

# Knowledge and Attitude of Pediatric Nurses in Saudi Arabia Regarding Child Abuse

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**Background:** Child abuse, especially when caused by the child's parents or caregivers, can be either physical, psychological, and/or sexual. Pediatric nurses should be able to identify cases of child abuse, provide appropriate care, and address the issue. Nurses' knowledge, attitudes in child abuse are essential in safeguarding the well-being and safety of those children. This study aimed to investigate pediatric nurses' knowledge and attitude about child abuse and actions taken to address such abuse.

**Methods:** Seventy pediatric nurses working in one educational hospital in Riyadh City, Saudi Arabia participated in the study. This study followed a quantitative design. A self-administrative questionnaire was distributed to pediatric nurses. A convenience sampling was followed to include the nurses who met the criteria. An adopted validated questionnaire was used for collecting data about nurses' knowledge and attitudes regarding child abuse. The data was analyzed by SPSS with a descriptive analysis, independent *t*-tests or ANOVA test, and regression analysis.

**Results:** The descriptive results indicate that participants had adequate knowledge for identifying a child as a probable victim of child abuse. All participants agreed that an important role for nurses in managing and preventing child abuse is present. The study also indicated a favorable attitude of pediatric nurses toward child abuse. Linear regression analysis showed that nurses age between 31 and 40 years were positively associated with nurses' knowledge of child abuse, nurses with fewer years of experience and nurses with experience in dealing with a victim of child abuse had a more favorable attitude.

**Conclusion:** The study concludes that pediatric nurses have adequate knowledge and a positive attitude toward child abuse. Middle age was positively associated with nurses' knowledge of child abuse, while years of experience and experience in dealing with child abuse was inversely associated with nurses' attitude.

**Keywords:** child abuse, awareness, knowledge, child neglect, child abuse

## Introduction

Child abuse has been defined as "an act or failure to act on the part of a parent or caretaker that results in death, serious physical or emotional harm, sexual abuse or exploitation; or an act or failure to act which introduces an avoidable danger or substantial damage to anyone under the age of 18".<sup>1</sup> Child abuse and neglect affect children's physical, emotional, behavioral, and psychological well-being over the long term and is a public health concern.<sup>2,3</sup> In 2002, the World Health Organization (WHO) classified Child Abuse and Neglect as a global issue that manifests itself in many ways.<sup>4</sup> Child Abuse and Neglect is a social burden that has expensive and dire repercussions. The community, businesses, and society are all significantly impacted by Child Abuse and Neglect. The estimated lifetime economic cost of Child Abuse and Neglect is seven trillion dollars worldwide.<sup>3,5</sup> Due to the fact that Child Abuse and Neglect can be passed down through generations, Child Abuse and Neglect can ruin children, families, towns, and even countries.<sup>5</sup>

In 2014, it was estimated that one billion children globally experienced abuse and neglect.<sup>5</sup> Children who have experienced child abuse are more likely to report experiencing it again in the future.<sup>6</sup> Additionally, children who experience physical abuse are more likely to develop antisocial traits, commit crimes, such as murder, and/or exhibit aggressive behaviors as adults.<sup>7</sup>

Around 5% of children die and another 25% suffer severe injuries globally when children are assaulted and left with an abusive caregiver without help.<sup>8</sup>

For situations of child abuse, healthcare providers must be able to recognize the signs, make a diagnosis, and ensure that the child receives medical care and legal care.<sup>9</sup> Additionally, it is a legal requirement in numerous nations for pediatric healthcare professionals to notify the appropriate authorities when a case of child abuse is discovered.<sup>9</sup> When it comes to reporting child abuse cases, medical providers have occasionally run into issues. As a result, it is critical that medical personnel understand how to recognize and report suspected cases of child abuse and rely on their knowledge and expertise to do so.<sup>10</sup> Healthcare professionals must have appropriate knowledge about child abuse, their roles in addressing it, and all-related protocols. One study by Poreddi et al was conducted in India indicating that students' knowledge of child abuse and neglect is not sufficient and that there is a need for education.<sup>11</sup>

The Saudi Health Practice Bylaw states that healthcare professionals who fail to report instances of child abuse may face penalties, employment suspensions, or both as a result of this oversight.<sup>4</sup>

Child Abuse and Neglect is a serious public health problem that has become evident in recent decades.<sup>12</sup> Several measures and laws have been established worldwide to protect children from abuse. To promote early detection and prevent recurrent and escalation of child abuse, reporting of suspected abuse to government authorities has been enacted in different countries.<sup>13,14</sup> However, the situation developed countries, towards sexual child abuse, such as western countries have long period of experience developing the appropriate interventions for prevention, the situation in developing countries have not yet fully investigated and no interventions developed for prevention.<sup>15</sup> Russell et al in another study concluded that knowledge and attitude are essential for creating appropriate safe environment for children and young people for preventing sexual child abuse.<sup>16</sup>

Nurses play a vital role in reporting suspected child abuse cases because they are on the front-line when caring for children who might suffer from maltreatment.<sup>13</sup> Because nurses interact with a large number of injured children in their workplace, adequate knowledge in assessing the signs of abuse and attitudes about child abuse are essential for recognizing such abuse and acting accordingly. This study investigated the knowledge and attitudes of nurses toward child abuse and neglect in Saudi Arabia.

In the KSA, one way that nurses can identify child abuse is to measure the parents' attitudes of children who are brought in for treatment.<sup>1</sup> The literature indicates that a lack of studies in the KSA about pediatric nurses' knowledge and awareness about child abuse exists. Furthermore, limited information about how pediatric nurses in KSA react to child abuse is available. Furthermore, journals of Child Abuse and Neglect and Development and Psychopathology were primarily examined. Thus, this study aimed to investigate the knowledge and attitude of pediatric nurses working in the KSA about child abuse and how to address it. The results of this study emphasize the need to educate pediatric nurses about the signs and symptoms of child abuse and what their roles are to stop Child Abuse and Neglect if they suspect its occurrence during their daily nursing practice. Improving pediatric nurses' awareness about child abuse can help protect children from any harm.

## Materials and Methods

### Study Design

This study employed a quantitative research design to investigate the level of knowledge and attitude about child abuse among pediatric nurses.

### Sampling Technique

The sample for this study consisted of pediatric nurses employed at one of the educational hospitals in Riyadh City, Saudi Arabia. A convenient sampling method was employed to select the participants.

### Sample Size

The targeted hospital had a total of 500 nurses, out of which 84 were pediatric nurses. Therefore, the target population for this study was determined to be 84 pediatric nurses. Of the targeted population, a total of 70 pediatric nurses completed

the questionnaires, resulting in a response rate of 83.33%. Thus, the final sample size for the study consisted of 70 pediatric nurses. The sample size was decided based on convenience and the availability of nurses within the study area during the data collection period.

## Setting

Data for this study was collected from a single educational hospital located in Riyadh City. The hospital served as the primary setting for conducting the study and gathering information from the participants.

## Data Collection Tool

A validated questionnaire was used for data collection. The questionnaire included queries about demographical data and data concerning knowledge and attitudes regarding Child Abuse and Neglect. Furthermore, 30 items measuring knowledge were present, and of these, 17 items targeted knowledge of the indicators of child abuse and neglect, four items were related to Child Abuse and Neglect as a social problem, and nine items reported national and international efforts to combat this problem. Each item in the knowledge section of the questionnaire had three possible responses, namely yes, no, or not sure. One mark was awarded for every correct response; otherwise, zero was awarded. Hence, the total number of marks in the knowledge section ranged from 0 to 30. The knowledge was assessed in three parts; a child is probably a victim of child abuse and neglect of 17 items, child abuse and neglect as a social problem of 4 items and reporting a case of child abuse and neglect National and international effort regarding child abuse and neglect of 9 items.

The attitude section included 17 items using a 4-point Likert scale. The possible responses for each statement were strongly disagree, disagree, agree, or strongly agree. The score of 0–68 for attitude level is indicated.

The questionnaire used in this study was originally developed by Elarousy et al in 2012. To ensure its validity, the questionnaire was reviewed by experts who assessed its relevance and coverage of the topic. Based on their feedback, necessary modifications were made to improve its content and appropriateness.<sup>17</sup> The reliability of the questionnaire was measured using Cronbach's alpha test. For the knowledge section, the reliability coefficient was found to be 0.827, indicating a high level of internal consistency. Similarly, for the attitudes section, the reliability coefficient was 0.882, indicating good reliability. According to the guidelines proposed by Burns and Grove in 1993, a reliability coefficient of 0.70 or higher is considered acceptable for a newly developed instrument.<sup>18</sup> To further enhance the questionnaire's quality, a pilot study was conducted involving 10 students who were asked to complete the questionnaire. Based on their feedback and insights gained from the pilot study, necessary modifications were made to ensure the clarity, comprehensibility, and relevance of the questionnaire items. The collected data from the ten nurses were used to determine Cronbach's alpha for the tools. The reliability coefficients for each tool were above the acceptable level of 0.70, indicating good internal consistency.

## Ethical Considerations

Ethical approval for this study was obtained from the Ethical Committee at Princes Nourah Bint Abdulrahman University. The committee reviewed the study protocol, methodology, and potential ethical implications to ensure participant protection, privacy, and compliance with ethical guidelines. The ethical approval was obtained on August 27, 2019, with the IRB log number being 19-0117.

## Data Analysis

SPSS version 22 was used to address quantitative data. Descriptive analysis was used to describe the demographic data of the participants and their level of knowledge and awareness about child abuse. In addition to descriptive analysis, independent *t*-tests or ANOVA test were used to compare the means of different groups and determine if there were any significant differences in the level of knowledge about child abuse among the participants. Furthermore, regression analysis was conducted to explore the relationships between various factors, including demographic variables, and the level of attitude towards child abuse.

## Results

### Characteristics of the Study Participants

In this cross-sectional study, a total of 70 participants were included. The demographic characteristics of the participants are shown in (Table 1). The majority of the participants were female (84.3%), and around two-thirds of the participants (65.7%) were in the aged group of 31 to 40 years. More than half of the participants were single (55.7%) and had no children (67.1%). Eighty-seven percent of the participants were non-Saudi, 45% of the participants had 7–10 years in nursing service, and 31% were from the emergency department. Around 14% of the participants had been a victim of child abuse, and nearly half of the participants (42.6%) had experienced dealing with a victim of child abuse.

### Participant Knowledge

Table 2 shows the knowledge of participants toward identifying suspected cases of child abuse. Results show that participants attained mean scores of correct answers of 13.18 (3.08) over 17 items, indicating that nurses had adequate knowledge for identifying whether a child is probably a victim of Child Abuse and Neglect, Regarding the knowledge of

**Table 1** Demographic Characteristic of the Participants

Variable	N = 70	%
<b>Age (Mean 35 ± 2.4)</b>		
21–30	18	25.7
31–40	46	65.7
41 and above	6	8.6
<b>Gender</b>		
Male	11	15.7
Female	59	84.3
<b>Marital status</b>		
Single	39	55.7
Married	31	44.3
<b>No of children</b>		
None	47	67.1
1–2	22	31.5
3 or more	1	1.4
<b>Nationality</b>		
Saudi	9	12.9
Non-Saudi	61	87.1
<b>Years of experience (Mean 21 ± 1.6)</b>		
1–3	6	8.6
4–6	19	27.1
7–10	25	35.7
More than 10	20	28.6

(Continued)

**Table 1** (Continued).

Variable	N = 70	%
<b>Department</b>		
University Medical Center	2	2.9
Intensive Care Unit	8	11.4
Emergency department	22	31.4
Outpatient	10	14.3
Pediatrics	2	2.9
Operating Room	10	14.3
Medical ward	16	22.9
<b>Have you ever been a victim of child abuse</b>		
Yes	10	14.3
No	60	85.7
<b>Have you had any experience dealing with a victim of child abuse</b>		
Yes	30	42.9
No	40	57.1

**Table 2** The Frequency Distribution of Participants in the Study, Who Supplied Correct Responses to Questions on the Knowledge About Child Abuse

Statement	Participants Who Answered Correctly		Means (SD)
	N = 70	%	
<b>A child is probably a victim of child abuse and neglect when</b>			
The history of the injury is changing over time	50	71.4	13.18 (3.08)
The mechanism of injury does not explain the injury that is found on examination.	50	71.4	
A 6-year-old child has bruises behind the ears	44	62.9	
A 7-year-old child has bruises in both knees and elbows	27	38.6	
Two-month-old has a femur or skull fracture	58	82.9	
A 4-year-old child with bruises in inner thighs	59	84.3	
Children involved in exchange or trade pornography	67	95.7	
A child is touched or fondled in a sexual way	69	98.6	
Inappropriate things about sex are said to a child <sup>#</sup>	69	98.6	
Parents allow a youth to make his/her own reasonable choices.	21	30	
A parent refuses to listen to the child	51	72.9	

(Continued)

**Table 2** (Continued).

Statement	Participants Who Answered Correctly		Means (SD)
	N = 70	%	
A parent refuses to let the child express himself/herself	52	74.3	
A parent destroys the child's toys or possessions	55	78.6	
The parents do not provide the child with an appropriate stimulating environment to develop normally	60	85.7	
The parents fail to seek timely and appropriate medical care when the child has serious health problems	66	94.3	
The parents fail to protect child from harm	61	87.1	
The parents leave a very young child in the care of a sibling who is too young to provide adequate care or supervision	20	28.6	
<b>Child abuse and neglect as a social problem</b>			
Child abuse and neglect most probably done by strangers*	20	28.6	2.17 (1.03)
Children with disabilities are at low risk for abuse and neglect than the general population of children*	15	21.4	
Child who was sexually abused is known to and trusted by the abuser	50	71.4	
Child abuse and neglect can occur anywhere in the community	67	95.7	
<b>Reporting a case of child abuse and neglect national and international effort regarding child abuse and neglect</b>			
It is mandatory for all nurses to report a case of child abuse	65	92.9	5.64 (1.60)
Multidisciplinary team includes pediatrician, nurses and psychiatric doctors only to manage cases of child abuse and neglect	43	61.4	
Nurses should have adequate knowledge, skills and attitudes to manage child abuse adequately and effectively	68	97.1	
The nurse should do accurate record keeping to establish evidence of abuse	67	95.7	
I have never heard of the United Nation Convention on the Rights of the Child	24	34.3	
Saudi Arabia does not ratified the Convention on the Rights of Child	17	24.3	
In Islam child rights are due even before birth	34	24.3	
Saudi Arabia does not have any organization to deal with the reported cases of child abuse and neglect*	33	47.1	
Child abuse and neglect is not an important social problem in KSA	20	28.6	

**Notes:** \*Negative question (reverse scoring). #It refers to communication or discussions of a sexual nature that are considered unsuitable or harmful for a child's age or developmental stage.

the participants considering child abuse and neglect as an important social problem, it was found that about half of the participants answered the questions correctly with a mean score of 2.17 (1.03). In the domain of reporting and national and international efforts in cases of Child Abuse and Neglect, the mean score of correct answers was 5.64 (1.60), indicating adequate knowledge in reporting cases of Child Abuse and Neglect. The term record-keeping refers to establishing evidence of any kind of child abuse for further investigation.

## Participant Attitude

In terms of attitudes toward cases of Child Abuse and Neglect, all of the nurses agreed that they would act to prevent child abuse from occurring, and the majority of the respondents were confident in identifying risk factors and suspected cases of child abuse ( $n = 68$ ; 97.1% and  $n = 66$ ; 94.3%, respectively) as shown in Table 3. A majority of nurses were

**Table 3** The Frequencies of Participants in Terms of Their Attitudes Toward Child Abuse

Items	Strongly Disagree/ Disagree		Strongly Agree/ Agree	
	N	%	N	%
<b>Indicate to What Extent You Agree with the Following Statements by Marking in the Selected Section.</b>				
I would probably act to prevent child abuse from occurring	0	0	70	100
I am confident in my ability to identify risk factors of child abuse.	2	2.9	68	97.1
I am confident in my ability to identify suspected cases of child abuse	4	5.7	66	94.3
I could comfortably deal with an emotionally abused child	10	14.3	60	85.7
I could comfortably deal with the person who caused emotional abuse of a child	20	28.6	50	71.4
I could comfortably deal with a physically abused child	10	14.3	60	85.7
I could comfortably deal with the person who caused physical abuse if the abuser were the child's mother	19	27.1	51	72.9
I could comfortably deal with a sexually abused child	16	22.9	54	77.1
I could comfortably deal with the person who caused sexual abuse if the abuser were the child's father	27	38.6	43	61.4
I am confident in my ability to report child abuse and neglect	2	2.9	68	97.1
I would properly wait for the doctor to deal with abused child	14	20	56	80
I would probably act to ensure that the abuse remains a secret	22	31.5	48	68.5
I am confident that I will be able to manage physically abused child as I am able to deal with any other sick child	3	4.3	67	95.7
I am confident that I will be able to manage sexually abused child as I am able to deal with any other sick child	1	1.4	69	98.6
I would probably act to isolate the abused child from abuser	3	4.3	67	95.7
I am interested to be told what happens to the child after I report child abuse	5	7.1	65	92.9
I would probably act to do accurate record keeping as an evidence of abuse	1	1.4	69	98.6

**Abbreviations:** N, frequency; %, percentage.

confident in dealing with physically, sexually, and emotionally abused children ( $n = 67$ ; 95.7%,  $n = 6$ ; 98.6%, and  $n = 68$ ; 97.1%, respectively). The mean attitude score was 53.7 (7.62), indicating that nurses had favorable attitudes toward handling child abuse and neglect. In our study, the mean attitude score among nurses was 53.7 (7.62), surpassing this threshold and suggesting a favorable attitude.

## Factors Affecting Nurses' Knowledge

Table 4 shows the comparison of scores and association between the nurses' demographic characteristics and knowledge toward Child Abuse and Neglect. A significant difference in scores by age group: (1) 21–30 ( $M = 18.88$ ,  $SD = 4.63$ ), (2) 31–40 ( $M = 22.39$ ,  $SD = 3.68$ ), and (3) 41 and above ( $M = 16.66$ ,  $SD = 3.44$ ;  $F = 9.11$ ,  $p = 0.001$ ). Meanwhile, a linear regression analysis was used to examine the factors associated with attitudes of nurses toward cases of Child Abuse and Neglect (Table 5). In the final model, only two factors were found to be statistically significant. The first factor, years of experience as a nurse, demonstrated a larger beta value ( $\beta = -1.97$ ;  $p < 0.05$ ), nurses with fewer years of experience had positive attitude. This means that having less experience was associated with a higher attitude. The second factor was experience in dealing with a victim of child abuse ( $\beta = -0.83$ ;  $p < 0.05$ ), nurses with no experience in dealing with a victim of child abuse had more favorable attitude scores than those who have experiences. This means that having experience in dealing with such cases was associated with lower attitude scores. The rest of the factors were not statistically correlated with nurses' attitude.

**Table 4** Association Between Nurses' Knowledge About Child Abuse and Their Demographic Variables

Variable	Means (SD)	Statistical Test	P = value
<b>Age</b>		F = 9.11	0.001*
21–30	18.88 (4.63)		
31–40	22.39 (3.68)		
41 and above	16.66 (3.44)		
<b>Gender</b>		t = 0.67	0.503
Male	20.18 (4.85)		
Female	21.15 (4.30)		
<b>Marital status</b>		t = 0.65	0.513
Single	21.30 (5.25)		
Married	20.61 (2.95)		
<b>No of children</b>		F = 1.33	0.271
None	21.53 (4.58)		
1–2	19.77 (3.79)		
3 or more	23.0 (0)		
<b>Nationality</b>		t = -0.56	0.571
Saudi	20.22 (5.21)		
Non-Saudi	21.11 (4.27)		
<b>Years of experience</b>		F = 0.947	0.423
1–3	22.0 (4.28)		
4–6	22.10 (6.30)		
7–10	20.80 (2.94)		
More than 10	19.90 (3.61)		
<b>Department</b>		F = 1.58	0.167
University Medical Center	17.50 (2.12)		
Intensive Care Unit	18.87 (5.16)		
Emergency department	22.36 (3.57)		
Outpatient	21.20 (4.77)		
Pediatrics	18.50 (3.53)		
Operating Room	19.0 (4.69)		
Medical ward	22.06 (4.23)		
<b>Have you ever been a victim of child abuse</b>		t = 0.85	0.394
Yes	22.10 (3.38)		
No	20.81 (4.51)		

(Continued)

**Table 4** (Continued).

Variable	Means (SD)	Statistical Test	P = value
<b>Have you had any experience dealing with a victim of child abuse</b>		t = -0.88	0.380
Yes	20.44 (3.09)		
No	21.40 (5.12)		

Note: \*Significant at 0.05.

Abbreviations: SD, standard deviation; F, F-test; t, t-test.

**Table 5** Predictors Associated with Attitudes of Nurses Towards Child Abuse

Variable	B	SE	R <sup>2</sup>	Adjusted R <sup>2</sup>	T	95% (CI)	P value
<b>Age</b>	0.36	0.23	0.23	0.12	1.56	(-0.10-0.84)	0.124
<b>Gender</b>	-0.55	2.52			-0.22	(-5.58-4.48)	0.827
<b>Marital status</b>	-4.44	2.39			-1.85	(-9.23-0.35)	0.069
<b>No of children</b>	0.20	1.78			0.11	(-3.36-3.77)	0.908
<b>Nationality</b>	-1.33	3.27			-0.40	(7.87 3.77)	0.684
<b>Years of experience</b>	-1.97	1.28			1.53	(-4.54-1.59)	0.030*
<b>Department</b>	-0.09	0.39			-0.22	(-0.87-0.69)	0.820
<b>Personal history of child abuse</b>	2.89	2.80			1.03	(-2.70-8.49)	0.306
<b>Experience in dealing with a victim of child abuse</b>	-0.83	1.90			0.436	(-4.63-2.97)	0.050*

Note: \*Significant at 0.05.

Abbreviations: CI, confidence interval; R<sup>2</sup>, R squared; T, T-value; SE, standard error; B, estimated coefficient.

## Discussion

The present study revealed that nurses in Saudi Arabia had adequate knowledge of how to identify suspected cases of Child Abuse and Neglect in comparison with previous studies. The cultural background and social characteristics may determine the reporting and formal notification of abuse cases among children. Furthermore, reporting child abuse and neglect in Saudi Arabia may have a sensitive aspects and religious factors that determine the way and why reporting such cases. The Saudi local communities, religious leaders, and stakeholders should be included for developing appropriate interventions that facilitate reporting and addressing the cases of child abuse in Saudi Arabia.

The level of knowledge found in our study was comparable to the previous study conducted among pediatric nurses in the United States and emergency room nurses in Korea.<sup>19,20</sup> That study highlighted that those pediatric nurses who had recent continuing education had greater confidence in child abuse management.<sup>19</sup> In line with previous research and study in the United States (US), studies conducted among students' nurses show a lack of adequate knowledge and skills, particularly in identifying suspected cases of child abuse.<sup>11</sup> These findings corroborate results from previous studies that strongly support the need for continuing education among nurses and strengthen the program curricula among student nurses about child abuse education.<sup>19,20</sup>

This study also highlights the positive attitudes of nurses toward Child Abuse and Neglect prevention in addition to the confidence to identify suspected cases of child abuse. A majority of nurses in the present study were confident in dealing with suspected physically, sexually, and/or emotionally abused children. It can be suggested that the possible reason for the positive attitudes of nurses about Child Abuse and Neglect relates to hospitals currently possessing clear guidelines and policies regarding Child Abuse and Neglect. In addition, the positive attitude might be because of the

obligation by law to report child abuse in Saudi Arabia. In Saudi Arabia, all healthcare professionals are required to report all suspected or substantiated abuse cases for all types of abuse.<sup>21,22</sup> Nurses are responsible for physical assessment and take full history about the child and all the findings are documented. If there is any suspected case of abuse, the nurse should notify the physician for confirming child abuse. Furthermore, based on the theory of planned behavior, the behavior of an individual is determined by their intention to perform the behavior.<sup>20,23</sup> The behavioral intention of an individual is determined by three important factors: (1) attitude toward the behaviors, (2) perceived behavioral control, and (3) subjective norms.<sup>20,23</sup>

Presenting the detail of attitude serves three key purposes. Firstly, it provides a comprehensive view of participants' responses to each item, highlighting specific areas of attitude that may require attention. Secondly, it facilitates comparisons and discussions among researchers and clinicians, enabling the identification of patterns and informing interventions. Lastly, it promotes transparency, replicability, and scientific rigor by allowing other researchers to examine and validate the findings. In summary, the inclusion of individual items enhances understanding, enables comparisons, and supports transparency in the study of child abuse attitude.

Previous studies have established that a mean attitude score above a certain threshold indicates a positive attitude towards handling child abuse and neglect. For instance, Sathiadass et al determined the acceptable level of attitude toward child abuse, when reporting a similar study among healthcare professionals and considered good attitude score of 28–40 over 40 items. Attitude Scale was considered indicative of a favorable attitude towards child abuse and neglect.<sup>24</sup>

As indicated by the results of the present study, there was a significant difference in the mean knowledge scores across different age groups (21–30: 18.88, 31–40: 22.39, 41 or more: 16.66). Sathiadass et al's study and the average in this study are evaluated with one sample *t*-test indicating similar findings.<sup>24</sup> However, further analyses, such as correlation coefficients, were not conducted to examine the specific direction (positive or negative) of the relationship between age and knowledge about Child Abuse and Neglect. Similarly, another study in India found a correlation between age and knowledge about child abuse among nursing students.<sup>11</sup> The study found that older students scored higher on the total knowledge scale when compared with younger students.<sup>11</sup> Meanwhile, the present study revealed the was experience in dealing with a victim of child abuse ( $\beta = -0.83$ ;  $p < 0.05$ ), nurses with no experience in dealing with a victim of child abuse had more favorable attitude toward child abuse. The results of this study are contrary to the study investigating attitudes of emergency nurses in Korea in which work experience was not associated with attitudes toward child abuse.<sup>20,25</sup> Previous studies recommended that continuing health education and training provide additional knowledge in recognizing suspected child abuse cases.<sup>24,26</sup> In addition, specific courses about handling and reporting suspected child abuse cases may promote appropriate attitudes among nurses.<sup>24,26</sup>

As Al Dosari et al pointed out in their assessment of child abuse in the KSA, child abuse is a complex phenomenon that cannot be easily identified. Thus, it is difficult for nurses in Saudi Arabia to know what to look for as many health care professionals are not trained to identify the signs of abuse. These researchers found that in spite of the challenges, nurses can be equipped with the skills to recognize child abuse at early stages before it gets worse; for instance, Al Dosari et al suggested that nurses pay attention to parents' attitudes, which can be measured so that "prevention initiatives, such as screening and counseling for parents of children at risk, can be developed and incorporated into primary care practice" (p. 79). Thus, these researchers show that a greater need for nurses to understand how to identify and assess child abuse still exists.<sup>1</sup> According the Ontario established a guidelines indicated that pathologist should keep open mind toward any suspected case of child abuse during the initial assessment or risk.<sup>27</sup>

Al-Saif et al described that nurses' knowledge and awareness of child abuse depends on how much training they have had and that even, then gender plays a part in how nurses respond to signs of child abuse; for instance, "women, healthcare professionals, and those who had participated in more than five training courses were more concerned about the underreporting of abuse (high sensitivity) relative to other professionals (p. 23)", while men were less concerned about child abuse and showed less awareness and knowledge of how to identify it in the KSA.<sup>28</sup> The study indicates that more nurses need to be trained to recognize child abuse and respond appropriately to it.

In India, a study by Poreddi et al showed that nursing students' knowledge of child abuse and neglect is not adequate and that more education is needed (p. 264).<sup>11</sup> This finding correlates with the findings of Al Dosari et al and Al-Saif et al regarding the extent to which nurses in Saudi Arabia are appropriately trained and aware of child abuse when their patients are subject to it.<sup>1,28</sup> In Europe, nurses are trained to detect child abuse by examining and measuring the attitudes of parents and the attitudes that they

demonstrate,<sup>29,30</sup> which is consistent with the recommendation of Al Dosari et al for nurses in the KSA.<sup>1</sup> In the United States, nurses are not so well trained and do not understand how to respond to situations of child abuse even if they are detected. Turner et al found that nurses are generally uncertain about how to respond to domestic violence and are particularly unclear about best practice with regard to children's exposure and their role in a multiagency response.<sup>31,32</sup> This finding demonstrates that room for development among nurses in the US exists just as among nurses in Saudi Arabia as few of them in either country know what to look for or how to respond to this issue.

This investigation presented a few limitations. First, it used a cross-sectional design, so causality cannot be inferred. Another limitation of the study of this study is the small sample size, which may not be generalizable to all nurses in Saudi Arabia. However, these findings might help future researchers in the academic and clinical field by establishing a baseline of the level of knowledge and attitudes of nurses toward Child Abuse and Neglect in Saudi Arabia. This study might also help as a criterion for comparison for future studies. The present study may also provide models for health administration to determine specific courses that will help nurses to promote early detection of suspected cases of child abuse and reporting of suspected abuse to government authorities.

## Conclusions

The study provides insights into the knowledge and attitudes of nurses regarding child abuse and neglect. The study concludes that the majority of nurses demonstrated adequate knowledge and a positive attitude toward child abuse. The age group of 31–40 years was positively associated with nurses' knowledge of child abuse, while the regression analysis showed that the years of experience and experience in dealing with child abuse cases have negatively associated with nurses' attitude. The nurses with fewer years of experience have a positive attitude, and the nurses with no experience in dealing with a victim of child abuse have a positive attitude score.

## Data Sharing Statement

The data is available upon request from the corresponding author.

## Ethics Approval and Consent to Participate

The ethical approval was obtained from Princess Nourah bint Abdulrahman University Institutional Review Board (IRB) number (H-01-R-059; 19-0117). This study complies with the Declaration of Helsinki. A written informed consent indicated that the participant has the right to decline or withdraw at any point during the course of the study which was obtained from all participants. Furthermore, confidentiality was assured to each participant.

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## Author Contributions

All authors have participated in preparation of study, methodology, analysis, discussion and they read and agreed to the published version of the manuscript. All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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## Disclosure

The authors declare no competing interests in this work.

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