Perceived Child Abuse and Neglect in Hospitalized Children with Special Health Care Needs in Iran

Abstract

Background: Child Abuse and Neglect (CAN) is an important public health concern. Nurses play a key role in caring for the children and keeping them safe from abuse and neglect. The aim of this study was to determine the rate of perceived CAN in Hospitalized Children with Special Health Care Needs (CSHCN) as well as the relationship between the rate and some effective factors. **Materials and Methods:** This is a descriptive cross-sectional study on 199 CSHCN aged 6–18 years old, admitted to the pediatric wards in an educational hospital, in Isfahan, Iran, in 2018. Children were selected through convenience sampling method and assessed for CAN through a child abuse questionnaire. The Pearson correlation coefficient and Kruskal–Wallis and Mann–Whitney U tests were used to analyze the data. The p values smaller than 0.05 were regarded as significant. **Results:** According to the findings, 173 children (86.93%) had perceived CAN, the average total score of which was 9.36 contributing commonly to malnutrition 3.01 (2.36) followed by psycho-emotional abuse 2.71 (1.76), neglect 1.62 (1.23), and physical 1.52 (1.08) and sexual 0.54 (0.31) abuse based on mean (SD). Statistical analysis indicated a significant effect of child's age, economic situation of the family, mother's education and occupation, and parents' illness on the total score of perceived CAN ($p < 0.05$). **Conclusions:** Malnutrition was found to be the most common type of perceived CAN. Therefore, parents and the health system are advised to prioritize nutritional needs when planning their nutrition.

Keywords: *Child abuse, hospitalization, Iran, malnutrition*

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Introduction

Child Abuse and Neglect (CAN) is an important public health concern in today's world.[1] By definition, CAN is any type of physical, emotional, and sexual abuse, neglect or negligence, commercial or other exploitation resulting in actual or potential harm to the child's health, survival, development, or dignity in the context of a relationship of responsibility, trust, or power.[2] The global prevalence rate of childhood sexual, physical, and emotional abuse, and physical and emotional neglect is 12.7%, 22.6%, 36.3%, 16.3%, and 18.4%, respectively.[3] In Iran, the prevalence of physical and emotional abuse and neglect in children ranged from 9.7% to 67.5%, 17.9% to 91.1%, and 23.6 to 80.18%, respectively.[4]

Due to several factors including low self-defense, restrictions to report abuse, and lack of financial support from the family, children are more prone to abuse. [5] While abuse is a pressing public health concern (public health pressing concern) in the general pediatric population, a specific part of population are at even higher risk for abuse and neglect.[6] Children with Special Health Care Needs (CSHCN) are found more at risk of abuse compared to those in the general population. Being particularly fragile and vulnerable, CSHCN are more likely to develop chronic behavioral, developmental, physical, and emotional disorders. They also need higher levels of healthcare services than normal children, mandating more.[7,8] It has been documented that these children have challenging family environments and impose heavy burdens on parents because of chronic health conditions.[6,9] Children with chronic problems usually feel different from their peers and become sensitive to the behaviors of those around them. Abuse in these children is often due to the caregivers' poor understanding of their needs or the lack of ability to cope with their condition.[8,10,11]

It is an essential issue that health care providers, especially nurses, consider and detect the needs of hospitalized CSHCN to improve their health. Being in frequent contact with children and families, nurses are well positioned to keep children safe from abuse and neglect and pediatric nurse practitioners play a vital role in detecting and preventing the abused children and care about them.[6,12,13] The definition of CSHCN can encompass a wide range of disabilities; however, this article focused on children with chronic physical problems. Despite some studies in Iran on child abuse in CSHCN,[8,10,14,15] the issue of perceived CAN in hospitalized children with chronic physical problems has not yet been addressed. Thus, this research aimed at determining the prevalence of perceived CAN in hospitalized CSHCN and its relationship with some of the effective factors.

Materials and Methods

This descriptive cross-sectional study was conducted from April to August 2018 in an educational hospital in Isfahan, Iran. The study population consisted of children aged 6–18 years old diagnosed with chronic problems according to a child's medical record more than 3 months earlier. The purpose of the study was to determine the prevalence of perceived CAN and accordingly school-age and adolescent-age groups were selected to easily understand and answer the questions. The inclusion criteria included the conscious and mentally healthy children without behavioral disorders,[7] according to a child's medical record and being hospitalized in the internal wards of the selected hospital affiliated to the Isfahan University of Medical Sciences (IUMS) during the study period. In addition, the criterion to diagnose the chronic condition was passing 3 months since the diagnosis.[6] The exclusion criteria included not answering more than 5 questions of the questionnaire. The sample size was estimated at 204 subjects with a confidence level of 95% with a precision of at least 0.15S and a potential sample loss of 20%. The samples were selected by convenience sampling.

The data collection questionnaires consisted of a form of the child's and parents' demographic information (the child's age and sex, level of education, occupation, addiction, illness and divorce of the parents and the family economic status) and the child abuse questionnaire that was developed in Iran by Nourbakhsh.[16] This questionnaire contains 25 questions in five physical, sexual, neglect, malnutrition, and psycho-emotional domains. Each domain had five questions. The scoring of this questionnaire is based on the Likert scale and from zero (never) to five (very frequently). After completing the questionnaire, the scores are summed up and analyzed. Accordingly, the total score varies from 0 to 125. The total scores of each child show the rate of CAN that they have experienced. A score of 0–24 represents no CAN, 25–49 is representative of mild CAN, 50–74 indicates moderate CAN, 75–99 shows severe CAN, and the score above 100 represents very severe CAN. Content and face validity of the questionnaire has been assessed using the opinions of the relative experts. In addition, the Cronbach's alpha for the whole tool was obtained 0.80 and for physical, sexual, neglect,

malnutrition, and psycho-emotional domains, it was calculated 0.69, 0.72, 0.70, 0.82, and 0.77, respectively.[16]

The questionnaires were completed two days after admission to stabilize the physical condition of the child and prevent the effect of this factor on the results. In order to adhere to the principle of uniformity and avoid the interviewer's bias, data were collected by a pediatric nurse. The demographic information questionnaire was filled out in an interview with the mothers or using the medical records of the child and in the next step, the rate of CAN was assessed. The child abuse questionnaire is a self-report scale, but depending on the age of the samples, younger children were unable to complete the questionnaire and a pediatric nurse communicated with children in a friendly manner and filled the questionnaire based on the child's response to each question. Each questionnaire was orally completed during 10–20 min. During the interview with children, their parents were asked to leave the room. Due to the age of the samples, parental withdrawal does not cause separation anxiety in children.[6] The subjects were given a present following answering the questionnaires. The collected data were analyzed using SPSS 16 (Chicago, IL, USA) with descriptive statistics and inferential statistics including Pearson correlation coefficient, and Kruskal–Wallis and Mann–Whitney U tests. The p-values smaller than 0.05 were regarded as significant.

Ethical considerations

The research was approved by the Research Ethics Committee of the IUMS (Ethical code: IR.MUI. REC.1.1396.199) and the hospital authorities were given the approval and introduction letter. The participants' parents were informed about the research objectives and the written informed consent was obtained from them. The children were also given oral consent in the presence of their parents. They were informed that they are free to withdraw from the study. There was no need to mention the subjects' names or characteristics and they were also assured of the confidentiality of data. A summary of the research results will be communicated to the relevant authorities and also children and families if they wish.

Results

Five out of 199 questionnaires were eliminated because they had more than 5 incomplete responses; therefore, 119 questionnaires that had less than 5 unanswered questions were analyzed. The mean and standard deviation of the age of the children in this study was 12.15 (2.47) years, who were hospitalized on average 19.90 (35.50) times per year. The other characteristics of the participants and their families are presented in Table 1. According to the findings, of the 199 studied subjects, 173 children (86.93%) had perceived CAN, of whom 158 each (91.32%) had experienced mild abuse and 15 others (8.67%) had experienced moderate abuse. The results also showed no experience of severe and very severe CAN in the samples. The mean (SD) total score of perceived CAN was 9.36 (5.46). The most common type of child

abuse was malnutrition with a mean score of 3.01 (2.36), followed by psycho-emotional abuse 2.71 (1.76), neglect 1.62 (1.23), and physical 1.52 (1.08) and sexual 0.54 (0.31) abuse. The prevalence of perceived CAN in five domains is presented in Table 2.

The data normality was evaluated by the Kolmogorov–Smirnov ($p < 0.001$) and Shapiro–Wilk ($p < 0.001$) tests. Due to the nonnormality of the data distribution and the nature of the variables, Pearson correlation coefficient (for

Table 1: Demographic characteristics of the participants and their families

Variable		*n* (%)
Child's age	6-12* years (School age)	91 (45.72)
	12-18 years (Adolescence)	108 (54.27)
Child's gender	Boy	99 (49.74)
	Girl	100 (50.25)
Number of hospitalizations	<5	16 (8.04)
	5-10	39 (19.59)
	10-20	89 (44.72)
	>20	55 (27.63)
Child's disease	Kidney and urinary tract	55 (27.63)
	Glands and Metabolic	50 (25.12)
	Respiratory	42 (21.10)
	Digestive	36 (18.09)
	Other problems	16 (7.53)
Father's education	Illiterate	14 (7.03)
	Primary school	38 (19.09)
	Middle school	43 (21.60)
	High school/Diploma	65 (32.66)
	Academic education	39 (19.59)
Mother's education	Illiterate	13 (6.53)
	Primary school	46 (23.11)
	Middle school	32 (16.08)
	High school/Diploma	65 (32.66)
	Academic education	43 (21.60)
Father's job	Unemployed	16 (8.04)
	Worker	62 (31.15)
	Freelance job	83 (41.70)
	Clerk	38 (19.09)
Mother's job	Housewife	162 (81.40)
	Employed	37 (18.59)
Parents' illness	Not	144 (72.36)
	Physical illness	50 (25.12)
	Mental illness	5 (2.51)
Parents' addiction	No	176 (88.44)
	Yes	23 (11.55)
Parents' divorce	No	190 (95.47)
	Yes	9 (4.52)
Family economic status***	Rich	32 (16.08)
	Mild	99 (49.74)
	Poor	68 (34.17)

*12 year means 11 year, 11 months, and 29 days, **Mean (Standard Deviation), ***Based on the ratio of income to expenditure, Rich: Income > Expenditure, Mild: Income = Expenditure, Poor: Income < Expenditure

the relationship between the mean score of perceived CAN and child's age and number of rehospitalization), the Kruskal–Wallis test (for the relationship between the mean score of perceived CAN and family economic status, parents' education, and father's occupation), and Mann–Whitney U test (for the relationship between the mean score of perceived CAN and child's gender, mother's occupation, and parents' illness, addiction, and divorce) were used based on the results. The child's age, family economic state, mother's education, and occupation, and parents' illness significantly influenced the total score of perceived CAN ($p < 0.05$) but no statistically significant association was found between child's gender and the number of hospitalizations, father's education and occupation, and parents' addiction and divorce with the total score of perceived CAN ($p > 0.05$) [Table 3].

Discussion

According to the results of this study, 87% of the CSHCN had perceived CAN. Studies in the United States have revealed that the children suffering from a chronic disease experience all types of abuse 1.7 to 2.2 times more than healthy ones.[17] Similarly, another study revealed a significant difference between the scores of neglect among healthy and sick children suffering from a chronic disease in Isfahan, Iran.[8] Despite the similarity of views about the increased risk of CAN in the CSHCN, the results of studies on the dimensions of child abuse are different. Children with cerebral palsy and autism are at increased risk of physical abuse and neglect[7] and children with attention deficit hyperactivity disorder and oppositional defiant disorder are at higher risk of physical and psychological abuse.[18,19] In addition, the risk of sexual abuse is higher in CSHCN with language and learning disorders.[20]

The difference between these results may be related to the differences in samples. In addition, the results of our study may be affected by exposure to the hospital environment, receiving often invasive treatments, symptoms of disorders, such as anorexia, and the limitations imposing on these children by health care providers or their parents, such as dietary and activity constraints. Also, these children are more fragile and delicate than their healthy peers and they suffer from excessive protection by their families and compassion for them.[15] In addition, the high rates of perceived psycho-emotional abuse in these children are related to their special health care needs. On the other hand, the prolonged illness, numerous treatment complications, extra responsibilities and care of parents, unexpected costs, and sometimes loss of job due to taking care of the child, especially in mothers impose heavy burdens on parents. Thus, their parents' behavior may be perceived by the child as CAN.[8,21]

The perceived child abuse in school-age children and adolescents can have a negative effect on the normal personality development process of them and might result in a sense of inferiority, inadequacy, or confusion in identity. Therefore, effective primary prevention measures including education and health promotion for the groups at risk are required.[2,6,11] Studies have revealed that the

Table 2: The frequency and mean score of different dimensions of perceived CAN* in hospitalized CSHCN**

Domain of CAN	Not experienced of CAN No (%)	Experienced of CAN No (%)	Mean (SD)
Physical	155 (77.89)	44 (22.11)	1.52 (1.08)
Sexual	86 (43.20)	113 (56.80)	0.54 (0.31)
Neglect	84 (42.22)	115 (57.78)	1.62 (1.23)
Malnutrition	57 (28.65)	141 (71.35)	3.01 (2.36)
Psycho-emotional	81 (40.70)	118 (59.30)	2.71 (1.76)
Total			9.36 (5.46)

*CAN: Child Abuse and Neglect, **CSHCN: Children with Special Health Care Needs, SD: Standard Deviation

Table 3: Relationship between mean score of perceived CAN* and effective factors

Variable	Statistic test (df)	*p*
Child's age	r:-0.73	<0.05**
Number of rehospitalization	r:0.02	>0.05**
Family economic status	$H_{(2)}$: 6.52	<0.05***
Father's education	$H_{(4)}$: 3.66	>0.05***
Father's occupation	$H_{(3)}$: 3.10	>0.05
Mother's education	$H_{(4)}$: 9.17	0.05
Mother's occupation	MW-U: −2.43	<0.05
Gender	MW-U: −0.30	>0.05
Parents' illness	MW-U: −3.16	<0.05****
Parents' addiction	MW-U: −1.64	>0.05****
Parents' divorce	MW-U: −0.17	>0.05

*CAN: Child Abuse and Neglect, p**: *p* of Pearson Correlation Coefficient, p***: *p* of Kruskal-Wallis, p****: *p* of Mann-Whitney U test, df: degree of freedom

lack of the parents' knowledge, skills, and competence necessary for the care of children and meeting their developmental and nutritional needs are the most common factors contributing to CAN.[11,15] Nurses are responsible to prevent CAN and protect abused and neglected children.[13] Therefore, they must be aware of the risk factors of CAN and provide some facilities to provide an appropriate educational program for children regarding the required nutritional restrictions in hospitalized children,[22] such as training dietary restrictions at the level of children's perception and evolution. Training parents about the special needs of these children, parent–child communication, and how to apply restrictions can be helpful, as well.[23]

Based on the results of the present study, age is inversely correlated with CAN and is decreased with increasing age. Some studies have indicated an increase in the risk of CAN by increasing age. They have reported that the prevalence of CAN among children aged 8–11 years was higher than that of the other age groups.[24,25] Given the age range of subjects in the present study, it can be concluded that school-age children are more prone to CAN than other age groups. Although child abuse might occur at all social and economic levels, it is more likely to occur in the lower social and economic

classes,[1,26] which is consistent with our results. The reasons for this observation may be low income, population density, inadequate housing, family stress, and even the need for long-term hospitalization and special treatment in CSHCN.[21,27]

According to the results, the number of CAN perceived was higher in children whose mothers had less education and were housewives. Perhaps, this result can be attributed to the lack of awareness about the process of child development and growth, and their physical, mental, and emotional needs in mothers with low education.[15] Therefore, making mothers informed about the developmental and growth needs of the child and training appropriate strategies are effective to increase mothers' resilience and decrease CAN.[15,24] Regarding the lower frequency of CAN among working mothers, it may be true that working mothers are affected by the limited opportunities of being available at home and treating their children more nicely.[28] In addition, improving the family's economic status may be the other reason for a decline in CAN in these families. Our results showed that parental illness significantly increased CAN. In this regard, other studies have shown that child abuse is associated with parents' mental illness[29] because of a specific stressful situation.[30] On the other hand, this stress can be transmitted to the children and can worsen the condition. Parents' social problems such as addiction and divorce have been introduced as the most important risk factors for CAN[26,28]; however, we could not find a significant relationship between the total mean score of perceived CAN and parents' addiction and divorce, which was probably due to the number of samples.

Overall, this study confirmed a high prevalence of CAN in CSHCN and indicated several risk factors that could affect perceived child abuse by children. This study faced some limitations, which could affect the results. First, the present research was a cross-sectional study that limits causal inference. Second, this study was limited to hospitalized CSHCN in Isfahan; thus, the results cannot be generalized to all CSHCN cases. Third, due to the nature of the study and unwillingness to disclose CAN, few families were willing to participate in the study. Fourth, this study did not examine variables, such as parents' occupation type or stress, and insurance status or child's membership in a support organization. It is suggested that future studies consider these variables. Finally, our sample size was reasonable, given the cost and time available, yet some results were inconclusive because of the lack of specific cases reported. Further studies with a larger sample size are necessary for any definitive conclusion to be drawn.

Conclusion

The present study showed that malnutrition is the most common type of CAN in the hospitalized CSHCN. Specific stressful situations, such as losing a job, illness, and poor coping skills experienced by parents may exacerbate the family situation with a CSHCN, and in turn, aggravate the

level of abuse. Accordingly, the implementation of prevention programs, such as providing appropriate education to children regarding the required nutritional restrictions, can be useful in reducing perceived CAN in hospitalized children and its lasting effects. As healthcare professionals, nurses play a vital role in identifying children at risk of child abuse; therefore, they need to have an in-depth knowledge base about the risk factors of child abuse. They also should provide professional and non-judgmental care to allow the child to feel safe.

Conflicts of interest

Nothing to declare.

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