Journal for Re Attach Therapy and Developmental Diversities
eISSN: 2589-7799
2023 July; 6 (7s): 673-680

Assessment of Mothers' Knowledge toward Non-Pharmacological Pain Management from Psychological Perspective among Children under three years

***Noora Farhan Hassan AL-Abedi,**Abdul Mahdi Abdul Reda Hassan**

*****PhD. Pediatric Nursing, College of Nursing/University of Babylon.
nora.farhan@uokufa.edu.iq

******Professor. Psychiatric & Mental Health Nursing, College of Nursing/University of Babylon, Iraq.
abd_mahdi2003@yahoo.com

Received: 12-May-2023
Revised: 18-June-2023
Accepted:01-July-2023

Abstract:

Background: One of the health problems known all over the world is pain. Therefore, relief and management are human rights and is aspect recognized by World Health Organization. Millions of people worldwide suffer from pain, whether in the hospital, their homes, or assisted living facilities. The incidence of moderate to severe pain is 20–80% worldwide. Community-based surveys find that 15–25% of adults suffer from chronic pain at any given time.

Objective: to assess mother's knowledge of non-pharmacological pain management and determine the relationship between mother's knowledge and their demographic data.

Material and methods: A cross-sectional descriptive study is carried out in AL-Zahra teaching hospital at AL-Najaf city; the study has been conducted from 13th April 2022 to 2nd March 2023. A non-probability (purposive sample) of 96 mothers.

Results: The study results reveal a significant relationship between mother's knowledge and mother's education and occupation.

Conclusion and Recommendation: Most of the mothers surveyed demonstrated a limited understanding of non-pharmacological pain management methods. The study suggests that enhancing awareness among mothers through educational programs focused on non-medicated pain management would be beneficial. This approach aims to improve their knowledge levels, leading to a reduction in drug usage due to potential long-term effects.

Keywords: Mothers, Knowledge, non-pharmacological pain management.

INTRODUCTION:

Pain refers to an unfavorable combination of sensory and emotional sensations linked to real or potential harm to tissues. Non-pharmacological pain management involves employing alternative treatments like comfort therapy, physical and occuApational therapy, psychosocial therapy/counseling, and neurostimulation to effectively control and diminish pain without relying on medication. **(Hosseni, et al., 2016);(Ali, et al., 2013).** One of the health problems known all over the world is pain. Therefore, relief and management are human rights and is aspect recognized by global health bodies such as the World Health Organization.(**RONO,2021)**.

Pain afflicts a substantial number of individuals globally, regardless of whether they are hospitalized, residing at home, or in assisted living facilities. The occurrence of moderate to severe pain is prevalent, ranging from 20% to 80% on a global scale. Surveys conducted within communities indicate that approximately 15% to 25% of adults experience chronic pain at any given moment. **(Jira, et al.,2020**). Pain, a universal health concern, poses significant global challenges, particularly for highly vulnerable and often underserved children. Despite the growing body of scientific evidence on pediatric pain in recent years, several obstacles hinder the effective management of pain in children. Consequently, inadequate and inefficient pain management persists during hospitalization, leading to children enduring unnecessary pain (**Lulie, et al., 2022)**

The American Society for Pain Management Nursing (ASPM), has mentioned everyone has the right to the best pain management before, during, and after a surgery that could be uncomfortable or unpleasant. Exposure to pain can affect a child's central nervous system and enhance their sensitivity to pain, in addition to

causing dread, misery, and a lack of trust. So, failure to provide adequate pain relief can hurt children mentally and physically. **(Shaffer, 2019);(Linhares et al., 2012**).

Numerous studies have revealed that parents, particularly mothers, desire to participate in pain management or serve as primary caregivers. Evidence also suggests that parent participation positively affects infants and parents alike; it increases developmental support for infants and facilitates the transfer of responsibility from nurse to parent. Parental participation can also improve pain assessment and management practices. Therefore, parents need to take active roles in infant pain management, but to do so; they need increased information about all aspects of pain care and encouragement from nursing staff. **(Pölkki, et al., 2018).**

OBJECTIVES OF THE STUDY: This study aimed to assess mother's knowledge of non-pharmacological pain management and determine the relationship between mother's knowledge about non-pharmacological pain management and their demographic data.

METHODOLOGY:

A cross-sectional descriptive study is carried out in AL-Zahra teaching hospital at AL-Najaf City; The study was conducted from 13th April 2022 to 2nd March 2023. A non-probability (purposive sample) of 96 mothers and selected according to some criteria such as mothers living in an Al-Najaf city and having children under three years. All mothers were of Iraqi Nationality. Babies were free from any congenital anomalies. The questionnaire format consisted of (2) parts: **Part1:Socio-demographic data: consists from Section 1:Mother's demographic data:** This includes age, education, occupation, residence area, type of family, and socio-economic status. **Section 3: child's demographic data:** This includes age, gender, child sequence in the family, and number of pain episodes).

Part 2: Mother's Knowledge about non-pharmacological pain Management: This part of the questionnaire includes 50 items that clarify the mother's knowledge regarding non-pharmacological pain management, measured by multiple-choice questions. The knowledge of mothers was rated and scored according to the following patterns: Multiple-choice questions were used for rating the knowledge items. The scoring is as follows: two for correct answer, and one for incorrect answer.

RESULTS:

Table 1. Socio-Demographic Characteristics of the study sample.

Socio-Demographic data	Rating and intervals	Frequency	Percent
Mother's Age (year)	<= 25	32	33.3
	26 - 30	37	38.5
	> 30	27	28.2
Level of education	Read and write	5	5.2
	Primary	24	25
	Secondary	45	46.9
	Institute	2	2.1
	College/higher	20	20.8
Occupation	Employed	16	16.6
	Housewife	80	83.4
Residence	Rural	16	16.7
	Urban	80	83.3
Type of family	Nuclear	39	40.6
	Extended	57	59.4
Socio-economic status	Satisfied	32	33.3
	Satisfied to some extent	57	59.4

	Unsatisfied	**7**	**7.3**
Child's age (month)	**≤ 12**	**53**	**55.2**
	13 - 24	**31**	**32.3**
	25 - 36	**12**	**12.5**
Child's Gender	**Boy**	**49**	**51.0**
	Girl	**47**	**48.9**
Child's order	**First**	**29**	**30.2**
	Second	**30**	**31.3**
	Third	**14**	**14.6**
	Fourth or more	**23**	**23.9**
Number of pain episodes	**Once a week**	**22**	**22.9**
	Once a month	**61**	**63.5**
	Several times a week	**13**	**13.5**

Table (1) reveals that (38.5%) of participants within the age groups (26-30) years old. Regarding the mothers' education, about (46.9%) of them graduated from secondary school. Additionally, most of the study sample (83.4%) were housewives. Concerning the participant residence area, the majority of the study sample (83.3%) are urban dwellers. In regard to family type, more than half the mothers are from extended families. Concerning socio-economic status, (59.4%) of the study sample were somewhat satisfied with monthly income. Still, this finding may be overestimated, and the current result is due to a small, non-random sample. According to the evidence, poverty and unemployment are increasing in our society, and therefore, most Iraqi families are of a medium or limited income level. Concerning the child's age, most mothers had children under one year old. As for the child's gender, more than half of mothers had boy children. Regarding the sequence of the child in the family, about (31.3%) of the first child. Regarding the number of pain episodes, most children complain of pain and are hospitalized at least once a month.

Table 2:Sources of mothers' information about non-pharmacological pain management.

Items	Rating and intervals	Frequency	Percent
Did you receive advice about the use of non-pharmacological pain management?	**No**	**42**	**43.8**
	Yes	**54**	**56.2**
Total		**96**	**100.0**
Sources of information	**None**	**42**	**43.8**
	Physician	**11**	**11.8**
	Health Workers	**7**	**7.3**
	Family	**17**	**17.7**
	Friend	**5**	**5.2**
	physician, and Health Worker	**9**	**9.3**
	Mass Media	**5**	**5.2**
Total		**96**	**100.0**

Table (2) reveals that the (56.2%) of mothers receive information about the use of non-pharmacological pain management. The family is the main source of this information.

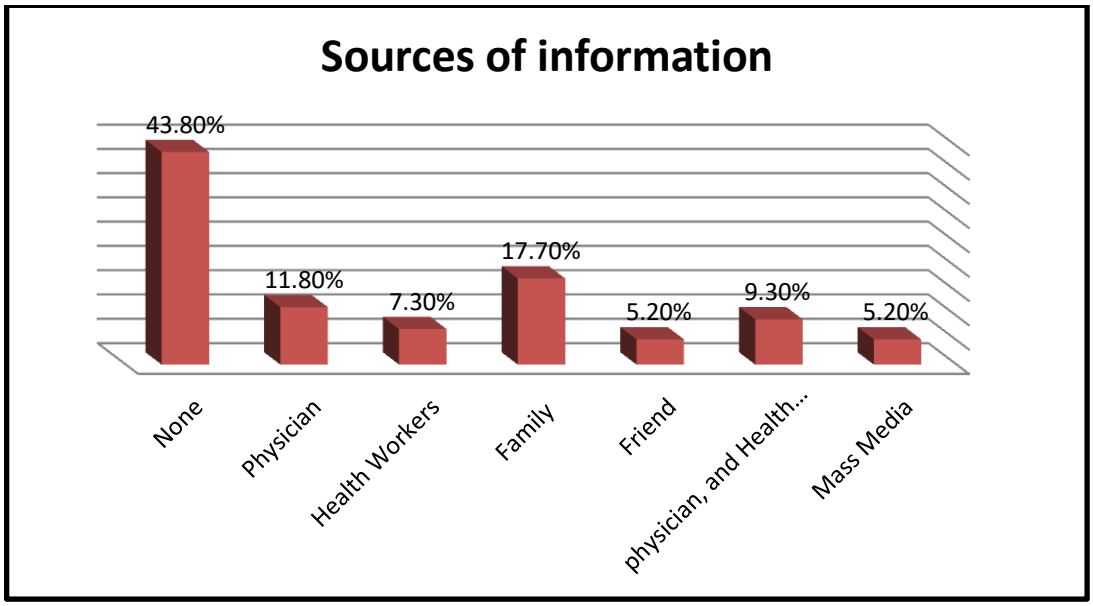

Fig. 1: Sources of mother Information about non-pharmacological pain strategies.

Table 3: Distribution of the study sample responding to the knowledge items about pain.

Questionnaire	Correct		Incorrect		Mean score	Assessment
	No.	%	No.	%		
Newborn children feel pain	56	40.6	40	59.4	1.58	Good
Meaning of pain for mother	29	30.2	67	69.8	1.3	Poor
Children who can be distracted from pain are usually those who are suffer from mild to moderate pain	31	32.3	65	67.7	1.32	Poor
One of the most common causes of pain in infants is illness such as in infections or colic	62	35.4	34	64.6	1.56	Good
The child's feeling of pain, even if he is a newborn	63	34.4	33	65.6	1.66	Good
Increase of the pain in a child, can lead to separation anxiety regardless of the physical stimuli	27	28.1	69	71.8	1.28	Poor
Factors that affect pain include child's age and mood	27	28.1	69	71.9	1.28	Poor
Vital signs such as temperature, pulse and respiration are unreliable measurement of patient's pain	35	36.4	61	63.5	1.36	Poor
Acute pain occurs suddenly and lasts less than 3 months	31	32.3	65	67.7	1.32	Poor
One of the characteristics of acute pain is having a specific cause	39	40.6	57	59.4	1.66	Good
Headache is the most common chronic pain complaint of children and adolescents	39	40.6	57	59.4	1.41	Poor
Pain is classified as chronic if lasted more than 3 months	30	31.2	66	68.7	1.31	Poor
Common signs and symptoms of pain in children not include increase weight	24	25	72	75	1.25	Poor

Identify figure of very severe pain	32	33.3	64	66.7	1.33	Poor
Lack of social interaction is considered as a complication of pain in children	26	27.1	70	72.9	1.27	Poor
Child who cries and turns his head from side to side a lot refers to pain site	56	44.8	40	55.2	1.58	Good
Nonverbal behavior that indicates that the child is in pain	27	28.1	69	71.9	1.28	Poor
Aggressive behavior later on is one of the psychological effects of pain in children	37	38.5	59	61.4	1.35	Poor
The most accurate judge of the intensity of the patient's pain is the patient himself	21	21.8	75	78.1	1.21	Poor
Not appropriate to specify localization of pain when assessing pain in an infant	60	37.5	36	62.5	1.63	Good

This table reveals that the majority of the study sample has poor knowledge about pain for all items except items numbered (1,4,5,10,16, and 20) their responses were good.

Table 4: Distribution of the overall assessment of mother's knowledge about pain.

Main Domain	M.S	Assessment
Overall Mother's Knowledge	**1.40**	**Poor**

N(96), Good (Mean of score ≥ 1.5), poor (Mean of score < 1.5).

Table (4) shows that the overall assessment of mother's knowledge about pain was poor.

Table 5: Distribution of mothers' knowledge about non-pharmacological pain managements items.

	Items	Correct		Incorrect		Mean score	Assessment
		No.	%	No.	%		
1.	Non-pharmacological strategies may reduce pain perception	38	39.6	58	60.4	1.4	Poor
2.	Know the technique used for pain management	50	52.1	46	47.9	1.52	Good
3.	Non-pharmacological pain interventions can be considered as behavioral strategies	21	21.8	75	78.1	1.22	Poor
4.	Non-pharmacological pain management includes all of following except using drugs	31	32.3	65	67.7	1.32	Poor
5.	Non-pharmacological interventions such heat, music, pictures, etc are effective to reduce pain in the case of mild to moderate pain	26	27.1	70	72.9	1.27	Poor
6.	Doing deep breathing exercises for the child who suffers from certain pain for reducing pain and removing anxiety in children	35	36.4	61	63.5	1.36	Poor
7.	Carrying the baby and singing a quietly is considered one of the simple techniques for relaxation	24	25	72	75	1.25	Poor
8.	The use of humor and laughter as a distraction method is effective in reducing pain in children	37	38.5	59	61.4	1.39	Poor
9.	The use of a pacifier in infants to reduce the feeling of pain in some cases, as this method is considered as non-pharmacological methods	37	38.5	59	61.4	1.38	Poor
10	The preferred strategy for relieving muscle spasm pain or tension is relaxation	61	63.5	35	36.4	1.64	Good
11	Watch funny videos or listening to music is one way to	26	27.1	70	72.9	1.27	Poor

	distract children to reduce pain						
12	The method that works to relax and distract at the same time, which helps relieve pain in the child is music Therapy	58	60.4	38	39.6	1.6	Good
13	Giving a placebo medicine to the patient to assess whether feels pain or not	25	26.0	71	73.9	1.26	Poor
14	The best procedure to reduce pain and discomfort in a child after a heel prick procedure	33	34.3	63	65.6	1.34	Poor
15	Benefits of skin-to-skin contact with the baby	24	25	72	75	1.25	Poor
16	After giving the injection, we should advise the mother to cover the infant with a blanket roll	32	33.3	64	66.7	1.33	Poor
17	Endorphins, a substance that blocks the transmission of painful stimuli, are released by using message	24	25	72	75	1.25	Poor
18	The most effective strategy for relieving newborn pain	33	34.4	63	65.6	1.34	Poor
19	Benefits of massage provides to the child	29	30.2	67	69.8	1.3	Poor
20	Psychological benefits of doing a massage for the child	34	35.4	62	64.6	1.35	Poor
21	The use of acupuncture facilitates the release of substances such as (endorphins).	38	39.6	58	60.4	1.4	Poor
22	The use of cold application on the site of pain is one of the non-pharmacological measures under the category cutaneous stimulation	29	30.2	67	69.8	1.3	Poor
23	The correct procedure when using ice bag to relieve pain	32	33.3	64	66.6	1.33	Poor
24	Pain can be relieved by Changing the child's position and a comfortable positioning	35	36.4	61	63.5	1.36	Poor
25	Heat bags are used to relieve pain caused by inflammation and spasm.	41	42.7	55	57.3	1.43	Poor
26	Using ice bags for children who suffer from toothaches is effective in reducing pain.	55	57.3	41	42.7	1.57	Good
27	Knowledge about herbs that help relieve pain in a children	58	60.4	38	39.6	1.60	Good
28	Emotional support strategies to reduce pain in children	50	52.1	46	47.9	1.52	Good
29	Participation of family members in pain management measures can be considered as emotional support strategy	55	57.3	41	42.7	1.57	Good
30	Providing a suitable light and temperature leads to pain relief	54	56.2	42	43.7	1.56	Good

This table shows that the majority of participants had inadequate knowledge about non-pharmacological pain managements for all items except those numbered (2, 10, 12, 26, 27,28, 29, and 30), for which the mothers' responses were acceptable.

Table 6: Distribution the overall assessment of mother's knowledge about non-pharmacological pain managements.

Main Domain	M.S	Assessment
Overall Mother's Knowledge	**1.39**	**Poor**

This table shows the overall assessment of mother's knowledge about non-pharmacological pain managements was poor.

DISCUSSIONS:

However, our study findings indicated that the greater percentage of participants within age groups (26-30) years (37.5%). This result is consistent with research done by **(Abolwafa & Ali, 2019);** their study mentioned that the dominant age of mothers is (30) years. The age group (26–30) was the most likely to respond and engage in the program, whereas the other age groups were unable to commit to attendance or were disinterested in the program; therefore, their proportion was low. (Researcher).

Regarding the mothers' education, about (46.9%) of the study group were secondary school graduates. The present study's findings are compatible with those of **(El-Adham, et al.,2020),** who found that (36%) of study participants' graduated from secondary school. Regarding occupational status, the present study shows that (83.4%) of the study group were housewives, while the remaining only (16%) of participants were employees. Due to their substantial work commitments, many working mothers often face difficulties actively participating and engaging in program sessions. As a result, their involvement in the sessions was relatively low compared to non-working mothers, as observed by the researcher. Concerning the residency area, The findings of the study indicate that more than half of the study participants are urban dwellers. As regards the family type, there is the majority of mothers of extended families.

In regard to the socio-economic status, The monthly income of participants (59.4%) was sufficient to some extent. Evidence suggests that our society is experiencing increased poverty and unemployment, so most Iraqi families have moderate or low incomes. According to the report issued by the Ministry of Planning and Development in Iraq in 2021, the Iraqi per capita gross domestic product decreased during the past year, compared to the preceding one, as a result of the economic downturn due to the COVID-19 pandemic, not to mention the rentier economy **(MOP, 2021).**

Regarding child age, the results demonstrated that the highest percentage of mothers (59.4%) have children within the age of one year or less. Concerning the child's gender, about 51% of the children in the study group were boys, while 49% were girls. Concerning the sequence of the child in the family, about (31.3%) of them was the first child. This result is consistent with another study in Egypt done by (**Abd Elaziz and Mohamed,2019)** found that more than half of the children in the study sample (55.0%) were males, and about (59.0%) were ranked as the first child in the family.

Regarding the number of pain episodes, most infants are admitted to the hospital at least once a month. This result was in agreement with another study done by **(Gorodzinsky, et al., 2012**); According to this study, a significant number of parents (22%) indicated that their children experienced pain once a month, leading to hospital admissions. Additionally, a smaller percentage (7.3%) reported their children suffering from pain multiple times a week, while the lowest percentage (2.5%) mentioned their children experiencing pain once a day. According to **(table 2 and Figure 1)** reveals that the majority of mothers receive information about non-pharmacological pain management, while the remaining women (43.8%) reported that they don't get information about the study topic. In detail, the family is the main source of information which took a higher percentage of responses (17.7%) whereas, for physicians, the percentage was (11.8%) only.

Concerning the overall assessment of mother's knowledge about pain (table 4), the study findings show that the overall knowledge was poor at a mean score was (1.40). The result of the current study is consistent with the study carried out by several researchers (Saadatjoo, et al., 2013); they mentioned that most study participants had low knowledge of pediatric pain management. The current study's results revealed a lack of mothers' awareness of how to use some non-pharmacological strategies to relieve pain in their children. This necessitated the need to increase mothers' awareness of how to deal with pain when it occurs again in the future. While tables (5 & 6) demonstrated that most participants had inadequate knowledge about non-pharmacological pain management for all items except those numbered (2, 10, 12, 26, 27,28, 29, and 30), for which the mothers' responses were acceptable. Moreover, several research studies also showed that most mothers have poor to moderate knowledge regarding non-pharmacological pain management **(Abd-Alrazzaq & Aziz, 2021).**

The current study exposes that there is a significant relationship between mothers' knowledge and their demographic variables, such as (education and occupation). This finding agrees with a previous study done by **(Abed El Fatah & Mobarak, 2016)** which indicates that mothers have adequate knowledge about pain (44.4%) in employee mothers, in comparison to housewife mothers about (37.0%) .

RECOMMENDATIONS: The researcher recommends Increasing mothers' awareness through educational programs about non-drug pain management to improve and enhance the mother's level of knowledge and reduce

the use of medications because of their long-term effects. In order to generalize the results, the study recommended conducting further studies on a large number of the population and in several hospitals in several governorates.

REFERENCES:

1. Abd Elaziz, S. M., & Mohamed, R. A. E. (2019). Effect of self care management program on pain and fatigue in sickle cell children. *Int J Novel Res Healthc Nurs*, *6*(3), 747-761.
2. Abd-Alrazzaq, A. I., & Aziz, A. R. (2021). Effectiveness of An Educational Program on Mother's Knowledge toward their Children with Sickle Cell Anemia about Non-Pharmacological Approaches to Pain Management in Basra Center for Hereditary Blood Diseases. *Indian Journal of Forensic Medicine & Toxicology*, *15*(3).
3. Abed El Fatah, S. M., & Mobarak, A. A. (2016). Mothers' Knowledge and Practices for their Children with Sickle Cell Anemia At New Valley Governorate Hospitals. *Assiut Scientific Nursing Journal*, *4*(9), 144-155
4. Abolwafa, N. F. &Ali,A.S. Educational Program for Empowering Mothers of Fewer Than Five Children to Overcome Sickle Cell Crisis. IJND 2019. 09(04), 21–31.
5. Ali HS, Ibrahim Y, Mohamed E. Non-pharmacological pain management: nurses' knowledge, attitudes and practices in selected hospitals at Makkah El-Mukarramah. *Life Sci J*. 2013;2:10. [Google Scholar] [Ref list].
6. Amouzeshi, Z., Unesi, Z., & Saadatjoo, S. A. (2013). Mothers' Knowledge of pediatric pain management in the pediatric ward of Valli-e-asr hospital in 2011. *Journal of Birjand University of Medical Sciences*, *19*(04).
7. El-Adham, N. A. E.-, Said, D. A., & Awad, H. (2020). Effect of an Educational Program for Parents of Children with Sickle Cell Anemia. *Journal of Nursing and Health Science*, *9*(3), 21–30. https://doi.org/10.9790/1959- 0903062130.
8. Gorodzinsky, A. Y., Bernacki, J. M., Davies, W. H., Drendel, A. L., & Weisman, S. J. (2012). Community parents' use of non-pharmacological techniques for childhood pain management. *Children's Health Care*, *41*(1), 1-15.
9. Hosseni SF, Pilevarzadeh M, Vazirinasab H. Non-pharmacological strategies on pain relief during labor. *Biosci Biotechnol Res Asia*. 2016;13:701–706.
10. Jira, L., Weyessa, N., Mulatu, S., & Alemayehu, A. (2020). Knowledge and attitude towards non-pharmacological pain management and associated factors among nurses working in benishangul gumuz regional state hospitals in western Ethiopia, 2018. *Journal of Pain Research*, 2917-2927.
11. Linhares, M., Doca, F., Martinez, F., Carlotti, A., Cassiano, R., Pfeifer, L., Finley, G. (2012). Pediatric pain: Prevalence, assessment, and management in a teaching hospital. *Brazilian Journal of Medical and Biological Research, 45*(12), 1287-1294. doi:10.1590/S0100-879X2012007500147.
12. Lulie, E., Berhanu, M., & Kassa, S. F. (2022). Knowledge, attitude, and associated factors toward pediatric pain management among nurses at the University of Gondar Comprehensive Specialized Hospital: A cross-sectional study. *SAGE Open Medicine*, *10*, 20503121221075163.
13. MOP (2021) *Report of GDP for iraqi persone, News*. Available at: https://mop.gov.iq/news/view/details?id=583 (Accessed: 14 June 2021).
14. Pölkki, T., Korhonen, A., & Laukkala, H. (2018). Parents' use of non-pharmacologic methods to manage procedural pain in infants. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, *47*(1), 43-51.
15. Rono, J. (2021). Non pharmacological pain management in pediatric nursing (1-10 year).
16. Shaffer, K. (2019). Pediatric pain management during intravenous line placement: nursing perceptions and interventions

.