

Psychosocial Risk Factors at Work in Family Physicians Assigned to a Family Medicine Unit

Factores de riesgo psicosocial en el trabajo en médicos familiares adscritos a una unidad de medicina familiar

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Summary

Objective: to analyze the psychosocial risk factors at work of family physicians assigned to a Family Medicine Unit. **Methods:** analytical cross-sectional study, where 50 physicians, from the Family Medicine Unit No. 49 of the Mexican Institute of Social Security in Celaya, Guanajuato Mexico, participated. The Official Mexican Standard NOM-035-STPS-2018, “Psychosocial Risk Factors at Work-Identification, Analysis and Prevention” was applied. Descriptive statistics, t-test for difference of two means, and one-factor ANOVA were performed for the comparison of the factors in the sociodemographic variables. **Results:** 60% of the total sample was represented by women; the average age was 40.1±6 years, 72% were married, and the average working time was 12.9±7.1 years. Eleven participants reported severe traumatic events; the psychosocial risk was 56% medium, 34% high and 6% very high; activity factors were the highest level of risk category, with 72% at very high risk; the domains with the highest psychosocial risk were workload with 84% at very high risk, lack of control over work with 52% at very high risk and leadership with 8% at very high risk. Women had a higher psychosocial risk in work organization than men ($p=0.014$), with nine years or less seniority. In leadership and relationships at work, those between ten and nineteen years had lower psychosocial risk compared to those with more than twenty years ($p=0.001$, 0.036, respectively). **Conclusions:** in accordance with NOM-035-STPS-2018, the FMU No. 49 requires for its family physicians to review the psychosocial risk prevention policy and the development of programs to address them, as well as the promotion of a favorable organizational environment.

Keywords: Risk Factors; Family Physician; Job Satisfaction

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Resumen

Objetivo: analizar los factores de riesgo psicosocial en el trabajo en médicos familiares adscritos a una unidad de medicina familiar. **Métodos:** estudio transversal analítico, participaron cincuenta médicos de la Unidad de Medicina Familiar (UMF) No. 49 del Instituto Mexicano del Seguro Social en Celaya, Guanajuato, México. Se aplicó la Norma Oficial Mexicana NOM-035-STPS-2018, “Factores de riesgo psicosocial en el trabajo-Identificación, análisis y prevención”. Se realizó estadística descriptiva, prueba t para diferencia de dos medias y ANOVA de un factor para la comparación de los factores en las variables sociodemográficas. **Resultados:** las mujeres representaron 60% del total de la muestra; la edad promedio fue de 40.1±6 años; casados, 72%; antigüedad laboral, 12.9±7.1 años. Once participantes reportaron acontecimientos traumáticos severos; el riesgo psicosocial fue en 56% medio, 34%, alto y 6%, muy alto; la categoría con el mayor nivel de riesgo fue factores propios de la actividad, con 72% en riesgo muy alto; los dominios de mayor riesgo psicosocial fueron carga de trabajo con 84% en riesgo muy alto, falta de control sobre el trabajo con 52% en riesgo muy alto y liderazgo con 8% en riesgo muy alto. En la organización del tiempo de trabajo, las mujeres tuvieron un riesgo psicosocial más alto que los hombres ($p=0.014$), con nueve años o menos de antigüedad. En liderazgo y relaciones en el trabajo, tuvieron menor riesgo psicosocial aquellos entre diez y diecinueve años, en comparación con los de más de veinte años ($p=0.001$, 0.036, respectivamente). **Conclusiones:** de acuerdo con la NOM-035-STPS-2018, la UMF No. 49, requiere para sus médicos familiares revisar la política de

prevención de riesgos psicosociales y el desarrollo de programas para su abordaje, así como la promoción de un entorno organizacional favorable.

Palabras clave: factores de riesgo, médico familiar, satisfacción laboral

Introduction

Mental health is a state of wellbeing stage in which a person is able to cope the normal stresses of life, work productively and contribute to his or her community.¹ Psychosocial risks are the conditions present in a work situation related to organization, content and performance of work that are likely to affect the physical, psychological or social health and well-being of workers.^{2,3}

Working in health care can involve intense emotional demands that increase susceptibility to occupational risk factors,⁴ significant associations have been documented between working conditions of German resident physicians, occupational distress, and mental health-related aspects;⁵ also, less fair workplace conditions, job insecurity, and violence in this context were significantly related to an increased risk of minor mental disorders in health care workers.⁶ In Estonian nurses, the highest scores for negative work factors were emotional and cognitive aspects, as well as work pace;⁷ physicians have shown higher emotional and cognitive demands compared to nurses, but from both professional branches high sensory demands and workplace responsibilities are reported.⁸ In this same setting, there is a strong correlation between psychosocial risk factors and burnout, stress, sleep and

cognitive disorders, depression, and somatic symptoms;⁹ these aspects have been reported in other study settings where there is an association between adverse psychosocial work conditions and poor quality of life in health care workers.¹⁰⁻¹⁵

At the national level, NOM-035 has been applied to university workers and it has been identified that the domains with the highest number of workers with medium, high and very high levels of psychosocial risk are: workday, lack of control over work, recognition of performance, leadership, workload, low belonging and instability, violence, and work-family interference.¹⁶ Among Mexican resident physicians, the situations generated in the work place that affect their well-being are psychological and verbal abuse, and outside the work place, interference in the work-family relationship.¹⁷ Similarly, older age, more hours dedicated to recreational activities and intense exercise, and a better possibility of working outside the institution are associated with lower psychosocial risk.¹⁸ Relieving this type of risk is essential for occupational safety and health, and for sustainable health systems, in addition to contribute to improving the quality of services.¹⁹⁻²¹

Having analyzed the above factors and their scope, the aim of this study was to analyze the psychosocial risk factors at work in family physicians assigned to a family medicine unit.

Methods

Analytical cross-sectional study, 50 physicians from the Family Medicine Unit (FMU) No. 49 of the Mexican

Institute of Social Security in Celaya, Guanajato, Mexico participated, which corresponded to the total of Family Physicians assigned to this FMU. To assess the psychosocial factors the Official Mexican Norm NOM-035-STPS-2018, “Psychosocial Risk Factors at Work-Identification, Analysis and Prevention” was applied, whose objective is to establish the elements to identify, analyze, and prevent psychosocial risk factors, and promote a favorable organizational environment in workplaces.

First, all participants answered the reference guide I: “Questionnaire to Identify Workers who were Subjected to Severe Traumatic Events”, which identifies those who have been subjected to severe traumatic events and require clinical assessment; then, they answered the reference guide II: “Questionnaire to Identify Psychosocial Risk Factors in the Workplace”, which consists of four categories: work environment, activity specific-factors, organization of work time, leadership, and relationships at work. In turn, each category comprises different domains. Category 1, work environment, including conditions in the work environment; category 2, activity-specific factors, includes two domains, workload and lack of control over work; category 3, organization of work time, includes two domains, working hours and interference in the work-family relationship; while category 4, leadership and work relations, includes three domains: leadership, work relations and violence; at the same time, each domain has different dimensions made up of different items.²²

The present study was approved by the corresponding ethics and research committee and was adhered to the ethical principles of the General Health

Law on Research, and the Declaration of Helsinki.

Statistical analysis was performed with SPSS v. 25 statistical software. Tables of frequencies and proportions were made for sociodemographic variables, severe traumatic events, and description of responses for psychosocial risk factors. SPSS syntax was used to create automatic macros to score the level of risk according to NOM 035-STPS-2018, in addition to t-tests for difference of two independent

means and one-factor ANOVA for the comparison of factors in the sociodemographic variables. The Shapiro-Wilk test was used to demonstrate normality in the distribution of quantitative variables subject to statistical testing. A p-value <0.05 was considered statistically significant.

Results

The total sample consisted of 50 medical professionals, where women represented 60% of the studied population, the

Table 1. Workers who Undergone Severe Traumatic Events

	Yes	
	Frequency	Percentage*
I. Severe traumatic event		
Threats?	6	54.5
Assaults?	5	45.5
Accident resulting in death, loss of limb or serious injury?	4	36.4
Violent acts resulting in serious injuries?	1	9.1
Kidnapping?	1	9.1
Any other event that puts your life or health, and/or that of others, at risk?	1	9.1
II. Persistent memories of the event (during the last month)		
Have you had recurrent memories of the event that cause you discomfort?	3	27.3
Have you had recurrent dreams about the event, which cause you discomfort?	2	18.2
III. Effort to avoid circumstances similar to or associated with the event (during the last month)		
Have you made an effort to avoid any feelings, conversations or situations that might remind you of the event?	4	36.4
Have you made an effort to avoid any activities, places or people that might remind you of the event?	4	36.4
Have you ever felt alienated or distant from others?	3	27.3
Have you had the impression that your life is going to be shortened, that you are going to die before other people, or that you have a limited future?	3	27.3
Have you noticed that you have difficulty expressing your feelings?	2	18.2
Have you had difficulty remembering any important part of the event?	0	0
Has your interest in your daily activities diminished?	0	0
IV Affectation (during the last month):		
Have you had difficulty concentrating?	3	27.3
Have you been nervous or constantly on alert?	3	27.3
Have you been particularly irritable or had outbursts of anger?	2	18.2
Have you been easily startled by anything?	2	18.2
Have you had difficulty sleeping?	1	9.1

*Denominator: 11 cases with severe traumatic events

average age was 40.1 ± 6 years, with a minimum age of 31 and a maximum of 53 years; when classified by age range, 52.3% were in their 30's, 72% reported being married and 24%, single; the remaining percentage represented other categories. The percentages with respect to the work shift were equal, 50% for the morning and afternoon shifts. In relation to seniority, the mean was 12.9 ± 7.1 years.

Eleven participants reported severe traumatic events (22%), of which, 54.5% reported threats (6/11), followed by 45.5% with assaults (5/11); 27.3% had recurrent memories about the event (3/11), while 36.4% made an effort to avoid all types of memories, conversations or situations that reminded them of the event (4/11). In this same scenario, 36.4% made an effort to avoid all types of activities, places or people that would provoke memories of the event (4/11); with respect to affect, 27.3% had difficulty concentrating (3/11) and 27.3% were nervous or in a state of alertness (3/11), see Table 1.

Regarding psychosocial risk, the percentage of "almost always" and "always" responses for the four categories were: work environment 6.6%, activity-specific factors 39%, organization of work time 2%, and leadership and relationships at work 6.2%.

In relation to the category of activity-specific factors, the responses "always" and "almost always" for the first domain, workload, had 42.6%, three dimensions above 40%, which were mental workload with 78%, high responsibility burdens 64%, and accelerated work rhythms 46%; the second domain, lack of control over work, answers "always" or "almost always" had 36.4%, with two dimensions above 30%, which were limited or non-

Table 2. Psychosocial Risk Factors in Family Physicians at the FMU No. 49*

Category / Domain / Dimension	Never	Almost never	Sometimes	Almost always	Always
1. Work environment	25.3	32.7	35.3	5.3	1.3
Work environment conditions:	25.3	32.7	35.3	5.3	1.3
Dangerous and unsafe conditions	28	30	40	2	0
Poor and unhealthy conditions	26	34	34	2	4
Hazardous jobs	22	34	32	12	0
2. Activity-specific factors	9.8	18.8	32.4	21.7	17.3
Workload:	10.8	18	29.6	21.2	20.4
Quantitative burdens	24	22	28	17	9
Accelerated work pace	9	14	31	33	13
Mental load	4	4	14	38	40
Emotional psychological burdens	10	14	48.7	14	13.3
High responsibility burdens	4	11	21	21	43
Contradictory or inconsistent burdens	14	43	35	4	4
Lack of control over work:	8.8	19.6	35.2	22.2	14.2
Lack of control and autonomy over the job	21.3	32.7	34.7	6.7	4.7
Limited or no possibility of development	3	17	44	17	19
Limited or no training	2	9	27	43	19
3. Work time organization	42	36	20	1	1
Working day:	50	29	19	2	0
Long working days	50	29	19	2	0
Interference in the work-family relationship	34	43	21	0	2
Influence of off-site work	46	42	12	0	0
Influence of family responsibilities	22	44	30	0	4
4. Leadership and work relations	26.5	38.4	29	4.4	1.8
Leadership:	20.7	39.7	35.7	3.2	0.8
Unclear functions	23.3	43.3	29.3	3.3	0.7
Leadership features	18	36	42	3	1
Work relations:	5.9	51.7	37	3.7	1.7
Social relations at work	9.3	39.3	40.7	7.3	3.3
Poor relationship with supervised employees	2.6	64.1	33.3	0	0
Violence:	52.8	23.8	14.3	6.3	3
Workplace violence	52.8	23.8	14.3	6.3	3

*Values expressed in percentages

existent training with 62%, and limited or no possibility of development 36%, see Table 2.

According to the NOM-035-STPS-2018 risk classification, the percentage of psychosocial risk of family physicians at the FMU No. 49 was 56% with medium risk, followed by 34% high risk, and 6% very high risk. The category with the highest level of psychosocial risk was activity-specific factors with 72% at very high risk, and 24% at high risk; for the other categories, the levels of high and very high risk were equal to or less than 8%. In terms of domain, the highest psychosocial risk was found in workload with 84% in very high risk and 10% high risk, in second place, lack of control over work with 52% in very high risk and 32% high risk, and in third place, leadership with 8% in very high risk and 26% high risk, see Table 3.

In the work time organization domain, women had a higher psychosocial risk than men (Likert 1.8 and 1.3 respectively), ($p=0.014$). Participants aged 39 years or younger had lower psychosocial risk compared to those aged 40 to 49 years with respect to the leadership and relationships at work factor (Likert 1.9 and 2.9 respectively), ($p=0.004$). Regarding the work time organization domain, single participants had lower psychosocial risk (Likert=1.0) than married (Likert=1.7) and cohabiting (Likert=2.5) participants ($p=0.027$ and 0.520 respectively). When analyzing seniority with respect to the leadership and work relationship domain, participants with nine years or less seniority had lower psychosocial risk (Likert=1.6) than those with ten to nineteen years (Likert=2.7) and more than 20 years (Likert=2.6) ($p=0.001$ and 0.036 respectively), see Table 4.

Discussion

Of the total sample of fifty physicians, eleven reported severe traumatic events, the category with the highest percentage of psychosocial risk was factors inherent to the activity and the category with the lowest psychosocial risk was organization of work time.

40% of family physicians of this study perceived that they sometimes worked in dangerous and unsafe conditions, 34% in poor and unhealthy conditions, and 32% that their work was dangerous, which could be due to the fact that these physicians had cared for patients confirmed or suspected of SARS-CoV-2; these same observations have been perceived by physicians and nurses in Serbia, who showed high negative scores for job insecurity,⁸ as nurses in Estonia did.⁹

The dimensions of mental workload, high responsibility burdens, and fast-paced work presented higher psychosocial risk in family physicians, which is related to previous international reports that emotional and psychological well-being is compromised mainly by complex and intense work, respectively.⁴ The highest scores for negative factors were work pace and cognitive demands in Estonian nurses;⁷ meanwhile, high burnout scores have been reported in health professionals from different parts of the world.^{3,10,20}

At the national level, these results also coincide with previous reports, in a Mexican university the domains with the most at-risk workers were: workday and lack of control over work,¹⁶ the psychosocial factors of greatest risk in Mexican residents were high responsibility loads and long workdays;¹⁷ Mexican emergency physicians perceive that it is unfavorable for health to have to work

very fast and poor control of the amount of work to be done.¹⁴

This study presents that the third dimension with the highest psychosocial risk was limited or no training, but no previous reports of psychosocial risk in health care workers were found for comparison.

In the category of leadership and work relationships, family physicians at the FMU No. 49 showed less psychosocial risk, which is consistent with previous studies, in which the highest mean scores recorded for positive psychosocial factors were social relationships and mutual trust among employees.^{3,7}

It is important to highlight that 14.3% of the physicians who participated in this study report that they have sometimes experienced violence at work, which is comparable to that reported by family physicians in Lithuania, who mention, in the following proportions, that they have experienced: harassment by patients, 11.8%, by their colleagues, 8.4%, and by a superior, 26.6%.²³

Women presented greater psychosocial risk than men in the domain of organization of work time, in this study, which coincides with what was reported by physicians belonging to the World Organization of Family Doctors WONCA, who commented that they were dissatisfied with some aspects of their jobs, such as personal time.²⁴ Family physicians, in this study, showed that the risk of psychosocial factors at work increases with age, which differs from what has been reported by other studies.¹⁸

One of the strengths of the study is that all the assigned family physicians participated and that it is one of the few studies that analyzes the assessment of psychosocial risk factors in health personnel in Mexico, an aspect that, despite

Table 3. Level of Psychosocial Risk in Family Physicians at the FMU 49*

Category / Domain	Null	Low	Medium	High	Very High
Final rating	2	2	56	34	6
Work environment	30	32	30	8	0
Work environment conditions	30	32	30	8	0
Activity-specific factors	2	0	2	24	72
Workload	4	0	2	10	84
Lack of control over work	6	0	10	32	52
Work time organization	62	22	12	4	0
Working day	40	12	38	10	0
Interference in the work-family relationship	16	24	48	12	0
Leadership and work relations	24	28	38	8	2
Leadership	14	14	38	26	8
Work relations	40	36	14	10	0
Violence	64	18	10	6	2

*Values expressed in percentages

Table 4. Comparison of Psychosocial Risks (Likert Scale) on the Sociodemographic Variables

		Work environment	P	Activity-specific factors	P	Work time organization	P	Leadership and work relations	p	Final rating	p
Gender	Man	1.9 (0.9)	0.208	4.7 (0.6)	0.636	1.3 (0.6)	0.014*	2.3 (1.0)	0.533	3.5 (0.7)	0.696
	Woman	2.3 (1.0)		4.6 (0.8)		1.8 (1.0)		2.4 (1.0)		3.4 (0.8)	
Age (years)	<= 39	2.0 (1.0)	0.499	4.8 (0.8)	0.509	1.6 (0.9)	0.674	1.9 (1.0)	0.005*	3.4 (0.8)	0.916
	40 - 49	2.3 (0.9)		4.5 (0.5)		1.7 (0.9)		2.9 (0.9)		3.4 (0.7)	
	50+	2.3 (1.5)		4.5 (1.0)		1.3 (0.5)		2.5 (0.6)		3.5 (0.6)	
Marital status	Single	1.8 (0.8)	0.380	4.4 (1.2)	0.438	1.0 (0.0)	0.01*	2.1 (0.8)	0.455	3.0 (0.7)	0.056
	Married	2.3 (0.9)		4.7 (0.5)		1.7 (0.9)		2.5 (1.1)		3.5 (0.7)	
	Cohabiting	2.5 (2.1)		4.5 (0.7)		2.5 (0.7)		2.0 (1.4)		4.0 (1.4)	
Shift	Morning	2.0 (1.0)	0.240	4.5 (0.9)	0.246	1.5 (0.9)	0.416	2.4 (1.0)	1.000	3.3 (0.8)	0.443
	Afternoon	2.3 (0.9)		4.8 (0.4)		1.7 (0.9)		2.4 (1.1)		3.5 (0.7)	
Seniority (Years)	<= 9	1.9 (0.8)	0.304	4.6 (1.0)	0.648	1.3 (0.4)	0.118	1.6 (0.9)	0.001*	3.1 (0.7)	0.075
	10 - 19	2.3 (1.0)		4.7 (0.5)		1.8 (1.0)		2.7 (0.8)		3.6 (0.7)	
	20+	2.1 (1.1)		4.5 (0.8)		1.5 (0.8)		2.6 (1.2)		3.5 (0.8)	

*Significance < 0.05, T-test was applied for gender and shift, one-factor ANOVA for age, marital status and seniority, (Bonferroni in case of significance).

its importance, has not been studied in depth.

The limitations of this work include the type of cross-sectional study, as well as the sample size, which prevents the generalization of the results obtained in other work contexts.

Conclusion

According to the NOM-035-STPS-2018 risk classification, the FMU No. 49 is found with a final medium risk rating of 56% for its family physicians, so, to address the psychosocial risk prevention policy and the development of programs, as well as the promotion of a favorable organizational environment, should be reviewed.

Authors' contribution

D B-N: conceptualization, development, writing and application of surveys; B A-P and L C-T: conceptualization, analysis, discussion of results and writing. All authors approve the publication of this paper.

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Conflicts of interest:

The authors declare not having conflicts of interest.

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