REVISTA O MUNDO DA SAÚDE

DOI: 10.15343/0104-7809.202347e13262022I

Analysis of pediatric self-medication in patients treated at a high-complexity hospital

Luma Paulino dos Santos[1] Ana Karoline Ribeiro Novais[1] Lívia Maria Silveira Costa[1] Lorena Maria Ferreira de Lima[1] Jeferson Falcão do Amaral[1] Alana Santos Monte[1] Aline Santos Monte[1]

[1]Universidade da Integração Internacional da Lusofonia Afro-Brasileira. Redenção – UNILAB. Redenção/CE, Brasil.
E-mail: alinesmonte@unilab.edu.br

Abstract

Pediatric self-medication occurs when parents or guardians use over-the-counter medications to treat recognized illnesses or symptoms in children. To analyze the profile of pediatric self-medication in a high-complexity hospital in the interior of Ceará. This is a cross-sectional study based on the interview technique, carried out with 135 parents/guardians of children aged 0 to 12 years old who sought hospital care between November 2020 and March 2021. There was a prevalence of self-medication of 60%. As for frequency, 43.2% of respondents reported doing it sometimes. Of these, the majority were: mothers (94.3%; p<0.0001); aged 17 to 27 years old (48.6%; p<0.0001); family income of less than 1 minimum wage (57.1 %; p=0.020); and 59.3% indicated that their reason for medicating was that they considered the health problem as simple. The main cause of self-medication was fever, and the most used drugs were analgesics and antipyretics. The predominance of pediatric self-medication by mothers is due to their experience with their other children. In addition, socioeconomic conditions influenced the erroneous practices of self-medication, as families that do not have the resources to consult and purchase drugs end up opting for self-administration. The indiscriminate use of medications must be repressed, because, depending on the dose, serious consequences can occur to children. The importance of a multidisciplinary health team during a pediatric consultation is highlighted, with doctors, nurses, and pharmacists providing parents with information about medication, their benefits and risks, discouraging the practice in this population group and reducing medication errors.

Keywords: Self-medication. Pediatrics. Hospitals. Inappropriate Use of Medications. Non-Prescription Drugs.

INTRODUCTION

Self-medication occurs when an individual selects and uses medicines available without a prescription, that is, without consulting a doctor, to treat self-recognized diseases or symptoms, which can cause risks of health problems due to irrational consumption[1]. However, despite the risks, there are some advantages of responsible self-medication with over-the-counter drugs (OTCs), such as: direct benefits to patients' health, including in terms of prevention; improvement of self-care confidence and practice; cost reduction for the healthcare system; and comfort for consumers, since there is no need to go to a healthcare service to treat a symptom that is already known[2]. Thus, self-medication is an integral

DOI: 10.15343/0104-7809.202347e13262022I

part of self-care that must be carried out in a rational way. Therefore, children represent a group that is susceptible to drug self-administration, as the safe use of drugs in pediatrics depends on some variables that are often not considered in adults, such as: age, weight, body surface area, in addition to the ability to absorb, metabolize, and excrete drugs[3].

Furthermore, there are potential harmful effects in pediatric self-medication, especially in urgent medical conditions, when the diagnosis and medical management is of extreme importance for the child's treatment. Other risks of pediatric self-medication include antimicrobial resistance due to irrational use of antibiotics, development of addiction/abuse, and, in some cases, intoxication[4].

The National System of Toxic-Pharmacological Information (NSTPI) recorded, in 2017 alone, around 20,000 cases of drug intoxication and 50 deaths, corresponding to a mortality rate of 0.25%. More than 20 children per day are victims of poisoning, a consequence of the inappropriate use of medication, a fact that indicates that their parents do not have information regarding the dosage and proper storage of medications[5]. Intentional or accidental intoxication is often driven by the high amount of information on the internet, causing parents to self-medicate their children[6]. In addition, the rational use of medication for children is hampered by the small number of specific drug classes for this age range, making it difficult to convert from adult to pediatric doses[7].

Some reasons for pediatric self-medication are easy access to over-the-counter drugs, positive experience in previous treatment with a given medication, parents' perception of the disease being considered mild, high cost of medical consultations, long distance to the doctor's office, busy work schedule, and long waiting times in queues[8]. Moreover, insufficient knowledge of parents about medication and pharmacotherapy is considered an additional problem. A study carried out in Serbia found that more than half of the parents (56.7%) of preschool children were not able to adequately understand the medication dosage regimen on the package label or on the package inserts[9]. In France, a similar percentage of parents was found who did not know how to properly prepare and reconstitute oral antibiotics, resulting in a risk of underdosing or overdosing[10].

These facts are also a result of a precarious way of dispensing drugs. In Brazil, 106 caregivers of children admitted to the pediatric unit of a hospital located in the metropolitan region of Porto Alegre were evaluated. Of these, only 43.4% answered that they received orientation on the correct use of the medication in pharmacies or healthcare centers, 34.0% answered "from time to time" and 20.8% stated that they did not receive information about the medicine at the time of purchase[11]. A study carried out in Minas Gerais showed the practice of pediatric self-medication in 79% of the interviewed families. In addition, it was verified in many interviews that antibiotics and bactericides were self-administered without knowledge of the indications for use, pathology and symptomatology[12]. Recent research shows that levels of pediatric self-medication are high. A study carried out at a school in the interior of Sao Paulo showed that 93% of parents of children between 0 and 5 years old already practiced self-medication, even considering that such practice is harmful to the child's health[13].

However, there is still a lack of studies that expand the analysis of self-medication in children and suggest effective interventions to implement measures aimed at preventing self-medication in this population. These data justify the importance of carrying out research that promotes the rational use of medication

Revista O Mundo da Saúde

DOI: 10.15343/0104-7809.202347e13262022I

in children by their parents. In this context, this study aimed to analyze the profile of the practice of self-medication in children aged 0 to 12 years old, by their parents and/or guardians, treated at a high-complexity hospital in the interior of Ceara.

METHODOLOGY

This research came from a scientific initiation project of a student of the Pharmacy course at a federal university located in the interior of Ceara. This was a cross-sectional and descriptive study, based on the interview technique, with parents or guardians of children aged between 0 and 12 years old who were attended at the Hospital e Maternidade Paulo Sarasate (HMPS) located in Redencao - Ceara. The HMPS is a non-profit charitable entity that corresponds to a healthcare center of medium and high hospital and outpatient complexity, with 1 pediatrician and 16 pediatric clinic beds, all destined for the Unified Health System (UHS). The sample was calculated considering a total of 40 monthly pediatric consultations (data provided by the hospital's statistics system based on pediatric consultations in this sector in the previous year), an error of 5%, and a confidence level of 95%, using the following sample calculation for finite populations[14]:

$$n = (\sigma^2.p.q.N) / e\,(N-1) + \sigma^2.p.q$$

Where:

n = Sample Size;

σ = Chosen confidence level, expressed in standard deviation numbers;

p = Percentage with which the phenomenon occurs;

q = Additional percentage (100-p);

e = Maximum error allowed;

N = Population size.

These calculations resulted in a total of 132 participating individuals to be interviewed. Before applying the questionnaire, a pilot study was carried out to validate the data collection instrument and approach. This was applied to parents and guardians of children who consulted at the HMPS before the beginning of the study, that is, these data were not included in the results of this report. It is noteworthy that there are no validated questionnaires on pediatric self-medication in the literature.

For data collection, the process of simple random sampling by convenience was adopted, which consists of attracting people with easier access to participate in the study[15], including parents or guardians who sought the pediatric consultation service that took place every Thursday between November 2020 and March 2021. Parents or guardians of hospitalized children or those who sought the hospital emergency service on the day of data collection were excluded from the study, because, due to the stress and concern that these parents/guardians were going through, it would be impracticable to apply a questionnaire at that time.

A data collection instrument was used that addressed the socioeconomic characteristics

DOI: 10.15343/0104-7809.202347e13262022I

of the family (age of parents and guardians and children, gender, education, occupation, marital status, number of residents in the household, income, degree of kinship, among others), and the practice of pediatric self-medication (prevalence, frequency, motivation, main medications used and health situations, and knowledge about medications and their adverse effects). The interviews were carried out by students of the Pharmacy course who participated in previous training to standardize the correct conduct of the interview, in order to guarantee the uniformity of interpretation, understanding, and application of the form.

In this study, only the use of pharmaceutical formulations without prescription, as indicated by parents or guardians for self-medication in children was adopted, excluding the use of other therapeutic alternatives, such as medicinal plants or homemade recipes used with the intention of curing or alleviating symptoms. The referred drugs were divided into groups and subgroups according to the latest version of the Anatomic Therapeutic Chemical (ATC) classification of the World Health Organization[16].

The collected information was coded and transferred to a Statistical Package for the Social Sciences - SPSS, version 23.0, analytical software database (SPSS for Windows, Chicago, USA), through which possible association relationships between variables were evaluated. Pearson's chi-square test was used to investigate the existence of associations between independent variables. For all analyses, a significance level of $p < 0.05$ was considered.

The study project was approved by the Research Ethics Committee of the University of International Integration of Lusofonia Afro-Brasileira (UNILAB), through Plataforma Brasil, in accordance with Opinion No. 4.382.331 and Certificate of Presentation for Ethical Appreciation (CAAE) No. 31925920.6.0000.5576. All participants were informed by the interviewers about the nature of the study, its objectives, methods, and expected benefits, potential risks, and possible inconveniences before signing the Informed Consent Form.

RESULTS

137 parents and/or guardians participated in the survey, of which 2 were excluded for not answering all the answers on the form, totaling the information of 135 children. When analyzing the socioeconomic characterization of the research participants, it was observed that the majority were women (63%), between 17 and 27 years old (48.1%), married (57.8%), with a high school education (66.7%), who were not employed (68.1%), with an income of less than one minimum wage (52.6%), living in rural areas (59.3%), and with 4 or more residents in the household (63.7%). Moreover, it was observed that the mothers of the children attended made up the highest percentage of the individuals interviewed (85.9%) and that most of the children attended were between 0 and 3 years old (64.4%), totaling 87 children in this age group. It is noteworthy that, of these 87 children aged 0 to 3 years old (n=46; 52.9%) had already received medication administered by their parents without a medical prescription, while 41 (47.1%) had not.

The prevalence of pediatric self-medication was 60% (n=81), while 40% (n=54) stated that they had never performed it, according to the criteria adopted in this study. The association of the participants' socioeconomic characteristics with the practice of pediatric self-medication analyzed using Pearson's chi-square test is shown in Table 1 below.

REVISTA O MUNDO DA SAÚDE

DOI: 10.15343/0104-7809.202347e13262022I

Table 1 – Correlation between the socioeconomic profile of parents and guardians of children treated at a high-complexity hospital and the practice of pediatric self-medication. Redencao – Ceara – Brazil. 2020-2021.

Variables	Has Self-medicated	Has Not Self-medicated	Total	P value*
Gender of parents/ guardians	N = 81 (%)	N = 54 (%)	N = 135 (%)	
Female	58 (71.6%)	27 (50%)	85 (63%)	0.011
Male	23 (28.4%)	27 (50%)	50 (37%)	
Age of parents/ guardians				
17 – 27 years old	43 (53.1%)	22 (40.7%)	65 (48.1%)	0.456
28 – 38 years old	27 (33.3%)	23 (42.6%)	50 (37%)	
39 – 49 years old	9 (11.1%)	6 (11.1%)	15 (10.9%)	
Equal or greater than 50 years	2 (2.5%)	3 (5.6%)	5 (3.7%)	
Marital status				
Single	34 (42%)	19 (35.2%)	53 (39.3%)	0.698
Married	45 (55.6%)	33 (61.1%)	78 (57.8%)	
Divorced / widowed	2 (2.5%)	2 (3.7%)	4 (3%)	
Education				
Elementary	17 (21%)	12 (22.2%)	29 (21.5%)	0.968
High school	54 (66.7%)	36 (66.7%)	90 (66.7%)	
Higher	10 (12.3%)	6 (11.1%)	16 (11.9%)	
Employed				
Yes	28 (34.6%)	15 (27.8%)	43 (31.9%)	0.407
No	53 (65.4%)	39 (72.2%)	92 (68.1%)	
Family income				
Less than 1 minimum wage	44 (54.3%)	27 (50%)	71 (52.6%)	0.508
Up to 2 minimum wages	33 (40.7%)	26 (48.1%)	59 (43.7%)	
From 2 to 4 minimum wages	4 (4.9%)	1 (1.9%)	5 (3.7%)	
Residential zone				
Urban	30 (37%)	25 (46.3%)	55 (40.7%)	0.283
Rural	51 (63%)	29 (53.7%)	80 (59.3%)	
Relationship with the child				
Mother	72 (88.9%)	44 (81.5%)	116 (85.9%)	0.457
Father	3 (3.7%)	4 (7.4%)	7 (5.2%)	
Siblings/ Grandparents/ Aunts/Uncles/ Family friends	6 (7.4%)	6 (11.1%)	12 (8.9%)	
Number of residents				
Up to 3	30 (37%)	19 (35.2%)	49 (36.3%)	0.826
4 or more	51 (63%)	35 (64.8%)	86 (63.7%)	

to be continued...

REVISTA O MUNDO DA SAÚDE

DOI: 10.15343/0104-7809.202347e13262022I

...continuation table 1

Variables	Has Self-medicated	Has Not Self-medicated	Total	P value*
Child's age (years)				
0 - 3	46 (56.8%)	41 (75.9%)	87 (64.4%)	0.146
3 – 6	13 (16%)	4 (7.4%)	17 (12.6%)	
6 – 9	11 (13.6%)	4 (7.4%)	15 (11.1%)	
9 - 12	11 (13.6%)	5 (9.3%)	16 (11.9%)	

*Pearson's chi-square test

Pearson's chi-square test indicated a significant correlation between the sex of the parents and guardians, showing that women are more likely to medicate their children without a medical prescription (p = 0.011). As for the other variables, which refer to age, marital status, paid activity, family income, area of residence, number of residents in the household, and age of the child, no significant associations were found (Table 1).

For those interviewees who claimed to perform pediatric self-medication, they were asked about the frequency of this practice. Of these, 49.9% (n=40) checked the item "rarely", 43.2% (n=35) checked the item "sometimes", and 7.4% (n=6) checked the item "always", as can be seen in Table 2.

Table 2 – Correlation between age of parents or guardians, family income, relationship with the child, and frequency of pediatric self-medication. Redencao – Ceara – Brazil. 2020-2021.

	Frequency of pediatric self-medication			
Variables	**Rarely**	**Sometimes**	**Always**	**P value***
Relationship with the child	N = 40 (%)	N = 35 (%)	N = 6 (%)	
Mother	36 (90%)	33 (94.3%)	3 (50%)	< 0.0001
Father	3 (7.5%)	0 (0%)	0 (%)	
Siblings/ grandparents/ uncles/ friends of the family	1 (2.5%)	2 (5.7%)	3 (50%)	
Age of parents or guardians				
17 – 27 years old	26 (65%)	17 (48.6%)	0 (0%)	< 0.0001
28 – 38 years old	9 (22.5%)	15 (42.9%)	3 (50%)	
39 – 49 years old	5 (12.5%)	3 (8.6%)	1 (16.7%)	
Equal or greater than 50 years	0 (0%)	0 (0%)	2 (33.3%)	
Family income				
Less than 1 minimum wage	21 (52.5%)	20 (57.1%)	3 (50%)	0.020
Up to 2 minimum wages	18 (45%)	14 (40%)	1 (16.7%)	
From 2 to 4 minimum wages	1 (2.5%)	1 (2.9%)	2 (33.3%)	

*Pearson's chi-square test

REVISTA O MUNDO DA SAÚDE

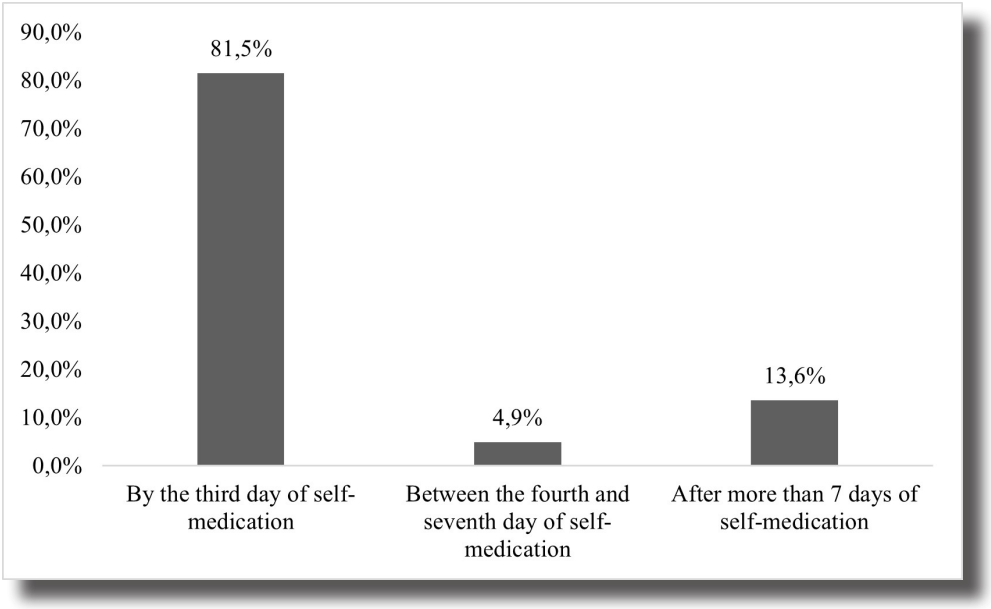
DOI: 10.15343/0104-7809.202347e13262022I

Of the respondents, mothers were the ones who most reported using over-the-counter medications for their children, totaling 72 participants. Of these mothers, half (n=36; 50%) reported that this practice was performed sometimes and always. Of the 43.2% of parents/guardians who reported that they did it sometimes, the majority (94.3%) were mothers (p<0.0001), 48.6% were aged between 17 and 27 years old (p< 0.0001), and 57.1% had a family income of less than 1 minimum wage (p=0.020).

Yet, for the interviewees who claimed to perform pediatric self-medication, the reason for such practice was questioned. Most (59.3%) reported that the reason was because they considered the health problem to be simple; 27.2% answered that they already had the medicine at home from previous treatments or reused the medical prescription; 8.6% reported having been influenced by family, friends, or neighbors; 4.9% reported that they medicated their child without a medical prescription due to difficulty in accessing the healthcare service.

Participants had to answer the following question: "After starting self-medication and in the absence of clinical improvement in the child, how long did it take you to seek the healthcare service?". The majority (81.5%) reported seeking the healthcare service by the third day of self-medication, 13.6% after more than 7 days of self-medication, and 4.9% between the fourth and seventh day of self-medication (Figure 1).

Figure 1 – Time that parents and guardians sought the healthcare service after starting self-medication and the child's absence of clinical improvement. Redencao – Ceara – Brazil. 2020-2021.



Regarding the identification of adverse reactions caused by drugs used without a prescription, most respondents answered that they had never detected them (90.1%), while 9.9% reported having identified them before. The adverse reactions cited were: allergic reactions, diarrhea, agitation, intoxication, and convulsion.

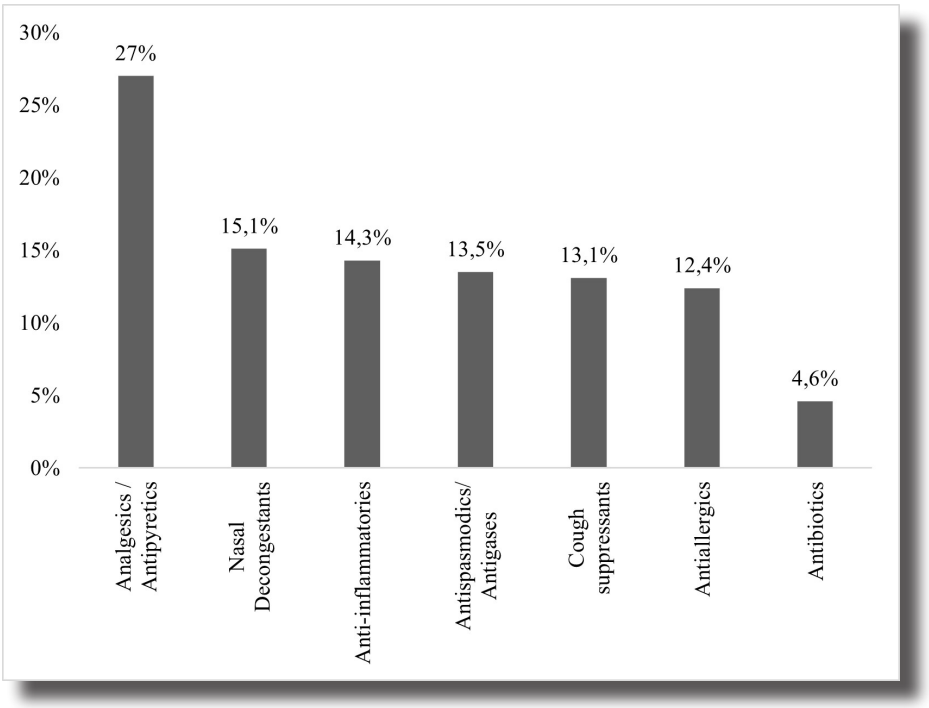
When asked if they read the medication leaflet and respected the indicated dose, the majority (87.7%) of the interviewed parents and guardians said yes, while 12.3% reported not having had this habit. Participants had to answer, "How do you consider your know-

DOI: 10.15343/0104-7809.202347e13262022I

ledge about the medication(s) used?". Most (81.5%) considered it moderate, 16% considered having a good amount of knowledge, and 2.5% reported no knowledge.

Figure 2 deals with the classes of drugs most used in the practice of pediatric self-medication by parents and guardians. According to the analysis of this graph, the majority used analgesics and antipyretics, and the least used class was antibiotics.

Figure 2 – Distribution of drug classes used by parents and guardians in the practice of pediatric self-medication*. Redencao – Ceara – Brazil. 2020-2021.



*Participants could opt for one or more medications.

As for the clinical health situations that led to the practice of pediatric self-medication, those mentioned were: fever (38.6%), colic and pain in general (25%), cough (13.6%), flu (12.5%), sore throat (5.7%), vomiting (2.3%), and allergies (2.3%).

DISCUSSION

The results of the present study indicate a high prevalence of self-medication in children, which is considered a real and frequent practice. This result is consistent with a study carried out in Romania, which reported that 70% of respondents self-medicated their children[17]. It is worth mentioning the fact that the prevalent age group of self-medicated children in the present study was 0 to 3 years old, similar to other studies[12]. The high rate of self-medication specifically in this age group is worrying, because, as the first year of a child's life is an important

Revista O Mundo da Saúde

DOI: 10.15343/0104-7809.202347e13262022I

period of child development, due to the immaturity of the organism in the face of the effects of the environment, the use of medication can pose risks to the health of this population[18]. This result may be a consequence of the possibility of reusing old prescriptions for older siblings[19], in addition to more frequent medical follow-up in this age group, leading to more prescriptions and, therefore, leftover medications that the mother reuses when there is the reappearance of symptoms, or even reacquiring medication with existing prescriptions[20].

In the present study, this was confirmed by the result of when parents and guardians were asked concerning the main reason for their children's self-medication. The second most cited reason was already having the medication at home due to previous treatments or reusing an old medical prescription. It is known that the so-called "home pharmacies" are frequent in Brazilian homes. There are several reasons that lead the population to stock up on medication at home, among them the possible use of the medicine in the future, purchase without medical prescription, change in treatment or change in dosage, leftovers from previous treatments, prescriptions with excessive doses, and receiving free samples[21]. A survey carried out in Tubarao – Santa Catarina showed that the amount of pediatric medication for children up to 14 years of age present in households represented 52.7% of household stock[20].

The first reason given by parents and guardians to justify the practice of pediatric self-medication was considering that the health problem was simple. It is considered that this conduct can have serious consequences for the child, because, depending on the symptom, the health problem can be misdiagnosed, and, in this case, the medication can mask serious evolutionary diseases[22]. Self-medication can be classified as: cultural, when knowledge about the use of medication is transmitted through generations; guided, when the patient already has prior knowledge about the drugs they intend to use; or induced, when the medication is used due to the influence of advertising campaigns with purely commercial purposes[23].

As for the degree of kinship of the children who were attended, the most common was that of the mothers. Thus, proportionally, they were the ones that performed the most pediatric self-medication. The predominance of mothers administering non-prescribed drugs to children has already been observed in several studies[24]. This is due to the social roles typically attributed to mothers, among them, providing for the family's health and incisive participation in the daily care of their children[25].

Regarding socioeconomic characteristics, we observed that the respondents who performed the most pediatric self-medication are those who do not have paid work and who are members of a family with an income of less than 1 minimum wage, 4 or more residents in the household, and residents of a rural area. These data can be explained by the fact that the present study was carried out in a public hospital located in the interior of the state of Ceara. That is, most of the interviewees came from poor families, as observed in other similar studies[12,25].

The relationship between the practice of self-medication and a greater number of residents in the household can be explained by the fact that, in larger families, there are probably members who have already gone through similar health situations, motivating the selection of a therapeutic alternative and the greater assurance of this practice[20]. The mother's training in identifying symptoms, based on her experience with her other children, allows certain "competences" to indicate the administration of an acquired medication, which she considers generally adequate[26].

It is known that socioeconomic conditions

DOI: 10.15343/0104-7809.202347e13262022I

influence erroneous practices of self-medication, considering that families that do not have the resources to consult and buy drugs end up opting, in large part, for self-administration, thus increasing the risks to children's health[12]. On the other hand, regarding the level of education, most of the research participants and those who claimed to practice pediatric self-medication have a high school level, which can be considered high. Similar results were found in a recent study carried out in Iguatu, another municipality in the interior of the state of Ceara[27]. As for the time that parents and guardians took to seek the healthcare service after starting self-medication and the child's absence of clinical improvement, the majority of respondents stated waiting 3 days. This result may be related to the fact that, in the hospital where the interviews were conducted, pediatric consultations took place only once a week. In addition, the majority of respondents who performed self-medication were residents of rural areas, which partially hinders access to other healthcare services.

In the present study, most parents and guardians who had already practiced self-medication with children reported that they had read the leaflet and that they considered their knowledge of medication to be average. Thus, it is suggested that the high level of education seems to be related to the practice of self-medication in children, probably because parents and guardians have a greater understanding of prescriptions and package inserts, which makes them think that they are practicing responsible self-medication. Although responsible self-medication can be beneficial in some situations, theoretically, allowing parents to become responsible and gain confidence in managing their children's health, if such practice is carried out inappropriately and based on unreliable information sources, it can pose serious health risks[28]. Thus, for the practice of responsible pediatric self-medication, it is crucial that the use of over-the-counter medications (OTC) is accompanied by the necessary information. In this scenario, the pharmaceutical professional is important, capable of selecting and indicating an OTC with the aim of alleviating or solving a health problem at the request of a family member, or of referring them to the doctor when the referred problem needs his/her attention[29].

Regarding the self-administered medication classes, the findings of this study corroborate many studies in the literature, in which analgesics and antipyretics are the most consumed medication classes in the studied community[12,30]. Antibiotics corresponded to the class of drugs least used. This result is probably due to the fact that, in Brazil, the sale of antibiotics by pharmacies is only possible with an authorized prescription[31].

These results are intrinsically related to the main clinical health conditions that motivated pediatric self-medication in this study: fever, colic, and general pain. It is noteworthy that non-pharmacological measures may be more effective in reducing colic, such as: use of "warm thermal bags" in contact with the child's abdomen and use of probiotics. Therefore, healthcare professionals should suggest these methods during childcare consultations[18].

The literature shows that fever is one of the main reasons that result in pediatric self-medication and that most of these children use undue doses of antipyretics[27]. This occurs because parents generally overestimate the risks associated with pediatric fever, taking actions that may not reflect current clinical recommendations. However, it is known that in childhood, fever is usually self-limited, that is, most cases do not require any specific medical intervention[32]. Furthermore, although drugs such as acetaminophen and dipyrone are analgesics and antipyretics and are considered safe when used in children while respecting the adequate doses, the indiscriminate

Revista O Mundo da Saúde

DOI: 10.15343/0104-7809.202347e13262022I

use of these medications should be discouraged[33]. This is because, depending on the administered dose, serious consequences may occur to children, such as adverse reactions, hypersensitivity reactions, or intoxication[34].

However, when asked about the detection of possible adverse drug reactions (ADRs), most research participants reported not identifying any. Such data corroborate another study that showed that 93% of respondents did not identify ADRs in their children[27]. ADRs are harmful, unintentional events that occur with doses of drugs normally prescribed to patients for prophylaxis, diagnosis, therapy, or physiological modifications[35]. Depending on the medication, such reactions may appear late, that is, after several days of treatment[34], which may explain, in part, the high rate of parents not recognizing ADRs. Therefore, it is worth highlighting the importance of pharmaceutical care and follow-up in the treatment of pediatric patients from the point of view of administration, correct use of drugs, and identification of ADRs, in view of the different peculiarities of this class of patients.

As for the limitation of the present study, we mention the fact that most of the information obtained during data collection was self-reported, that is, there is a possibility of memory bias of the participants because it is a recall assessment. In addition, we emphasize the difficulty in discussing the data of this research based upon few, similar current Brazilian studies. Therefore, due to the lack of research that addresses this issue, the importance of new studies that report on this subject is observed.

CONCLUSION

Through the analysis of forms made available to research participants, relevant data emerged, such as a high rate of pediatric self-medication, main classes of medication used, knowledge, motives, and socioeconomic characteristics of parents and/or guardians in relation to self-medication in children. It is important to carry out an educational intervention, together with parents and guardians, to clarify the drugs used, respecting the dosage based on the weight and age group of the child, which are issues contained in the prescription.

In this context, the importance of the multidisciplinary health team during a pediatric consultation is highlighted, with doctors, nurses, and pharmacists providing parents and guardians of children with information about the medications, their benefits and risks, in order to discourage the practice in this population and reduce medication errors. It is noteworthy that, although in some municipalities the presence of a pharmacist is not part of the reality of the public healthcare scenario, pharmacists play a fundamental role in advising the community on self-medication and rational use of medicines. It is hoped, therefore, that this study will contribute to alerting the community about the lack of knowledge concerning medications that are self-administered to children and to prevent possible adverse reactions, intoxications, and therapeutic ineffectiveness, providing well-being to patients.

ACKNOWLEDGEMENTS: To the Institutional Program of Scientific and Technological Initiation Scholarships (BICT) of the Cearense Foundation for Research Support (FUNCAP) for granting a scientific initiation scholarship to the student Luma Paulino dos Santos.

Revista O Mundo da Saúde

DOI: 10.15343/0104-7809.202347e13262022I

Author Statement CREdiT

Conceptualization: Monte, Aline Santos; Santos, LPD. Methodology: Santos, LPD; Novais, AKR; Lima, LMFD; Coast, LMS. Validation: Santos, LPD. Statistical analysis: Monte, Aline Santos; Amaral, JFD. Formal analysis: Monte, Alana Santos. Research: Santos, LPD; Novais, AKR; Lima, LMFD; Coast, LMS. Obtaining financing: Monte, Aline Santos. Elaboration of the original draft: Monte, Aline Santos; Santos, LPD; Mount, Alana Santos. Writing-revision and editing: Monte, Alana Santos. Visualization: Monte, Aline Santos; Santos, LPD; Novais, AKR; Lima, LMFD; Costa, LMS; Monte, Alana Santos; Amaral, JFD. Supervision: Monte, Aline Santos. Project management: Monte, Aline Santos.

All authors read and agreed with the published version of the manuscript.

REFERENCES

1. Tunc ES, Aksoy E, Arslan HN, et al. Evaluation of parents' knowledge, attitudes, and practices regarding self-medication for their children's dental problems during the COVID-19 pandemic: a cross-sectional survey. BMC Oral Health. 2021 Mar; 21 (1): 1–7. Doi: 10.1186/s12903-021-01466-7.
2. Cruz Junior AF. Automedicação de Medicamentos Isentos de Prescrição (MIP). [monografia]. São Paulo: Universidade São Judas Tadeu. 2021. Acesso em 20 de fevereiro de 2023. Disponível em: https://repositorio.animaeducacao.com.br/handle/ANIMA/13669
3. Taylon T, Ferreira D, Gama J, et al. Cuidados farmacêuticos em uma unidade de terapia intensiva pediátrica: Uma revisão integrativa. Rev Cient Saude. 2021; 3 (1): 9–22. Acesso em 20 de fevereiro de 2023. Disponível em: http://revista.urcamp.tche.br/index.php/revistasaude/article/view/3402/2960
4. Duborija-Kovacevic N, Martinovic M, Belojevic G, et al. Maternal education, health profession and cigarette smoking are decisive factors for self-medication in children by parents. Acta Pharm. 2020 Jun; 70 (2): 249–257. Doi: 10.2478/acph-2020-0018.
5. Xavier MS, Castro HN, Souza LGD, et al. Automedicação e o risco à saúde: uma revisão de literatura. Braz. J. Health Rev. 2021 Jan; 4 (1): 225–240. DOI: https://doi.org/10.34119/bjhrv4n1-020
6. Alves JCM, Magalhães EQ, Rodrigues Junior OM. A automedicação infantil ocasionada pelos pais no Brasil. Res., Soc. Dev.2021 Nov; 10 (15): 1-7. DOI: http://dx.doi.org/10.33448/rsd-v10i15.23443
7. Silva AR, Moura JMA, Pivetta LF, et al. Intoxicação medicamentosa infantil. Braz. J. Dev. 2020 Jan; 6 (1): 5072–5075. DOI: https://doi.org/10.34117/bjdv6n1-366
8. Santos ERC, Ferreira JA, Costa TA, et al. Automedicação pediátrica: Consequências para a saúde em decorrência dessa prática. Rev I.Amer. Hum, Cie. Edu. . 2022 Jun; 8 (5): 2466–2476. DOI: https://doi.org/10.51891/rease.v8i5.5719
9. Ubavić S, Bogavac-Stanojević N, Jović-Vraneš A, et al. Understanding of information about medicines use among parents of pre-school children in Serbia: Parental pharmacotherapy literacy questionnaire (PTHL-SR). Int J Environ Res Public Health 2018 Maio; 15 (5): 977. doi: 10.3390/ijerph15050977.
10. Berthe-Aucejo A, Girard D, Lorrot M, et al. Evaluation of frequency of paediatric oral liquid medication dosing errors by caregivers: Amoxicillin and josamycin. Arch Dis Child. 2016 Abr; 101 (4): 359–364. DOI: 10.1136/archdischild-2015-309426
11. Vieira JKF, Perassolo MS. Avaliação do conhecimento sobre uso correto e cuidados com medicamentos em cuidadores de pacientes na unidade pediátrica de um hospital. Rev Eletr. farm. 2011 Set; 8 (3): 1-16. DOI: https://doi.org/10.5216/ref.v8i3.15800
12. Telles Filho PCP. Automedicação em crianças de zero a cinco anos: fármacos administrados, conhecimentos, motivos e justificativas. Esc Anna Nery. 2013 Jun; 17(2): 291–297. Acesso em 21 de fevereiro de 2023. Disponível em: https://www.redalyc.org/articulo.oa?id=127728367013
13. Marim FA, Paschoa DTP, Frias DFR. Automedicação em crianças em idade pré-escolar no município de Aparecida D'oeste, São Paulo. Rev Univap. 2021 out; 27 (55): 1–9. DOI: https://doi.org/10.18066/revistaunivap.v27i55.2548
14. Hulley SB, Cumming SR, Browner WS, et al. Delineando a pesquisa clínica: uma abordagem epidemiológica. 3ª Ed. Porto Alegre: Artmed. 2008. Acesso em 21 de fevereiro de 2023. Disponível em: https://edisciplinas.usp.br/pluginfile.php/3144051/mod_resource/content/1/Delineando%20a%20pesquisa%20clinica%20-%20uma%20abordagem%20epidemiol%C3%B3gica%20-%20staphen%20b.%20hulley%2C%20steven%20r.%20cummings-2.pdf
15. Polit D, Beck C. Fundamentos da pesquisa em enfermagem: avaliação de evidências para a prática de enfermagem. 7a Ed. Porto Alegre: Artmed, 2011.
16. World Health Organization (WHO). ATC/DDD Index 2023. Acesso em 21 de fevereiro de 2023. Disponível em: https://www.whocc.no/atc_ddd_index/.
17. Tarciuc P, Stanescu AMA, Diaconu CC, et al. Patterns and Factors Associated with Self-Medication among the Pediatric Population in Romania. Medicina. 2020 Jun; 56 (6): 1–12. doi: 10.3390/medicina56060312.
18. Souza ALDM, Batista FFA, Tacla MTGM, et al. Uso de medicamentos em crianças menores de um ano. Rev Soc Bras Enferm Ped. 2020 Jul; 20 (1): 31–39. DOI: http://dx.doi.org/10.31508/1676-3793202000005
19. Nunes ALM, Vilela SS, Siqueira L da P. A automedicação em crianças e adolescentes através da influência parental: uma revisão integrativa. Res., Soc. Dev. 2022 Nov; 11 (14): 1-13. DOI: http://dx.doi.org/10.33448/rsd-v11i14.36741
20. Beckhauser GC, de Souza JM, Valgas C, et al. Utilização de medicamentos na pediatria: A prática de automedicação em crianças por seus responsáveis. Rev Paul Pediatr. 2010 Set; 28 (3): 262–268. DOI: https://doi.org/10.1590/S0103-05822010000300002
21. Constantino VM, Fregonesi BM, Tonani KA de A, et al. Estoque e descarte de medicamentos no domicílio: uma revisão sistemática. Cien Saúde Colet. 2020 Fev; 25 (2): 585-594. DOI: 10.1590/1413-81232020252.10882018.

REVISTA O MUNDO DA SAÚDE

DOI: 10.15343/0104-7809.202347e13262022I

22. Ferreira FCG, Luna GG, Izel ICM, et al. O impacto da prática da automedicação no Brasil: Revisão Sistemática. Braz. App. Sci. Rev. 2021 Jun; 5 (3): 1505–1518. DOI: https://doi.org/10.34115/basrv5n3-016
23. Queiroz SL, Ribeiro TCC, Alves O de F, et al. A influência da mídia sobre a automedicação e o papel do farmacêutico para promover o uso racional de medicamento. Saúde Cien Ação. 2022; 8 (1): 130–145. Acesso em 21 de fevereiro de 2023. Disponível em: https://revistas.unifan.edu.br/index.php/RevistaICS/article/view/982/657
24. Klein K, Souza NS de, Ribeiro AC, et al. Automedicação em crianças de zero a cinco anos: práticas de seus cuidadores/familiares. Res., Soc. Dev. 2020 Maio; 9 (7): 1-20. DOI: https://doi.org/10.33448/rsd-v9i7.4296
25. Mukattash TL, Alkhatatbeh MJ, Andrawos S, et al. Parental self-medication of antibiotics for children in Jordan. J Pharm Health Serv Res.2020 Mar; 11 (1): 75–80. DOI: https://doi.org/10.1111/jphs.12331
26. Ortiz MV, Ruiz-Cabello FJS, Uberos J, et al. Self-medication, self-prescription and medicating "by proxy" in paediatrics. An Pediatr. 2017 Maio; 86 (5): 264–269. DOI: https://doi.org/10.1016/j.anpede.2016.06.005
27. Lima MFP, Lima DBS, Oliveira FB, et al. A prática da automedicação em criança por pais e responsáveis. Holos. 2019; 5: 1–13. DOI: 10.15628/holos.2019.5120
28. Melo JRR, Duarte EC, de Moraes MV, et al. Automedicação e uso indiscriminado de medicamentos durante a pandemia da COVID-19. Cad Saude Publ. 2021 Abr; 37 (4): 1-5. DOI: 10.1590/0102-311X00053221.
29. Mota KF, Pereira ML, Coelho EB, et al. Medicamentos isentos de prescrição (MIP): o farmacêutico pode prescrever, mas ele sabe o que são? Rev de La Ofil. 2020 Mar; 30 (1): 52–55. DOI: https://dx.doi.org/10.4321/s1699-714x20200001000013
30. Belo N, Maio P, Gomes S. Automedicação em idade pediátrica. Birth Grow Med Jou 2017; 26(4): 234–239. Acesso em 21 de fevereiro de 2023. Disponível em: https://revistas.rcaap.pt/nascercrescer/article/download/10489/10395/41723
31. Malcher CMSR, Santos IBD, Farias LR, et al. Automedicação e uso de antibióticos: análise qualitativa em uma comunidade virtual. Res., Soc. Dev.2022 Ago; 11 (11): 1–10. DOI: http://dx.doi.org/10.33448/rsd-v11i11.33191
32. Thompson AP, Nesari M, Hartling L, et al. Parents' experiences and information needs related to childhood fever: A systematic review. Patient Educ Couns. 2020 Abr; 103 (4): 750–763. doi: 10.1016/j.pec.2019.10.004.
33. Clavé S, Rousset-Rouvière C, Daniel L, et al. The Invisible Threat of Non-steroidal Anti-inflammatory Drugs for Kidneys. Front Pediatr. 2019 Dez; 7 (520): 1-6. doi: 10.3389/fped.2019.00520
34. Renz L, Silva AF, Suwa UF. Riscos associados à automedicação de anti-inflamatórios não esteroides em pacientes pediátricos: uma revisão sistemática. Braz. J. Dev.2021 Out; 7 (10): 97619–97630. DOI: https://doi.org/10.34117/bjdv7n10-196
35. Mota DM, Vigo Á, de Souza Kuchenbecker R. Reações adversas a medicamentos no sistema de farmacovigilância do Brasil, 2008 a 2013: estudo descritivo. Cad Saúde Pública. 2019; 35 (8): 1-14. DOI: https://doi.org/10.1590/0102-311X00148818

Received: 15 july 2022.
Accepted: 30 march 2023.
Published: 12 july 2023.