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Influence of Profession on Teachers' Quality of Life

Abstract

The aim of this study was to analyze the quality of life (QOL) of 142 primary school teachers and 145 firemen-rescuers. To determine QOL we used a WHOQOL-BREFF questionnaire. Teachers' QOL was significantly lower in all four domains when compared with firefighters' QOL; however, it did not differ statistically from the Czech population norms. Significantly lower compared to the norm was only teachers' satisfaction with their health. Our results showed a significant influence of profession, age and gender on QOL. The influence of subjectively perceived mental stress as a factor reducing the QOL was manifested only in teachers. The explanation for this difference in QOL could be predicting better physical and mental health of firefighters.

Keywords: quality of life, WHOQOL-BREFF questionnaire, teachers, firefighters

Introduction

WHO defines the quality of life as that corresponding with the human's perception of his/her own position in life in the context of culture, in which a person is living, and in relation with his/her aims, expectations, standards, and concerns (Dragomirecká & Bartoňová, 2006). Quality of life is usually defined as a subjective assessment of their own life situations and includes not only a sense of physical health, but also the mental health, social opportunities, religious, economic aspects, etc.

The quality of life should be considered within the context of individual study. The biggest interest of researchers is being devoted to QOL of patients suffering from various diseases or health handicaps (Health Related Quality Of Life). Besides

that we may find studies oriented to the topics of QOL in various population groups defined from the point of view of age, gender, or social-economic status (Axelsson et al., 2007; Hnilica, 2005; Hulman & Hemlin, 2008; Mareš, 2006; Řehulka & Řehulková, 2001). In our study we analyzed the QOL according to the exposition to occupational stress. We assessed the QOL of primary school teachers and firemen-rescuers.

In terms of exposure to work stress, **the teaching profession** belongs among the most risky ones, and elementary school teachers are, according to the results of many studies, one of the most vulnerable groups (Židková & Martinková, 2003). Many authors proved that primary school teachers are exposed to time pressure and an increased sense of responsibility. They also demonstrate a high degree of neurotic complaints, including the loss of professional productivity due to the long performance of this profession (Paulík, 1998). Žaloudíková (2001) states that the teaching profession is characterized by the third, highest degree of mental stress, and even some health damage cannot be excluded. Řehulková & Řehulka (2007) state that teachers' stress can reduce teachers' quality of life.

The firefighter profession has, in terms of mental and physical demands, also its specific features that determine this profession as an activity highly demanding in both aspects. We may include, above all, a high level of physical activity, intense stress during rescue operations, work in shifts, exposure to noise, high temperature, toxic substances, etc. (Šváb, 2006).

From the above-mentioned it is clear that both the teaching and firefighter professions belong to jobs with high exposition to occupational stress. The entity of work stress, however, is different. In the case of teachers, it is a chronic, persistent mental workload enhanced by the perception of the low social prestige of this profession (Paulík, 1998). In the case of firefighters, we can talk about short attacks of extreme stress during interventions, often followed by relief and satisfaction of a job well done. Firefighters have a greater choice in decision-making, their job brings them satisfaction and they consider it as interesting and varied. This partially eliminates the adverse effects of other factors such as work under time pressure or high responsibility.

Method

Over the period 2011–2012, at the Department of Hygiene and Preventive Medicine at Hradec Králové, Czech Republic, an anonymous questionnaire inquiry of QOL among the representatives of two randomly chosen professions

was conducted. We examined 142 primary school teachers and 145 firefighters. The mean age of the teachers was rather higher (41.6 ± 10.7) than that of the firefighters (36.9 ± 8.7). As expected, in the group of firefighters there were more men than women ($n=135$, i.e. 93.1%), the majority of the teachers were female ($n=102$, i.e. 71.8%), ($p < 0.0001$). The length of professional experience was statistically similar in both groups; however, due to their higher average age, the teachers had done their job longer (15.5 vs. 13.1 years). The majority of the teachers had a university education (95.8%). In the group of firefighters, 75% had completed high school education; those remaining had passed a higher or lower degree of university education.

The respondents participating in the study received a 3-component questionnaire. The first part concerned demographic and socioeconomic data, the way of life (negative habits) and occupational history. The second part was the Czech version of the WHOQOL-BREF questionnaire (Dragomirecká & Bartoňová, 2006), and the third part was Meister's Questionnaire to assess psychical workload (Židková, 2002).

The WHOQOL-BREF questionnaire contains 26 items grouped in 4 domains expressing the QOL of the subjects investigated: *physical health*, *mental health*, *social relations and environment*. The remaining two items assessed the *general health status and quality of life*. Overview of the surveyed items is presented in Table 2. The questionnaire is standardized on the Czech population up to 65 years of age.

The statistical analysis was performed using the NCSS 2007 program. To compare the quantitative data (e.g. age), Kruskal-Wallis analysis of variance was made with following multiple comparison tests (ANOVA). For assessing the qualitative data (e.g. educational attainment or the mutual comparison of the teachers and firefighters QOL) the χ^2 test of independence in contingency tables, or Fisher's exact test were used (Table 1a-f). To compare the individual items of WHOQOL-BREF questionnaire with population norm two-sample t-test was used (Table 2)

Results

The questionnaire inquiry focused on assessing QOL in both investigated professional groups showed that between these groups there are statistically significant differences. In all the domains and items of the WHOQOL-BREF questionnaire, the firefighters showed values statistically higher (i.e. better) than the population norms indicate (Table 1a-f). In contrast, the teachers rated their *physical health*, *mental health*, *social relationships*, *living conditions (environment)* and *quality*

of life similar to the average Czech population. Only the results concerning the items *satisfaction with one's own health* were worse than in the general population ($p=0.02$). From the comparison of the QOL of both monitored professional groups of respondents it follows that in all the domains and items the teachers obtained significantly lower, i.e. worse, results ($p < 0.001$).

Knowing that our groups showed a gender and age imbalance, we evaluated not only the influence of the profession on each domain and item of the WHOQOL-BREFF questionnaire, but also the influence of age and gender (Table 1a-f). We monitored the results of the whole set of respondents in each profession and then for men and women and over and under 40 years of age separately in the groups of teachers and firefighters. The last aspect, which we took into account when assessing differences in the QOL rating of both groups, was their subjective perception of occupational stress. We evaluated how the teachers and firefighters who negatively perceived their work-related stress assessed their QOL. The level of subjectively perceived psychical occupational load was monitored by the Meister questionnaire (for more details see Šušoliaková et al., 2013).

We assumed that increased exposure to work-related stress in the teachers could be a crucial determinant decreasing their quality of life. This hypothesis, however, was not fully confirmed. From Table 1a-f the significant influence of profession, age and gender on all the domains of the QOL are evident. In all the domains and items, the men, especially firefighters, younger but even older ones, obtained statistically better results ($p < 0.001$) than the women (both female teachers and firefighters) or older male teachers. The influence of subjectively perceived mental stress as a factor reducing the quality of life was manifested only in the teachers. The firefighters, who negatively perceived their work stress, exhibited better results in all domains than the standard population, even in these cases. Only in separate items, *quality of life* and *satisfaction with one's own health*, these differences were not statistically significant.

Differences in individual items of all the monitored domains are presented in Table 2, which also gives us an overview of all the issues raised by the WHOQOL-BREFF questionnaire. Generally speaking, according to the subjective statements of our respondents, they consider their **physical health** as more or less good or very good. It is certainly due to the fact that our respondents were middle-aged individuals capable of working. As for the particular items of the physical health domain, we found that the teachers significantly more often than the firefighters complained of *pain*, impaired *mobility* and more frequently expressed a *need for medical care*. The firefighters showed more *sufficient energy* than the teachers (31% vs. 7%), excellent *ability to perform daily activities* and were more *satisfied with work performance* and the quality of their *sleep*.

The firefighters also stated a significantly better evaluation in all the items of the **mental health** domain. They reported significantly greater *enjoyment of life* (maximally satisfied were 48% of the firefighters and 18% of the teachers), believed that their *life has great sense*, and stated a better *capability of concentration*. The firefighters were also more satisfied with their *physical appearance* and *identity*. On the contrary, the teachers more frequently experienced *negative emotions*, such as blue mood, despair, anxiety or depressions.

In the domain monitoring **social relations**, both groups differed significantly in all items, again. The firefighters obtained better results in the items evaluating *satisfaction with personal relationships* (30% of the firefighters and only 10% of the teachers were very satisfied), with *sexual life* (very satisfied were 39% of the firefighters and only 14% of the teachers) and with the *support of friends*.

A statistically significant difference was observed in the majority of items evaluating living conditions (domain **environment**). The studied groups differed in the evaluation of the *financial situation* (completely satisfied were 9% of the firefighters and 3% of the teachers; completely dissatisfied were 5% of the firefighters and 13% of the teachers, and between these marginal possibilities, the firefighters were rather satisfied and the teachers more dissatisfied). The firefighters were more satisfied with their possibility to pursue *hobbies*, with the *living conditions*, *access to health services* and with *transportation*.

The firefighters evaluated their **quality of life** significantly higher, 31% of them considered it to be very good and 60% to be good. The teachers rated their QOL lower (only 11% considered it as very good and 53% thought it was good). The teachers were also less **satisfied with their health** (10% were dissatisfied, 32% moderately satisfied, 53% were satisfied and only 3% were very satisfied). The firefighters reported better results. 61% of them were satisfied with their health and 25% were very satisfied.

Discussion

In The New Educational Review No. 1, 2013 (Šušoliaková et al., 2013) we presented the results of a study aimed at the assessment of occupational mental stress of elementary school teachers and firefighters. The results of our survey showed that although both professions can be considered mentally demanding, the level of the perceived stress among the teachers was higher than in the firefighters. We wondered whether the two groups differ even in QOL.

The results of our study show that the teachers' QOL was indeed in all domains

significantly lower than the QOL of the firefighters. Yet, it should be stressed that their QOL was not statistically different from the Czech population norms. Significantly lower compared to the norm was only the teachers' satisfaction with their health. This finding may, to some extent, be related to the fact that the teachers were represented predominantly by women and those are known to have a tendency to care about their own health more than men.

An explanation of the differences in the QOL between the representatives of both professions can be found in a number of reasons. One of them is the fact that firefighters represent a selective population of emotionally, mentally and physically resistant individuals. Employees doing the job of firefighters are healthy individuals who have passed through the sieve of preventive check-ups. In contrast, for teachers such a special health feature is not required.

Important determinants of QOL are also social contacts, perceived social support, and integration into groups, social cohesion, acceptance and contribution (Kebza, 2005). From our study, it is clear that the teachers did not differ from the population norm in the domain evaluating social relations, the firefighters, however, showed there an above-average rating (satisfaction with personal relationships, sexual life, and with the support of friends). The firefighters showed a high rating also in the items of the mental health domain, particularly as regards their positive life evaluation, increased self-confidence and self-esteem.

One of the factors which can decrease the teachers' QOL may be higher perception of stress. In this context it should be noted that in recent years even in teachers we can find a positive shift in the perception of occupational stress. For instance, Paulík (2012) states that despite a relatively high level of subjective load, a relatively high level of job satisfaction can be observed among teachers. A possible explanation may lie in the fact that teachers, at least those who voluntarily remain in their profession, probably manage to counterbalance their excessive workload by means of other factors. Job satisfaction is connected to particular personality traits as temperament, neuropsychological stability, hardiness, sense of coherence, optimism, self-confidence factors, etc. Similarly, Blatný (2001) stated that one of the main prerequisites of life satisfaction, which can in turn influence the degree of occupational stress perception, is self-esteem. Also Nepožitková in 2009 showed that people with higher QOL are exposed to lower workload and vice versa. It is important to note that the perception of working/teaching stress also affects such factors like a healthy lifestyle and the knowledge of suitable coping strategies. There is space for preventive programs and possible intervention.

Conclusion

The aim of our study was to analyze the QOL of primary school teachers and firemen-rescuers. We found that the teachers' QOL was significantly lower in all four domains when compared with the firefighters' QOL; however, it did not differ statistically from the Czech population norms. One of the reasons for the observed difference may be higher perception of occupational stress by elementary school teachers. Nevertheless, from our results it appears that sex and age are higher predictors of employees' QOL than the kind of profession. These factors are the most important confounders. Thus, when interpreting the results of our study, we must emphasize that the worse QOL of the teachers could be caused by the fact that there were more women in this group and the mean age of the teachers was higher than the mean age of the firefighters. Another explanation of the differences in the QOL of our two groups of respondents could be the fact that firefighters are a selected population, which due to their good physical and mental health can show the so-called "healthy worker effect". Personal characteristics of the respondents were not examined.

In conclusion, it can be stated that the benefit of this work is not in mutual comparison of QOL among our two groups, but in the independent evaluation of the teachers' and firefighters' QOL in relation to the population norm.

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Appendix

Tables 1 a-f: Influence of particular factors (profession, sex, age, occupational stress perception) on domains and items of WHOQOL-BREFF questionnaire (two-sample t test.)

Table 1a. Domain 1 – Physical health

	number	mean	p-value	
Population norm	308	15.55		
Teachers – whole set	142	15.34	0.33	NS
Firefighters – whole set	145	17.12	< 0.001	***
Men – whole set	175	16.89	< 0.001	***
Men – teachers	40	15.67	0.78	NS
Men – firefighters	135	17.26	< 0.001	***
Women – whole set	112	15.21	0.19	NS
Women – teachers	102	15.2	0.20	NS
Women – firefighters	10	15.31	0.77	NS
Younger (< 40 years) – whole set	154	16.83	< 0.001	***
Younger – teachers	65	15.91	0.28	NS
Younger – firefighters	89	17.51	< 0.001	***
Older (≥ 40 years) – whole set	133	15.55	1	NS
Older – teachers	77	14.85	0.0074	**
Older – firefighters	56	16.51	0.0014	**
Teachers negatively perceiving work stress	99	15.03	0.015	*
Firefighters negatively perceiving work stress	44	16.48	0.0025	**

The span of scale in domains is from 4 to 20; in items Q1 and Q 2 it is from 1 to 5, where the higher value of a score the better QOL.

Table 1b. Domain 2 – Mental health

	mean	p-value	
Population norm	14.78		
Teachers – whole set	14.84	0.80	NS
Firefighters – whole set	16.96	< 0.001	***
Men – whole set	16.64	< 0.001	***
Men – teachers	15.3	0.21	NS
Men – firefighters	17.04	< 0.001	***

Population norm	mean	p-value	
	14.78		
Women – whole set	14.76	0.93	NS
Women – teachers	14.65	0.60	NS
Women – firefighters	15.87	0.16	NS
Younger (< 40 years) – whole set	16.4	< 0.001	***
Younger – teachers	15.23	0.17	NS
Younger – firefighters	17.26	< 0.001	***
Older (\geq 40 years) – whole set	15.34	0.024	*
Older – teachers	14.5	0.36	NS
Older – firefighters	16.48	< 0.001	***
Teachers negatively perceiving work stress	14.50	0.31	NS
Firefighters negatively perceiving work stress	16.32	< 0.001	***

Table 1c. Domain 3 – Social relations

Population norm	mean	p-value	
	14.98		
Teachers – whole set	14.86	0.67	NS
Firefighters – whole set	16.68	< 0.001	***
Men – whole set	16.3	< 0.001	***
Men – teachers	14.93	0.92	NS
Men – firefighters	16.7	< 0.001	***
Women – whole set	14.98	1	NS
Women – teachers	14.84	0.62	NS
Women – firefighters	16.4	0.13	NS
Younger (< 40 years) – whole set	16.35	< 0.001	***
Younger – teachers	15.53	0.15	NS
Younger – firefighters	16.96	< 0.001	***
Older (\geq 40 years) – whole set	15.12	0.63	NS
Older – teachers	14.3	0.061	NS
Older – firefighters	16.24	< 0.001	***
Teachers negatively perceiving work stress	14.68	0.36	NS
Firefighters negatively perceiving work stress	15.94	0.0069	**

Table 1d. Domain 4 – Environment

Population norm	mean	p-value	
	13.30		
Teachers – whole set	13.10	0.34	NS
Firefighters – whole set	14.63	< 0.001	***
Men – whole set	14.3	< 0.001	***
Men – teachers	13.08	0.53	NS
Men – firefighters	14.67	< 0.001	***
Women – whole set	13.2	0.66	NS
Women – teachers	13.11	0.42	NS
Women – firefighters	14.1	0.23	NS
Younger (< 40 years) – whole set	14.33	< 0.001	***
Younger – teachers	13.71	0.15	NS
Younger – firefighters	14.79	< 0.001	***
Older (≥ 40 years) – whole set	13.34	0.85	NS
Older – teachers	12.58	0.006	**
Older – firefighters	14.38	< 0.001	***
Teachers negatively perceiving work stress	12.93	0.12	NS
Firefighters negatively perceiving work stress	14.32	< 0.001	***

Table 1e. Item Q1 – Quality of life

Population norm	mean	p-value	
	3.82		
Teachers – whole set	3.70	0.11	NS
Firefighters – whole set	4.21	< 0.001	***
Men – whole set	4.1	< 0.001	***
Men – teachers	3.75	0.57	NS
Men – firefighters	4.21	< 0.001	***
Women – whole set	3.72	0.22	NS
Women – teachers	3.68	0.47	NS
Women – firefighters	4.2	0.1	NS
Younger (< 40 years) – whole set	4.1	< 0.001	***
Younger – teachers	3.88	0.54	NS
Younger – firefighters	4.26	< 0.001	***

	mean	p-value	
Population norm	3.82		
Older (≥ 40 years) – whole set	3.79	0.69	NS
Older – teachers	3.55	0.0037	**
Older – firefighters	4.13	0.0026	**
Teachers negatively perceiving work stress	3.69	0.12	NS
Firefighters negatively perceiving work stress	3.98	0.16	NS

Table 1f. Item Q2 – Satisfaction with one's own health

	mean	p-value	
Population norm	3.68		
Teachers – whole set	3.49	0.02	*
Firefighters – whole set	4.10	< 0.001	***
Men – whole set	3.99	< 0.001	***
Men – teachers	3.45	0.1	NS
Men – firefighters	4.15	< 0.001	***
Women – whole set	3.51	0.062	NS
Women – teachers	3.51	0.072	NS
Women – firefighters	3.5	0.51	NS
Younger (< 40 years) – whole set	3.99	< 0.001	***
Younger – teachers	3.69	0.92	NS
Younger – firefighters	4.21	< 0.001	***
Older (≥ 40 years) – whole set	3.58	0.24	NS
Older – teachers	3.32	< 0.001	***
Older – firefighters	3.93	0.012	*
Teachers negatively perceiving work stress	3.41	0.0053	**
Firefighters negatively perceiving work stress	3.89	0.12	NS

Table 2. Statistical comparison of scores of particular items of WHOQOL-BREF questionnaire in the group of teachers and firefighters (χ^2 test of independence in contingency tables)

Domains	Items	Firefighters vs. teachers p value
Domain 1 Physical health	Q3 Pain or discomfort	0.003 (**)
	Q4 Dependency on medical care	< 0.001 (***)
	Q10 Energy and fatigue	< 0.001 (***)
	Q15 Ability to move around	0.003 (**)
	Q16 Satisfaction with sleep	< 0.001 (***)
	Q17 Ability to perform daily living activities	< 0.001 (***)
	Q18 Satisfaction with work performance	< 0.001 (***)
Domain 2 Mental health	Q5 Enjoyment of life	< 0.001 (***)
	Q6 Meaning of life	< 0.001 (***)
	Q7 Ability to concentrate	< 0.001 (***)
	Q11 Acceptance of physical appearance	0.002 (**)
	Q19 Satisfaction with one's own identity	< 0.001 (***)
Domain 3 Social relations	Q26 Negative feelings, such as blue mood, despair, anxiety, depression	< 0.001 (***)
	Q20 Satisfaction with personal relationships	< 0.001 (***)
	Q21 Satisfaction with sexual life	< 0.001 (***)
	Q22 Satisfaction with support from friends	< 0.001 (***)
Domain 4 Environment	Q8 Feeling of security in daily life	< 0.001 (***)
	Q9 Satisfaction with physical environment (e.g. pollution, climate, noise, attractiveness)	0.059 (NS)
	Q12 Satisfaction with financial situation	< 0.001 (***)
	Q13 Satisfaction with access to information	0.200 (NS)
	Q14 Opportunity for leisure activities/hobbies	< 0.001 (***)
	Q23 Satisfaction with living conditions	< 0.001 (***)
	Q24 Satisfaction with access to health services	0.004 (**)
Particular items	Q25 Satisfaction with transport possibilities	0.016 (*)
	Q1 Satisfaction with quality of life	< 0.001 (***)
	Q2 Satisfaction with one's own health	< 0.001 (***)