



Knowledge and Attitude of Pediatricians and Pediatric Residents Regarding Child Abuse and Neglect

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ABSTRACT

Introduction: Child abuse and neglect is a public health challenge with lifelong consequences for survivors. Physicians' knowledge regarding child abuse and neglect is essential for diagnosis, treatment, and timely referral to legal authorities. This study aimed to determine pediatric residents' and pediatricians' knowledge and attitude regarding child abuse and neglect.

Methods: In this cross-sectional study, pediatric residents and pediatricians' knowledge and attitude regarding child abuse and neglect were measured using a standard questionnaire with confirmed validity and reliability. In this questionnaire, knowledge score ranged from 0 to 17, and attitude score ranged from 10 to 50. After collecting the questionnaires and calculating the scores, the information was entered into the SPSS software (version 22), and statistical analysis was performed.

Results: A total of 80 participants, including 38 pediatric residents and 42 pediatricians, participated in this research. Among them, 71.3% were female, and 28.8% were male. The mean score of knowledge and attitude in all participants was 14.05 ± 1.88 out of 17 and 41.39 ± 4.36 out of 50, respectively. The mean score in the pediatric residents and pediatricians was 13.42 ± 2.02 and 14.62 ± 1.57 for knowledge and 40.66 ± 4.32 and 42.05 ± 4.35 for attitude, respectively. Regarding knowledge, 19 participants (23.8%) had a good score, 35 (43.8%) had a moderate score, and 26 (32.5%) had a poor score ($p=0.24$). There was a significant difference in terms of knowledge score among four academic groups (first-year resident, second-year resident, third-year resident, and pediatrician) ($p=0.031$), as the score was significantly higher in pediatricians than in residents ($p=0.004$). However, no significant difference was observed for attitude score ($p=0.056$). In general, and regarding all participants, no significant relationship was observed between attitude score and knowledge score ($p=0.059$).

Conclusion: Most pediatric residents and pediatricians participating in the present study had moderate knowledge and attitude toward child abuse and neglect, and less than a quarter of the participants had good knowledge in this regard. Also, the pediatricians had significantly higher knowledge scores than the pediatric residents. These results emphasize the importance of more education for pediatric residents regarding child abuse and neglect and continuing education programs for pediatricians.

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Introduction

Child abuse has been defined as “any recent act or failure to act on the part of a parent or caretaker, which results in death, serious physical or emotional harm, sexual abuse or exploitation”; or “an act or failure to act which presents an imminent risk of serious harm” (1). Many children are recognized by child protective services (CPS) as proven victims of abuse. On the other hand, studies have shown that 27% of women and 30% of men experienced physical abuse in childhood, which shows that many cases are not recorded (2).

In a review study conducted in Iran in 2014, the overall prevalence of physical abuse, psychological abuse, and neglect was 43.6%, 64.5%, and 40.9%, respectively (3). In another study in Tehran in 2012, the prevalence of child abuse among male teenagers was reported as 83.1% (4).

Despite the statistics showing a decrease in recorded child abuse cases over the past years, hospital research shows that hospitalization cases due to child abuse have remained constant or have increased in some periods (5-7).

According to the recommendation of the World Health Organization, it is necessary for physicians to be aware of the possibility of child abuse in the face of any unexplained or ambiguous injuries and to include it as one of the diagnoses in the list of differential diagnoses and evaluate it according to the patient's history (8).

Early identification of child abuse in health and treatment centers and reporting to the related authorities are the main foundations in preventing child abuse. Alertness and awareness of therapists regarding signs, symptoms, and risk factors of child abuse is an essential prerequisite for this purpose. Pediatricians and pediatric residents are on the front line of dealing with child abuse cases in many medical centers and clinics.

They can identify, properly manage, and report these cases early if they have sufficient knowledge and the right attitude toward this phenomenon. In a study in 2015 in Iran, only 58.5% of health employees had sufficient knowledge about the causes of child abuse, and 45% of them had sufficient knowledge about the symptoms, signs, and complications of child abuse (9).

In another study, only 49% of pediatric residents and pediatricians had good and sufficient knowledge regarding child abuse, and residents had less knowledge than pediatricians (10). Several studies have shown that physicians who have completed additional courses related to child abuse after their regular education have better awareness and performance in dealing with child abuse cases (11,12). The results of these studies show that the current educational content in the field of child

abuse needs to be improved. Child abuse and neglect are highly prevalent and vital, and pediatricians have a critical role in their prevention and early diagnosis. Also, few studies have investigated the knowledge and attitude of physicians in this regard. Therefore, this study aimed to measure the knowledge and attitude of pediatric residents and pediatricians of Mashhad University of Medical Sciences regarding child abuse and neglect.

Materials and Method

This cross-sectional study was conducted in 2020-2021 after being approved by the Ethics Committee of Mashhad University of Medical Sciences with the code IR.MUMS.MEDICAL.REC.1398.216 in groups of pediatric residents and pediatricians by available sampling.

The data collection tool was the questionnaire “assessing the attitude and knowledge of pediatricians regarding child abuse” designed and validated by Garousi et al. (10).

This questionnaire consists of three parts. The first part contains demographic information, and the second part, with 17 questions, evaluates the knowledge so that one point is considered for each correct answer and the range of knowledge was between 0-17. The scores of 16 to 17 were classified as good, 14 to 15 as moderate, and less than 14 as poor. The third part evaluates the attitude and includes ten questions with a 5-point scale (from completely agree to completely disagree).

Based on the favorable direction, a score of 1-5 has been assigned to each question. Therefore, attitude score ranges from 10 to 50. The scientific validity of the questionnaire was provided using content validity, and its reliability was also confirmed using the internal consistency coefficient (Cronbach's alpha 0.7 and 0.72 for knowledge and attitude, respectively). The questionnaire was provided to the pediatricians of the Dr. Sheikh and Akbar hospitals and the pediatric residents of the pediatric department of Mashhad University of Medical Sciences, and they were asked to complete it. None of the participants' identities or identifiable information was recorded in the questionnaires. The confidentiality of research data was respected in all stages. Data were analyzed using SPSS software (version 22).

After checking the normality or non-normality of data distribution, mean and standard deviation or median and interquartile range were used to describe quantitative variables. T-test or Mann-Whitney and Kruskal-Wallis tests were used to compare quantitative variables between the groups separated by gender, education, and resident's level. The Chi-square test was used to evaluate the statistical

relationship between quantitative variables. $P < 0.05$ was considered statistically significant.

Results

A total of 80 participants, including 38 pediatric residents and 42 pediatricians, participated in this study. There were 57 (71.3%) women and 23 (28.8%) men, with 33 (86.8%) women and five (13.2%) men in the pediatric residents group and 24 (57.1%) women and 18 (42.9%) men in the pediatricians group.

The mean age was 42.26 ± 8.69 years in the group of pediatricians and 32.92 ± 6.13 years in the group of pediatric residents. In the pediatric residents group, 14 (36.8%) were in the first academic year, seven (18.4%) were in the second academic year, and 17 (44.7%) were in the third year of education.

The mean score of knowledge and attitude in all participants was 14.05 ± 1.88 and 41.39 ± 4.36 , respectively. Knowledge score according to gender, education, and resident's level is shown in Diagram 1.

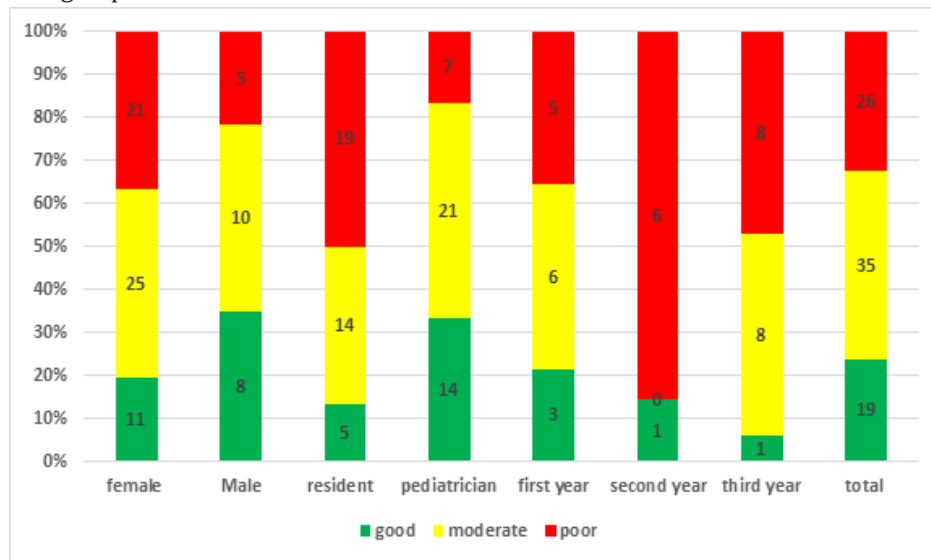


Figure 1: Knowledge of participants by gender, education, and residents' level

The mean score of knowledge and attitude was 13.89 ± 1.89 and 41.74 ± 4.50 among women and 14.43 ± 1.85 and 40.52 ± 3.96 among men, respectively. Although knowledge level was higher in men than in women, this difference was not statistically significant ($p=0.24$). There was also no statistically significant difference between men and women regarding attitude score ($p=0.38$).

The mean score of knowledge in the pediatric residents and pediatricians was 13.42 ± 2.02 and 14.62 ± 1.57 , respectively. Also, attitude score in the pediatric residents and pediatricians was 40.66 ± 4.32 and 42.05 ± 4.35 , respectively. The scores of knowledge and attitude according to the level of the participants' education are shown in Table 1.

Table 1: Mean scores of knowledge and attitude by education level

Education level	Attitude score	Knowledge score	
	Mean \pm SD	Mean \pm SD	
Resident	First-year	42.5 \pm 3.83	13.57 \pm 2.53
	Second year	36.57 \pm 5.12	13.00 \pm 1.52
	Third year	40.82 \pm 3.32	13.47 \pm 1.80
	Total of residents	40.66 \pm 4.32	13.42 \pm 2.02
Pediatricians	42.05 \pm 4.35	14.62 \pm 1.57	
Total	41.39 \pm 4.36	14.05 \pm 1.88	

In terms of the overall knowledge score distribution, 19 participants (23.8%) had a good score, 35 (43.8%) had a moderate score, and 26 (32.5%) had a poor score. These values among the pediatric residents were five (13.2%),

14 (36.8%), and 19 (50.0%), respectively, and among pediatricians, were 14 (33.3%), 21 (50.0%), and seven (16.7%), respectively. There was a significant difference among the four study groups (first-year, second-year, third-year, and

pediatricians) regarding knowledge score ($p=0.031$). On the other hand, the knowledge score of the pediatricians was significantly higher than that of the residents ($p=0.004$). There was no difference among different educational levels regarding attitude score ($p=0.056$). There was no significant relationship between age with knowledge and attitude scores ($p=0.15$, $p=0.28$). A significant direct relationship was only observed between age and attitude score in first-year residents, with a correlation coefficient of 0.8 ($p=0.001$). Regarding all participants, no significant relationship was observed between knowledge and attitude scores ($p=0.059$). Also, this relationship was insignificant after dividing the participants into different groups (first-year, second-year, third-year, and pediatricians) ($p=0.972$, $p=0.546$, $p=0.231$, $p=0.157$, respectively).

Discussion

Early diagnosis, attention to the mental health needs of abused children, and inter-sectoral cooperation are among the challenges in preventing and treating child abuse and neglect. Although identifying abuse can be very challenging, there is ample evidence that clinicians often miss opportunities for early detection and intervention (13,14). More training is needed to help pediatricians identify cases with a high probability of maltreatment.

In a study in Kerman, Garousi and colleagues investigated the level of knowledge and attitude of pediatric residents and pediatricians regarding child abuse (10). They used a semi-structured questionnaire prepared by the researcher, and its scientific validity and reliability were confirmed.

A total of 49 participants, including nine pediatric residents and 40 pediatricians (members and non-members of the faculty), participated in the study. The mean knowledge score was 14.49 ± 2.10 , and attitude score was 40.86 ± 0.05 . Also, 49% of the participants had good knowledge, 30.6% had moderate knowledge, and 20.4% had poor knowledge (10). In the present study, the questionnaire prepared in the above study was used, and the mean knowledge and attitude score was 14.05 ± 1.88 and 41.39 ± 4.36 , respectively.

Compared to the above study, the mean knowledge score was lower, and attitude score was higher. In this study, 19 participants (23.8%) had a good score, 35 (43.8%) a moderate score, and 26 (32.5%) a poor score, which shows a more unfavorable situation compared to the mentioned study. The higher knowledge score in the above study can be due to more pediatricians compared to the residents in their study.

In another study, Garousi et al. assessed the knowledge and attitude of 200 general practitioners of Kerman City regarding child abuse (15).

They observed that 55% of general practitioners in Kerman City do not have enough knowledge about child abuse. The information on the risk factors and physical-psychological symptoms of misbehavior was relatively good, but the information on the diagnosis of sexual or psychological cases was insufficient. The attitude toward corporal punishment was negative and at the same time, the attitude had a significant relationship with the gender of the physician. Many physicians (65%) had observed child abuse cases in their clinical job.

However, very few (4.5%) had reported these cases and their information was very little regarding how to report cases of child abuse (15). In the above study, there is a gap between the knowledge and attitude of general practitioners at the desired level, which is in line with the present study's findings. In a study in 2017 in Saudi Arabia, Al-Nasser et al. investigated the knowledge, attitudes, and beliefs of pediatricians, pediatric residents, and medical students regarding child abuse (16).

They used a questionnaire to collect information and distributed it to 150 participants in inpatient wards, outpatient clinics, intensive care units, and pediatric emergencies. They observed that participants were generally familiar with the definition of misbehavior. Physicians with more experience had a higher level of knowledge, especially about neglect. Although women were more pessimistic about the legal system for dealing with abusers and protecting children, they were more willing to report these cases. In their study, the knowledge about reporting was defective in all categories. More certainty about the effectiveness of reporting had led to an increase in reporting. All participants requested to receive training in this area (16).

The above study is in line with the present study's findings in terms of higher knowledge of physicians with more experience. The present study did not investigate willingness to report, information about it, and obstacles leading to non-reporting.

Demirçin and colleagues (2017) assessed the knowledge and opinions of physicians regarding medical and legal procedures related to the physical abuse of children in Turkey (12). A detailed questionnaire was distributed among 390 physicians. The correct answer to the questionnaire questions was higher among pediatricians than general practitioners.

More than two-thirds of physicians thought that reporting should be solely within the scope of social service duties and that physicians should not have an obligation to report cases to legal institutions (12). The above study also supports the higher knowledge of pediatricians than residents in the present study. In our study, the attitude of physicians toward reporting and their legal duties was

not investigated. In a study in Italy in 2016, Romeo et al. assessed the ability of physicians to identify cases of child abuse (11).

They sent a questionnaire to the family doctors, pediatricians, and hospitals in Milan and around. A total of 273 responses were received. Their findings showed that doctors' knowledge about how to report cases to the judicial authority is insufficient. Half of the physicians had not participated in any congress or conference related to child abuse in the last three years, and more than a third of them had not studied any articles about it in this time period. Also, 75.6% of physicians stated that they did not participate in any specific training course about child abuse (11). The above study shows that physicians are not sufficiently prepared to identify and report child abuse cases, which aligns with our observations. It also emphasizes the necessity of educational planning during education and retraining in increasing the knowledge and preparation of physicians in this regard. Other similar studies on health professionals (17) and medical and dental students (18-20) have found similar findings regarding physicians' low knowledge level regarding child abuse, insufficient ability to detect cases, and weakness in reporting despite the ability to diagnose.

As can be seen, the results of numerous studies from all over the world, in different socio-economic conditions and different populations of medical staff in terms of education level, specialized field, and workplace, generally indicate lack of knowledge of physicians and other categories of service providers regarding child abuse and its diagnosis and reporting. Since very few studies in Iran have assessed the knowledge and attitude of pediatricians regarding child abuse and neglect, the results of this research help increase our understanding of the knowledge and attitude of this group.

A correct understanding of the existing conditions can lead to planning for the empowerment of physicians and other personnel to deal with child abuse and neglect and ultimately help its victims. These plans can include the definition of training courses at different stages of medical education, appropriate content for retraining, the development of clear and practical guidelines, and providing specific interpretations of existing laws in diagnosing and reporting abuse and neglect cases. The availability of the questionnaire only in Persian was one of the crucial limitations of this study. This questionnaire generally measures the information and views of people. It cannot assess their performance in dealing with cases of child abuse, as well as their knowledge about the clinical details related to child abuse and neglect, the existing laws in this field, the legal duties of physicians, and how to refer to legal authorities. In future studies, it is suggested to design or trans-

late questionnaires with the capability of more detailed measurement of knowledge and attitude, especially in the clinical field. Information collection methods such as interviews and evaluating the performance of treatment staff in dealing with clinical scenarios can also be used.

The previous knowledge and experiences of the participants in facing and reporting cases of misbehavior and related factors can also be evaluated in future research.

Conclusion

According to the results of this study, most of the pediatric residents and pediatricians of Mashhad University of Medical Sciences had moderate knowledge and attitude toward child abuse and neglect. Less than a quarter of the participants had a good knowledge score. Considering the mean scores, the pediatricians showed significantly higher knowledge than the pediatric residents. Therefore, it seems necessary to review and compile educational content or clinical guidelines regarding child abuse and neglect for the training course of pediatric residents and the retraining courses of pediatricians.

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Conflict of interest

The authors declare no conflicts of interest.

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