

# A Study of Bulgarian Dental Practitioners' Knowledge about Child Abuse and Neglect

Mariana Dimitrova<sup>1</sup>, Veselina Kondeva<sup>2</sup>, Tatyana Boeva<sup>3</sup>

<sup>1</sup>Medical University – Plovdiv, Faculty of Dental Medicine, Department of Pediatric Dental Medicine, Hr. Botev 3, Plovdiv 4002, Bulgaria

<sup>2</sup>Medical University – Plovdiv, Faculty of Dental Medicine, Department of Pediatric Dental Medicine, Hr. Botev 3, Plovdiv 4002, Bulgaria

<sup>3</sup>Medical University – Plovdiv, Faculty of Public Health, Department of Medical Informatics, Biostatistics and E-learning, V. Aprilov 15A, Plovdiv, 4002, Bulgaria

**Abstract:** *Child abuse is internationally disseminated phenomenon and it is a significant public health problem. It concerns all sectors of society, regardless of ethnicity, culture and socio-economic status. Dental practitioners are obliged to report suspicions of child abuse and neglect along with related documents. Unfortunately a small number of dental practitioners report child abuse cases. The aim of this research is to determine the knowledge of Bulgarian dental practitioners about child abuse and neglect and their willingness to participate in reporting. Materials and methods. The object of the study are 265 dental practitioners from several Bulgarian regions. They fill direct anonymous questionnaire containing 15 questions. Results and discussion: Results show that every second dental practitioner with over 20 years of professional experience has had suspicious cases /49.2%, but only 5,7% of them report about them. The most common reason is "Lack of knowledge on reporting process" /40.4%. More than half of the questioned practitioners /54,3% consider themselves not being relevantly informed on detecting the signs of abuse. Conclusion: The fact that only a small number of practitioner have reported the case is quite provocative and still the rear quite overwhelming reprimands. Most participants confirm the need for additional training.*

**Keywords:** child abuse and neglect, dental practitioners', violence

## 1. Introduction

Child abuse is internationally disseminated phenomenon and it is a significant public health problem. It concerns all sectors of society, regardless of ethnicity, culture and socio-economic status /16/. It takes all forms of physical, emotional, sexual violence, neglect and exploitation, and it affects negatively life and development of children and society. /22/.

Unfortunately, child abuse is a frequent event. Dental practitioners are obliged to report suspicions of child abuse and neglect along with related documents. Dental practitioners take a key position to assist in distinguishing the signs of abuse and they should be able to detect them. /1, 5, 7, 10, 19/. Dental practitioners can identify and report a case of abuse, as statistically from 50 to 75% of all violence cases include head face and mouth bruises. /4,6,20/

By scientific data a small number of dental practitioners report such cases. /2, 3, 9, 14, 21/ The low report rate is highly disturbing because dental practitioners such as all society members are obliged to report suspicious cases. There is no similar study in Bulgaria that investigates the knowledge of dental practitioners in child abuse and neglect signs and the reasons for not reporting such cases, which is the aim of this article.

**Aim.** The aim of this research is to determine the knowledge of Bulgarian dental practitioners about child abuse and neglect and their willingness to participate in reporting.

**Materials and Methods:** An anonymous questionnaire is developed including 265 dental practitioners from several regions of Bulgaria. Data is collected in 2014-2015 on

scientific meetings throughout the country. The questionnaire consists of 15 multiple choice questions.

The study includes demographic characteristic variables – gender, age, professional experience, specialization, attitude towards child abuse and neglect. A question is asked on suspicion about abuse and neglect cases in their patients. In case of positive answer, they were asked about reporting and in case of negative answer – would they recognize the signs of abuse.

A question is included about their interest in additional training aiming at distinguishing the signs of abuse.

Professional experience is separated in 4 groups: no specialization, general dental medicine, pediatric dental medicine and other.

Data analysis and statistical methods: After being coded the primary data were processed with SPSS.v.17. Some data are in table form for better result comparison. For result presentation the methods used are descriptive analysis,  $\chi^2$  analysis, one-step logistic regression analysis, multiple responses, and graphic analysis. The significance level is  $\alpha \leq 0,05$ .

## 2. Results and Discussion

Demographic data: Our research includes 265 dental practitioners, of which които 170 /64,2%/ females, and 95 /35,8%/ males.

Table one presents the age distribution. The smallest group is the group of young specialists - 37 /14%/, and the largest is

the group of dental practitioners above 50 years of age -123 /46,4%/.

**Table 1:** Age distribution of respondents

Age	n	%
<30	37	14,0
31-39	55	20,8
40 - 50	50	18,9
>50	123	46,4
Total	265	100,0

Table 2 presents the distribution by professional experience. The smallest number of participants has experience from 5 to 10 years - 9,4%, and the largest – above 20 years of professional experience - 55,8%.

**Table 2:** Distribution of respondents by professional experience

Years of dental practice	n	%
<6	37	14,0
10-Jun	25	9,4
20-Nov	55	20,8
>20	148	55,8
Total	265	100,0

Table 3 presents the distribution by specializations. The largest number of practitioners have no specialization - 37,4%, followed by practitioners specialized in general dental medicine-35,8%, and 11,3%.

**Table 3:** Distribution by specialization

	n	%
Without specialization	99	37,4
General Dental Medicine	95	35,8
Pediatric Dental Medicine	30	11,3
Other	41	15,5
Total	265	100,0

These demographic data are necessary for determining the questioned contingent.

The question **Have you ever had children patients whom you have suspicion to have been victims of child abuse?**, 22,3% of the questioned practitioners answer with **Yes**, and 77,7% answer with **No**. The results from a Harrisetal. investigation present that 37% of Scottish dental practitioners have suspicion about child abuse and neglect. These numbers are higher than the results from our study /11/. The results, given by Carinsetal. are comparable to ours /4/. They are higher than the Brazilian ones – 14,3% /8/. We investigated the relation between the positive answers of the abovementioned question and the professional experience. The tendency is that the higher the professional experience is, the more practitioners report about suspicious cases of child abuse. Every second practitioner from the group of practitioners with more than 20 years of experience report cases of child abuse and neglect /49.2%/ /Table 4./, but the is no statistical significance of those differences / $\chi^2=3,142$ ,  $p=0,37$ /.

**Table 4:** Distribution of cases of victims of child abuse, depending on professional experience.

		Years of dental practice				Total	
		<6	6-10	11-20	>20		
Have you ever had children patients whom you have suspicion to have been victims of child abuse?	no	n	27	21	39	119	206
		%	13,1%	10,2%	18,9%	57,8%	100,0%
	yes	n	10	4	16	29	59
		%	16,9%	6,8%	27,1%	49,2%	100,0%
Total		n	37	25	55	148	
		%	14,0%	9,4%	20,8%	55,8%	

The fact that only 5,7% of those who gave positive answer of the abovementioned question have reported the case is quite provocative. These data confirm that dental practitioners are reluctant to report suspicious cases. A Northern Irish inquiry shows that dental practitioners detect and report less child abuse cases than any other medical practitioners' /13/. It is considered that children and parents avoid second visitation of the same medical surgery, but they usually visit the same dental practitioner /1/. So, it is surprising that dental practitioners take a small part of the total number of child abuse reports to the relevant authorities /17,18/. There is only one study that presents high number of reported cases /8/. The fact that dental practitioners do not report is quite a significant issue in our country and in other countries. There are several reasons and they can be grouped so as: lack of certainty on diagnosis; lack of knowledge on reporting process; fear of consequences concerning the child; fear for practice and litigation. Our study displays the results in table 5.

**Table 5:** Reasons for not reporting child abuse cases

	n	%
Fear of further violence on child.	11	23,4
Fear of aggression toward the practitioner.	3	6,4
Fear of further litigation.	1	2,1
Fear for the child after authority interference.	6	12,8
Lack of knowledge on reporting process.	19	40,4
Hesitation on diagnosis	7	14,9
Total	47	100

The most common reason for not reporting to the relevant authorities is **Lack of knowledge on reporting process** /40.4%/. It is disturbing that almost half of the practitioners have no information on reporting process. By summing the number of those who answered with hesitation on diagnosis, with those who have no relevant information on reporting process, the total percentage of practitioners who have no knowledge on detecting and raising alert of child abuse is extremely high /55.3%/. The focus of child abuse prevention programs should be perfecting the knowledge of the abovementioned problems.

The second reason of not reporting is **Fear of further violence on child** 23.4%/, followed by **Fear for the child after authority interference** /12.8%/. The latter shows that dental practitioners do not trust the active and relevant reaction of authorities. Only one questioned practitioner did not report the relevant authorities.

The highest percentage of respondents answer **with Lack of knowledge about the reporting process**. Similar studies have been carried out by Jordan colleagues, and by Kilpatrick et al. and Azevedo M. et al. They point out the same reasons: uncertain diagnosis, lack of medical history, consequences

concerning the child, concerns on information restriction. /1, 12, 15/

We investigated the relation between professional experience and the reasons for not reporting. The results are displayed on table 6. It is obvious that the biggest number of practitioners who answered with **Hesitation on diagnosis** are the ones with professional experience up to 5 years -

11,1%. This number is the lowest at the group of practitioners with over 20 years of professional experience- 3,6%. This fact is explained by the huge life and professional experience. There is a statistical significance of differences LikelihoodRatio=27,201; p=0,075.

**Table 6:** Relation between reasons for not reporting and professional experience

		Reasons for not reporting:							Total	
		Fear of further violence on child.	Fear of aggression toward the practitioner.	Fear of further litigation.	Fear for the child after authority interference.	Lack of knowledge on reporting process.	Hesitation on diagnosis	Had no such patients.		
Professional experience	<6	n	2	0	1	2	4	1	26	36
		%	5.6	0.0	2.8	5.6	11.1	2.8	72.2	100.0
	6-10	n	0	2	0	0	2	1	19	24
		%	0.0	8.3	0.0	0.0	8.3	4.2	79.2	100.0
	11-20	n.	2	0	0	1	8	0	36	47
		%	4.3	0.0	0.0	2.1	17.0	0.0	76.6	100.0
	>20	n	7	1	0	3	5	5	119	140
		%	5.0	0.7	0.0	2.1	3.6	3.6	85.0	100.0
Total		n	11	3	1	6	19	7	200	247
		%	4.5	1.2	0.4%	2.4	7.7	2.8	81.0	100.0

More than half of the questioned practitioners /54,3%/ consider not being relevantly informed on detecting the signs of abuse. This shows that despite the fact that this issue takes place in university education, further action is necessary for training on the identification the signs of abuse and neglect. Our study shows that pediatric dental practitioners are considered to have the best knowledge -75,9%, followed by other dental practitioners -43,6%. After come the general dental practitioners -39,1% and in the end practitioners without specialization – 34,0%. There is statistical significance of differences p=0,01,  $\chi^2=16,418$ .

Dental practitioners in Bulgaria are asked whether they need extra qualification concerning child abuse and neglect. The positive answers are 75,1%, with several training approaches; extra lectures, courses, developing a guidebook. These measures would result in more efficient inclusion of dental practitioners in the process of identifying and reporting cases of abuse and neglect. An interdisciplinary approach is necessary among practitioners working in the sphere of child abuse.

### 3. Conclusions

This study aims to investigate the knowledge of dental practitioners in Bulgaria on child abuse and neglect. Most of them are in position to identify suspicious cases. It is disturbing that a small number of practitioners alerted to the relevant authorities and still there are quite overwhelming reprimands. Relevant qualification is vital for early identification of aggression and reporting the relevant authorities. Most participants confirm the need for additional training and are willing to take part in several training campaigns.

### 4. Future Scope

The lack of studies on this issue in Bulgaria gives a ground for developing training programs for dental practitioners and interaction with legislative authorities in the country.

### References

- [1] **Azevedo M. S. et al.** Child maltreatment: a survey of dentist in southern Brazil. *Brazil Oral Res.* 2012: Jan-Feb;26(1):5-11.
- [2] **Becker D. B., Needleman H. L., Kotelchuk M.** Child abuse and dentistry; orofacial trauma and its recognition by dentists. *J Am Dent Assoc* 1978 Jul; 97 (1):24-28.
- [3] **Bsoul S. A. et al.** Reporting of child abuse: a follow-up survey of Texas dentists. *PediatrDent* 2003 Nov-Dec;25(6): 541-545.
- [4] **Cairns A. M., Mark J. Y. Q., Welbury R. R.** The dental practitioner and child protection in Scotland. *Br Dent J* 2005;517-520.
- [5] **Cairns A. M., Mark J. Y. Q., Welbury R. R.** Injuries to the head, face, mouth and neck in physically abused children in a community setting. *Int J Paedr Dent* 2005;15:310-318.
- [6] **Cavalkanti A. L.** Prevalence and characteristics of injuries to the head and orofacial region in physically abused children and adolescents- a retrospective study in a city of the Northeast Brazil. *Dent Traumatol.* 2010 Apr; 26(2):149-153.
- [7] **da Fonseca M. A., Feigal R. J., ten Bensele R. W.** Dental aspects of 1248 cases of child maltreatment on file at a major country hospital *Pediatr Dent* 1992;14:152-157.
- [8] **Granville-Garcia A. F., de Menezes V. A., Silva P. F. R. M.** Mastratosinfantis: Percepção e responsabilidade

do cirurgiãodentista.Rev OdontoCien2008 Jan-Mar;23(1):35-39.

- [9] **Jessee S. A.** Risk factors as determinants of dental neglect. *ASDC J Dent Child* 1998 Jan-Feb;65(1):17-20.
- [10] **Jessee S. A.** Child abuse and neglect: implications for the dental profession. *Tex Dent J* 1999;116:40-46.
- [11] **Harris et al.** Safeguarding children in dentistry: 1. Child protection training, experience and practice of dental professionals with an interest in paediatric dentistry. *Br Dent J* 2009;206:409-414.
- [12] **Kilpatrick N. M., Scott J., Robinson S.** Child protection: a survey of experience and knowledge within the dental profession of New South Wales, Australia. *Int J Paediatr Dent* 1999 Sep;9(3):153-159.
- [13] **Lazenbatt A., Freeman R.** Recognizing and reporting child physical abuse: a survey of primary healthcare professionals. *J Adv Nurs*. 2006 Nov;56(3):227-236.
- [14] **Needleman H. L.** Orofacial trauma in child abuse: types, prevalence, management, and the dental profession's involvement. *Pediatr Dent*, 1986, May;8/1 Spec No: 71-80.
- [15] **Owais A. I., Qudeimat M. A., Qodceih S.** Dentists' involvement in identification and reporting of child physical abuse: Jordan as a case study. *Int J Paediatr Dent* 2009 Jul;19(4): 291-296.
- [16] **Rayman S. et al.** Child abuse. Concerns for Oral Health Practitioners. *The New York state Dental Journal*, 2013, June-July; 30-34.
- [17] **Ramos-Gomez F., Rothman D., Blain S.** Knowledge and attitudes among California dental care providers regarding child abuse and neglect. 1998 Mar; 129(3):340-348.
- [18] **Santos J. F. et al.** Maus-tratos infants: conhecimento e attitudes de Odontopediatras em Uberlândia e Araguari, Minas Gerais. *Pesqui Bras Odontopediatria Clin Integr*. 2006 Set-Dez;6(3):273-279.
- [19] **Senn D. R., McDowell J. D., Adler M. E.** Dentistry's role in the recognition and reporting of domestic violence abuse and neglect. *Dent Clin North Am*. 2001;45:343-363.
- [20] **Thomas J. E., Straffon I., Inglehart M. R.** Knowledge and professional experiences concerning child abuse and analysis of provider and student responses. *Pediatr Dent* 2006: 428-438.
- [21] **Thomas J. E. et al.** Milieu in dental school and practice. *J Dent Educ* 2006;70:558.
- [22] **World Health Organization and International Society for prevention of Child Abuse and Neglect.** Preventing child maltreatment: a guide to taking action and generating evidence. 2006. [citado em 10 mai. 2011]. Disponível em: [http://whqlibdoc.who.int/publications/2006/9241594365\\_eng.pdf](http://whqlibdoc.who.int/publications/2006/9241594365_eng.pdf).

Dental Medicine in 1997 and General Dental Medicine in 2005. She completed her PhD under the topic "Early Childhood Caries – epidemiology, risk factors and treatment" in 2003.



**Dr. M. Dimitrova** has clinic practice and scientific researches in the sphere of early childhood caries, caries epidemiology and prevention. She is an author and co-author of 46 publications in Bulgarian and international scientific magazines, treatise and over 85 scientific inquiries. She is a member of BDA, BSDA, BASS, associated member of FDI, Association of the Bulgarian Pediatric Dentists. Certified lecturer at BDA. Since 2014 Dr. Dimitrova has scientific interest in the sphere of Child abuse and neglect and its relation to dental medicine.



**Dr. Veselina Kondeva** is an assoc. professor in the Department of Pediatric Dental Medicine. She graduated the Medical University in 1988. She has been a full-time assistant professor in the department since 1994. She holds a Pediatric Dental Medicine specialty since 2001 and General Dental Medicine since 2005. She holds a PhD in the sphere of "Occlusal caries in childhood – epidemiological and clinical research".

**Dr. Veselina Kondeva** has clinic practice and studies in epidemiology, diagnosis and prevention of oral diseases in childhood. She is an author and co-author in 66 publications in Bulgarian and international scientific magazines, a treatise and over 128 scientific publications. Certified lecturer at BDA. She is a member of BDA, BSDA, BASS, associated member of FDI, Association of the Bulgarian Pediatric Dentists.

**Eng. Tatyana Boeva** is a full time PhD student in the Department of Medical Informatics, Biostatistics and E-learning, Faculty of Public Health, Medical University, Plovdiv since April, 2013. She graduated the Technical University of Plovdiv. She holds Medical Informatics and Health Management specialty since 2012.

## Author Profile



**Dr. Mariana Dimitrova, PhD**, is an assistant professor in the Department of Pediatric Dental Medicine, Medical University of Plovdiv, Faculty of Dental Medicine. She graduated the Medical University of Plovdiv, Bulgaria in 1991. She has been a regular assistant since 1993. She gained specialization in Pediatric