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Kosana Stanetić

Primary Health Center ''Banja Luka'', BiH
Department of family medicine, Medical faculty, Banja Luka, BiH

The exposure of family medicine residents to stress and burnout syndrome

Key Words:
stress,
burnout syndrome,
family medicine residents

Abstract

Introduction: The burnout syndrome is defined as chronic work stress that includes three dimensions: the sense of the emotional exhaustion, the negative approach to providing services (depersonalization) and the sense of reduced personal accomplishment. The physician' profession is one of the professions at the greatest risk of suffering from the burnout syndrome.

Objective: The objective of this paper is to assess the prevalence of the burnout syndrome and stress among resident physicians in family medicine in the Republic of Srpska.

Methods: The study was carried out on the basis of a questionnaire survey among family medicine residents in the Educational Centers of Family Medicine in Banja Luka and Doboj during the period from February 1, to April 30, 2010. The examinees fulfilled the questionnaire for the self-assessment of the stress level (Giardino, Everly, Dusek, 1996) and Maslach Burnout Inventory questionnaire (Maslach et al. 1996) that are amended with data regarding age, sex and years of service.

Results: During the study period in the Educational Centers of Family Medicine in Banja Luka and Doboj 59 physicians were present but offered questionnaire was answered and returned by 47 (79.67 %) physicians. A total of 59.6% examinees met criteria for the high level of stress. The high level of the emotional exhaustion was present among 25.6 % of examinees; the high degree of depersonalization was present among 25.6 % of examinees while the low level of personal accomplishment was present among 42.5 % of the surveyed physicians.

Conclusion: The high level of stress was present in more than half of examinees; the high or moderate level of emotional exhaustion; the high or moderate level of depersonalization and the low or moderate level of the personal accomplishment. The acquired results indicate that there is a need to undertake measures for prevention of the stress and burnout syndrome.

Correspondence to:
Vojvode Momčila 9/a
78 000 Banja Luka, B&H
Phone: +387 51 21 11 77
Email: mirkos@inecco.net

Introduction

The burnout syndrome is a response to the long term chronic exposure to emotional and interpersonal stressors that are related to workplace. It emerges as the consequence of non-harmonized relations between employees on one and working environment on the other side. It is defined as chronic work stress that includes three dimensions: the sense of the emotional exhaustion, the negative approach to providing services (depersonalization) and the sense of reduced personal accomplishment. It occurs most often in persons who work in direct contact with other people[1,2,3]. Medicine is one of the professions at the greatest risk of suffering from burnout syndrome[4,5]. There are numerous studies about the prevalence of the burnout syndrome among medical residents. A study carried out in the US showed the prevalence of the burnout syndrome among medical residents of approximately 50%. The highest prevalence of the burnout syndrome was among gynecology and obstetrics residents (75%) while the lowest prevalence was among family medicine residents (27%). A study was carried out in Greece among 311 medical residents, out of which 154 examinees (49.5%) had moderate and high range of the burnout syndrome and 99 (31.8%) had low range of the burnout syndrome on all three subscales. The results of the study indicated that the burnout syndrome and dissatisfaction with the education system are common among medical residents in Greece. The results of fifteen different studies about the prevalence and causes of the burnout syndrome among medical residents were summarized and published in the article *Resident Burnout*. The studies were carried out between 1983 and 2004. It was concluded, based on the results of the studies, that intensive work, limited control and disruption of work-life balance because of a huge commitment to residency are the most important predisposing factors for development of the burnout among medicine residents[8].

Objective

The objective of the study was to examine the prevalence of the burnout syndrome among the family medicine residents in the Republic of Srpska.

Method

The study was carried out on the basis of a questionnaire survey among family medicine physicians in Education Centers of the Primary Health Care Centers in Banja Luka and Doboj, from February 1st to April 30th 2010. The questionnaire that contained the questionnaire for the self-assessment of the stress level (Giardino, Everly, Dusek, 1996) and MBI-HSS -Maslach Burnout Inventory Human Services Survey (Maslach et al. 1996) that are amended with data regarding age, sex, years of service, way of work and educational and vocational level was offered to all physicians who were residents in Family Medicine during the study. The questionnaire survey was anonymous and examinees independently fulfilled the questionnaire. Different statistical methods were used in data processing. Descriptive analyze in terms of frequencies and percentages was used for the examination of samples and to determine the level of stress among physicians. Reliability of the used scales was measured by the Cronbach's Alpha Reliability Coefficient. T-test was used to compare the means of two groups of examinees.

Results

During the period of this study, there were 42 family medicine residents in the Education Centre in Banja Luka and 17 in the Education Centre in Doboj. Out of 59 family medicine residents, 47 family medicine residents returned the filled questionnaire that was offered, 32 (76.19%) from the Education Centre in Banja Luka and 15 (88.23%) from the Education Centre in Doboj.

The survey group consisted of 10 (21.3%) male and 37 (78.7%) female physicians. 24 (51.1%) physicians were under the age of 35 and 23 (48.9%) physicians were aged 36 years or over. Approximately half (24 or 51.1%) of the family medicine residents surveyed had less then 5 years of service and 23 (48.9%) family medicine residents had 6 or more years of service. The results of the questionnaire for the self-assessment of the stress level indicated that more of the half of the family medicine residents (28 or 59.6%) had high level of stress. The physicians under the age of 35 had statistically significant (p=0.011) lower level of the expression of the stress compared to physicians who were aged 36 years or over (Table 1). The physicians who had less then 5 years of service had statistically significant (p=0.007) lower level of the expression of the stress compared to physicians who had 6 or more years of service (Table 2).

Table 1. Stress Level to Age Ratio

	Under the age of 35	**Over the age of 36**	**Total**	***p***
Low level of stress	14 (58.3%)	5 (21.7%)	19 (40.4%)	p=0.011
High level of stress	10 (41.7%)	18 (78.3%)	28 (59.6%)	
Total	24 (100.0%)	23 (100.0%)	47 (100.0%)	

Table 2. Stress Level to Length of Service Ratio

	Under 5 years of service	Over 5 years of service	Total	*p*
Low level of stress	13 (56.5%)	6 (21.7%)	19 (40.4%)	p=0.007
High level of stress	10 (43.5%)	18 (78.3%)	28 (59.6%)	
Total	23 (100.0%)	24 (100.0%)	47 (100.0%)	

The largest number of surveyed physicians (20 or 42.5%) had a low level of emotional exhaustion, majority of the physicians surveyed (19 or 40.4%) had a low level of depersonalization while the largest number of family medicine residents (20 or 42.5%) had the low level of personal accomplishment (Table 3).

Table 3. The levels of emotional exhausting, depersonalization and personal accomplishment in all examinees

	Low level	Moderate level	High level
Level of emotional exhausting	20 (42.5%)	15 (31.9%)	12 (25.6%)
Level of depersonalization	19 (40.4%)	16 (34.0%)	12 (25.6%)
Level of personal accomplishment	20 (42.5%)	17 (36.2%)	10 (21.3%)

The results obtained from a survey of the family medicine residents in Education Centers in Banja Luka and Doboj indicated there was no statistically significant difference between two Centers in regards to the level of stress (p = 0204), emotional exhaustion (p = 0.244) and levels of personal accomplishments (p = 0557). Statistically significant difference was found in regards to degree of depersonalization (p=0.027) whereat residents in the Education Centre in Banja Luka had higher degree of depersonalization in comparison to the residents from Doboj.

Discussion

The study results indicated that more than half of the examinees had high level of stress (59.6%), high and moderate level of emotional exhaustion (57.5%), high and moderate degree of depersonalization (59.6%), and low and moderate level of the personal accomplishment (57.5%). The majority of the physicians surveyed were female physicians, while the examinees under and over the age of 35 with 5 or more years of service were equally represented.

A study in two large hospitals in Lebanon enrolled 155 residents in various fields of medicine. The prevalence of the burnout syndrome in residents surveyed was high in all domains. 80% of the examinees had a high level of the burnout in at least one domain, while the highest was in domain of emotional exhaustion, in 67.7% of the examinees [9]. Family medicine residents enrolled in our study had less expressed emotional exhaustion compared to the residents surveyed in Lebanon.

In a study carried out in the University Hospital in Barcelona, 132 hospital residents were enrolled. The results of the study indicated that 40.2% of the residents had a high level of the emotional exhaustion, 64.4% had a high degree of depersonalization and in summary, 69.7% of the residents had the burnout syndrome[10]. Family medicine residents in our study had lower expression of the emotional exhaustion in percentage in comparison to the residents from the University Hospital in Barcelona, but residents in the University Hospital in Barcelona had significantly higher degree of depersonalization compared to the family medicine residents in the Republic of Srpska.

A study carried out in France during 2009 enrolled 204 residents in oncology, radiology and hematology. The results of the study indicated a high level of the syndrome in residents surveyed: a high level of emotional exhaustion was found in 26% of the residents and high level of depersonalization in 35% of the residents. The highest level of the burnout was found in the residents in oncology[11]. Results acquired in the survey among family medicine physicians in our study in regards to the levels of the emotional exhaustion are very similar to the results of the study conducted in France. Family medicine residents enrolled in our study indicated lower degree of depersonalization compared to the physicians surveyed in the study in France.

Demanding Residency Programme, preparations for a difficult Specialist exam, separation from the family, change of social environment during residency and increasing costs presumably influence level of stress and the burnout syndrome in large number of examinees. From the results of the study it is evident that younger physicians and with shorter length of service had lower level of stress and burnout syndrome. We assume that younger physicians more easily adapt to change and fit and adjust to new environment and thus have less expressed symptoms.

Within the last ten years, the republic of Srpska has been implementing an intensive Primary Health Care Reform, which probably contributes to the high prevalence of stress and risk of the burnout syndrome. Study conducted in England proved that any reform of the Primary Health Care negatively influences health of physician while during reform level of the burnout syndrome increased[12].

Conclusions

A significant number of the family medicine residents in the Republic of Srpska have a high level of stress and are at risk of developing the burnout syndrome. The levels of stress and burnout symptoms are more evident among older physicians with longer length of service. Acquired results indicate a need to undertake corrective measures for prevention of stress and the burnout syndrome.

Косана Станетић

ЈЗУ Дом здравља, Бања Лука, Република Српска
Катедра породичне медицине, Медицински факултет, Бања Лука, Република Српска

Изложеност стресу и синдрому сагоријевања на послу љекара на специјализацији из породичне медицине

Кључне речи:
стрес,
синдром сагоријевања на послу,
љекари на специјализацији из породичне медицине

Сажетак

Увод. Синдром сагоријевања на послу (*burnout syndrome*) се дефинише као хронични радни стрес који укључује три димензије: осјећај емоционалне исцрпљености, негативан приступ у пружању услуга (деперсонализација) и осјећај смањеног личног задовољства. Љекари су једна од професија највећег ризика за оболијевање од синдрома сагоријевања на послу.

Циљ рада. Испитати заступљеност синдрома сагоријевања на послу и стреса код љекара на специјализацији из породичне медицине у Републици Српској.

Метод. Истраживање је проведено анкетирањем љекара на специјализацији из породичне медицине у Едукативним центрима породичне медицине ‘’Бања Лука’’ и ‘’Добој’’ у периоду од 1. фебруара до 30. априла 2010. године. Испитаници су попуњавали анкетни упитник за самопроцјену нивоа стреса (*Girdin, Everly, Dusek*, 1996) и анкетни упитник *Maslach Burnout Inventory* (*Maslach et al.,* 1996) који су били допуњени подацима о добу, полу и дужини радног стажа.

Резултати. У вријеме истраживања у Едукативним центрима породичне медицине у Бањој Луци и Добоју било је 59 љекара, а понуђени анкетни упитник је попунило и вратило 47 (79,67 %) љекара. Критеријуме за висок ниво стреса задовољило је 59,6% испитаника. Висок ниво емоционалне исцрпљености имало је 25,6%, висок ниво деперсонализације 25,6%, а низак ниво личног задовољства 42,5% анкетираних љекара.

Закључак. Више од половине испитаника је имало висок ниво стреса; висок или умјерен ниво емоционалне исцрпљености; висок или умјерен ниво деперсонализације и низак или умјерен ниво личне испуњености. Ниво стреса и симптоми *burnout* више су изражени код љекара старијег животног доба и са већом дужином радног стажа. Добијени резултати указују на потребу предузимања мјера за превенцију стреса и синдрома сагоријевања на послу.

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