farklı tedavi seçeneklerinin tespiti. *Journal of Contemporary Medicine*. 2013;3:1-6.
13. Critch JN. Infantile colic: is there a role for dietary interventions? *Paediatr Child Health*. 2011;16:47-49.
14. Hill DJ, Roy N, Heine RG, et al. Effect of a low-allergen maternal diet on colic among breastfed infants: a randomized controlled trial. *Pediatrics*. 2005;116:e709-e715.
15. Iacovou M, Ralston R, Muir J, Walker K, Truby H. Dietary management of infantile colic: a systematic review. *Maternal and Child Health Journal*. 2012;16:1319-1331.
16. Hall B, Chesters J, Robinson A. Infantile colic: a systematic review of medical and conventional therapies. *Journal of Paediatrics and Child Health*. 2012;48:128-137.
17. Johnson JD, Cocker K, Chang E. Infantile colic: recognition and treatment. *Am Fam Physician*. 2015;92:577-582.
18. Javan R, Feyzabadi Z, Kiani M. Management of infantile colic; based on traditional Iranian medicine. *Int J Pediatr*. 2015;3:909-913.

19. Rosen LD. "The Gripe": an integrative approach to infant colic. *Explore*. 2007;3:417-422.
20. Savino F, Ceratto S, De Marco A, di Montezemolo LC. Looking for new treatments of infantile colic. *Ital J Pediatr*. 2014;40:53.
21. Uğurlu E, Kalkım A, Sağkal T. 0-1 yaş arası bebeklerde sık karşılaşılan ağrı durumları ve ailelerin yaklaşımları. *Fırat Tıp Dergisi*. 2014;19:25-30.
22. Demirel G, Yıldız I, Gundogdu NA, Doganer A. Factors affecting colic in infants and the applications of mothers in Turkey. *International Journal of Caring Sciences*. 2018;11:1301-1310.
23. Çapık C, Çapık A. Traditional infant care practices of mothers with 6-12 month-old infants in Turkey. *Indian Journal of Traditional Knowledge*. 2014;13:266-274.
24. Sezici E, Yigit D. Comparison between swinging and playing of white noise among colicky babies: a paired randomized controlled trial. *J Clin Nurs*. 2017. Doi: 10.1111/jocn.13928. [Epub ahead of print]
25. Balcı S. Kolikli Bebeklere Beyaz Gürültünün Etkisi. Marmara Üniversitesi Sağlık Bilimleri Enstitüsü Çocuk Sağlığı ve Hastalıkları Hemşireliği Anabilim Dalı, Yüksek Lisans Tezi. İstanbul, Türkiye. 2006.
26. van Sleuwen BE, L'Hoir MP, Engelberts AC, et al. Comparison of behavior modification with and without swaddling as interventions for excessive crying. *J Pediatr*. 2006;149:512-517.
27. McRury JM, Zolotor AJ. A randomized, controlled trial of a behavioral intervention to reduce crying among infants. *J Am Board Fam Med*. 2010;23:315-322.
28. Akcam M, Yilmaz A. Oral hypertonic glucose solution in the treatment of infantile colic. *Pediatrics*. 2006;48:125-127.
29. Alexandrovich I, Rakovitskaya O, Kolmo E, Sidorova T, Shushunov S. The effect of fennel (*Foeniculum vulgare*) seed oil emulsion in infantile colic: a randomized, placebo-controlled study. *Altern Ther Health Med*. 2003;9:58-61.
30. Savino F, Cresi F, Castagno E, Silvestro L, Oggero R. A randomized double-blind placebo-controlled trial of a standardized extract of *Matricariae recutita*, *Foeniculum vulgare* and *Melissa officinalis* (ColiMil) in the treatment of breastfed colicky infants. *Phytother Res*. 2005;19:335-340.

Table 1. Descriptive characteristics of the sample (n=257).

| | Groups | Frequency (n) | Percentage (%) |
|--|--------------------------------|----------------------|-----------------------|
| Sex of the Baby | Female | 118 | 45.9 |
| | Male | 139 | 54.1 |
| Order of the Baby | 1st child | 106 | 41.2 |
| | 2nd child | 85 | 33.1 |
| | 3rd child | 41 | 16 |
| | 4th of later child | 25 | 9.7 |
| Food Consumed by the Child | Breast milk | 108 | 42 |
| | Breast milk + baby food | 115 | 44.7 |
| | Baby food | 34 | 13.2 |
| Feeding Method for the Child | Breastfeeding | 104 | 40.5 |
| | Breastfeeding + infant formula | 100 | 38.9 |
| | Bottle only | 8 | 3.1 |
| | Breastfeeding + spoon | 22 | 8.6 |
| | Bottle + spoon | 23 | 8.9 |
| Burping the Baby after Feeding | Yes | 234 | 91.1 |
| | No | 23 | 8.9 |
| The Mother is Working | Yes | 65 | 25.3 |
| | No | 192 | 74.7 |
| The Mother's Educational Status | Illiterate | 3 | 1.2 |
| | Literate | 7 | 2.7 |
| | Primary education graduate | 53 | 20.6 |
| | High school graduate | 131 | 51 |
| | University graduate | 63 | 24.5 |
| Collecting Information about Methods to Reduce Gas Pain | Yes | 174 | 67.7 |
| | No | 83 | 32.3 |
| Source of Information | Doctor | 92 | 52.9 |
| | Nurse | 34 | 19.5 |
| | Family | 30 | 17.2 |
| | Internet | 18 | 10.3 |
| Visiting the Hospital Due to Gas Pain | Yes | 115 | 44.7 |
| | No | 142 | 55.3 |
| Mean ± SD | | | |
| Mean Baby Age (months) | 7.81 ± 2.45 | | |
| Mean Mother Age (years) | 27.48 ± 4.89 | | |
| Number of Children in the Family | 2.00 ± 1.17 | | |

Table 2. Practices of the mothers they used on themselves and their perceptions on their utilisation.*

| Practices | Those Who Do | | Utilization | | | |
|---|------------------|-------------------|--------------|--------------|--------------|--------------|
| | Frequency (n) | Percentage (%) | Useful | | Not Useful | |
| | | | Freq. (n) | Perc. (%) | Freq. (n) | Perc. (%) |
| Avoiding consumption of flatulent foods and drinks | 230 | 89.5 | 223 | 97 | 7 | 3 |
| Keeping the feet warm | 91 | 35.4 | 85 | 93.4 | 6 | 6.6 |
| Exercise, walking | 52 | 20.2 | 43 | 82.7 | 9 | 17.3 |
| Warmth treatment to the abdomen | 30 | 11.7 | 28 | 93.3 | 2 | 6.7 |
| Massaging the abdomen | 87 | 33.9 | 84 | 96.6 | 3 | 3.4 |
| Herbal supplements, teas, etc. | 89 | 34.6 | 80 | 89.9 | 9 | 10.1 |

* More than one options could be selected. Freq.: Frequency ; Perc.: Percent

Table 3. Practices of the mothers they used on their baby and their perceptions on their utilisation*

| Practices | Those Who Do | | Utilization | | | |
|--|--------------|-----------|-------------|-----------|------------|-----------|
| | Freq. (n) | Perc. (%) | Useful | | Not Useful | |
| | | | Freq. (n) | Perc. (%) | Freq. (n) | Perc. (%) |
| Warmth treatment to the abdomen | 72 | 28 | 66 | 91.7 | 6 | 8.3 |
| Massaging the abdomen | 230 | 89.5 | 220 | 95.7 | 10 | 4.3 |
| Pulling the legs towards the abdomen | 114 | 44.4 | 101 | 88.6 | 13 | 11.4 |
| Picking up the baby | 40 | 15.6 | 36 | 90 | 4 | 10 |
| Picking up the baby and walking | 73 | 28.4 | 57 | 78.1 | 16 | 21.9 |
| Rocking (on a baby sling, in a blanket, on chest or in a crib) | 69 | 26.8 | 54 | 78.3 | 15 | 21.7 |
| Positioning | 60 | 23.3 | 58 | 96.7 | 2 | 3.3 |
| Patting | 39 | 15.2 | 20 | 51.3 | 19 | 48.7 |
| Giving pacifier | 31 | 12.8 | 15 | 48.4 | 16 | 51.6 |
| Swaddling/covering | 18 | 7 | 7 | 38.9 | 11 | 61.1 |
| Singing a lullaby | 53 | 20.6 | 41 | 77.4 | 12 | 22.6 |
| White noise / music to help release gas | 30 | 11.7 | 25 | 83.3 | 5 | 16.7 |
| Sounds of a hairdryer, vacuum cleaner, washing machine, etc. | 42 | 16.3 | 40 | 95.2 | 2 | 4.8 |
| Walking with a stroller / baby sling | 18 | 7 | 11 | 61.1 | 7 | 38.9 |
| Travelling by car | 23 | 8.9 | 20 | 87 | 3 | 13 |
| Pushing swing along music | 31 | 12.1 | 27 | 87.1 | 4 | 12.9 |
| Warm water | 21 | 8.2 | 7 | 33.3 | 14 | 66.7 |
| Sugary water | 16 | 6.2 | 4 | 25 | 12 | 75 |
| Lemon water | 3 | 1.2 | 1 | 33.3 | 2 | 66.7 |
| Fennel tea | 16 | 6.2 | 13 | 81.3 | 3 | 18.7 |