

Occupational Effects on the Family Well-being of Dentists in Lithuania: A Survey of Dentists

Alina Pūrienė¹, Jolanta Aleksejūnienė², Jadvyga Petrauskienė³,
Irena Balčiūnienė¹, Vilija Janulytė¹

¹Institute of Odontology, Faculty of Medicine, Vilnius University, Lithuania,

²Department of Oral Health Sciences, Faculty of Dentistry, The University of British Columbia, Vancouver, Canada,

³Department of Health Management, Medical Academy, Lithuanian University of Health Sciences, Lithuania

Key words: dentistry; occupational hazards; family well-being.

Summary. *Background and Objective.* Work-related commitments unavoidably interfere with the dentist's everyday life. Therefore, the objective of our study was to assess the impact that a dentist's occupation might have on the family well-being.

Material and Methods. The questionnaire was sent to all (N=2449) licensed dentists registered in the Lithuanian Dental Association (response rate, 68.2%). The data were analyzed by means of multiple logistic regression analysis.

Results. Most dentists reported difficulties in reconciliation of their professional activities and family life, i.e., insufficient time to spend with a family, necessity to reduce family leisure activities, neglected duties to the family, limited time for hobbies, and work-related anxiety and nervousness at home. These hazardous occupational effects were mainly related to long working hours, which negatively affected all areas of family life.

Conclusions. Occupational hazards, particularly long working hours of dental practitioners, had negative effects on all areas of the dentist's family life. Although dentists frequently faced difficulties in reconciliation of their professional activities and their family interests, in general, they had quite a harmonious family life. The findings suggest that the focus should be on finding the ways to reduce working hours in order to facilitate the reconciliation of a successful dental practice and family life. Additionally, there might be other effective means, e.g., to cope with stress or to develop better working and leisure time management skills.

Introduction

Dentistry has been included in the category of stressful occupations. Extensive responsibility, contractual working conditions in addition to the ever-increasing pressure to improve the quality of health service with a concomitant reduction of professional errors, fast work pace, stringent requirements concerning dentist-patient communication are just some of the numerous occupational risks which affect dentists' physical health, mental health, and overall well-being (1–3). In order to develop a successful dental practice, a dentist must be patient and dedicate energy, persistence, kindness, and commitment to his/her patients. Unsurprisingly, a number of studies have reported a high prevalence of disorders among dental professionals such as job-related stress, tension, burnout, emotional exhaustion, depersonalization, depression, occupational musculoskeletal problems, allergies, and various infections (4–8).

Moreover, work-related commitments unavoid-

ably interfere with a dentist's everyday life (9, 10). While devoting a significant part of their energy and time to their profession, dentists place their personal relationships at risk, thus, possibly damaging their family life. Increased workload, time pressure, absence at home long after regular working hours, lack of support and communication with their family members, extra time spent at meetings, psychological conflicts, decreased interest in family affairs, and leaving the responsibility to their spouses have been identified as risk factors for the stability of a dentist's family (11). However, only few studies have examined occupational hazards related to the dental profession (12–14), particularly the impact dentist's professional activities might have on his or her family life.

A high prevalence of physical and mental complaints (i.e., negative occupational effects on the psychological well-being) of Lithuanian dentists has been previously reported, too (15–17). However, occupational effects on family life of Lithuanian

Correspondence to A. Pūrienė, Institute of Odontology, Faculty of Medicine, Vilnius University, Žalgirio 115, 08217 Vilnius, Lithuania. E-mail: alina.puriene@gmail.com

Adresas susirašinėti: A. Pūrienė, VU MF Odontologijos institutas, Žalgirio 115, 08217 Vilnius
El. paštas: alina.puriene@gmail.com

dentists have not been previously examined.

Therefore, the aim of this present study was to evaluate the occupational impact of the dental profession on the well-being of their families.

Material and Methods

The present survey was approved by the Lithuanian Bioethical Committee (No. 59) and carried out in 2006. All licensed dentists (N=2449) registered in the Lithuanian Dental Association were approached, and structured questionnaires were sent to all of them. The sample included dentists working in various Lithuanian regions in both public and private dental practices. In order to increase the response rate, the same questionnaire was sent for the second time two weeks after the first mailing, and for the third time, two weeks after the second mailing. The feedback was received from 1670 responders, which constituted a response rate of 68.2%. Due to the required anonymity, a nonresponse analysis was not feasible. Consequently, it is unknown if there were any systemic differences between responders and nonresponders.

The structured questionnaire was designed to evaluate possible influences of a dentist's occupation on the well-being of their families and the difficulties dentists face in their efforts to reconcile their profession with their family life. The questionnaire included a number of statements about the impact the dental profession might have on various aspects of family life such as insufficient time spent with the family because of long working hours, necessity to reduce family leisure activities and tiredness due to work resulting in not fulfilling family duties, not having time for hobbies and stress at work causing nervousness at home. These aspects were presented as statements and measured on a 5-point Likert scale from the score "1" representing total disagreement to "5" indicating total agreement with a specific statement (18). The questionnaire also collected information about personal and professional characteristics such as gender, age, marital status, years in practice, job category (general practitioner or specialist), the type of the institution (public, private, or both) and number of working hours per week.

The questionnaire was pretested in a pilot study in order to evaluate its content for clarity and easiness to follow. Ten subjects were asked to fill the questionnaire and to report if the questions and their sequence were clear. Subsequently, some parts of the questionnaire were revised.

The reliability of the questionnaire was assessed by the Cohen kappa method. The reliability was considered substantial as a kappa coefficient for the repeated statements in the questionnaire exceeded 0.7 (19).

The SPSS version 13.0 and MS Office Excel software programs were used for statistical analyses with the threshold for the significance set at $P < 0.05$. As the focus of the present inquiry was related to family topics, firstly the marital status of the respondents was assessed and further bivariate and multivariate analyses excluded the dentists who were single (N=136). The sample of dentists living in marriages and in common law partnerships or divorced and widowed dentists was analyzed (N=1531). Univariate analyses were used to describe the sample in regard to demographic characteristics. Bivariate analyses (the chi-square test) were employed to relate dentists' perceptions about difficulties in balancing their dental practice with family interests, personal and professional characteristics, and different occupational hazards. The joint impact of demographic factors and occupational hazards due to difficulties in reconciling the dental practice with family interests were studied by means of multiple logistic regression. Two multiple logistic regression models were carried out. In the first one, various aspects of the family well-being and the ability to reconcile dental practice with family interests were considered as dependent variables. The independent variables were gender, marital status, number of years in practice, job category, institution type, and number of working hours per week. In the second multiple logistic model, difficulties to reconcile dental practice and family interests were considered as dependent variables while independent variables were personal characteristics and different professional hazards.

Results

Among respondents, there were 15% of males and 85% of females (Table 1). The majority of respondents were general dental practitioners and 17% were dental specialists. Half of the respondents worked only in private institutions, one-third practiced in public institutions, and 19% combined practice in both public and private clinics. The majority of respondents were married, 9% were divorced, 6% were widowed, and 5% lived in common law partnerships. Of all respondents, 8% were single who were excluded from further bivariate and multivariate analyses.

Most dentists worked substantially longer hours compared to a usual working week, and 7% worked more than 50 hours per week (Table 1). A substantial group of dental professionals were seniors; about the same number of them reported working for 20–29 years, 23% worked for 10–19 years, and 15% worked for less than 10 years.

The majority (64%) of the respondents reported difficulties in reconciling their dental practice with family interests. Of all, 26% fully agreed with the

Table 1. Personal and Professional Characteristics of the Respondents

Characteristic	n	%
Gender		
Male	250	15
Female	1420	85
Professional involvement		
General dental practitioner	1386	83
Dental specialist	284	17
Institution		
Private	835	50
Public	518	31
Private and public	317	19
Family status		
Married	1123	72
Divorced	140	9
Widow/widower	94	6
Living together, but not married	84	5
Single	125	8
Working hours per week		
>50	112	7
34–50	945	62
18–33	362	24
<18	107	7
Years of experience		
0–9	224	15
10–19	350	23
20–29	453	30
≥30	501	33

statement, “It is difficult to coordinate my work responsibilities and my family life,” 38% partly agreed, and 36% disagreed with the aforementioned statement. A large percentage (42%) of dentists noted that they could not spend sufficient time with their families because of long working hours, 34% partly agreed that their profession influenced the well-being of their families, and 24% reported no such negative impact. What concerns family leisure activities, 29% of dentists did not need to reduce their family leisure activities due to work commitments, while 35% had to do so occasionally, and 36% had to refrain from these activities on a regular basis. The overall majority partly (37%) or fully (32%) agreed that work and the resulting tiredness interfered with their duties to the family, while 31% did not report this impediment. The lack of time for hobbies was another occupation-related impact on the well-being of their families. Of all respondents, 36% noted that they were usually unable to find time for hobbies, 36% reported this as occasional difficulty, and 28% did not encounter this difficulty.

The majority (74%) of dentists indicated that work-related stress and problems made them nervous at home, and only 26% of them did not note any occupational influence on the psychological well-being at home.

Bivariate analyses showed significant differences between dentists' ability to reconcile their dental practice and their family life, while occupational hazards affected all inquired aspects of family life

($P < 0.001$). There were also significant differences regarding years of practice ($\chi^2 = 35.59$, $P < 0.001$), institution type ($\chi^2 = 46.04$, $P < 0.001$), working hours per week ($\chi^2 = 61.26$, $P < 0.001$), and the ability to reconcile dental practice and family life. There were no significant differences related to gender ($\chi^2 = 5.71$, $P > 0.05$), marital status ($\chi^2 = 5.66$, $P > 0.05$), or job type ($\chi^2 = 1.30$, $P > 0.05$).

The results of multiple logistic regression analyses showed that heavier workload significantly increased difficulties in reconciling professional activities with the family well-being (Table 2). Simultaneously, longer hours spent in dental practice reduced the possibility of such problems for each year by 2%.

It was found that occupational effects related to workload affected all aspects of family life. Each additional working hour per week increased the possibility of difficulties in spending more time with the family (OR, 1.04; 95% CI, 1.03 to 1.05), the necessity to reduce family leisure activities (OR, 1.03; 95% CI, 1.02 to 1.04), interference of work commitments and tiredness affected fulfilling family duties (OR, 1.03; 95% CI, 1.02 to 1.04), lack of time for hobbies (OR, 1.03; 95% CI, 1.02 to 1.04), and stress at work resulting in nervousness at home (OR, 1.01; 95% CI, 1.00 to 1.02). Longer years in practice significantly reduced the possibility of difficulties in spending more time with the family because of long working hours (OR, 0.98; 95% CI, 0.97 to 0.99) and the necessity to reduce family leisure activities (OR, 0.99; 95% CI, 0.98 to 1.00). Working in different type of dental institutions also had a significant independent effect on the ability to spend more time with the family, to realize hobbies, and the necessity to reduce family leisure time. The probability to have difficulties in spending more time with the family and to have time for hobbies was 1.6 times higher, while the probability to reduce family leisure activities because of work was 1.8 times higher for dentists working in both public and private institutions than for dentists working only in public institutions. Marital status of the respondents had no significant occupational effect on the family well-being, except for nervousness at home due to stress at work. Widows and widowers had a lower probability to be nervous at home as compared with their married counterparts (OR, 0.57; 95% CI, 0.34 to 0.94).

From all the listed aspects of family life, the shortage of time to spend with the family because of the practice was identified as the main problem affecting the well-being of the family (Table 3), i.e., insufficient time to spend with the family because of long working hours increased the probability of emerging difficulties in reconciling dental practice with family life by 7.2 times. The necessity to adjust

Table 2. The Impact of Personal and Occupational Effects on Family Life and Dentists' Ability to Reconcile Their Dental Practice and Family Life*

Dependent Variable	Independent Variable		OR (95% CI)
It is difficult to reconcile my work and my family life	Years in practice**		0.98 (0.97–0.99)
	Working hours per week**		1.02 (1.01–1.03)
I cannot spend more time with my family because of long working hours	Years in practice**		0.98 (0.97–0.99)
	Institution type	Public	1.00
		Private	1.58 (1.22–2.04)
		Public and private	2.04 (1.46–2.85)
Working hours per week**		1.04 (1.03–1.05)	
I often reduce my family leisure activities because of my work	Years in practice**		0.99 (0.98–1.00)
	Institution type	Public	1.00
		Private	1.26 (0.97–1.63)
		Public and private	1.79 (1.29–2.50)
Working hours per week**		1.03 (1.02–1.04)	
Work and tiredness interfere with my duties to my family	Working hours per week**		1.03 (1.02–1.04)
I can have time for hobbies due to my job commitments	Institution type	Public	1.00
		Private	1.29 (0.99–1.67)
		Public and private	1.55 (1.11–2.16)
	Working hours per week**		1.03 (1.02–1.04)
Stress at work makes me nervous at home	Marital status	Married	1.00
		Divorced	1.22 (0.86–1.73)
		Widow/widower	0.57 (0.34–0.94)
		Living together, but not married	0.62 (0.36–1.04)
	Working hours per week**		1.01 (1.00–1.02)

*Logistic regression analysis. OR, odds ratio; CI, 95% confidence interval. Independent variables assessed: gender, marital status, years in dental practice, job category, institution type, and working hours per week. Only significant associations are presented in the table.

**Interval scale variables.

Table 3. The Impact of Occupation Affecting Various Spheres of Family Life on the Dentists' Ability to Reconcile the Dental Practice and Family Interests*

Independent Variable	OR (95% CI)
Years in practice*	0.99 (0.98–1.00)
I cannot spend more time with my family because of long working hours	7.17 (4.88–10.53)
I often have to reduce my family leisure activities because of my work	1.92 (1.36–2.71)
Work and tiredness interfere with my duties to my family	1.69 (1.16–2.47)
I cannot have time for my hobbies	1.58 (1.10–2.26)
Stress at work makes me nervous at home	1.52 (1.10–2.10)

*Multiple logistic regression analysis. Dependent variable, dentists' ability to reconcile work and family life. OR, odds ratio; CI, 95% confidence interval.

**An independent variable of interval scale.

family leisure activities because of work was the second most important problem in reconciling dental practice with family life (OR, 1.92; 95% CI, 1.36 to 2.71). The interference of work commitments and tiredness due to long hours with one's duties to the family, lack of time for hobbies, and stress at work making one nervous at home also had a significant impact on the family well-being.

Discussion

The present study was the first ever attempt to examine the influence of the dentist's occupation on the well-being of their families in Lithuania. Given the response rate of 68.2% and that nonresponse analysis was not feasible, generalizations of the present findings to the whole population of Lithuanian dentists should be done with some caution. The results of this study represent personal dentists' opinion about occupational effects on the family well-being and can be overestimated. Therefore, further studies are required to be carried out more definite generalizations about dentistry as a profession among other occupations.

A number of studies have reported different levels of influence of occupation on family life, and psychologists have found that in general families tend to be vulnerable to the effects of job stressors to marital interaction (9, 10).

The present study has shown that the dental profession has occupational hazards and influences the well-being of a dentist's family, i.e., as many as 64% of the respondents experienced difficulties in reconciling their dental practice and family interests. This negative occupational impact was observed on virtually all areas of family life. The majority of Lithuanian dentists noted insufficient time to spend with

the family, the necessity to reduce family leisure activities and to neglect duties to the family, insufficient time for hobbies and nervousness at home either occasionally or on a regular basis because of work-related commitments. Interestingly, increased years in practice significantly reduced a negative occupational effect on the well-being of a dentist's family. Seemingly, practitioners with longer work experience became accustomed to the stringent physical and psychological requirements inherent in their profession, and they possibly developed better communication and practical skills, became more self-confident, and were able to handle better different situations compared with their colleagues with shorter work experience. Although the attenuated impact of occupational risks could be observed with longer work experience, the overall negative effect of the occupation on the family well-being should be considered as both general dentists and specialists, females and males, dentists working in different types of institutions reported similar difficulties in reconciling dental practice with their family life. Although few studies have examined occupational hazards to dentist's family, high prevalence of marital problems, problems in personal relationships, and lack of social involvement among dentists were also common findings (12–14).

Long working hours of Lithuanian dental practitioners need special attention. An important finding in the present study was that the majority of Lithuanian dentists (69%) worked longer than usual hours and 7% of them worked 7 days a week. The basic reason underlying this trend is undoubtedly the desire to earn extra income: dentists who work on their own usually have financial liabilities, and for some families, the dental practice is the major source of their family income. Undoubtedly, working long hours has many detrimental effects. The present findings showed that long working hours affected all areas of family life and the ability of the respondents to reconcile their dental practice with family life as a whole. Insufficient time spent with the family as a result of long working hours affected the inability to reconcile their dental practice and their family well-being by as many as 4 times more often than any other psychological and physical occupational effect on the dentist and his/her family well-being. Moreover, earlier Lithuanian studies indicated excessive workload as the reason for impaired physical and mental health and psychological well-being of dentists (15–17). Other studies also concluded that excessive working hours adversely affected the mental health of dentists as well as had a negative impact on their interpersonal relations (5, 14).

Similarly, work-related problems and their impact on marital life and heavy workload were re-

ported among other medical professionals, e.g., a study in England found that the doctors' increased workload with concomitant decreased interest in their family life were important stressors to the family well-being (11).

The present study also showed that workload increased when private and public practices were combined. Consequently, this leads to a negative effect on the well-being of family life, i.e., the ability to spend more time with the family, to have time for hobbies, and to be able to have family leisure activities. This means that Lithuanian dentists who alternatively work in two types of institutions are to a larger extent exposed to reconciliation difficulties as compared with those working only in public dental clinics.

The necessity to reduce family leisure activities because of excessive workload might have an additional adverse effect on the well-being of a dentist. Tired professionals could tend to select passive leisure activities rather than active activities; consequently, this may lead to other health problems.

Another negative implication is that spouses of Lithuanian dentists have to take over a large part of family responsibilities; consequently, this may lead to other family difficulties as well as further impairment in the well-being of the family. Other personal implications, such as the inability to have more time for hobbies and increased nervousness might impair their personality and shatter aspirations. Unavoidably, this personal implication will have a further adverse effect on a dentist's family. However, there were fewer single, more married, and fewer divorced dentists when compared with Lithuanian residents of similar age from a general population (21). Seemingly, dental profession affects their family well-being, but dentists tend to marry, not to get divorced, and possibly may still lead quite a harmonious family life.

Conclusions

Occupational hazards, particularly long working hours of dental practitioners, had negative effects on all areas of the dentist's family life. Although dentists frequently faced difficulties in reconciling their professional activities with their family interests, in general they had quite a harmonious family life. The findings suggest that the focus should be on finding ways to reduce working hours in order to facilitate the reconciliation of a successful dental practice and family life. Additionally, there might be other effective means, e.g., to assist in coping with stress or to develop better working and leisure time management skills.

Statement of Conflict of Interest

The authors state no conflict of interest.

Profesijos įtaka odontologo šeimos gerovei

Alina Pūrienė¹, Jolanta Aleksejūnienė², Jadvyga Petrauskienė³,
Irena Balčiūnienė¹, Vilija Janulytė¹

¹Vilniaus universiteto Medicinos fakulteto Odontologijos institutas,

²Britų Kolumbijos universiteto Odontologijos fakulteto Burnos sveikatos mokslų skyrius, Vankuveris, Kanada,

³Lietuvos sveikatos mokslų universiteto Medicinos akademijos Socialinės medicinos katedra

Raktažodžiai: odontologija, profesinė įtaka, šeimos gerovė.

Santrauka. Atsidavimas profesijai ir savo darbui neišvengiamai paliečia odontologo asmeninio gyvenimo kasdienybę. *Tyrimo tikslas.* Įvertinti, kokią įtaką profesija gali turėti odontologo šeimos gerovei.

Metodika. Atlikta visų (N=2449) į Lietuvos Respublikos odontologų rūmų registrą įtrauktų gydytojų odontologų apklausa paštu. Atsako dažnis – 68,2 proc. Gauti duomenys išanalizuoti taikant daugiamačės logistinės regresijos metodą.

Rezultatai. Dauguma odontologų nurodė, kad jiems sudėtinga suderinti darbą su šeimos gyvenimu: dėl ilgų darbo valandų negalima daugiau laiko skirti šeimai, nėra galimybės tinkamai realizuoti savo pomėgių, dėl įtampos darbe odontologai, grįžę namo, būna nervingi. Neigiama profesijos įtaka daugiausia buvo susijusi su ilgomis darbo valandomis, kurios darė neigiamą įtaką visoms odontologo šeimos gyvenimo sferoms.

Išvados. Odontologo profesijos savitumai, ypač ilgos odontologo darbo valandos, darė neigiamą įtaką visoms šeimos gyvenimo sferoms. Nors odontologai, derindami darbą su šeimos gyvenimu, dažnai susidurdavo su sunkumais, jų šeimos gyvenimas buvo gana harmoningas. Studijos duomenimis, reikia ieškoti būdų, kaip sutrumpinti odontologų darbo laiką ir taip sumažinti neigiamą profesijos įtaką odontologo šeimos gerovei. Kitos priemonės, kurių odontologai gali imtis, norėdami sėkmingiau suderinti darbą ir šeimos gyvenimą, padėtų mokytis valdyti stresą, geriau organizuoti darbo laiką ir savo poilsį.

References

- Pozos Radillo BE, Tórriz López TM, Aguilera Velasco Mde L, Acosta Fernández M, González Perez GJ. Stress-associated factors in Mexican dentists. *Braz Oral Res* 2008;22:223-8.
- Kay EJ, Lowe JC. A survey of stress levels, self-perceived health and health-related behaviours of UK dental practitioners in 2005. *Br Dent J* 2008;204:622-3.
- Gorter RC, Storm MK, te Brake JH, Kersten HW, Eijkman MA. Outcome of career expectancies and early professional burnout among newly qualified dentists. *Int Dent J* 2007;57:279-85.
- Leggat PA, Kedjarune U, Smith DR. Occupational health problems in modern dentistry: a review. *Ind Health* 2007;45: 611-21.
- Pūrienė A, Janulytė V, Musteikytė M, Bendinskaitė R. General health of dentists. Literature review. *Stomatologija* 2007;9:10-20.
- Te Brake JH, Bouman AM, Gorter RC, Hoogstraten J, Eijkman MA. Using the Maslach Burnout Inventory among dentists: burnout measurement and trends. *Community Dent Oral Epidemiol* 2008;36:69-75.
- Leggat PA, Smith DR. Prevalence of hand dermatoses related to latex exposure amongst dentists in Queensland, Australia. *Int Dent J* 2006;56:154-8.
- Nagao Y, Matsuoka H, Kawaguchi T, Ide T, Sata M. HBV and HCV infection in Japanese dental care workers. *Int J Mol Med* 2008;21:791-9.
- Story LB, Repetti R. Daily occupational stressors and marital behavior. *J Fam Psychol* 2006;20:690-700.
- Ilfeld FW Jr. Understanding marital stressors. The importance of coping style. *J Nerv Ment Dis* 1980;168:375-81.
- Rout U. Stress among general practitioners and their spouses: a qualitative study. *Br J Gen Pract* 1996;46:157-60.
- Nevin RS, Sampson VM. Dental family stress and coping patterns. *Dent Clin North Am* 1986;30:117-32.
- Lewis JM, Barnhart FD, Howard BL, Carson DI, Nace EP. Work stress in the lives of physicians. *Tex Med* 1993;89:62-7.
- Möller AT, Spangenberg JJ. Stress and coping amongst South African dentists in private practice. *J Dent Assoc S Afr* 1996;51:347-57.
- Pūrienė A, Aleksejūnienė J, Petrauskienė J, Balčiūnienė I, Janulytė V. Self-reported occupational health issues among Lithuanian dentists. *Ind Health* 2008;46:369-74.
- Pūrienė A, Aleksejūnienė J, Petrauskienė J, Balčiūnienė I, Janulytė V. Self-perceived mental health and job satisfaction among Lithuanian dentists. *Ind Health* 2008;46:247-52.
- Pūrienė A, Aleksejūnienė J, Petrauskienė J, Balčiūnienė I, Janulytė V. Occupational hazards of dental profession to psychological wellbeing. *Stomatologija* 2007;9:72-8.
- Murtomaa H, Haavio-Mannila E, Kandolin I. Burnout and its causes in Finnish dentists. *Community Dent Oral Epidemiol* 1990;18:208-12.
- Landis JR, Koch GG. The measurement of observer agreement for categorical data. *Biometrics* 1997;33:159-74.
- Likert R. Technique for the measurement of attitudes. *Arch Psychol* 1932;140:1-55.
- Department of Statistics to the Government of the Republic of Lithuania. Available from: URL: <http://www.stat.gov.lt>. Individual request (statistics from 2006).

Received 16 June 2011, accepted 29 July 2011

Strapsnis gautas 2011 06 16, priimtas 2011 07 29