



Evaluation Awareness of Parents About Use of Medications in Children

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Abstract

Background: Proper use of medications in outpatients, as an important issue, especially in children, should be considered.

Objectives: The aim of present study was to evaluate the awareness of parents about the consumption of medications.

Methods: This interventional study was conducted on patients' parents referred to Amir Kabir Hospital. First, a medical history was taken, and then they completed a compiled questionnaire. After completing the checklist by parents, they were educated about general information on how to use medicines. Before and after the education about the proper use of medications, data were analyzed by SPSS software.

Results: From one hundred evaluated cases, the mean and standard deviation (SD) of age were 4.3 ± 2.4 . In addition, we observed statistically significant differences between the level of parental awareness before and after the intervention.

Conclusions: In parents with any level of education, training about the proper use of medications is necessary and important.

Keywords: Parents, Pediatrics, Medications Use

1. Background

The use of proper medications, as an important issue in medicine, has been noticed over time. As it is not usually followed up by a physician or pharmacist, a patient's precise awareness of how to use the medications is important. Consumption of medications varies based on people's tastes (1). In the meantime, children are more likely to be bothered by different medications than others (2, 3).

Also, parents may have inappropriate behaviors such as crushing the tablet and mixing it with food and juice to make the child more comfortable with their medications (4). A group of parents also thinks that children are small adults to whom adult medications can be prescribed in lower doses. Some of them use different medications for their children without information about the complications of these drugs (5, 6). Alternatively, the non-chewable pills cannot be halved or crushed for the pediatrics to make it easier to swallow (7).

2. Objectives

Parents' awareness of the proper use of medication is very important. Furthermore, knowledge of the etiology and predisposing factors of the disease, and the mother's role, and age and educational attainment are key points (8, 9). Therefore, the aim of this study was to evaluate parents' awareness of consumption of medications.

3. Methods

3.1. Study Setting

This cross-sectional study was conducted in pediatric clinic of Amir-Kabir Hospital, a governmental pediatric referral center, in Arak city.

3.2. Study Population

We evaluated patients' parents in our study and their awareness of consumption of medications. We included 100 cases as the study group. Patients were selected in 2016 within two months.

3.3. Inclusion and Exclusion Criteria

Outpatient pediatrics' parents who were willing to participate in the study were considered the study groups. Also, parents who did not answer the questions correctly were excluded from the study.

3.4. Ethical Considerations

Ethical issues (including plagiarism, data fabrication, and double publication) have been completely considered by the authors. In addition, the Ethics Committee of Arak University of Medical Sciences approved the study protocol, with the ethical code IR.ARAKMU.REC.1395.183.

3.5. Measurement

One hundred patients' parents were selected as the study group. At first, the demographic information was obtained, and then a questionnaire was completed by them. After completing the first questionnaire, parents were given training on how to correctly use medication as follows:

How to make syrup, how to use a syringe and a dropper, avoid crushing or chewing coated pills, avoiding taking crushed coated pills, shaking liquid medicines before taking, discarding semi-consumed medications that are partially consumed, washing hands and eyelashes and around the eye before using eye drops, not prolonged use of eye drops, especially those containing corticosteroids. Then, 48 hours after training and follow-up by phone call, the second questionnaire was completed for the parents.

After collecting the pre- and post-training questionnaires, the data were extracted from both questionnaires, and their results were analyzed in SPSS statistical system. Then, the results of the two questionnaires were compared to evaluate the effect of education and give information on parents' knowledge and attitude.

3.6. Statistical Analysis

In this study, we used descriptive-analytic statistical methods, tables, and statistical charts. Data were analyzed with SPSS 23 software. The mean and standard deviation (SD) were used for the descriptive analysis of the data. In addition, statistical analysis was performed using paired *t*-test or non-parametric tests.

4. Results

Of 100 evaluated cases, the mean \pm SD of children age was 4.3 ± 2.4 years. Also, age of children's fathers and mothers were 40.6 ± 10.2 and 36.3 ± 8.8 years,

Table 1. Demographic and Epidemiologic Information of Children (n = 100)

Variables	Values (n = 100)
Age (y)	
Children	4.3 \pm 2.4
Father	40.6 \pm 10.2
Mother	36.3 \pm 8.8
Father's education	
Lower diploma	93
Diploma and associate degree	5
Bachelor degree and higher	2
Mother's education	
Lower diploma	87
Diploma and associate degree	9
Bachelor degree and higher	4
Father's occupation	
Unemployed	24
Farmer	32
Employee	14
Self-employer	30
Mother's occupation	
Housewife	44
Employee	13
Self-employer	43

respectively. Parents' educational levels and occupations are summarized in [Table 1](#).

In evaluating the awareness of parents about medication consumption in mothers, before training, awareness was poor in 76 cases, intermediate in 16 cases and good in 8 cases. Also, after training, awareness was poor in 34 cases, intermediate in 49 cases and good in 17 cases. Moreover, in fathers, before training, awareness was poor in 86 cases, intermediate in 12 cases and good in two cases. Besides, after training, awareness was poor in 56 cases, intermediate in 38 cases, and good in six cases. Based on statistical evaluation, there was a significant difference between the two times of evaluations ($P = 0.001$, [Table 2](#)).

5. Discussion

Proper use of medications, as an important issue in pediatrics, has been noticed over time (10), and precise awareness of consumption of medications is important (5, 11). We observed that parental awareness was not at an appropriate level, so it is important to train parents about this issue. Other results have been discussed in

Table 2. Parents' Awareness of the Use of Medications Pre- and Post-training

Variables	Training		P-Value
	Before	After	
Mothers awareness			0.001
Poor	76	34	
Intermediate	16	49	
Good	8	17	
Fathers' awareness			0.001
Poor	86	56	
Intermediate	12	38	
Good	2	6	

the following. A study by Jafari et al. showed that parents did not have the appropriate knowledge, attitude, and practice about antibiotic use in children with upper respiratory infections, and it was necessary to increase parental knowledge by physicians (11). In our study, parents also did not have appropriate awareness of the consumption of medications (11). In another study by Dawood et al., they mentioned that the mean score of knowledge was 7.36 ± 2.38 , and there was a statistically significant difference between age groups ($P < 0.05$) (10). Thus, they stated that older children were more aware of medication. In addition, they mentioned that the level of parental knowledge, socioeconomic status, and children's attitudes about how to use the medication are affected. Accordingly, the results of this study were consistent with the results of our study. Further, the general education of the patient has been effective, which has been seen in all age groups of the parents. According to the results of this study, younger mothers with fewer children had better knowledge about the proper use of medication in children (10). So, we can improve knowledge of parents about proper medication consumption by accurately training them in this field.

5.1. Conclusions

Based on the results of the present study, training parents at any level of education about proper consumption of medications is an important issue in outpatients.

Footnotes

Authors' Contribution: H. T. A. designed the study. P. Y. C. designed the study and performed some parts of the statistical analysis. L. S. S. re-evaluated the clinical data, revised the manuscript, performed the statistical analysis, and revised the manuscript. M. R. and M. R. Z.

collected the clinical data, interpreted them, and revised the manuscript. S. K. M. re-analyzed the clinical and statistical data and revised the manuscript. All authors read and approved the final manuscript.

Conflict of Interests: The authors declared no competing interests.

Data Reproducibility: The dataset presented in the study is available on request from the corresponding author during submission or after its publication.

Ethical Approval: Ethical issues (including plagiarism, data fabrication, and double publication) have been completely observed by the authors. In addition, the Ethical Committee of Arak University of Medical Sciences approved the study protocol, with ethical code as IR.ARAKMU.REC.1395.183.

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Informed Consent: Outpatient pediatrics' parents who gave informed consent to participate in the study were considered the study group.

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