



IRAQI
Academic Scientific Journals



العراقية
المجلات الأكاديمية العلمية

ISSN:1813-1638

The Medical Journal of Tikrit University

Journal Homepage: <http://mjtu.tu.edu.iq>

MJTU

The Medical Journal
of Tikrit University

The Mothers Attitude for Infantile Colic Attending Salah-Alden General Hospital

Marwa Mahmoud Mohammed¹, and Mohammed Adress Younis²

¹M.B.Ch.B, Kirkuk University, Kurkuk, Iraq

²Pediatrics Department, College of Medicine, Tikrit University, Iraq

*Corresponding author: E-mail: Mohammadadress@tu.edu.iq

Received: 14/06/2023

Accepted: 13/08/2023

Available online: 31/12/2023

KEY WORDS:

Mothers, attitude, infantile colic.

ABSTRACT

Background: Infantile colic is a benign condition and a common cause that made parents to seek medical advice in the early three months of life. It is defined as paroxysms of crying and fussiness more than three hours per day, more than three days in a week for three weeks in a healthy infant from fourteen days to four months of life. The real cause still unknown but underlying organic causes less than 5%.

Aim of the study: To evaluate the mother's attitude about infantile colic.

Patient and Method: A cross sectional hospital-based study done on 200 mothers whose baby had infantile colic to evaluate mother's knowledge about treatment of their problem, the study was done at the Pediatric consulting department of Salah-Alden General Hospital during the period from 2nd January to 30th August 2021 selected not randomly. The Mother's knowledge were taken by the wards of the mother without interference and without guidance, the source of the knowledge depend whether it is taken from her previous experience, her relatives and friends, health care provider, from social media. Regarding educational level of the mothers were divided into illiterate, read and write, primary school, secondary school and college. Regarding the type of formula, the formulas divided into the types as AC formula, AD formula regardless the name of the company.

Results: The study showed that the high rate of males and females children enrolled in this study was in 2 months of age (29.73 and 30.34% respectively). The majority of children were belonged to families lived in urban area. 52% of the mothers consulted physician, 50.5% consulted medical staff. Most of mothers haven't knowledge about infantile colic 63.5%, and 17% acquired their knowledge from previous experience or relatives and friends. 30% of mothers were completed primary school, 27% were illiterate, 19% read and write and 13% for each of secondary school and college. The high rates of most mothers with variety education levels haven't previous experience.

Conclusions: The study showed that the high rate of children was in 2 months of age and belonged to families lived in urban area. Most of the mothers consulted doctor and health care providers and most of them haven't experience about infantile colic and manage it by anti-colic drugs and changing of formula.

DOI: <http://doi.org/10.25130/mjotu.29.1.1>



© 2023. This is an open access article under the CC by licenses <http://creativecommons.org/licenses/by/4.0>

INTRODUCTION

Infantile colic is episodes of crying in an otherwise well-nourished infant that last three hours in a day for three days per week of three weeks in a month⁽¹⁾. About one in five infants younger than three months can develop colic. Although infantile colic considered to be self-limiting and benign affection infantile colic still the most common problem worldwide⁽²⁾, it is stressful problem for family and causes frequent doctor referrals in this age group and puts a significant burden on the health system⁽³⁾. It occurs equally in boys and in girls. It ends spontaneously in the first six months of life and rarely lasts up to one year of age⁽⁴⁾. The prevalence of infantile colic in infants is about 20% (one from five children), the frequency was increased to 25% in the first six weeks of life, and even to 40% in some communities^(5,6).

The real etiology of colic is unknown. It can be caused by gastrointestinal discomfort like intestinal cramping⁽⁷⁾. Diagnosis done by excluding other causes like fever, lethargy, or a distended abdomen. Less than 5% of infants with crying have an underlying pathology⁽⁸⁾. Colic can be treated conservatively, with no role or sometimes for either drugs or other therapies⁽⁹⁾. Extra support for the parents may be benefit. Probiotics may be benefit for the baby and a low-allergen diet by breastfed the mothers. Hydrolyzed formula may be useful in bottle fed infants⁽⁸⁾. Other than pharmacological treatment different actions done by parents with baby with infantile colic whether by giving herbal therapy or some action done by the mother like lullaby depend on the cultural background of the family⁽¹⁰⁾. Aim of the study to evaluate the mother's attitude about infantile colic.

PATIENTS AND METHODS

A cross sectional descriptive hospital-based study done on 200 mothers whose baby have infantile colic to evaluate mother's knowledge about treatment of their problem, the study done at the Pediatric Consulting Department of Salah-Alden General Hospital during the period from 2nd January to 30th August 2021 selected not randomly. Before attending the study, oral acceptance were taken from the mothers to participate in the study in addition to written acceptance taken from directorate of the Salah-Alden General Hospital for attending the study. Each mother and their babies included in the study were evaluated by a prepared questionnaire that include name, age, gender, residence. Including infants below one year and above two weeks of age.

The Mother's knowledge were taken by the wards of the mother without interference and without

guidance, the source of the knowledge depend whether it is taken from her previous experience, her relatives and friends, health care provider, from social media. Regarding educational level of the mothers were divided into illiterate (not read and write), read and write, primary school, secondary school and college. Regarding the type of formula, the formulas divided into the types as AC formula, AD formula regardless the name of the company.

The statistical analysis were done by SPSS version 18 for determination of Chi square and including of P. value (P value less than 0.05 are considered to be significant).

RESULTS

The high rate of males and females children enrolled in this study was in 2 months of age (29.73 and 30.34% respectively) followed by 3 months of age, The study showed that majority of children enrolled in this study were belonged to families lived in urban area (63%) and 37% were from rural area, 56% of studied children have history of previous sibling with colic (Figure 1). All females enrolled in this work suffered from colic at morning while most of males have colic at evening (P: 0.001), as shown in Table 1.

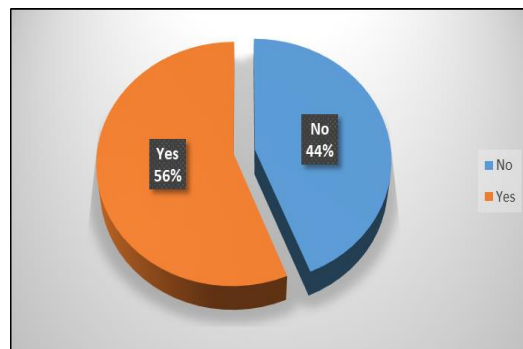


Figure 1. Family history of siblings colic.

Table 1: Distribution of children related to gender and time of colic

Time	Male		Female		Total
	No.	%	No.	%	
PM	74	66.67	0	0	74
AM	34	30.63	88	100	122
Any time	4	3.6	0	0	4
Total	111	100	88	100	200

P. value: 0.001

All 42% of studied children fed by artificial feeding, 39% by mixed feeding and only 19% exclusive breast feeding, Figure 2. In this study, most children enrolled haven't any problem, 12% were

suffered from diarrhea and poor feeding, 8% suffered from fever and 5% have vomiting, Figure 3.

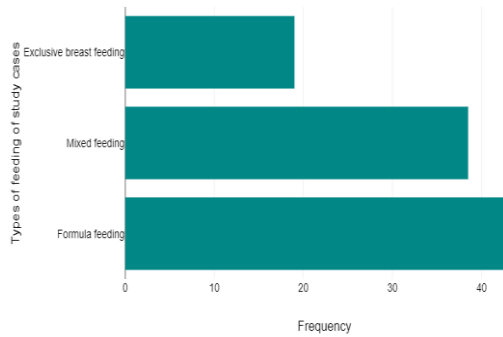


Figure 2. Distribution of associated symptoms

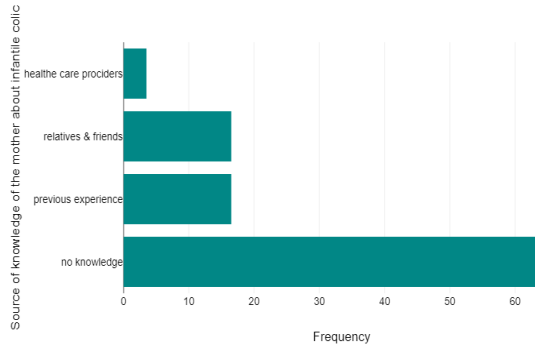


Figure 3: Distribution of cases according to associated problems with colic

In this study, 52% of the mothers consulted physician, 50.5% consulted medical staff, Table 2. In this study, most of mothers haven't knowledge about infantile colic 63.5, and 17% acquired their knowledge from previous experience or relatives and friends, Figure 5.

Table 2: Behavior of mother during colic

Behavior	No. (%)
Consult Doctor	104 (52%)
Medical Staff	101(50.5%)
Fortune Teller	6 (3%)

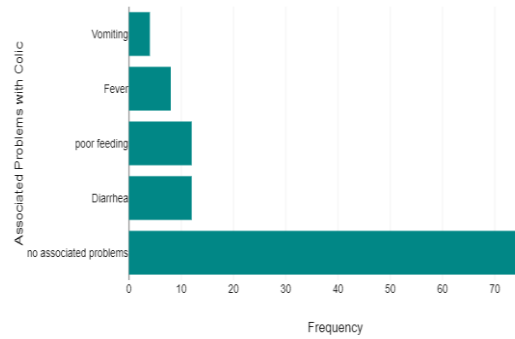


Figure 5: Source of knowledge of the mother about infantile colic

The study demonstrated that majority of the mothers manage infantile colic by AC_drug, 18.5% change formula to treat infantile colic. Table 3.

Table 3: Treatment option of infantile colic

Treatment	No. (%)
Traditional medicine	3(1.5%)
Anti- colic drugs	163(81.5%)
Change formula	37(18.5%)
Grape Water	16(8%)
Nothing	26(13%)

30% of mothers were completed primary school, 27% were illiterate, 19% read and write and 13% for each of secondary school and college, the high rates of illiterate, read and write and secondary school mothers feed their infants by formula feeding and the high rate of college mothers feed their infant by mixed feeding, Table 4.

The high rates of illiterate and read& write mothers acquired their information by consult doctors and the high rate of mother with primary, secondary and collage education consulted medical staff, Table 5.

The high rates of illiterate mothers treat their children primarily by AC drugs, and by changing formula while high rates of mother with primary, secondary and collage education, treat their children by AC drugs only. Table 6.

Table 4: Educational Level in Regard to the Types of Feeding

	Breast feeding	Formula feeding	Mixed feeding	Total
Illiterate	9 (4.5%)	27 (13.5%)	17 (8.5%)	53 (26.5 %)
Read & write	7 (3.5%)	17 (8.5%)	15 (7.5%)	39 (19.5%)
Primary school	14 (7%)	22 (11%)	24 (12 %)	60 (30 %)
Secondary school	6 (3%)	11 (5.5%)	7 (3.5%)	24 (12 %)
College	2 (1%)	8 (4%)	14 (7%)	24 (12%)
Total	38 (19%)	85 (42.5%)	77 (38.5%)	200 (100%)

P. value: 0.044

Table 5: Educational level regarding to the behavior of the mother during colic

Educational level	Consult Doctor		Medical Staff		Fortune Teller	
	No.	%	No.	%	No.	%
Illiterate	52	17.33	0	0	1	0.33
Read & write	38	12.67	0	0	1	0.33
Primary school	0	0	58	19.33	2	0.67
Secondary school	10	3.33	101	33.67	6	2
College	14	4.67	20	6.67	1	0.33

P. value: 0.013

The high rates of mothers within the age group 16-24 year haven't experience about infantile colic and 7.5% have previous experience. Additionally, most of other

age groups haven't experience toward infantile colic age groups, Table 7.

Table 6: Educational level in regard to the treatment of infantile colic

	AC drugs	Change Formula	Grape water	Nothing	Traditional medicine
Illiterate	53	33	13	0	0
Read & write	2	5	4	27	3
Primary school	60	0	0	0	0
Secondary school	24	0	0	0	0
College	24	0	0	0	0

P. value: 0.001

Table 7: The relationship between the age of the mothers and the sources of knowledge about colic

	Previous experience	Relatives & friends	Health care providers	No experience	Total
16 -24	15 (7.5%)	14 (7%)	5 (2.5%)	65 (32.5%)	99 (49.5%)
25 -34	16 (8%)	18 (9%)	2(1%)	55 (27.5%)	91 (45.5%)
≥ 35	2(1%)	1 (0.5%)	0	7 (3.5%)	10 (5%)
Total	33 (16.5%)	33 (16.5%)	7 (3.5%)	127 (63.5%)	200(100%)

P. value: 0.042

DISCUSSION

Colic is one of the most common problems in infancy, which leads to frequent complaints and referrals of the infant's family ⁽¹⁾. Infantile colic was crying more than three hours a day or crying more than three days a week for at least three weeks in a month ⁽²⁾. Other definition; colic pain is a constant crying in

the evening at a specific time for at least one week in an otherwise healthy child ⁽³⁾. Many mothers, did not expect colic pain in their babies especially first baby, and they were not mentally ready to confront this condition ⁽¹⁾. Prolonged crying of the infant made mothers nervous and confused. They need,

psychological informational, and spiritual support for caring their babies⁽¹²⁾.

The study showed that 56% of studied children have history of previous sibling with colic (Figure 3.2). Al-Shehri *et al*⁽¹³⁾ also demonstrated that high rate of children had history of previous sibling with colic. This does not mean that the disease is hereditary, but perhaps getting used to the wrong methods in dealing with cases of colic and repeating the same mistakes in terms of continuing artificial feeding and continuing to leave children in cold or hot weather at home by those mothers may lead to the continuation of the problem and its recurrence in babies^(14, 15, 16).

In this study, 52% of children previously consulted physician, 50.5% consulted medical staff, in different studies, many mothers, did not expect colic pain in their babies, and most of them consult doctors or medical staff about management of colic⁽¹⁷⁾. In another study, infantile colic is the most common cause for consulting a doctor. Most of the mothers expected many problems during infantile colic. The mothers did not know how to care for their infants⁽¹⁸⁾. Most of mothers haven't knowledge about infantile colic, and 17% acquired their knowledge from previous experience or relatives and friends, In Olaogun *et al* study, most of mothers knowledge regarding this condition was experience with the previous child, then from relatives and friends, then from media, and lastly from healthcare providers. Other studies showed that the concurrence with the previous findings in which a majority of mothers reported their source of knowledge from a previous child and from their parents and friends^(19, 20). The majority mothers manage infantile colic by anti-colic drug, 18.5% change formula to treat infantile colic. In similar study, Because the real cause of the pathogenesis and treatment of infantile colic still unknown, there are no clear guidelines about the treatment⁽²¹⁾. A detailed history and physical examination to identify the signs and symptoms is essential to rule out any organic cause and reassurance, self-limiting nature of the infantile colic is the first step that should be advised to the family⁽²²⁾. Some drugs that decrease gastrointestinal gas production might help some infants, but most of other trials have shown no difference in reducing episodes of infantile colic⁽¹⁵⁾. Approximately half of the mothers thought that their own milk could cause colic, resulting in giving unnecessary medical formulas and thinking that breast milk was the cause and insufficient, leading to early start of additive food⁽¹⁶⁾.

Thirty percent of mothers were completed primary school, 27% were illiterate, 19% read and write and 13% for each of secondary school and college. Different studies also showed similar finding

^(13,14). Other studies found a relation between infantile colic and the level of education of mothers^(13, 21). A statistically there is a significant relationship between the actions performed for colic according to educational levels^(15,16). It has been determined that secondary school graduate mothers are more likely to give anti-colic drugs and the blow dryer methods. On the other hand, Çiftçi *et al* did not find a statistically significant relationship between the education levels of the mothers and the applications for colic⁽²³⁾. The study demonstrated that the high rates of illiterate and read& write mothers acquired their information by consult doctors and the high rate of mother with primary, secondary and collage education consulted medical staff. In similar study, high rates of illiterate and read& write mothers consult doctors and or medical staff to receive information about colic⁽¹⁷⁾. The study demonstrated that the high rates of illiterate mothers treat their children primarily by AC drugs, Some studies most of mother with different socioeconomic and educational level used anti colic medications for management of the disease in their children^(16,18,22).

CONCLUSIONS

The study showed that the high rate of children was in 2 months of age and belonged to families lived in urban area. Most mother consulted doctor and health worker about infantile colic and most of them haven't experience about infantile colic and manage it by anti-colic drugs and changing of formula. The study demonstrated that the high rates of illiterate, read, write and secondary school mothers feed their infants by formula feeding. Anti -colic drugs were the predominant treatment in infantile colic.

REFERENCES

1. Zeevenhooven J, Browne PD, L'Hoir MP, de Weerth C, Benninga MA. Infant colic: mechanisms and management. *Nat Rev Gastroenterol Hepatol* 2018;15:479–96.
2. Wessel MA, Cobb JC, Jackson EB, Harris GS Jr, Detwiler AC. Paroxysmal fussing in infancy, sometimes called colic. *Pediatrics* 1954;14:421–35.
3. Savino F, Tarasco V: New treatments for infant colic. *Curr Opin Pediatr* 2010, 22(6):791–7.
4. Radesky JS, Zuckerman B, Silverstein M, Rivara FP, Barr M, Taylor JA, Lengua LJ, Barr RG: Inconsolable infant crying and maternal postpartum depressive symptoms. *Pediatrics* 2013, 131(6):e1857–64.
5. Wolke D, Bilgin A, Samara M. Systematic Review and Meta-Analysis: Fussing and Crying

- Durations and Prevalence of Colic in Infants. *J Pediatr* 2017;185:55–61.e4.
6. Vandennplas Y, Abkari A, Bellaiche M, Benninga M, Chouraqui JP, Çokura F, et al. Prevalence and Health Outcomes of Functional Gastrointestinal Symptoms in Infants From Birth to 12 Months of Age. *J Pediatr Gastroenterol Nutr* 2015;61:531–7.
 7. Shamir, Raanan; St James-Roberts, Ian; Di Lorenzo, Carlo; Burns, Alan J.; Thapar, Nikhil; Indrio, Flavia; Riezzo, Giuseppe; Raimondi, Francesco; Di Mauro, Antonio (2013-12-01). "Infant crying, colic, and gastrointestinal discomfort in early childhood: a review of the evidence and most plausible mechanisms". *Journal of Pediatric Gastroenterology and Nutrition*.57 Suppl 1: S1–45.
 8. Johnson JD, Cocker K, Chang E. Infantile colic: recognition and treatment. *American family physician*. 2015 Oct 1;92(7):577-82.
 9. Biagioli E, Tarasco V, Lingua C, Moja L, Savino F. Pain-relieving agents for infantile colic. *Cochrane Database of Systematic Reviews*. 2016(9).
 10. 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.
 11. Hyman PE, Milla PJ, Benninga MA, Davidson GP, Fleisher DF, Taminiu J: Childhood functional gastrointestinal disorders: neonate/toddler. *Gastroenterology* 2006, 130:1519–26.
 12. Barr RG. Colic and crying syndromes in infants. *Pediatrics* 1998;102 (5 suppl E):1282-6
 13. Al-Shehri H, Al-Mogheer BH, Al-Sawyan TH, Abualalaa AB, Jarrah OA, Jabari M, Al-Faris A. Assessment of maternal knowledge about infantile colic in Saudi Arabia. *Electronic physician*. 2016 Dec;8(12):3313.
 14. Rosen LD, Bukutu C, Le C, Shamseer L, Vohra S: Complementary, holistic, and integrative medicine: colic. *Pediatr Rev*. 2007, 28 (10): 381-5.
 15. Underdown A, Barlow J, Chung V, Stewart-Brown S: Massage intervention for promoting mental and physical health in infants aged under six months. *Cochrane Database Syst Rev*. 2006, 18 (4): CD005038.
 16. Wolke D, Bilgin A, Samara M. Systematic Review and Meta-Analysis: Fussing and Crying Durations and Prevalence of Colic in Infants. *J Pediatr* 2017;185:55–61-7.
 17. Al Saadoon M, Rizvi S, Khan I, Shuaili AK, Mamari MA. Prevalence and Associated Factors of Infantile Colic among Omani Babies. *Clin Res Open Access*. 2018;4(3).
 18. Fthenou E, Aboulsoud S, Leventakou V, Haddad A, Kogevas M, Sadoun E. A Review of Mother-Child and Birth Cohort Studies in the Middle East Area. Available at SSRN 3523854. 2020.
 19. Olaogun A, Ayandiran O, Olalumade O, Obiajunwa P, Adeyemo F. Knowledge and management of infants' pain by mothers in Ile Ife, Nigeria. *International journal of nursing practice*. 2008 Aug;14(4):273-8.
 20. Aktaş S, Küçük Alemdar D. Correlation between infantile colic and maternal breastfeeding self-efficacy, breastfeeding success and breast milk amount. *Journal of Tropical Pediatrics*. 2019 Aug;65(4):321-7.
 21. Mgongo M, Hussein TH, Stray-Pedersen B, Vangen S, Msuya SE, Wandel M. Facilitators and barriers to breastfeeding and exclusive breastfeeding in Kilimanjaro region, Tanzania: a qualitative study. *International journal of pediatrics*. 2019 Feb 3;2019.
 22. More SG, Sankeshwari R, Ankola AV. Exploring parental knowledge and indigenous practices for infant teething in indian population: A cross-sectional study. *International Journal of Clinical Pediatric Dentistry*. 2019 Nov;12 (6):479.
 23. Çiftçi EK, Arıkan D. Methods used to eliminate colic in infants in the eastern parts of Turkey. *Public Health Nursing*. 2007 Nov;24(6):503-10.