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Araştırma Makalesi/Research Article *2023 - 5(2)*

The Attitudes of Parents Having Children of 5 to 11 Years on the Use of Painkillers *

5-11 Yaş Çocuğu olan Ebeveynlerin Ağrı Kesici İlaç Kullanımına İlişkin Tutumları

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Abstract

Objective: A wide variety of pain experiences are experienced during childhood. Children and parents may be inadequate in managing these pains. Parents may not want to use painkillers because they are afraid of the side effects of analgesics or that they are addictive. Little is known about parental attitudes in this context in Turkey. This study was planned to determine the attitudes of parents who have 5-11 aged children to administer pain medication.

Methods: This research was conducted in descriptive type and the purposeful sampling method, one of the nonprobability sampling methods, was used in this study. The study was carried out in a primary school located in a town in the south of Turkey. Sociodemographic Data Collection Form and The Medication Attitudes Questionnaire which was prepared by the researchers by examining the literature, was used to collect the data. The sample of the study consisted of 395 parents.

Results: It was found that sociodemographic variables parents' did not affect the use of painkillers. It is seen that most of the parents have inadequate information and training about the use, effects, frequency of use, and side effects of analgesics.

Conclusion: It was determined that parents used various non-pharmacological treatments to manage their children's pain. In this context, it is seen that everyone should be made aware, without making any distinction between parents.

Keywords: Analgesic drugs, paediatric pain, pain relief belief, painkillers attitude, parents

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Öz

Amaç: Çocukluk döneminde çok çeşitli ağrı deneyimleri yaşanır. Çocuklar ve ebeveynler bu ağrılarla baş etmede yetersiz kalabilmektedirler. Ebeveynler analjeziklerin yan etkilerinden korktukları ya da bağımlılık yaptığını düşünerek, ağrı kesici kullanmak istemeyebilirler. Türkiye'de bu bağlamda ebeveyn tutumları hakkında çok az şey bilinmektedir. Bu araştırma, 5-11 yaş çocuğu olan ebeveynlerin ağrı kesici kullanımına ilişkin tutumlarının belirlenmesi amacıyla planlanmıştır.

Yöntem: Tanımlayıcı tipte yapılan bu araştırmada olasılıksız örnekleme yöntemlerinden biri olan amaçlı örnekleme yöntemi kullanılmıştır. Araştırma, Türkiye'nin güneyinde bir ilçede bulunan bir ilkokulda gerçekleştirilmiştir. Verilerin toplanmasında araştırmacılar tarafından literatür incelenerek hazırlanan Sosyodemografik Veri Toplama Formu ve İlaç Tutumları Anketi kullanılmıştır. Araştırmanın örneklemi 395 ebeveynden oluşmaktadır.

Bulgular: Ebeveynlerin sosyodemografik değişkenlerinin ağrı kesici kullanımını etkilemediği bulunmuştur. Ebeveynlerin çoğunun analjeziklerin kullanımı, etkileri, kullanım sıklığı ve yan etkileri konusunda yetersiz bilgi ve eğitime sahip olduğu belirlenmiştir.

Sonuç: Ebeveynlerin çocuklarının ağrılarını yönetmek için çeşitli farmakolojik olmayan tedaviler kullandıkları belirlendi. Bu bağlamda anne baba ayrımı yapılmadan tüm ebeveynlerin bilinçlendirilmesi gerektiği görülmektedir.

Anahtar kelimeler: Ağrı kesici inancı, ağrı kesici tutumu, analjezik ilaçlar, anne-baba, pediatrik ağrı

INTRODUCTION

Children often experience pain associated with a disease or trauma and injury, such as abdominal pain, neuropathic pain, migraine, surgery. Therefore, there is growing concern that it may have long-term adverse effects on the brain (Lee et al., 2019; Stubberud et al., 2016; Yu & Kim, 2021). "Pain can negatively impact all aspects of life, including mood, sleep, physical activity, socializing with friends and family, and school" (Lalloo & Stinson, 2014; Palermo, 2020).

Children and adolescents have the right to receive appropriate pain management treatment (World Health Organisation, 2020). Despite increasing knowledge and guidelines research over the last 10 years shows that moderate to severe pain is still common in hospitalized children and analgesic administration is not optimal (Marchetti et al., 2016; Walther-Larsen et al., 2017). However, children may experience persistent pain due to inappropriate pain management, lack of appropriate parental involvement, or lack of mutual trust between healthcare providers and children (Alotaibi et al., 2018). In a study, although parents were satisfied with their child's pain management in a hospital setting, they stated that most of the time, pain history was not taken, pain assessment tools were not used, and hospital staffs were not adequately cooperated with them in pain management, and they were not informed about the use of non-pharmacological methods to relieve pain (Twycross et al., 2015).

Parents can play an integral role in managing their children's pain. Relying on parent reports about whether their child is unwell is recommended, and parents will often identify best practices for soothing their child and adjusting to the particular medical condition (Carter et al., 2017). Parents have a significant role not only in the accurate assessment of the child's pain and its effective management, but also in providing the age-appropriate dose of analgesics, and in the use of non-pharmacological methods to relieve pain (Friedrichsdorf & Goubert, 2019). But many parents are unaware of evidence-based strategies to support their children during painful experiences (Gagnon et al., 2020). Parents may have wrong or inadequate knowledge and attitudes regarding their children's expression of pain and avoid the use of painkillers for fear of their side effects (Yu & Kim, 2021).

Among the insufficient knowledge and attitudes of the parents, the most common thoughts are that children will always tell their parents when they have pain and include false beliefs about the side effects, tolerance, frequency of use, and addiction to painkillers (Yu & Kim, 2021). As a result of these false beliefs, parents apply insufficient painkillers to their children and may fail in pain management (Voepel-Lewis et al., 2015). Nurses should be aware that the most effective way to reduce a child's pain at home is by targeting parents. They can prepare parents for pain management at home by training them in pain assessment or by organizing daily dosing schedules for parents (Parker et al., 2018). Thus, the self-efficacy of parents in assessing and managing their children's pain will increase (Yu & Kim, 2021). In Turkey, limited data are examining the knowledge, attitudes, and behaviors of parents about their children's pain management, pain medication, and pain management practices that they do at home (Boztepe et al., 2020; Esenay et al., 2015).

This study was planned to determine the attitudes of parents who have 5-11 aged children to administer pain medication.

METHODS

Study Design: This study was conducted in descriptive type and the purposeful sampling method, one of the nonprobability sampling methods, was used in this study.

Research Questions:

1. What are the attitudes of parents with 5-11 years old children towards the use of painkillers?
2. What are the factors affecting the attitudes of parents with 5-11 years old children towards the use of painkillers?
3. Do parents with 5-11 years old children use non-medical practices when there is pain?

Variables of the Study: The independent variables were the sociodemographic characteristics of the parents and child. The dependent variable was the Medication Attitudes Questionnaire score.

Settings of the Study: The study was carried out in a primary school located in a town in the south of Turkey. There are six kindergartens, five 1st, 2nd, 3rd grade, and six 4th grade students in the school in the 2020-2021 academic year, and there are 854 students in total. The study was carried out to reach all parents with children enrolled in the school between January-May 2021.

Population of the Study: In determining the research sample, it was calculated as 266 at the 95% confidence interval by using the formula used when the number of people in the population was known. Parents who have children registered in the primary school where the study was conducted and parents of students who volunteered to participate study were included in the study. Parents who did not know Turkish and did not want to participate in the study were excluded from this study. Parents of children with chronic pain or any persistent physical or psychological condition were excluded. Only one parent and parents with more than one child registered in the school were asked to complete the form for only one child. The study was completed with a total of 395 people. The error rate due to the sample size of the study was found to be 4.95% at the 99% confidence interval.

Data Collection: Data were collected using an online web-based questionnaire via Google Forms. Since education in schools is carried out in the form of distance education within the scope of Covid-19 measures, the questionnaire was delivered to parents via social media networks through the school principal and classroom teachers. Before starting the study, it was stated to the parents that the purpose of the study and it's done voluntarily, and they were free to participate in the study. The parents who agreed to participate in the study started to answer the questions after they electronically confirmed that they volunteered. Answering the forms took an average of 10-15 minutes. Data collection was completed with 395 parents.

Data Collection Tools: Socio-demographic Form and The Medication Attitudes Questionnaire which were prepared by the researchers by examining the literature, were used to collect the data.

Socio-Demographic Form: The sociodemographic characteristics form prepared by the researchers consists of 10 questions such as the age of the mothers, educational status, occupational distribution, the number of children and the age of the children, gender, presence of chronic disease, and whether they had undergone surgery before.

Medication Attitudes Questionnaire (MAQ): The MAQ was developed by Zeev N. Kain and revised by Rachel Yafta Rony to examine parental attitudes toward the use of painkillers and to treat children's pain (Rony et al., 2010). The items of the scale aim to evaluate the attitudes and beliefs of parents regarding the use of analgesics in children's pain. In Turkey, Deniz (2019) conducted the validity-reliability study of the scale and the Cronbach alpha value was found to be 0.73. The scale consists of 16 items and is evaluated as a seven-point Likert

scale. 1= Strongly agree, 2= Agree, 3= Slightly Agree, 4= Neither Agree, nor Disagree, 5= Slightly Disagree, 6= Disagree, 7= Strongly Disagree. A minimum of 16 and a maximum of 112 points can be obtained for the entire scale (Deniz, 2019). In this study, the Cronbach alpha value was found to be 0.71.

Ethical Considerations: Institutional permission (Date: 19/11/2020, No: E.122344) from Akdeniz Provincial Directorate of National Education and ethical approval (Date 05/02/2020 No: KAEK-78) were obtained from Akdeniz University Clinical Research Ethics Committee to conduct the study. The consent of the parents was obtained by informing them about the study on the first page of the data collection tool.

Data Analysis: Statistical analyses of the data were performed using the SPSS Statistics Base V 23 version of the Statistical Package for the Social Sciences software. The numerical variables were examined with Skewness and Kurtosis values for their conformity to the normal distribution. It was determined that the values of the Medication Attitudes Questionnaire (Skewness: 0.741, Kurtosis: 0.967) were between (+2.0) and (-2.0), providing normality (George & Mallery, 2010). Descriptive statistical methods (frequency, percentage, mean and standard deviation) were used to evaluate the data of the study, and a t-test for independent variables and one-way analysis of variance was used to test the difference between groups. The results were evaluated at a 95% confidence interval and $p<.05$ significance level.

RESULTS

Some characteristics of parents and their children are given in Table 1 (Table 1). 58.2% of mothers and 56.7% of fathers are between the ages of 31-40. The majority of the parents stated that their education level is university graduate (mother: 32.4%, father: 32.7%) and their income level as income equals expenditure (62.8%). 53.9% of the parents have two children, 50.9% of the children who go to school are boys and 40.8% are between the ages of 7-8. Parents reported that 10.6% of their children had a chronic disease and 21.8% had undergone previous surgery. The mean of the responses given to the Medication Attitudes Questionnaire items ranged from 1.59±1.15 to 5.22±1.56 (min: 1 – max: 7). The mean score for the total of the scale was determined as 51.42±11.06 (Table 2). No statistically significant difference was found between the total score of the scale and the parents' age, educational status, income level, number of children, gender of the child, age of the child, the presence of chronic disease, and surgery history in the child ($p>.05$) (Table 1).

Table 2 presents parents' concerns or doubts about the addictive potential, side effects, and benefits of painkillers included in the Medication Attitudes Questionnaire. Parents stated that they mostly agreed with the statements "Children should be given as little painkillers as possible due to their side effects" with 94.2% and "Painkillers have many side effects" with 88.6%. Parents also stated that they did not agree with the statements "You do not need to worry about the side effects of painkillers" with 71.6% and "Painkillers show the same effect no matter how often they are used" with 53.2%. In addition, it was observed that parents were mostly undecided with 14.4% in the statements "A child can't become dependent on painkillers when he takes medication for pain" and "Using painkillers for children's pain causes them to abuse other drugs later on".

Table 1. Some characteristics of parents, their children, and the mean scores of the MAQ regarding these characteristics (n= 395)

Parental Characteristics		**n (%)**	**MAQ Mean (*SD*)**	**F**	**p**
Mother's age	30 and below	82 (20.8)	51.41 (13.18)	1.525	.219
	between 31-40	230 (58.2)	50.76 (10.57)		
	41 and above	83 (21.0)	53.24 (9.96)		
Mother's education	Primary school graduate	102 (25.8)	51.31 (12.76)	1.596	.190
	Secondary school graduate	82 (20.8)	49.86 (10.54)		
	High school graduate	83 (21.0)	53.54 (12.21)		
	Graduated from a university	128 (32.4)	51.13 (8.56)		
Father's age	30 and below	44 (11.1)	50.75 (13.82)	1.060	.348
	between 31-40	224 (56.7)	50.88 (11.16)		
	41 and above	127 (32.2)	52.59 (9.73)		
Father's education	Primary school graduate	95 (24.1)	52.26 (12.13)	1.844	.139
	Secondary school graduate	76 (19.2)	48.85 (11.30)		
	High school graduate	95 (24.1)	52.46 (11.70)		
	Graduated from a university	129 (32.7)	51.55 (9.37)		
Income status	Income less than expenses	75 (19.0)	50.28 (12.85)	1.117	.328
	Income equals expense	248 (62.8)	51.31 (10.73)		
	Income more than expenses	72 (18.2)	52.97 (10.14)		
Number of children	1	65 (16.5)	52.64 (12.53)	0.438	.726
	2	213 (53.9)	51.32 (10.42)		
	3	88 (22.3)	51.22 (11.81)		
	4 and above	29 (7.3)	50.00 (10.08)		
Child's age	6 and below	83 (21.0)	51.86 (9.93)	0.095	.910
	7-8 years	161 (40.8)	51.39 (10.19)		
	9 and above	151 (38.2)	51.21 (12.51)		
Child Characteristics		**n (%)**	**MAQ Mean (*SD*)**	**t**	**p**
Child's gender	Girl	194 (49.1)	52.35 (10.31)	1.650	.100
	Boy	201 (50.9)	50.52 (11.69)		
Presence of chronic disease in the child	Yes	42 (10.6)	51.42 (13.62)	0.004	.997
	No	353 (89.4)	51.42 (10.74)		
Presence of a history of surgery in the child	Yes	84 (21.8)	50.40 (11.51)	-0.950	.343
	No	311 (78.7)	51.69 (10.94)		

SD: Standard Deviation, t: Independent Samples t Test, F: One-Way ANOVA

Table 2. MAQ responses (n= 395)

MAQ item	Mean (*SD*)	Disagree Agree (%)[a]	Uncertain (%)[b]	Agree (%)[c]
Children should be given pain medication as little as possible because of side effects	1.59 (1.15)	4.1	1.8	94.2
Children who take pain medication for pain may learn to take drugs to solve other problems	2.70 (1.80)	19.0	6.6	74.4
Pain medication works the same no matter how often it is used	4.34 (2.07)	53.2	7.8	39.0
Pain medication works best when it is given as little as possible	2.74 (1.78)	19.2	8.9	71.9
Pain medication has many side effects	2.18 (1.22)	4.6	6.8	88.6
Children will become addicted to pain medication if they take it for pain	2.82 (1.72)	18.7	7.1	74.2
There is little need to worry about side effects from pain medication	5.22 (1.56)	71.6	9.6	18.7
It is unlikely a child will become addicted to pain medication if taken for pain	4.26 (1.90)	47.6	14.4	38.0
Pain medication is addictive	3.12 (1.71)	22.0	12.4	65.6
Pain medication works best if saved for when the pain is quite bad	3.11 (1.78)	24.6	11.6	63.8
Using pain medication for children's pain leads to later drug abuse	3.97 (1.84)	42.3	14.4	43.3
The risk of addiction is reduced when pain relievers are given for pain.	3.09 (1.62)	18.5	14.2	67.3
Children learn how to use pain medication responsibly when it is given for pain	2.98 (1.65)	19.0	8.6	72.4
Side effects are something to worry about when giving children pain medication	2.75 (1.45)	13.7	9.9	76.5
The less often children take pain medication for pain, the better the medicine	2.76 (1.63)	16.2	9.6	74.2
Giving children pain medication for pain teaches proper use of drugs	3.72 (1.82)	33.7	12.4	53.9
Total	51.42 (11.06)	26.7	9.8	63.5

SD: Standard Deviation, MAQ: Medication Attitudes questionnaire, [a]Totally agree + agree + somewhat agree, [b] Neither agree nor disagree, [c] Strongly disagree + disagree + slightly disagree

247 (62.5%) of the parents participating in the study stated that they used a method to relieve pain at home when the child had pain, and it was seen that the most applied way was using painkillers (tablets, syrup, cream, etc.). It was followed by the methods of applying herbal oils, drinking herbal tea, massaging, taking a shower, applying hot or cold, applying herbal creams, and distracting (music, books, playing games, etc.) (Table 3). 148 parents (37.5%) who did not use any method stated that they immediately took the child to the doctor when they had pain, and other parents stated that they applied a method at home and went to the doctor if the pain did not go away.

Table 3. Methods parents use at home when their child has pain (n= 247)

Method	**n***
Using painkillers (tablets, syrups, creams, etc.)	151
Applying vegetable oils (apple oil, thyme oil, peppermint oil, lavender oil, etc.)	56
Drinking herbal tea	37
Massaging	33
Shower application	29
Hot or cold application	24
Applying herbal creams	21
Distraction (music, books, playing games, etc.)	17

*More than one method was mentioned by the parents.

DISCUSSION

This study is the first application of MAQ, which is a validated tool, in Turkey, even though it is in a single geographical location. It gives an idea about the attitudes of Turkish parents towards applying painkillers to their children. The MAQ can provide useful data for a local assessment of parents' painkiller use attitudes (Twycross et al., 2015). According to the general consequences of the study, it was found that sociodemographic variables such as parent's education level, age, sex and age of the child, chronic disease, and history of surgery in the child did not affect the use of painkillers. It is seen that most of the parents have inadequate information and training about the use, effects, frequency of use, and side effects of analgesics. In addition, it was determined that they used various non-pharmacological treatments to manage their children's pain. In this context, it is seen that everyone should be made aware, without making any distinction between parents.

According to the findings of the study, the highest level of negative attitude is almost all of the parents' belief that (94.2%) should be used as few painkillers as possible because of their side effects. A significant number of parents (71.6%) are concerned about the side effects of painkillers. These results show that parents have inadequate or wrong attitudes about painkillers. The findings of a recent study conducted in Arabia are similar to our research. 81.7% of Arabian parents advocate giving their children as few painkillers as possible due to side effects, and 50.6% are concerned about the side effects of painkillers (Alghadeer et al., 2021). “Similar results have been obtained in studies conducted in several countries” 36% of British parents (Twycross et al., 2015), approximately 47% of white American parents, and 69% of Hispanic parents (Fortier et al., 2011), believe that they should use as few analgesics as possible to protect their children from potential negative side effects.

One of the important findings of the study is that approximately two-thirds of parents (74.2%) think that their children may be addicted to the painkillers they used and these drugs. In addition, 65.6% stated that painkillers can be addictive. Also in previous study, it was found that parents advocated that analgesic drugs are addictive (Rony et al., 2010). When evaluated ethnically, 8% of British parents (Twycross et al., 2015), 14% of white American parents, nearly 43% of Hispanic parents (Fortier et al., 2011) and 44.1% of Arab parents (Alghadeer et al., 2021), think that children will become addicted to painkillers. Similar findings in our research and many other studies indicate that the reasons why parents think about the possibility of addiction to painkillers should be investigated in depth. In addition, it seems greatly essential to plan training on painkillers and addiction beliefs.

Another important finding of the research is that most parents (71.9%) think that it should be given as few painkillers as possible to children and that the less often the child uses painkillers, the better the drug will work (74.2%), and the painkiller will work best if it is taken

when the child's pain worsens (63.8%). Other studies have also found that there is a widespread belief that it should be given as few painkillers as possible to children and that the less often painkillers are used, the more effective the painkiller will be (Paquette et al., 2013; Rony et al., 2010). In the literature, it was found that approximately 35% of white American parents (Fortier et al., 2011), 37% of British parents (Twycross et al., 2015), 49% of Hispanic parents (Fortier et al., 2011) and 55% of Arab parents (Alghadeer et al., 2021) had similar thoughts to our research findings. In addition, the belief that painkillers would work best if taken when the child's pain worsened was 35.8% of Arab parents (Alghadeer et al., 2021), 51% of British parents (Twycross et al., 2015), 53% of white American parents, and 71% of Hispanic parents (Fortier et al., 2011). These results may cause parents to be hesitant to administer analgesic drugs as often as prescribed while caring for their children at home, and a significant proportion of children suffer from pain that can be effectively treated (Zisk et al., 2007).

Non-pharmacological methods such as psychological support and information, distraction, relaxation, massage, and hot/cold therapy are treatments applied to children with ongoing chronic and disease-related pain as well as acute and postoperative pain (Kashay, 2017; Friedrichsdorf & Goubert, 2019). These techniques, which can be used with various analgesic drugs targeting different mechanisms in the peripheral and central nervous systems, can provide more effective pain relief (Chou et al., 2016).These results suggest that healthcare providers should be aware of the techniques used by parents and their effectiveness should be evaluated.

When the results of our study and its connection with the literature are evaluated, it is observed that the difference between ethnic origins is small and the knowledge and attitudes of parents in using painkillers are commonly deficient. The results obtained from these studies cannot be generalized to all parents or ethnic groups in the world, but there is a need for interventions for parents to use efficient painkillers. In a review examining interventions to improve parental pain management at home, few interventions were reported to be effective in changing parents' pain management attitudes and practices (Parker et al., 2018). Nurses need to advocate for effective analgesics for their pediatric patients because the ineffectiveness of many interventions is attributed to insufficient analgesic drugs. Success in increasing analgesic drug administration is achieved through parent-targeted interventions and interventions that target healthcare professional-parent communications (Parker et al., 2018).

Limitations of the Study: This study was only applied to parents with preschool and primary school children in a local area. Therefore, it is not possible to determine whether it affects the beliefs and attitudes of parents who have a child who has undergone surgery, has a chronic disease, or has been hospitalized.

CONCLUSION

Our study showed that in a local region of Turkey, parents have misinformation, attitudes, and beliefs about pediatric painkiller use and its effects that may affect their children's quality of life. In this context, it is essential to work with larger populations. Implementation of education and interventions related to the pharmacological management of child pain can play an important role in reducing these misunderstandings and improving pediatric pain management. In addition, there is a need for studies that support attitude change with interventional and intermittent measurements over time that tackle multiple aspects of pain management. More research is needed to elucidate parents' views on what constitutes a good pain management experience, as well as strategies to support the use of evidence in pain management in practice. Considering that the pain is handled by the parents, especially in children experiencing acute pain; It is vital to inform parents about the use of painkillers and to organize intervention studies.

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Conflicts of interest: The author(s) declare that they have no conflict of interest.

Ethics Committee Approval: This study was approved by Akdeniz University Faculty of Medicine Clinical Research Ethics Committee (Number: KAEK-78; Date: 05.02.2020).

Peer-review: Externally peer-reviewed.

Author Contributions:

Research idea: AÜ

Design of the study: AÜ, AS

Acquisition of data for the study: AÜ, AS, GY

Analysis of data for the study: AS, GY

Drafting the manuscript: AÜ, GY

Revising it critically for important intellectual content: AS, GY

Final approval of the version to be published: AÜ, AS, GY

Data Availability Statement: The datasets used and analyzed during the current study are available from the corresponding author upon request.

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