European Review for Medical and Pharmacological Sciences 2023; 27: 659-672

Child abuse experience, training, knowledge, and attitude of healthcare professionals in sixty hospitals in Greece

K. PANAGOPOULOU[1], D. GKENTZI[1], S. FOUZAS[1], M. MENTIS[2], E. KOSTOPOULOU[1], P. PLOTAS[3], V. PAPAEVANGELOU[4], A. SOLDATOU[5], A. KARATZA[1], A. BERTZOUANIS[1], I. SPYRIDAKIS[6], D. SFOUNGARIS[7], N. ZAVRAS[8], C. SALAKOS[8], E. BLEVRAKIS[9], G. SAKELLARIS[9], K. KAMBOURI[10], V. GIAPROS[11], S. ROUPAKIAS[6], E. JELASTOPULU[12], Z. CHANTZI[13], V. PANAGIOTOPOULOS[14], A. VARVARIGOU[1], G. DIMITRIOU[1], X. SINOPIDIS[13]

[1]Department of Pediatrics, University of Patras School of Medicine, Patras, Greece
[2]Department of Education and Social Work, School of Humanities and Social Sciences, University of Patras, Patras, Greece
[3]Department of Speech and Language Therapy, School of Health Rehabilitation Sciences, University of Patras, Patras, Greece
[4]Third Department of Pediatrics, School of Medicine, National and Kapodistrian University, Athens, Greece
[5]Second Department of Pediatrics, School of Medicine, National and Kapodistrian University, Athens, Greece
[6]Second Department of Pediatric Surgery, School of Medicine, Aristotle University, Thessaloniki, Greece
[7]First Department of Pediatric Surgery, School of Medicine, Aristotle University, Thessaloniki, Greece
[8]Department of Pediatric Surgery, National and Kapodistrian University, Athens, Greece
[9]Department of Pediatric Surgery, University of Crete School of Medicine, Heraklion, Greece
[10]Department of Pediatric Surgery, School of Medicine, Democritus University of Thrace, Alexandroupolis, Greece
[11]Department of Pediatrics, Faculty of Medicine of the University of Ioannina, Ioannina, Greece
[12]Department of Public Health, University of Patras School of Medicine, Patras, Greece
[13]Department of Pediatric Surgery, University of Patras School of Medicine, Patras, Greece
[14]Department of Neurosurgery, University of Patras School of Medicine, Patras, Greece

Gabriel Dimitriou and Xenophon Sinopidis contributed equally

Abstract. – OBJECTIVE: This study aims to record the overall perception of healthcare professionals on child abuse and identify potential affecting factors in a nationwide scale in Greece as well as to provide information that might be useful for future educational actions.

MATERIALS AND METHODS: A total of 1,185 healthcare professionals in 60 hospitals with pediatric departments across Greece participated in this cross-sectional study. Participants included pediatricians, pediatric surgeons, residents, nurses, psychiatrists, psychologists, and social workers. Sections under investigation involved experience and training in child abuse, knowledge of formal and judicial issues, clinical knowledge, and self-assessment.

RESULTS: Although more than half of the participants had confronted child abuse (n=712, 60.08%), only 273 (38.34% of them) submitted reports. One third of participants reported that they had received some training (n=440, 37.13%), mainly of postgraduate nature and based on personal initiative. Of those who reported child abuse, 175 (64.10%) had been trained. Each professional category was aware of topics regarding its own interest, without adequate knowledge of other disciplines. One third of psychiatrists, psychologists, and social workers felt confident in discussing with children and parents. Relevant scores were lower in the other categories. The lower scores were recorded among nurses and residents. The training defi-

Corresponding Author: Xenophon Sinopidis MD, Ph.D; e-mail: xsinopid@upatras.gr

cit and reluctance to engage with judicial issues were the main causes of avoidance to deal with child abuse.

CONCLUSIONS: Focused and organized training in child abuse is crucial to create reliable professionals in the field. The internet is a considerably helpful tool. Professionalism must characterize knowledge and practice in child abuse at the same level as in other medical topics. Motivation to engage should be early inspired and developed during the graduate years.

Key Words:
Child abuse, Child maltreatment, Healthcare professionals, Experience, Training, Knowledge, Attitude.

Introduction

Child abuse is an international problem, concerning both developed and developing parts of the world. Professional training, experience, and overall perception of the issue are highly variable amongst healthcare professionals (HCPs). Even in the most culturally and technologically advanced countries, a radical solution of the phenomenon seems inconceivable. A recent report[1] of the World Health Organization (WHO) on the prevention of violence against children, provided striking information; one billion children suffer some form of violence each year. About 120 million girls under the age of twenty (slightly more than one in ten), have experienced forced intercourse or other forced sexual acts at some point in their lives[2]. Clinical and epidemiological data from more than 500,000 children in Madrid over the course of a decade, showed that 404 children (0.07%) were admitted to the emergency departments because of abuse[3]. Physical abuse regarded approximately 40%[3]. A total of 55% of the maltreated children were females, most of them having suffered sexual abuse[3].

Since the Persian alchemist and philosopher al-Razi, who in 900 A.D. stated that a bruise on the body of a child might have been caused by voluntary injury, Amboise Tardieu, a pioneer on child abuse who invented a clinical codification, and Henry Kempe, who in 1962 conceived the term "battered child syndrome", many scholars and scientists dedicated their work to the study, prevention, and management of child abuse[4-6]. Progress has been achieved in many sectors, as WHO reported violence reduction of 20-50% with applied programs[1]. HCPs are often untrained, anxious, afraid, or unwilling to act. These characteristics present variability among countries, societies, and cultures.

Various practices have been proposed to achieve a successful outcome against child abuse. Algorithm models have been devised to provide recognition and treatment of abused victims[7]. Codified steps have been recommended to approach these children[8]. Training and validation models have been implemented[9-13]. In Greece, efforts have been made by national programs, aiming to the improvement of physicians' training[14].

The aim of this study is to record the experience, training, knowledge, attitude, and self-assessment of HCPs in child abuse, in a nationwide scale in Greece. The anticipated outcome is to provide useful information for future educational interventions.

Materials and Methods

Survey

This is a cross-sectional study with the use of a questionnaire. Initially, demographic information was recorded, while the main section included questions categorized in five areas of interest: experience, training, knowledge of formal and judicial issues, clinical knowledge, and self-assessment. The estimated time to complete the questionnaire was 15 minutes. To ensure clarity, content validity and internal consistency, it was piloted with 30 volunteer HCPs and adjusted accordingly. Cronbach's alpha value was 0.5, according to the hypothesis of one factor model.

The questionnaires were distributed from June 2018 to October 2020 to pediatric and pediatric surgical departments across Greece. The bioethics committee of the University of Patras, where the study was conducted, approved the research (protocol number 6517.090920). Approval was also obtained by the bioethics committees of each hospital that participated in the survey (all available upon request). Participants who did not provide informed consent or did not return the questionnaire completed within one month, were excluded from the study.

Study Population

The participants were grouped into five professional categories: (1) pediatricians and pediatric surgeons, hereafter referred to as "consultants"; (2) residents in training in pediatrics and pediatric surgery; (3) nurses; (4) psychiatrists and

psychologists, referred to as "mental health professionals" (MHPs), and v. social workers. Demographics of participants included age, gender, family status, professional category, and work experience.

Statistical Analysis

Standard descriptive statistics were used to describe the variable outcomes. Pearson Chi-square and Fisher's exact tests were used for categorical data. Appropriate statistical tests such as Kendall's tau, and Goodman and Kruskal tau, depending on the distribution of the variables, were applied as well.

Logistic regression analysis was performed for certain important outcomes, on the sections of training and clinical knowledge. The participants' profession, gender, age group, presence of children in family, and work experience, were considered as the independent variables. Wald test was used for hypothesis testing. The model coefficients (β) and the standard errors (S.E.) were extracted, regarding multiple regression analysis. The levels of significance were two-tailed.

Statistical analysis was performed using the SPSS Statistical Software Package (IBM SPSS Statistics, version 24, Armonk, NY, USA). In all cases, the level of statistical significance was set to $p < 0.05$.

Results

Demographics

A total of 60 out of the 64 hospitals with pediatric and pediatric surgical departments in the country provided consent through their bioethics committees and participated in the study (response rate 93.75%). A total of 1,846 questionnaires were distributed. Of them, 1,185 were completed and returned (response rate 64.19%). Demographic characteristics of the study population are shown in detail in Table I. Most of the participants were nurses (n=472, 39.8%), followed by consultants (n=315, 26.6%). Females comprised the majority (n=895, 75.5%), while the most common age group of participants was between 41-50 years of age (n=432, 36.5%) (Table I).

Special Interest Outcomes

The outcomes of the 14 most important questions are presented in detail (Table II). The raw numbers, the percentages of each category re-

Table I. Demographic information of the study population.

Demographics		N	%
Gender	Male	290	24.5
	Female	895	75.5
Age groups (in years)	18-30	215	18.1
	31-40	276	23.3
	41-50	432	36.5
	>50	262	22.1
Family status	Single	302	25.5
	Married	744	62.8
	Widow/er	22	1.9
	Divorced	67	5.7
	In relation	50	4.2
Children	Yes	750	63.3
	No	435	36.7
Number of children	1-2	634	53.5
	3+	116	9.8
Professional category	Consultants	315	26.6
	Residents	207	17.5
	Nurses	472	39.8
	Mental health professionals	52	4.4
	Social workers	139	11.7
Experience (in years of work)	1-5	375	31.6
	6-10	160	13.5
	11-20	279	23.5
	> 20	371	31.3

Table II. Outcomes on experience, training, knowledge, and self-assessment of all five professional categories.

Questions	Outcomes	Consultants		Residents		Nurses		MHPs		Social Workers	
		N	%	N	%	N	%	N	%	N	%
Experience											
q1: Have you ever confronted child abuse cases?	Yes	247	78.4	116	56.0	202	42.8	34	65.4	113	81.3
	No	68	21.6	91	44.0	270	57.3	18	34.6	26	18.7
q2: How many cases of child abuse have you confronted during the last five years?	None	105	33.3	91	44.0	281	59.5	20	38.5	35	25.2
	1-5	176	55.9	109	52.7	164	34.7	27	51.9	83	59.7
	6-10	20	6.3	5	2.4	16	3.4	2	3.8	14	10.1
	>10	14	4.4	2	1.0	11	2.3	3	5.8	7	5.0
q3: Of the cases you have confronted, how many did you officially report?	None	215	68.3	167	80.7	435	92.2	34	65.4	61	43.9
	1-5	90	28.3	39	18.8	32	6.8	16	30.8	72	51.8
	6-10	6	1.9	0	00.0	4	0.8	2	3.8	0	0.00
	>10	4	1.3	1	0.5	1	0.2	0	0.00	6	4.3
Training											
q4: Have you ever been trained in diagnosis and management of child abuse?	Yes	162	53	69	33.3	88	18.6	38	73.1	83	59.7
	No	153	48.6	138	66.7	384	81.4	14	26.9	56	40.3
q5: Were you trained before or after graduation?	Before	8	2.5	18	8.7	5	1.1	3	5.8	5	3.6
	After	147	46.7	51	24.6	82	17.4	32	61.5	74	53.2
	Both	6	1.9	1	0.5	0	00.0	2	3.8	4	2.9
Knowledge of formal and judicial issues											
q6: Are you aware of a child abuse diagnosis, investigation, and management protocol at your institution?	Yes	112	35.6	60	29.0	138	29.2	19	36.5	64	46.0
	No	203	64.4	147	71.0	334	70.8	33	63.5	75	54.0
q7: Do you believe that it is your responsibility to initiate the investigation of possible child abuse, by reporting it?	Yes	114	36.2	90	43.5	75	15.9	15	28.8	56	40.3
	Yes, under conditions	155	49.2	94	45.4	220	46.6	30	57.7	79	56.8
	No	32	10.2	18	8.7	107	22.7	6	11.5	3	2.2
	I don't know	14	4.4	5	2.4	70	14.8	1	1.9	1	0.7
q8: Are you aware of the necessary formal actions needed to inform the appropriate services?	Yes	224	71.1	87	42.0	236	50.0	37	71.2	134	96.4
	No	91	28.9	120	58.0	236	50.0	15	28.8	5	3.6
q9: Do you know which the appropriate civil services are, to inform and report a suspect child abuse case?	Yes	236	74.9	126	60.9	320	67.8	42	80.8	137	98.6
	No	79	25.1	81	39.1	152	32.2	10	19.2	2	1.4

Continued

Table II *(Continued).* Outcomes on experience, training, knowledge, and self-assessment of all five professional categories.

Questions	Outcomes	Consultants		Residents		Nurses		MHPs		Social Workers	
		N	%	N	%	N	%	N	%	N	%
Clinical knowledge											
q10: Are you aware of the risk factors of child abuse?	Not at all	6	1.9	10	4.8	37	7.8	0	00.0	3	2.2
	Very little	34	10.8	33	15.9	94	19.9	3	5.8	4	2.9
	A little	122	38.7	104	50.2	208	44.1	9	17.3	29	20.9
	Much	128	40.6	53	25.6	110	23.3	28	53.8	85	61.2
	Very much	25	7.9	7	3.4	23	4.9	12	23.1	18	12.9
q11: Are you aware of the physical signs (injuries, lacerations, bruises, superficial wounds) that pose the suspicion of child abuse?	Not at all	2	0.6	3	1.4	33	7.0	1	1.9	4	2.9
	Very little	11	3.5	19	9.2	77	16.3	4	7.7	10	7.2
	A little	80	25.4	75	36.2	190	40.3	12	23.1	52	36.7
	Much	178	56.5	96	46.4	148	31.4	23	44.2	60	43.2
	Very much	44	14.0	14	6.8	24	5.1	12	23.1	14	10.1
q12: Are you aware of behavior (fear of touch, aggressiveness, hyperactivity, withdrawal) indicative of possible child abuse?	Not at all	6	1.9	5	2.4	29	6.1	1	1.9	1	0.7
	Very little	18	5.7	31	15.0	95	20.1	1	1.9	9	6.5
	A little	140	44.4	97	46.9	189	40.0	9	17.3	39	28.1
	Much	125	39.7	67	32.4	135	28.6	29	55.8	79	56.8
	Very much	26	8.3	7	3.4	24	5.1	12	23.1	11	7.9
Self-assessment											
q13: Do you feel comfortable to discuss with the child the possibility of abuse?	Fairly yes	77	24.4	34	16.4	71	15.0	19	36.5	48	34.5
	Yes	61	19.4	19	9.2	51	10.0	26	50	46	33.1
	Rather not	137	43.5	115	55.6	210	44.5	3	5.8	34	24.5
	No	30	9.5	32	15.5	108	22.9	1	1.9	7	5.0
	I do not know	10	3.2	7	3.4	32	6.8	3	5.8	4	2.9
q14: Do you feel adequate to discuss with the parents the possibility of child abuse?	Fairly yes	88	27.9	41	19.8	65	13.8	17	32.7	51	36.7
	Yes	71	22.5	20	9.7	27	5.7	27	51.9	63	45.3
	Rather not	122	38.7	111	53.6	213	45.1	3	5.8	20	14.4
	No	27	8,6	29	14.0	139	29.4	1	1.9	3	2.2
	I do not know	7	2.2	6	2.9	28	5.9	4	7.7	2	1.4

Abbreviation: Mental health professionals (MHPs).

garding the outcomes under consideration, and the statistical significance between variables, are shown in parentheses (Table II).

Experience

Consultants and social workers confronted child abuse more frequently than residents (p<0.001), nurses (p<0.001), and MHPs (p=0.040). However, as MHPs were engaged more frequently during the last five years, their frequency became analogous with that of the other two categories (p=0.776). Residents were exposed to child abuse cases more frequently than nurses (p=0.001). (Table II).

Although more than half of the participants had confronted child abuse (n=712, 60.08%), only 273 (38.34% of them) submitted reports. Consultants and MHPs were likely to report child abuse (p=0.910), but at a lower rate compared to social workers (p<0.001). Nurses submitted the fewest (p<0.001) and social workers the most (p=0.002) reports of all respondents (Table II).

Training

According to their reporting, MHPs were best trained in diagnosis and management of child abuse, while 81% of nurses reported no training (p<0.001). Consultants and social workers presented analogous training (p=0.103).

All categories presented statistically significant postgraduate training. Comparison between them showed that residents presented undergraduate training more often than others (p=0.001), except social workers (p=0.002) (Table II).

Knowledge of Formal and Judicial Issues

Most categories were not aware if their institution was running a protocol on child abuse. Social workers were significantly more aware of the protocol compared to others and considered themselves responsible to report a case of child abuse (Table II).

Though both MHPs and social workers considered themselves responsible for reporting child abuse, the last considered this duty more intensively (p=0.031). Nurses considered themselves inadequate to report, compared to all other categories (p=0.003) (Table II).

Social workers were the most aware of the necessary formal steps to report child abuse (p<0.001). Consultants and MHPs presented analogous levels of such knowledge (p=0.995), which were greater compared to residents and nurses (p<0.001) (Table II).

The outcome was analogous regarding knowledge of the proper civil service to be informed, to report child abuse. Again, social workers presented the higher levels of knowledge (p=0.007). Consultants and MHPs were more informed than residents and nurses (p=0.001) (Table II).

Clinical Knowledge

MHPs and social workers presented significantly higher knowledge levels of risk factors of child abuse, compared to all other categories (p=0.001). Consultants performed better (p=0.001) than residents and nurses (Table II).

Regarding knowledge of physical signs of child abuse, consultants and MHPs performed likewise well (p=0.111), and better compared to others (p=0.004). Residents and social workers had comparable outcomes (p=0.636), and both performed better than nurses (p=0.001) (Table II).

Finally, on knowledge of behavioral issues, MHPs were the most informed compared to social workers (p=0.027), and consultants (p<0.001). Social workers performed better than consultants (p=0.008) as well. Once more, the lowest level of knowledge shared equally (p=0.055), both residents and nurses (Table II).

Self-Assessment

The participants were questioned if they considered themselves adequate to discuss the probability of abuse with the children. MHPs considered themselves better qualified than all other categories, including social workers (p=0.022). Consultants considered themselves adequate to discuss with children more than nurses and residents (p=0.001). In this case, nurses performed better than residents (p=0.027).

When it came to self-assessment of the ability to discuss with parents, the outcome was analogous for consultants, who were more confident than residents (p<0.001) and nurses (p=0.000), but less than MHPs and social workers (p<0.001). MHPs and social workers were more confident (p=0.110) compared to all other categories, while nurses considered themselves inadequate to talk to parents (p<0.001) (Table II).

Negative Outcomes and Their Motives

In three cases where the participants responded negatively, their motives were investigated. The negative outcomes regarded the questions q3, q13, and q14. The results are shown in detail (Table III).

Table III. Negative outcomes and reasons.

Regarding q3: In case you did not report a case of possible child abuse, what was the reason?	**N**	***p*-value**	**Consultants**	**Residents**	**Nurses**	**MHPs**	**Social workers**
1. Lack of practical knowledge of the reporting procedure	136	**< 0.001**	43	28	62	1	2
2. Discomfort for the legal procedure outcomes	55	0.156	13	11	28	0	3
3. Fear of threatening from the child's family	43	0.161	11	5	24	0	3
4. Fear that the situation at the child's home will aggravate	26	0.237	5	2	16	1	2
5. The child should be referred to a different service	230	0.209	71	44	76	11	28
6. Reluctance of separating the child from proxies	7	0.672	3	0	3	0	1
7. I am afraid that the outcome will not be good	16	0.638	5	3	8	0	0
8. I can provide an informal solution alone	16	0.786	5	3	5	2	1
9. Lack of willingness to handle such cases	26	**< 0.001**	8	13	4	0	1
Regarding q13: In case you do not consider yourself adequate to discuss with the child, what are the reasons?							
1. Lack of skills or education	575	**< 0.001**	136	129	273	3	34
2. Concern of causing a psychological wound to the child	238	**< 0.001**	52	57	116	1	12
3. Lack of cooperation with the child	69	**< 0.001**	18	24	25	0	2
4. Avoidance of engagement with judicial procedures	125	**0.017**	36	27	55	1	6
5. Fear of personal safety	37	0.365	8	9	18	0	2
6. Previous negative experience	43	0.082	11	14	17	0	1
7. Cultural and linguistic obstacles	91	**< 0.001**	16	28	41	0	6
8. Lack of time to handle such cases	149	**< 0.001**	54	35	56	1	3
9. Lack of willingness to handle such cases	26	**< 0.001**	8	13	4	0	1
Regarding q14: In case you do not consider yourself adequate to discuss with the parents, what are the reasons?							
1. Lack of skills or education	538	**< 0.001**	115	119	280	3	21
2. Concern of hurting the feeling of the parents	85	**0.001**	25	14	46	0	0
3. Lack of cooperation with the parents	181	**< 0.001**	41	48	87	1	4
4. Avoidance of engagement with judicial procedures	167	**< 0.001**	45	38	77	1	6
5. Fear of personal safety	90	**0.005**	23	28	36	0	3
6. Previous negative experience	53	0.060	19	14	16	0	4
7. Cultural and linguistic obstacles	92	**< 0.001**	12	28	47	0	5
8. Lack of time to handle such cases	139	**< 0.001**	47	30	58	1	6
9. Lack of willingness to handle such cases	29	**0.008**	7	12	7	0	3

Statistically significant values are shown in bold characters. Abbreviation: Mental health professionals (MHPs).

As shown, most of those who did not report child abuse, attributed this attitude to the absence of practical knowledge of the reporting procedure (n=136), considered that the child should be deferred to a different service (n=230), and felt discomfort with the legal procedures (n=55) (Table III).

Most participants who did not consider themselves adequate to discuss abuse matters with a child, reported they were deficient in skills or training, (n=575), concerned with causing psychological harm to the child (n=238), and justified themselves with lack of time to deal with it (n=149) (Table III).

Most of the participants who considered themselves inadequate to discuss with parents, reported skill or training deficiency (n=538), lack of cooperation with the parents (n=181), and reluctance to be involved in judicial procedures (n=167) (Table III).

Logistic Regression Analysis Outcomes

Logistic regression analysis for question q4 (Have you ever been trained in diagnosis and management of child abuse?) showed that the relevant probability for a resident to be trained for child abuse diagnosis and management was 46.4% (OR: 0.536, 95% CI: 0.343-0.837), and for a nurse 78.5% (0.215, 0.150-0.306) lower, compared to a consultant respectively (OR: Odds ratio, CI: confidence interval). In contrast, for a MHP, it was 162.2% (2.622, 1.361-5.052) higher compared to a consultant (Table IV).

Analysis for question q10 (Are you aware of the risk factors of child abuse?) showed that the relevant probability of a nurse to be aware of risk factors was 66.3% (0.337, 0.239-0.475) lower compared to a consultant. A MHP had 245.9% (3.459, 1.736-6.891) higher probability to be aware compared to a consultant, and a social worker 155.3% (2.553, 1.615-4.036) respectively (Table IV).

Regarding question q11 (Are you aware of the physical signs that pose the suspicion of child abuse?), the relevant probability for a nurse to be aware of physical signs of child abuse was 76.2% (0.238, -1.437-0.175) compared to a consultant, and 55.8% (0.442, -0.817-0.221) compared to a social worker respectively. As for the age, it was found that for every superior age group, the probability to identify the physical signs of possible child abuse was 43.4% (1.434, 1.167-1.762) higher (Table IV).

As for question q12 (Are you aware of a behavior indicative of possible child abuse?), the relevant probability for a nurse to be aware of behavior indicative for child abuse, was 53.2% (0.468, 0.336-0.651) lower compared to a consultant. In contrast, the relevant probability of a MHP was 285.5% (3.855, 1.901-7.820) higher compared to a consultant, and of a social worker 66.6% (1.666, 1.083-2.564) higher respectively (Table IV). Regarding gender, the relevant probability of a female to be aware of abused behavior of a child was approximately five times (48.4%), (1.484, 1.101-2.000) higher compared to a male, independent from other factors (Table IV).

Discussion

Although it is well known that a thorough understanding of any complex problem is important to address it, results from our study indicated that HCPs in Greek pediatric departments have a non-systematic and vague knowledge of child abuse identification and management. Few have received formal training, mainly after graduation, as child abuse occupies some of the last chapters in graduate educational programs.

As analysis was performed according to the professional category, it was shown that each group of specialists presented positive and negative points. Pediatric clinicians were mostly aware of clinical signs, while psychiatrists and psychologists had a better knowledge of behavioral characteristics. Social workers were the only group with adequate knowledge of formal issues. In recent years, younger scientists get better training during their university education. Furthermore, psychiatrists and psychologists obtained a more active role during the last five years. It is noteworthy that nurses presented poor scores in every section, indicating that this is an issue needing active intervention.

Deficient training, reluctance, lack of time, negative approach against formal and judicial issues, impeded proceeding to effective confrontation with child abuse. Regression analysis showed that professional categories were factors which affected training, the awareness of child abuse risk factors, and the recognition of clinical and behavioral characteristics. Furthermore, the age of the participants affected the clinical awareness, while female participants had more chances to recognize the behavioral characteristics of abused children. Motivation to report, and awareness of how to react, were the most important challenges in all categories.

Table IV. Logistic regression analysis of the outcomes on training and clinical knowledge.

Variables	β	S. E.	Wald	*p*-value	OR	95% C.I for OR	
						Lower	Upper
q4							
Demographics							
Gender	0.108	0.156	0.476	0.490	1.114	0.820	1.512
Age	0.166	0.111	2.255	0.133	1.181	0.950	1.467
Children	-0.157	0.165	0.906	0.341	0.854	0.618	1.181
Experience*	-0.028	0.091	0.094	0.759	0.973	0.814	1.162
Category							
Consultants**	0.000						
Residents	-0.624	0.227	7.530	**0.006**	0.536	0.343	0.837
Nurses	-1.538	0.181	71.906	**0.000**	0.215	0.150	0.306
MHPs	0.964	0.335	8.300	**0.004**	2.622	1.361	5.052
Social workers	0.306	0.216	2.005	1.157	1.358	0.889	2.076
R square = 0.1777							
q10							
Demographics							
Gender	0.286	0.157	3.332	0.068	1.331	0.979	1.809
Age	0.162	0.108	2.257	0.133	1.176	0.952	1.453
Children	0.224	0.163	1.887	0.170	1.251	0.909	1.721
Experience*	0.082	0.089	0.841	0.359	1.085	0.911	1.293
Category							
Consultants**	0.000						
Residents	-0.396	0.231	2.927	0.087	0.673	0.428	1.059
Nurses	-1.087	0.174	38.835	**0.000**	0.337	0.239	0.475
MHPs	1.241	0.352	12.455	**0.000**	3.459	1.736	6.891
Social workers	0.937	0.234	16.108	**0.000**	2.553	1.615	4.036
R square = 0.172							
q11							
Demographics							
Gender	0.124	0.152	0.667	0.414	1.132	0.840	1.525
Age	0.360	0.105	11.752	0.001	1.434	1.167	1.762
Children	0.180	0.158	1.304	0.253	1.197	0.879	1.631
Experience*	-0.145	0.087	2.817	0.093	0.865	0.730	1.025
Category							
Consultants**	0.000						
Residents	-0.312	0.233	1.964	0.161	0.732	-0.312	0.233
Nurses	-1.437	0.175	67.622	**0.000**	0.238	-1.437	0.175
MHPs	-0.155	0.324	0.230	0.632	0.856	-0.155	0.324
Social workers	-0.817	0.221	13.644	**0.000**	0.442	-0.817	0.221
R square = 0.121							
q12							
Demographics							
Gender	0.395	0.152	6.707	0.010	1.484	1.101	2.000
Age	0.162	0.104	2.416	0.120	1.176	0.959	1.442
Children	0.232	0.157	2.176	0.140	1.261	0.927	1.716
Experience*	-0.014	0.086	0.027	0.869	0.986	0.833	1.160
Category							
Consultants**	0.000						
Residents	-0.199	0.223	0.796	0.372	0.819	0.529	1.269
Nurses	-0.759	0.169	20.238	**0.000**	0.468	0.336	0.651
MHPs	1.349	0.361	13.984	**0.000**	3.855	1.901	7.820
Social workers	0.510	0.220	5.391	**0.020**	1.666	1.083	2.564
R square = 0.102							

*Experience in working years, **Referral category. Statistically significant outcomes are shown in bold characters. *Abbreviations:* Odds Ratio (OR), Standard Error (S.E.), Model coefficient (β), Mental health professionals (MHPs).

Previous research[15] in Greece showed training of 21% before graduation, while 13% had experienced suspect child abuse cases. Of them, only 1.5% proceeded to official reporting. Our previous research showed that avoidance of engagement in time-consuming and hazardous procedures were the main cause of non-reporting child abuse[16].

Experience in child abuse did not differ from other countries. In a study from Turkey[17], less than half stated that had faced child abuse during their career. Of them, only 12.7% proceeded to official reporting, while in another study[18] on a larger sample, only 1% proceeded to reporting. Incomplete history, lack of knowledge, unawareness of their own role, fear of possible consequences for the child, and state infrastructure, were considered major causes of not reporting[17-19].

Suspicion of child abuse was under 10% and reporting under 3% in Saudi Arabia, although knowledge was of a satisfactory level[20-23]. Incomplete history has been considered as a major cause of not recognizing and reporting abuse[21]. A possible involvement with aggressive parents was an obstacle to proceed with reporting in the United Arab Emirates[24].

Lack of initiative has been considered as a major point of setback in child abuse management[25]. Though in Pakistan there was a tendency to act against child abuse, there was unwillingness to act when needed[26]. Fear that the child would be harmed more has been blamed for avoiding reporting[27]. In India knowledge was poor, while the perception of most physicians on child abuse was rather negative[25, 28-30].

In Sweden, a country well known for its civil rights, with obligatory legal reporting of child abuse, only 20% of general practitioners stated that they had reported analogous cases, and only 30% confided in state agencies for investigation and diagnosis[31]. In Netherlands, there were knowledge deficiencies both on formal issues, and on the psychosexual development of the children[32]. Only 9% declared that they would report child abuse in Bosnia-Herzegovina[33]. General practitioners in France showed low levels of knowledge[34]. They felt uncomfortable with the wealthier layers of society. Fear of erroneous diagnosis and resulting consequences were prominent. They also expressed their mistrust in their health system and infrastructure of the state[34].

Regarding training, approach and action outcomes of trained professionals were superior compared to those of untrained ones[35]. It is of interest that occasionally professionalism produced an opposite effect[36]. As medical students in Turkey came to the end of their graduate program, they started focusing more strictly on their selected scientific direction, at the expense of training in child abuse. Thus, decreasing knowledge in child abuse (from 67% of third, to 40% of fourth, and to 17% of fifth-year students), showed that child abuse was not a priority, compared to other lessons as graduation and professional life approached[37]. Furthermore, training in child abuse was mostly postgraduate, with a score of 11% trained before graduation[18]. Lack of training in child sexual abuse in social work programs has been observed in Denmark and England[38]. In our study, the reporting rate was rather low (38.34%) among the participants who experienced child abuse cases. However, 64.10% of those who reported child abuse were trained, showing the impact of training in their performance.

In the United States of America, professional experience, discussion with colleagues, workshops, and literature, preceded formal graduate education in order of frequency[39]. Psychologists felt competent to provide services to abuse victims, despite their deficient graduate programs[40]. However, this brought into question their competence to work with victims[40,41]. A point of interest is that educators in child abuse were often limited by their own experiences and clinical settings[42].

Internet training in Saudi Arabia, affected positively the diagnostical status on child abuse, and enhanced reporting rate to 27%[22]. A study[43] showed that 60% of participants in ten countries used the internet as a source of information on child abuse. Telemedicine web-based applications have been also proved secure and supportive for child abuse evaluation[42].

Knowledge of formal issues has been related to professional experience, higher training, and previous experience[27]. Seniors were less trained compared to younger professionals[17]. Japanese research concluded that training should be combined with clinical experience to obtain the ability to discriminate abuse[44]. Pediatricians performed better compared to general practitioners[45]. Research from Iran showed that those who were trained in emergency training programs, responded better[46]. Israeli research stated that even well-trained pediatric professionals desired more training[47]. Saudi Arabia research concluded that training in child abuse should be obligatory in university programs[48]. Educational protocols of education, both clinical and formal, were proved of utmost importance in child abuse[49-53].

Professionalism is a key point in overcoming unwillingness to deal with child abuse. Positive attitude prevailed over obligatory reporting when they were compared[54]. Outcomes from Sri Lanka are of interest, as the characteristics of abused children were recognized, but not those of the perpetrators[55]. At times, gender matters. In Saudi Arabia, female HCPs showed higher empathy for victims, while males showed more aggressive attitude on reporting[35]. Insufficient training and knowledge on formal issues, lack of cooperation and confidence, and defective infrastructure were considered major obstacles in African studies, resulting in delay of diagnostic and reporting procedures[56-59].

Local culture has proven to be a very important factor as well. For example, a study from China showed that 77% of HCPs believed that physical punishment was not abuse[60]. On the contrary, bad behavior of children has been blamed. This outcome also differed between urban and rural areas. In this research, training on child abuse handling was 3%, and lack of knowledge over 70%[60].

Fear of consequences, and fear of family reaction, are occasionally too strong[20,45,52,61]. Even in well-structured and trained Australia, though 97% of the participants in a study presented good level of knowledge, only 28% proceeded to reporting[62]. It is also of interest that in Australia it was reported that physically or sexually abused children might escape diagnosis, as an effect of substandard training and weak protection[50].

Limitations

The study involved personnel during working hours, under different circumstances in terms of availability and time constraints. Furthermore, as child abuse presents variability in all aspects in different societies and countries, a comparison of the results of this study to those from other researchers, might be considered as biased. In the aftermath of the well-known Covid-19 pandemic, we speculate that our results might have been affected, as families have been living for two years under long quarantine time-intervals, resulting in possible exaggeration of domestic violence. Novel studies might reflect this new reality.

Conclusions

After a thorough research of the international overall perception of child abuse, and our own outcomes, we concluded that some points would be of interest, and probably helpful. We outlined ten of them, considered important: 1) Attitude guided by fear is a matter that should be confronted early during the university years. To fight fear and ignorance, we must start discussing child abuse with students early in their graduate programs. Furthermore, HCPs should be and feel protected by the state, as legal implications comprise a factor of reluctance. 2) Professionalism must include knowledge and practice in child abuse at the same level as in other medical topics. To obtain this, guidelines must be set and followed with the same respect as those i.e., for asthma, trauma, or acute abdomen. 3) Child abuse is a binary entity. We focus on the recognition of the characteristics of the abused but must not omit those of the perpetrator as well. It is like microbiology, requiring not only diagnosis of the symptoms of the infectious disease, but also a deep understanding of the virulent organism. 4) Even limited training is always better than no training at all. 5) Female gender was reported related to empathy and male gender to more aggressive intervention. We believe that both sexes should be included in the teams that discuss and confront child abuse cases. 6) Local culture differs from one country to another, and from rural areas to urban ones. This plays an essential role in the attitude of the HCPs. Overcoming situations where something is considered as abuse in one society but not in another is important. 7) Specialty matters. Qualified professionals perform better, compared to more general professions. Thus, training should be more intense in the relevant specialties of HCPs. 8) Sometimes, training improvement is not enough. Collaboration between scientists from different backgrounds is of utmost importance. Mentality is difficult to change. 9) Detailed history is essential. In an era of sophisticated and advanced technology, the basic principles of clinical examination must not be forgotten. 10) The Internet is a tool we should use today to expand training in child abuse. We not only can, but must create and expand user-friendly scientific pages, interact on a large scale, and perform webinars, sharing experience and theoretical knowledge.

Conflict of Interest
The Authors declare that they have no conflict of interests.

Acknowledgements
We thank Mrs. Angeliki Karavota and Mr. Spyridon Skiadopoulos for their contribution to the statistical analysis.

Informed Consent
The participants provided informed consent.

Funding
The publication of this article has been financed by the Research Committee of the University of Patras.

Ethics Approval
The study protocol was approved by the Bioethics Committee of the University of Patras (protocol number 6517.09.09.20). Permission for the survey was obtained by the Bioethics Committees of all 60 hospitals which participated in the study. The planning conduct and reporting of human research are in accordance with the Declaration of Helsinki.

References

1) World Health Organization. Global status report on preventing violence against children. 2020. Available at: https://www.who.int/teams/social-determinants-of-health/violence-prevention/global-status-report-on-violence-against-children-2020.
2) UNICEF. Hidden in Plain Sight: A statistical analysis of violence against children. 2014. Available at: https://data.unicef.org/resources/hidden-in-plain-sight-a-statistical-analysis-of-violence-against-children/
3) Solís-García G, Marañón R, Medina Muñoz M, de Lucas Volle S, García-Morín M, Rivas García A. Child abuse in the emergency department. An Pediatr (Engl Ed) 2019; 91: 37-41.
4) Lynch MA. Child abuse before Kempe: an historical literature review. Child Abuse Negl 1985; 9: 7-15.
5) Roche AJ, Fortin G, Labbé J, Brown J, Chadwick D. The work of Ambroise Tardieu: the first definitive description of child abuse. Child Abuse Negl 2005; 29: 325-334.
6) Kempe CH, Silverman FN, Steele BF, Droegemueller W, Silver HK. The battered child syndrome. JAMA 1962; 181: 17-24.
7) Benger JR, Pearce V. Simple intervention to improve detection of child abuse in emergency departments. BMJ 2002; 324: 780.
8) International Rescue Committee (IRC), UNICEF Fund. Caring for child survivors of sexual abuse: Guidelines for health and psychosocial service providers in humanitarian setting. 2012. Available at: https://resourcecentre.savethechildren.net/document/caring-child-survivors-sexual-abuse-guidelines-health-and-psychosocial-service-providers/
9) University of Maryland medical system. SEEK project-child protection. 2022. Available at: https://www.umms.org/childrens/health-services/child-protection/seek-project
10) American Board of Pediatrics. Child abuse pediatrics certification. Eligibility criteria for certification in child abuse pediatrics. 2022. Available at: https://www.abp.org/content/child-abuse-pediatrics-certification
11) The Ray E. Helfer Society. Helfer next generation. Available at: https://www.helfersociety.org/
12) Yale School of Medicine. The Yale child abuse program. Available at: https://medicine.yale.edu/pediatrics/sections/general-pediatrics/safety-advocacy-healing-programs/
13) Sege RD, Flanigan E, Levin-Goodman R, Licenziato VG, De Vos E, Spivak H. American Academy of Pediatrics' connected kids' program. Case Study. Am J Prev Med 2005; 29: 215-219.
14) Soldatou A, Stathi A, Panos A, Paouri B, Koutsoukou E, Krepis P, Tsolia M, Oral R, Leventhal JM. A national educational campaign to raise awareness of child physical abuse among health care professionals. Eur J Pediatr 2020; 179: 1395-1402.
15) Laud A, Gizani S, Maragkou S, Welbury R, Papagiannoulis L. Child protection training, experience, and personal views of dentists in the prefecture of Attica, Greece. Int J Paediatr Dent 2013; 23: 64-71.
16) Gkentzi D, Panagopoulou K, Sinopidis X, Karatza A, Dimitriou G. Knowledge, and attitudes of healthcare professionals on child abuse in Greece. Child Care Health Dev 2019; 45: 310-311.
17) Özgür N, Ballıkaya E, Güngör HC, Ataç AS. Turkish paediatric dentists' knowledge, experiences, and attitudes regarding child physical abuse. Int Dent J 2020; 70: 145-151.
18) Kural D, Abbasoglu Z, Tanboga İ. Awareness and Experience regarding Child Abuse and Neglect Among Dentists in Turkey. J Clin Pediatr Dent 2020; 44: 100-106.
19) Pakiş I, Demir F, Bektaş G, Altun U, Yıldırı S. Investigation of the awareness and knowledge about child abuse and negligence among doctors and nurses working in the east part of Turkey. Rom J Le Med 2015; 24: 151-156.
20) Mogaddama M, Kamala I, Merdadc L, Alamoudic N. Knowledge, attitudes, and behaviours of dentists regarding child physical abuse in Jeddah, Saudi Arabia. Child Abuse Negl 2016; 54: 43-56.
21) Hussein AS, Ahmad R, Ibrahim N, Yusoff A, Ahmad D. Dental health care providers' views on child physical abuse in Malaysia. Eur Arch Paediatr Dent 2016; 17: 387-395.
22) Al-Dabaan R, Asimakopoulou K, Newton JT. Effectiveness of a web-based child protection training programme designed for dental practitioners in Saudi Arabia: a pre- and post-test study. Eur J Dent Educ 2015; 20: 45-54.
23) Alkathiri MA, Baraja MA, Alaqeel SM. Knowledge, attitude, and practice regarding child maltreatment among health care providers working in primary care centers in Riyadh, Saudi Arabia. J Family Med Prim Care. 2021; 10: 3198-3204.

24) Al Hashmi R, Hussein I, Kowash M, Welbury R, Al-Halabi M. Child maltreatment in Dubai and the Northern United Arab Emirates: dental hygienists and assistants' knowledge. Eur Arch Paediatr Dent 2021; 22: 651-658.

25) Malpani S, Arora J, Diwaker G, Kaleka PK, Parey A, Bontala P. Child Abuse and Neglect: Do We know enough? A Cross-sectional Study of Knowledge, Attitude, and Behaviour of Dentists regarding Child Abuse and Neglect in Pune, India. J Contemp Dent Pract 2017; 18: 162-169.

26) Ali Khan HM, Mansoori N, Sohail MH, Humayun MA, Liaquat A, Mubeen SM. Child physical abuse: awareness and practices of medical and dental doctors in Pakistan. J Pak Med Assoc 2021; 71: 1704-1708.

27) Buldur B, Büyükkök Ç, Cavalcanti AL. Knowledge, attitudes, and perceptions regarding child abuse and neglect among dentists in Turkey. Braz Oral Res 2022; 36: e001.

28) Kirankumar S Noorani H, Shivprakash P, Sinha S. Medical professional perception, attitude, knowledge, and experience about child abuse and neglect in Bagalkot district of north Karnataka: A survey report. J Indian Soc Pedod Prev Dent 2011; 29: 193-197.

29) Deshpande A, Macwan C, Poonacha KS, Bargale S, Dhillon S, Porwal P. Knowledge and attitude in regard to physical child abuse amongst medical and dental residents of central Gujarat: a cross-sectional survey. J Indian Soc Pedod Prev Dent 2015; 33: 177-182.

30) Poreddi V, Pashapu D, Kathyayani Bv, Gandhi S, El-Arousy W, Bada Math S. Nursing students' knowledge of child abuse and neglect in India. Br J Nurs 2016; 25: 264-268.

31) Talsma M, Bengtsson Boström K, Östberg AL. Facing suspected child abuse--what keeps Swedish general practitioners from reporting to child protective services? Scand J Prim Health Care 2015; 33: 21-26.

32) Schols MWA, Ruiter C, Ory FG. How do public child healthcare professionals and primary school teachers identify and handle child abuse cases? A qualitative study. BMC Public Health 2013; 13: 807.

33) Markovic N, Muratbegovic AA, Kobaslija S, Bajric E, Selimovic-Dragas M, Huseinbegovic A, Cuković-Bagic I. Knowledge and attitudes regarding child abuse and neglect. Mater Sociomed 2015; 27: 372-375.

34) Regnaut O, Jeu-Steenhouwer M, Manaouil C, Gignon M. Risk factors for child abuse: levels of knowledge and difficulties in family medicine. A mixed method study. BMC Res Notes 2015; 8: 620.

35) Al-Saif DM, Al-Eissa M, Saleheen H, Al-Mutlaq H, Everson MD, Almuneef MA. Professionals' attitude toward reporting child sexual abuse in Saudi Arabia. J Child Sex Abus. 2018; 27: 22-37.

36) Eskandari A, Abolfazli N, Lafzi A, Golmohammadi S. Oral Health Knowledge and Attitudes of Community Health Workers in East Azerbaijan, Iran. J Dent (Shiraz) 2016; 17: 297-300.

37) Bodrumlu EH, Avsar A, Arslan S. Assessment of knowledge and attitudes of dental students in regard to child abuse in Turkey. Eur J Dent Educ 2016; 22: 40-46.

38) Perry K. To what extent are social work students in England and Denmark equipped to deal with child sexual abuse? A comparative discourse analysis between English and Danish social work education in relation to child sexual abuse. Eur J Soc Work 2006; 9: 375-377.

39) Bryant JK. School counselors and child abuse reporting: A national survey. Prof School Couns 2009; 12: 333-342.

40) Pope K, Feldman-Summers S. National survey of psychologists' sexual and physical abuse history and their evaluation of training and competence in these areas. Prof Psychol: Res Pract 1992; 23: 353-361.

41) Kenny MC, Abreu RL. Training mental health professionals in child sexual abuse: curricular guidelines. J Child Sex Abuse 2015; 24: 572-591.

42) Frasier LD, Thraen I, Kaplan R, Goede P. Development standardized clinical training cases for diagnosis of sexual abuse using a secure Telehealth application. Child Abuse Negl 2012; 36; 149-155.

43) Duman C, Al-Batayneh OB, Ahmad S, Durward CS, Kobylińska A, Vieira AR, Tredoux S, Okutan AE, Egil E, Kalaoglu EE, Sirinoglu Capan B, Aksit Bicak D, Zafar S. Self-reported knowledge, attitudes, and practice of final-year dental students in relation to child abuse: A multi-centre study. Int J Paediatr Dent 2021; 31: 801-809.

44) Tanoue K, Senda M, An B, Tasaki M, Taguchi M, Kobashi K, Oana S, Mizoguchi F, Shiraishi Y, Yamada F, Okuyama M, Ichikawa K. Training program for Japanese medical personnel to combat child maltreatment. Pediatr Int. 2017; 59: 764-768.

45) Demirçin S, Tütüncüler A, Aslan F, Velipaşaoğlu Güney S, Atılgan M, Gülkesen H. The Knowledge Level and Opinions of Physicians about the Medical and Legal Procedures Related to Physical Child Abuse. Balkan Med J. 2017; 34: 140-146.

46) Azita A, Talattof Z, Deilami Z, Zahed M, Karimi A. Knowledge, and attitude of general dentists regarding common emergencies in dental offices: A cross-sectional study in Shiraz, Iran. Indian J Dent Res 2018; 29: 551-555.

47) Jedwab M, Benbenishty R. Israeli Paediatricians' attitudes and experiences of reporting child maltreatment and related training needs. Child Abus Rev 2017; 26: 439-450.

48) Alnasser Y, Albijadi A, Abdullah W, Aldabeeb D, Alomair A, Alsaddiqi S, Alsalloum Y. Child maltreatment between knowledge, attitude and beliefs among Saudi pediatricians, pediatric residency trainees and medical students. Ann Med Surg (Lond) 2017; 16: 7-13.

49) Park S, Kwak Y, Noh H, Jung J. A survey on the perception and attitude change of first-line

healthcare providers after child abuse education in South Korea: A pilot study. Medicine 2019; 98: e14085.

50) Kugananthan S, Nguyen T, Patel J, Anthonappa R. Knowledge, experiences and attitudes of dental health professionals towards reporting child abuse in Western Australia. Aust Dent J. 2021; 66: 194-200.

51) Ebrahimi S, Alavi A, Ebrahimi A. Pediatric residents' knowledge, and attitudes towards child abuse. Int J School Health 2019; 6: e77306.

52) Sahebihagh MH, Hosseini SZ, Hosseinzadeh M, Shamshirgaran SM. Knowledge, Attitude and Practice of Community Health Workers Regarding Child Abuse in Tabriz Health Centers in 2015-2016. Int J Community Based Nurs Midwifery 2017; 5: 264-274.

53) Jahanimoghadam F, Kalantari M, Horri A, Ahmadipour H, Pourmorteza E. A survey of knowledge, attitude, and practice of Iranian dentists and pedodontists in relation to child abuse. J Dent (Shiraz) 2017; 18: 282-288.

54) Lee IS, Kim KJ. Factors that influence mandatory child abuse reporting attitudes of pediatric nurses in Korea. J Forensic Nurs 2018; 14: 31-41.

55) Sathiadas MG, Viswalingam A, Vijayaratnam K. Child abuse and neglect in the Jaffna district of Sri Lanka - a study on knowledge attitude practices and behavior of health care professionals. BMC Pediatr 2018; 18: 152.

56) Antwi WK, Reeves PJ, Ferris C, Aziato L. Exploration of Ghanaian radiographers' reporting of suspected physical abuse amongst children. Radiography (Lond) 2021; 27: 817-822.

57) Pinto L, Lein A, Mahoque R, Wright DW, Sasser SM, Staton CA. A cross-sectional exploratory study of knowledge, attitudes, and practices of emergency health care providers in the assessment of child maltreatment in Maputo, Mozambique. BMC Emerg Med 2018; 18: 11.

58) Olatosi OO, Ogordi PU, Oredugba FA, Sote EO. Experience and knowledge of child abuse and neglect: A survey among a group of resident doctors in Nigeria. Niger Postgrad Med J 2018; 25: 225-233.

59) Saeed N, Sultan EA, Salama N, Galal M, Ghanem M. Child maltreatment: knowledge, attitudes and reporting behaviour of physicians in teaching hospitals, Egypt. East Mediterr Health J 2021; 27: 250-259.

60) Li X, Yue Q, Wang S, Wang H, Jiang J, Gong L, Liu W, Huang X, Xu T. Knowledge, attitudes, and behaviours of healthcare professionals regarding child maltreatment in China. Child Care Health Dev 2017; 43: 869-875.

61) Flemington T, Fraser J. Building workforce capacity to detect and respond to child abuse and neglect cases: A training intervention for staff working in emergency settings in Vietnam. Int Emerg Nurs 2017; 34: 29-35.

62) John V, Messer LB, Arora R, Fung S, Hatzis E, Nguyen T, San A, Thomas K. Child abuse and dentistry: a study of knowledge and attitudes among dentists in Victoria, Australia. Aust Dent J 1999; 44: 259-267.