International Clinical and Medical Case Reports Journal
Review Article (ISSN: 2832-5788)

Parents Awareness about the Use of Self-Medication in Children, Saudi Arabia, 2023

AL Shammari, Reham Obaid*and AL Enizy Rasha Jazy

Ministry of National Guard Health Affairs, Saudi Arabia

Citation: *AL Shammari Reham Obaid, AL Enizy Rasha Jazy. Parents Awareness about the Use of Self-Medication in Children, Saudi Arabia, 2023. Int Clinc Med Case Rep Jour. 2023;2(18):1-8.*

Received Date: 05 October, 2023; **Accepted Date:** 18 October, 2023; **Published Date:** 20 October, 2023

***Corresponding author:** AL Shammari, Reham Obaid, Ministry of National Guard Health Affairs, Saudi Arabia

ABSTRACT

Aim: The purpose of the study was to assess the knowledge and practice of parents about the use of self-medication in their children and to determine the reasons that lead to this situation. In addition to determining the relationship between self-medication practice and socio-demographic characteristics. An observational cross-sectional intuitional-based study including 427 parents regarding children's self-medication was conducted in King Saud Hospital in Qassim region, Saudi Arabia.

Result: A total of 427 participants were included in this study, (62.1%) of them were females, and (37.9%) were males. The commonest age group was found to be 31 – 35 years old (25.1%). Most of the participants (72.8%) were graduates, while (7.5%) were postgraduates. Most of the participants (78.7%) predominantly used synthetic medicines, while (21.3%) used herbal medication. The majority of the parents (69.8%) were aware of the side effects and complications of the medications. The most frequent self-medications used by the parents were antipyretics (81.5%), cough syrups (41.9%), and anti-allergy medication (23%). Moreover, reasons for parental self-medication of their children were awareness about their children's disease from the symptoms (72.6%), waiting time at the clinic for too long (61.8%), and consultation fees was too expensive (52%). Among socio-demographic characteristics that we included in the table, only occupation and number of children were found to be statistically significant ($p \leq 0.05$).

Conclusion: Overall, this study can conclude that there is a huge use of self-medication for children by parents attending King Saud Hospital, Qassim region, Saudi Arabia. The knowledge and practice of the majority of parents regarding self-medication in their children were found to be acceptable. However, despite that many of the parents were educated, but the knowledge of many of them about self-medication was insufficient. Significant associations were found between the use of self-medication and both occupation and the number of children.

Keywords: Parents Awareness, Self-Medication, Children

INTRODUCTION

Several health hazards might arise when a non-physician prescribes medication to a child. These concerns have been extensively documented globally. One typical self-care technique is self-medication. This is a more common practice, especially in poorer nations.[1] Other names for it include over-the-counter (OTC) and non-prescription.[2] Drugs from prior prescriptions that may occasionally be used for symptoms that the parents are aware of must

exist in certain households.[1] Without medical supervision, drug use can raise the risk of pathogen resistance, improper, erroneous, or excessive therapy, missed diagnoses, delays in necessary treatment, and increased morbidity.[3]

The World Health Organization defines self-medication as the use and selection of drugs by individuals to treat self-identified ailments or symptoms. Furthermore, the International Pharmaceutical Federation (IPF) defines self-medication as the use of non-prescription medications by persons on their own initiative.[4] In general, self-medication is defined as "the use of drugs, herbs, or home remedies on one's own initiative or on the advice of another person, without consulting a doctor."[3] OTC pharmaceuticals are medications that are sold directly to consumers without the need for a prescription from a healthcare professional. OTC medications include pain relievers, cough and cold cures, anti-allergy medications, vitamins, and vitality tonics. Although these medications are thought to be risk-free and useful for treating common health issues, excessive usage might result in serious side effects and negative reactions.[3]

Self-medication is not a safe practice. Risks associated with self-medication include: incorrect self-diagnosis, delays in seeking medical advice when necessary, infrequent but severe adverse reactions, dangerous drug interactions, incorrect administration, incorrect dosage, incorrect choice of therapy, masking of a severe disease and risk of dependence, diarrhea, vomiting, cough, and upper respiratory tract infection.[3] It can have long-term or short-term consequences, and it can sometimes be fatal. One of the issues that self-medication can create is an overdose, which can lead to child poisoning. Another issue is antibiotic resistance. Antibiotics must be administered by parents under the guidance of a certified medical practitioner.[5]

Most medications used have a license that says exactly how the medicine should be used. However, this license may not include use in children, or a particular illness or condition.[6] The patient's active participation in his or her own health care, better utilization of physicians' and pharmacists' skills, and a reduced (or, at the very least, optimized) load on governments due to health expenditure associated with the treatment of minor health disorders. However, self-medication is far from a perfectly safe practice, especially when it is not done responsibly. Potential risks of self-medication include: incorrect self-diagnosis, delays in seeking medical advice when needed, infrequent but severe adverse reactions, dangerous drug interactions, incorrect administration, incorrect dosage, incorrect therapy selection, masking of a severe disease, and the risk of dependence and abuse.[7]

Even for minor health conditions, the use of non-prescribed drugs can lead to complications. Over-the-counter medications, for example, are widely available.[3] But what we don't realize is that self-medication exposes us to allergies, drug dependence, addiction, disabilities, and even premature death; it wastes resources, increases resistance to pathogens, and causes serious health risks such as adverse reactions and prolonged suffering.[3] Antimicrobial resistance is a worldwide issue, particularly in developing nations where antibiotics are freely available.[3]

People prefer self-medication since it is immediate, there are no doctor charges, and there is a lack of transportation and fees associated with distant hospitals or clinics. However, if they have significant health problems, their medical expenses would double and their health will be irreversibly harmed.[8]

A study showed that the rising development of self-medication was seen among higher secondary school education mothers with 35.3%. In the income factor, 2600K-3000K was the most common income range found in the self-medication.[9] The study of Alsuhaibani et al., revealed that there is generous use of over-the-counter (OTC) medication for children by their parents in the Qassim region, Saudi Arabia. Most of the respondents were

educated but their knowledge about OTC is insufficient.[10] In Tanzania the knowledge on the appropriate use of antibiotics among parents was low. There was a need to have routine continuous health education at the community level about the use of antibiotics.[11] In Congo 96% of the mothers self-medicate their children; 95.7% do not know the exact dosage of the drug used; 97.17% do not check the expiry date; more than 91% of the mothers use anti-malarial drugs, 41.3% use antipyretics/analgesics and 26.3% use antibiotics.[12] However, according to a Pakistani Study, 63% of parents informed physicians about self-medication in their children and 18% reported that their child became sicker after self-medication. Out of total 56% of participants agreed that self-medication is unsafe for their children.[13]

As the best of our knowledge, there are some researches done about this topic in Saudi Arabia and worldwide, but it still is a major problem. Studies found that the socioeconomic status and the educational level of the parents, as well as clinical lack of control, are some of the major reasons that lead parents to usage of self-medication. Based on the previously mentioned reasons, this study aimed to assess the knowledge and practice of parents about the use of self -medication in their children and to determine the reasons which lead to this problem in Saudi Arabia. In addition to determining the relationship between self-medication practice and socio-demographic characteristics.

METHODOLOGY

This study was an observational descriptive cross-sectional hospital-based study. Conducted at King Saud Hospital in Qassim region, Kingdom of Saudi Arabia during the period from August 2023 to October 2023.

Data was collected using self-administered questionnaires. Data was entered and computerized through Microsoft Excel then analyzed by SPSS version 27. Descriptive statistics was presented in tables and diagrams for categorical variables. The association between the dependent and independent variables was tested by odd ratio and Chi-square test. A logistic regression test was used to control for confounding factors. The statistical significance was considered at $p < 0.05$.

RESULTS

A total of four-hundred twenty-seven participants were included in this study, of which (62.1%) were females, and (37.9%) were males. Among them, the age distribution was as follows: 18 – 20 years old (1.4%), 21–25 years old (4.9%), 26–30 years old (15.2%), 31–35 years old (25.1%), 36 – 40 years old, (21.5%), 41–45 years old (19.9%), 46 – 50 years old (8.7%), and more than 50 years old (3.3%). Furthermore, (64.9%) were non-healthcare employees, (6.6%) were healthcare employees, and (28.6%) were unemployed. (72.8%) of the participants who graduated from the University, of which (7.5%) had postgraduate education, (16.2%) finished tertiary school, and (3.5%) finished less than tertiary school. The description of the socio-demographic characteristics of participants is in Table 1.

Most of the participants (78.7%) predominantly used synthetic medicines, while (21.3%) used herbal medication. Importantly, parents self-medicated their children at different frequencies during one year, (37.2%) of them more than 4 times, (19.9%) four times, (9.1%)three times, (6.6%) twice, (4%) one time, and (23.2%) never did. (66%) of parents know the right doses for children, while (34%) do not. Regarding whether parents are aware of the side effects and complications that can be caused by medications, the majority (69.8%) do, while (30.2%) do not. When asked if parents read the medication's pamphlet, (56%) said they did, while (44%) said they did not. (63.5%)

of parents complete the whole course of medication, while (36.5%) do not. Regarding parents' actions, if the child's health did not improve with self-medication, (52.7%) of them attend the hospital, (39.3%) go to private clinics, (4%)% consult the community pharmacist, (2.3%) search for medication online. The Majority of the parents (90.9%) used OTC medication when the child's symptoms were mild, (9.1%) in the presence of moderate symptoms, and no participant chose to use self-medication in severe or critical conditions. Knowledge and practices of parents toward OTC were summarized in Table 2.

The medicine providers varied as well, (41.7%)% were provided by a hospital, (33.0%) by a pharmacy, (15.0%) by a private clinic, while (10.3%) were received from friends and relatives. The sources of medical information were the doctor (79.4%), followed by the pharmacist (52.5%), internet (23.4%), relatives and friends (26.9%). The most frequent OTC used by the parent were antipyretics (81.5%), cough syrups (41.9%), and anti-allergy medication (23%). Moreover, the reasons for parental self-medication to their children are stated in Table 3.

The level of attitude toward medicine has been calculated by adding all responses from attitude questionnaires, "Knowledge and practices of parents toward OTC") Table 2. For ease of analysis, strongly disagree and disagree have been merged and coded as 1, neutral have been coded as 2, and agree and strongly agree have been merged and coded as 3. Based on the analysis, the mean score was 16.4, the minimum score was 7 and the maximum score was 23. This result has been recoded into two categories such as; 8–12 as a negative attitude with 171 (40%) and 13 – 24 as a positive attitude with 256 (60.0%). We used the chi-square test on the table to measure the association between the level of attitude and socio-demographic characteristics of participants with p-values which indicates whether the association is statistically significant. We used p-$\leq$0.05 as a cutoff point of significant level for all statistical tests. Based on analysis, among socio-demographic characteristics that we included in the table, only occupation and number of children were found to be statistically significant ($p \leq 0.05$). Other demographical variables included in the table show a negative association with the level of attitude as shown in Table 4.

Table 1: Socio-demographic characteristics

Study variables	**N (%) (n=427)**
Gender	
Male	162 (37.9%)
Female	265 (62.1%)
Age group in years	
18 – 20 years old	6 (1.4%)
21 – 25 years old	21 (4.9%)
26 – 30 years old	65 (15.2%)
31 – 35 years old	107 (25.1%)
36 – 40 years old	92 (21.5%)
41 – 45 years old	85 (19.9%)
46 – 50 years old	37 (8.7%)
> 50 years old	14 (3.3%)
Occupation	
Healthcare employee	28 (6.6%)

Non-healthcare employee	277 (64.9%)
Unemployed	122 (28.6%)
Educational level	
Less than tertiary school	15 (3.5%)
Tertiary school	69 (16.2%)
Graduate	311 (72.8%)
Postgraduate	32 (7.5%)
Number of children	
One	76 (17.8%)
Two	93 (21.8%)
Three	89 (20.8%)
Four	78 (18.3%)
More than four	91 (21.3%)

Number (N), percentage

Table 2: Knowledge and practices of parents toward OTC

Study variables	N (%) (n=427)
Type of treatment	
Synthetic Medicine	336 (78.7%)
Herbal treatment	91 (21.3%)
The frequency of self-medication by parents to their children in 1 year.	
Never	99 (23.2%)
One time	17 (4.0%)
Two times	28 (6.6%)
Three times	39 (9.1%)
Four times	85 (19.9%)
More than four times	159 (37.2%)
If parents know the right dose for children	
Yes	282 (66.0%)
No	145 (34.0%)
If parents are aware about the side-effects and complications that can be caused by medications	
Yes	298 (69.8%)
No	129 (30.2%)
If parents read the medication's pamphlet	
Yes	239 (56.0%)
No	188 (44.0%)
If parents complete the whole course of medication	
Yes	271 (63.5%)
No	156 (36.5%)
Parent action if the child did not improve with self-medication	
Go to hospital	225 (52.7%)
Go to a private clinic	168 (39.3%)
Consult community pharmacist	17 (4.0%)

Search internet	10 (2.3%)
Seek advice from friends and/or relatives	4 (0.9%)
Continue self-medication	3 (0.7%)
Parents usually used the medication in the following cases.	
Mild symptoms	388 (90.9%)
Moderate symptoms	39 (9.1%)

Number (N), percentage (%)

Table 3: Reasons for parental self-medication to their children

Statement	**DisagreeN (%)**	**NeutralN (%)**	**AgreeN (%)**
1.Waiting time on the clinic is too long	62 (14.5%)	101 (23.7%)	264 (61.8%)
2.Consultation fees are too expensive	99 (23.2%)	106 (24.8%)	222 (52.0%)
3.The nearest clinic is too far away	140 (32.8%)	140 (32.8%)	147 (34.4%)
4.Bad attitude of healthcare workers	245 (57.4%)	25 (5.9%)	157 (36.8%)
5. Lack of sufficient health information from the medical provider	129 (30.2%)	155 (36.3%)	143 (33.5%)
6.I am expert enough	88 (20.6%)	162 (37.9%)	177 (41.5%)
7.Awareness about my children dis-ease from the symptoms	49 (11.5%)	68 (15.9%)	310 (72.6%)

Table 4: Association between attitude toward medicine and socio demographic characteristics of participants (n=427).

	Positive (n=256)	**Negative** (n=171)	**P-value** §
Study variables	**N (%)**	**N (%)**	
Gender			
Male	119 (46.5%)	70 (40.9%)	0.258
Female	137 (53.5%)	101 (59.1%)	
Age group in years			
≤35 years old	125 (48.8%)	89 (52.0%)	0.514
> 35 years old	131 (51.2%)	82 (48.0%)	
Occupation			
Employed	187 (73.0%)	107 (62.6%)	**0.022**
Unemployed	69 (27.0%)	64 (37.4%)	
Educational level			
Tertiary and below	54 (21.1%)	39 (22.8%)	0.674
Graduate and above	202 (78.9%)	132 (77.2%)	
Number of children			
1 – 3	65 (25.4%)	81 (47.4%)	**0.0001**
>3	191 (74.6%)	90 (52.6%)	

DISCUSSION

This study was conducted to assess the knowledge and practice of parents about the use of self-medication in their children and to determine the reasons that led them to use self-medication. In addition to determining the relationship between self-medication and socio-demographic characteristics among parents attending King Saud Hospital, Al-Qassim region, Kingdom of Saudi Arabia. Various published studies revealed that self-medication has been widely practiced by parents for their children regardless of the side effects it might cause.[9-13] This practice should be carefully assessed due to some side effects and complications that might be encountered during the course such as; child allergy to medicine, improper dosage, wrong medicine, expired medicine, and other related drug complications.

The results of our study show that most of the participants were mothers with the commonest age group being 31–35 years old, followed by 36–40 years old, and that the majority of the parents were college graduates or above, and most of them were employees.

When comparing the prevalence of parents' use of self-medication in their children between our study and previous studies, our study showed a higher percentage than Naseer Ahmed's study in Indonesia, Beatus Simon's study which was done in Tanzania, and Umar Farooq Gohar's study which was conducted in Pakistan. On the other hand, our result was less than Astrid Mukemo Katumbo's study in Congo and Ray Alsuhaibani's study in Saudi Arabia.[9-13]

Regarding knowledge and practices of parents toward self-medication, synthetic medicine was predominantly used by the parents to their children with (78.7%), and (19.9%) using self-medication for their children more than four times per year. The parents' action, if the child did not improve in self-medication, more than half of them will go to a hospital with (52.7%). When compared to the previously done study conducted by Ray Alsuhaibani in Saudi Arabia, our results show lower percentages than those found in Alsuhaibani's study, which can be explained by the efforts that were made to raise awareness and knowledge about the use of self-medication.[10]

The most frequent self-medication drugs used by parents were antipyretics (81.5%), cough syrups (41.9%), and anti-allergy medication (23%). This result agrees with the study of Ray Alsuhaibani in Saudi Arabia but with different percentages. This can be explained by the fact that the two studies were done in the same country and region. While Beatus Simon's study in Tanzania had antibiotics as the most commonly used drug, and Astrid Mukemo Katumb's study in Congo showed antimalarial, antipyretics/analgesics, and antibiotics as the most used drugs. It goes without saying that the different countries have different environments and common diseases which can affect this result.[10-12]

Regarding the reasons for parental self-medication to their children, the results of our study showed that the commonest reasons were awareness about parents' children's disease from the symptoms (72.6%), waiting time at the clinic being too long (61.8%), and consultation fees are too expensive (52%). Again, this result agrees with the study that was conducted in Saudi Arabia by Ray Alsuhaibani, but with different percentages.[10]

Based on our results, among socio-demographic characteristics that we included, only occupation and number of children were found to be statistically significant with the use of self-medication ($p \leq 0.05$). Other demographical variables showed a negative association with the level of attitude. When compared to the other studies, Naseer Ahmed's study in Indonesia showed a correlation between both education level and income, and use of self-medication. In addition, Ray Alsuhaibani's study in Saudi Arabia showed a significant association between residence and the use of self-medication.[9,10]

Just like all studies, our study has also been subjected to some limitations. First, the majority of participants in this study were mothers. Achievement of a 50:50 gender distribution of parents might not be possible as mothers usually take care of children more than fathers. In addition to that, we could not determine if parents' economic status was contributing to self-medication because the income data were not collected. Lastly, adding more important variables would be more beneficial especially when studying the knowledge and practice of parents toward self-medication.

CONCLUSION

Overall, this study can conclude that there is a huge use of self-medication for children by parents attending King Saud Hospital, Qassim region, Saudi Arabia. The knowledge and practice of the majority of parents regarding self-medication in their children were found to be acceptable. However, despite that many of the parents were educated, but the knowledge of many of them about self-medication was insufficient. Significant associations were found between the use of self-medication and both occupation and the number of children.

Health providers should raise awareness regarding the harmful effects of self-medication. Pharmacies should prevent over-the-counter behavior regarding drugs that have serious side effects. Moreover, social media should have a bigger role in raising awareness about self- medication. More studies regarding this topic should be done to help assess the situation.

DECLARATION

Ethical approval: Ethical clearance was obtained from ethics the review committee and administrative authorities of the King Saud Hospital. The participants' privacy and confidentiality were maintained.

Competing interest: The authors declare that they have no competing interest.

Authors' contribution: All authors carried out the research (data collection, analysis, and writing), presented the findings, and reviewed the findings.

Funding: Not applicable.

Availability of data and materials: Not applicable.

REFERENCES

1. Attia NA, Ahmed AE, Zafar T, Elawad MA, Alhaj O. The Prevalence of Self-Medication Among Mothers in Burri District, Sudan. European Journal of Biomedical. 2017;4(12):16-8.
2. Azhar MI, Gunasekaran K, Kadirvelu A, Gurtu S, Sadasivan S, Kshatriya BM. Self-medication: awareness and attitude among Malaysian urban population. International Journal of Collaborative Research on Internal Medicine & Public Health. 2013;5(6):436.
3. Bennadi D. Self-medication: A current challenge. J Basic Clin Pharm. 2013;5(1):19-23.
4. World Health Organization. Self-medication practice among patients in a public health care system. Eastern Mediterranean Health Journal 2011;17(5).
5. Youaremom, 3 Dangers of self-medicating children, 2 Sep 2018.
6. Side Effects and Dangers of Self Medication. PharmEasy Blog. 2015.
7. Ruiz ME. Risks of self-medication practices. Curr Drug Saf. 2010;5(4):315-23.

8. People prefer self-medication since it is immediate, there are no doctor charges, and there is a lack of transportation and fees associated with distant hospitals or clinics. However, if they have significant health problems, their medical expenses would double and their health will be irreversibly harmed [8].
9. Ahmed N, Ijaz S, Manzoor S, Sajjad S. Prevalence of self-medication in children under-five years by their mothers in Yogyakarta city Indonesia. J Family Med Prim Care. 2021;10(8):2798-2803.
10. Alsuhaibani R, Alsuhaibani M. Self-medication among Saudi children by parents in Al-Qassim Region, Saudi Arabia. Majmaah Journal of Health Sciences. 2020;8(1):53-64.
11. Simon B, Kazaura M. Prevalence and Factors Associated with Parents Self-Medicating Under-Fives with Antibiotics in Bagamoyo District Council, Tanzania: a Cross-Sectional Study. Patient Prefer Adherence. 2020;14:1445-1453.
12. Mukuku O, Katumbo AM, Tshiningi TS, Sinanduku JS, Mudisu LK, Mwadi PM, et al. The practice of self-medication in children by their mothers in Lubumbashi, Democratic Republic of Congo. Journal of Advanced Pediatrics and Child Health. 2020;3(1):027-31.
13. Gohar UF, Khubaib S, Mehmood A. Self-medication trends in children by their parents. J Develop Drugs. 2017;6(2):1-7.