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Carolina Aranda-Beltran, *University of Guadalajara*

Manuel Pando-Moreno, *University of Guadalajara*

José G. Salazar, *University of Guadalajara*

Teresa M. Torres-López, *University of Guadalajara*

María G. Aldrete-Rodriguez, *University of Guadalajara*



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Social Support, Burnout Syndrome and Occupational Exhaustion among Mexican Traffic Police Agents

Carolina Aranda Beltrán, Manuel Pando Moreno, José G. Salazar Estrada,
Teresa M. Torres López, and María Guadalupe Aldrete Rodríguez
Universidad de Guadalajara (Mexico)

The consequences of work-related stress on health are worrisome, and by the same token, so is Burnout Syndrome. However, it has been shown that social support can prevent, reduce or even combat individuals' responses to stress.

A descriptive, transverse study was carried out with the objective of determining the prevalence of both Burnout Syndrome and receiving social support for traffic police in Mexico. 875 traffic police participated in the study, men and women alike, from all work shifts, day and night. Three questionnaires were administered: one to record sociodemographic and professional data, as well as the Maslach Burnout Inventory and the modified Diaz Veiga Social Resources Inventory. Our data analysis obtained frequencies and percentages and also identified associations between the study's variables.

The prevalence of Burnout Syndrome was found to be 54.9% among the study's participants. The social support networks designated as "low or poor" were shown to be associated with Burnout Syndrome, with p values less than .05, an odds ratio (OR) greater than 1 and a confidence interval that did not include the number one.

In spite of the strong network of social support reported by participants, it seems that those social effects were not strong enough to combat Burnout Syndrome, and some resolution strategy ought to be implemented at the individual, group and organizational levels.

Keywords: social support, physical exhaustion, mental exhaustion, traffic police.

Las consecuencias en la salud derivadas del estrés laboral son preocupantes, tal como lo es el Síndrome de burnout. Se ha visto que el apoyo social, puede actuar previniendo, disminuyendo o amortiguando las respuestas que el estrés genera en el individuo.

Se realizó un estudio descriptivo y transversal con el objetivo de determinar la prevalencia del Síndrome de burnout y la situación del apoyo social en los agentes de tránsito, México. Participaron 875 agentes de tránsito, hombres y mujeres de cualquier turno. Se aplicaron tres cuestionarios, uno con datos sociodemográficos y laborales, la Escala de Valoración de Maslach Burnout Inventory, y el Inventario de Recursos Sociales de Diaz Veiga modificado. En el análisis de la información se obtuvieron frecuencias, porcentajes así como las posibles asociaciones entre las variables de estudio.

La prevalencia del Síndrome de burnout fue del 54.9%. Las redes sociales que se determinaron como "bajas o malas", obtuvieron asociaciones con el Síndrome de burnout, con valores de p menores a .05, un OR mayor a uno y un intervalo de confianza que no incluyó la unidad.

Pese a la muy buena red de apoyo que se reportó, parece ser que éstas no fueron lo suficientemente contundentes, por lo que alguna estrategia de solución deberá ser implementada de manera individual, grupal y organizacional.

Palabras clave: apoyo social, desgaste físico, desgaste mental, agentes de tránsito.

In the month of September, 2006, the 17th World Congress on Safety and Health at Work was held in Orlando, Florida. There, it was reported that, according to data from the International Labor Organization (Organización Internacional del Trabajo; OIT), in the year 2005, 2.2 million people died in work-related accidents, or of work-related illnesses (OIT, 2005). Furthermore, the impact of work-related stress on those accidents and illnesses was of grave concern.

Burnout Syndrome, which results from chronic occupational stress, is in fact a modern pathology to which the work force is exposed. It can manifest itself in the form of tiredness/sleepiness, feeling worn-out, emotional and physical exhaustion, having negative attitudes and feelings towards one's co-workers, or as a lack of motivation to carry out one's job (Aranda, Pando, Torres, Salazar, & Aldrete, 2006; Halbesleben & Buckley, 2004; Martos, 2000).

Several authors, such as Freudenberguer (1974) who is considered to be the pioneer on this subject, Maslach and Jackson (1981, 1986), Ferrando and Pérez (1996), Gil-Monte, Peiró, & Valcárcel (1996) and Gil-Monte (2002), and more recent contributors such as Aranda (2004) and Aranda et al., (2006), Palmer, Gómez, Cabrera, Prince, & Searcy (2005), Grau, Suñer, & García (2005), Matía, Cordero, Mediavilla, & Pereda (2006), Segura et al., (2006) and Restrepo, Colorado, & Cabrera (2006) to mention a few, have studied this syndrome using various models and from various theoretical perspectives, using different types of studies and analyses. The results have not been favorable; studies have found rates of prevalence to indicate Burnout Syndrome is widely present in today's work force. It is worth noting, too, that the majority of the authors mentioned above departed from organizational theory when establishing their studies. Organizational theory considers Burnout Syndrome to develop as a response to occupational stress stemming from modes of production as well as the organization and structure of the company or institution, including the type of social support that workers receive, and perceive themselves.

Social support is an interactive concept, through which interpersonal transactions take place (Barrón, 1996; Rodríguez, 1995). As far as Burnout Syndrome is concerned, social support can prevent or reduce one's response to a stressful situation or event, whether directly or by modulating it, depending on the worker's perceptions at the critical moment, and on whether or not he or she receives support from their social network (Cohen & Wills, 1985; Gil-Monte & Peiró, 1997).

We have identified several studies wherein social support played a crucial role in reducing or eliminating the effects of stress. Networks of social support have been associated with the prevention of cardiovascular problems, cancer, of chronic degenerative diseases and of metabolic, psychological, and neurological illnesses and even of death. It has also been found to influence the roles one develops, gender, and the transition into retirement (Aranda, 2004;

Aranda, Pando, Salazar, Torres, Aldrete, & Pérez, 2005; Chappell, Segal, & Lewis, 1990; Mutchler, Burr, Massagli, & Pienta, 1999; Mutran, Danis, Bratton, Sudha, & Hanson, 1997; Rodríguez, 1995). Still, other reports have found no significant association between social support and health. One such study, the Estrada and Alcazar study (2005), concluded that there was no significant association between social support and psycho-physiological disorders for undergraduate psychology students at the University of Mexico. Another, the Galván, Romero, Rodríguez, Durand, Colmenares, & Saldivar (2006) study, reported the finding that there is a high incidence of abandonment of women in prison by their families after they become incarcerated, which in turn makes them feel lonely and leads them to perceive their physical and mental well-being as being less than optimal. This trend of abandonment was especially pronounced for incarcerated women who experienced depressive symptoms and/or episodes.

Aranda (2004), in their study of the influence of social support on Burnout Syndrome among family physicians, found that doctors depend on a very strong network of social support in terms of frequency of contact. However, the physicians themselves indicated they did not feel sufficiently satisfied with their social networks. This differed from the behavior of the same variable for university faculty and administrators, for whom social support was found to be "poor" both in terms of frequency of contact with one's social network, and in terms of the level of satisfaction reported with that social network (Aranda, Pando, & Salazar, 2005).

Although there are literature reports on social support and its negative effect on people's health, for many study participants, like healthcare professionals, teachers, etc., no data was available about the professionals that formed the sample of the present study, thus, the objective was to determine the prevalence of Burnout Syndrome and the amount of social support in place for traffic police in Mexico.

Method

Participants

The sample was composed of 875 "traffic police force" employees pertaining to the central government of Mexico. Men and women alike, working any shift of the day or night, were included, and they were aware that their participation in this study was voluntary. The only people excluded from participation in the study were employees who were at that time not actively fulfilling the duties of the job, regardless of the reason.

The sample was predominantly male: 802 (91.6%) men versus 73 (8.4%) women. The age groups with the greatest frequency among participants were 30-39 years old and 40-49 years old (35.9% and 27.0%, respectively). 77.9% were married, 10% were single and 6% reported cohabitating

with a romantic partner. The majority of the police officers had completed the final grade of secondary school (42.4%), followed by those who had completed high school (18%) and finally, those who had completed primary school, college and some additional studies (12.8%); the rest did not respond to this item. A great majority of the police officers (69.1%) work on what is known as a "variable schedule," followed by the morning shift 17.9%, while the rest worked the afternoon or night shifts. Only one participant failed to answer this question. As for how long the participants had been in their current employment position, 51.0% of them had held this position for between 1 and 9 years, followed by those who had held it for 10-19 years (39.7%), while 9.3% had been working as traffic police for more than 20 years. The rest did not respond to this question. Regarding how long participants had been working for the establishment, the highest percentage of them, 57.2%, had been working for it for 10-19 years, followed by the group that had been working there for 1-9 years (23.7%), while 19.1% had been working for the establishment for longer than 20 years. It should be taken into account that a number of subjects (20) in the sample, for reasons unknown, chose not to respond to that item. Last, of the 875 traffic police, 91.9% had personnel working under them (Table 1).

Instruments

Three questionnaires were administered: one collecting general information about variables such as sex, age, civil status, education, name, area or region, work schedule, time having held the present job, years of service to the institution, and whether or not they had personnel working under their supervision. Next, the Maslach Burnout Inventory (MBI-HSS) (Maslach & Jackson, 1981-1986) was administered in order to rate and analyze workers' mental and physical exhaustion. Last, the modified Diaz Veiga Social Resources Inventory was administered, which, as its name suggests, was required to analyze participants' social support networks.

The MBI-HSS used to evaluate Burnout Syndrome, or occupational exhaustion, consists of 22 items and includes 3 dimensions. Each dimension is assessed on a Likert scale with options spanning from never (0 points) to everyday (6 points). The dimensions were the following: 1. Emotional Exhaustion (AE), which contained 9 items describing feelings of being exhausted emotionally and physically; 2. Depersonalization (D), which had 5 questions designed to define impersonal responses to others (treating others as objects instead of as subjects) and 3. Lack of, or poor Personal and Occupational Accomplishment (FRP) was measured by 8 items referring to feelings of competency and motivation at work. The scores that allowed us to place each traffic police officer within the respective dimensions were the following: for the Emotional Exhaustion dimension (high = ≥ 27 , medium = 17-26 and low = 0-16); for Depersonalization (high = ≥ 14 , medium = 9-13 and low =

0-8); last, for the Lack of, or Poor Personal and Occupational Accomplishment dimension (high = < 30 , medium = 36-31 and low = 48-37). Anyone whose scores fell within the high and medium ranges was determined to be "burned-out." Thus, in the AE and D dimensions, high scores corresponded to greater feelings of burnout, while low scores on the FRP dimension corresponded to greater feelings of burnout. According to Gil-Monte and Peiró (1997), this instrument has shown a high level of internal consistency, with a Cronbach's alpha α of .90 for emotional exhaustion, an α of .79 for depersonalization (alternating between .56 and .63) and an α of .71 for lack of personal and occupational accomplishment. The traffic police obtained an α of .623, which accounted for 36.95% of the total variance.

The questionnaire, Díaz Veiga's Social Resources Inventory (Barrón, 1996), was validated by Montorio (1994) and includes, on the one hand, objective, structural elements such as size of social network and frequency of contact with that network, and on the other hand, subjective, functional elements that have to do with one's level of satisfaction with their social network. Scores range from 1 (very frequent/very satisfied) to 3 (never or almost never/little or not at all satisfied). Montorio determined the reliability of the scale by obtaining indices of internal consistency from each of the subscales, which varied from .35 to .86 (Montorio, 1994). The present study obtained a Cronbach's α of .83, and accounted for 44.5% of the total variance.

The inventory items are directed to assess four of the most important types of social interaction within one's support network: significant other, children, other relatives, and friends. Nevertheless, in order to evaluate one's social network at work, other variables were added to the original inventory to focus on the kind of support that people both receive and perceive from the institution that employs them; this included both objective and subjective aspects (Aranda, 2004), which were evaluated in the same way as the social support networks were. Said interactions were confirmed by superiors, subordinates and other co-workers. For each one, both objective and subjective elements were evaluated. The resulting score was placed into a classification level (high, medium or low) in which high signifies having a very good support system (between 3 and 4 points), medium signifies having an average support network and a score of 8 or 9 points was considered to indicate the subject has a low, or poor, social support system. In any case, when a subject exhibits low scores "according to the measure of the scale," it means that they maintain a good support system, objectively speaking, in terms of the frequency at which they see and speak with the people that comprise it, as well as subjectively speaking, in terms of the level of satisfaction the subject holds for their support system.

Also, in order to evaluate one's social support system in its entirety, there was a final scoring of the objective and subjective aspects individually. In other words, the objective aspects were placed in a final classification, both

personal and occupational, and then the same was done for the subjective aspects, both occupational and personal. The purpose of this was to determine whether or not all of the subject's support system was good, regular, medium, low or poor consistently, or whether aspects of it were good while others were weak.

Statistical analysis

The study was descriptive and transverse in nature. Both descriptive and inferential statistics were employed. Gathering descriptive statistics involved obtaining frequencies and percentages for each item, as well as for each scale used in evaluation. As for the inferential analysis, for those subjects whose social support networks exhibited the presence of Burnout Syndrome, it was noted that the *OR* values were greater than one, the confidence interval did not include the number one and that the *p* values were less than .05. These calculations were all performed with the help of the computation program Epilinfo version 6.04.

Results

As we mentioned previously, the study sample was comprised of 875 traffic police. Of those 875, 836 subjects responded to the Maslach Burnout Inventory, and the prevalence rate of Burnout Syndrome obtained was 54.9% (459 police officers), considering that to suffer from Burnout Syndrome, one must exhibit more than one dimension of it. The relative prevalence of the Syndrome, by dimensions, were as follows: for the Emotional Exhaustion dimension, a prevalence of 12.3% was obtained (103 people), while for Depersonalization, the prevalence was 16.3% (136 police) and for Lack of Accomplishment, it was 48.2% (403 subjects) (Table 2).

Only 4 of the 875 police did not answer the modified Diaz Veiga's Social Support Inventory: of those that did respond, the findings were the following: 96.7% (820 people) reported having parents, nieces, nephews, siblings or cousins; 93.1% (773 subjects) said they have friends and 797 police (91.9%) reported having children.

Upon evaluating the scale for both aspects, both objective and subjective, the majority of the interactions were qualified as being either "a really good or regular network" (Table 3). Table 3 shows the distribution of the sample according to objective and subjective levels, and to family or non-work-related versus work-related networks, which were analyzed separately (Table 4).

In the inferential analysis of the two networks (subjective and objective) of non-work-related and work-related support on the whole, a significant association was observed between the objective network and Burnout Syndrome, with *p* values of .029, an *OR* = 1.64 and a confidence interval (*IC*) of 1.04-2.56 (Table 5).

Table 1
Descriptive analysis of the "traffic police" sample according to sociodemographic and occupational data

Sociodemographic and occupational information	Number	%
Sex		
Female	73	8.4
Male	802	91.6
Age groups		
20-29	111	12.8
30-39	312	35.9
40-49	234	27.0
50-59	128	14.7
60-69	70	8.1
70-79	10	1.2
80 and older	3	3
Civil status		
Married	675	77.9
Single	88	10.1
Widowed	15	1.7
Divorced	26	3.0
Separated	10	1.2
Cohabiting	53	6.1
Education		
Primary	153	18.1
Secondary	359	42.4
High School (US)/sixth forms (UK)	226	26.7
College	71	8.4
Other	37	4.4
Shift		
Morning	156	17.9
Afternoon	52	6.0
Night	62	7.1
Variable	603	69.1
Years working the present job		
1-9 years	433	51.0
10-19 years	337	39.7
20-29 years	69	8.1
30-39 years	6	0.7
40-49 years	4	0.5
Years employed by the institution		
1-9 years	203	23.7
10-19 years	489	57.2
20-29 years	141	16.5
30-39 years	18	2.1
40-49 years	4	0.5
Do they have personnel working under them?		
Yes	69	8.1
No	784	91.9

Table 2

Distribution of the “traffic police” sample by Burnout Syndrome dimensions according to the Maslach Burnout Inventory (HS)

Level Assigned	Emotional Exhaustion		Lack of Professional Accomplishment		Depersonalization	
	Number	%	Number	%	Number	%
High	57	6.8	208	24.9	49	5.9
Medium	46	5.5	195	23.3	87	10.4
Low	733	87.7	433	51.8	700	83.7

Note. Burnout Syndrome prevalence of 54.9%.

Table 3

Frequencies and percentages of different types of interaction, according to the modified Díaz Veiga Scale to evaluate social support and contact (Aranda, 2004)

Modified Díaz Veiga Scale to evaluate social support and contact (Aranda, 2004)						
Interaction with	Objective Aspects (frequency of contact)			Subjective Aspects (Satisfaction with one’s network)		
	Very Frequent	Not Frequent	Never	Very Satisfied	Somewhat Satisfied	Not Satisfied
Spouse	703 (88.8%)	69 (8.7%)	20 (2.5%)	686 (87.7%)	80 (10.2%)	16 (2%)
Children	708 (89.1%)	83 (10.4%)	4 (0.5%)	714 (90.6%)	71 (9%)	3 (0.4%)
Relatives	559 (64.4%)	299 (34.4%)	10 (1.2%)	644 (74.4%)	216 (24.9%)	6 (0.7%)
Friends	519 (60%)	335 (38.5%)	11 (1.3%)	534 (62.2%)	303 (35.3)	21 (2.4%)
Co-workers	742 (86%)	117 (13.6%)	4 (0.5%)	612 (71.7%)	231 (27%)	11 (1.3%)
Superiors	523 (60.6%)	303 (35.1%)	37 (4.3%)	511 (59.8%)	291 (34.1%)	52 (6.1%)
Subordinates	383 (67.5%)	146 (25.7%)	38 (6.7%)	355 (63.5%)	178 (31.8%)	26 (4.7%)

Table 4

Frequencies and percentages of different types of interaction, according to the modified Díaz Veiga Scale to evaluate social support and contact (Aranda, 2004)

Modified Díaz Veiga Scale to evaluate social support and contact (Aranda, 2004)					
	Non-work related Support		Work-related Support		
	Objective Aspects (frequency of contact)		Objective Aspects (frequency of contact)		
	Number	%	Number	%	
Very good or strong network	769	88.3	728	84.1	
Average or regular network	76	8.7	110	12.7	
Poor or bad network	26	3.2	28	3.2	
		Subjective Aspects (frequency of contact)		Subjective Aspects (frequency of contact)	
		Number	%	Number	%
Very good or strong network		767	88.1	692	79.9
Average or regular network		79	9.1	146	16.9
Poor or bad network		25	2.9	28	3.2

Table 5

Associations between the Total Network of Social Support and Burnout Syndrome, according to the Maslach Burnout Inventory (HS)

Social Support (Poor and Average Network vs. Good networks of support)	Burnout Syndrome (High and average levels vs. Low levels of burnout in each dimension)
Total Objective Network	OR = 1.64 IC = 1.04-2.56 p = .029
Total Subjective Network	OR = 1.45 IC = .93-2.24 p = .098

Table 6

Associations between Non-work Related Support Network and the Work-related Network with each of the dimensions of the Maslach Burnout Inventory (HS)

Social Support (Poor and average networks vs. Good support networks for each dimension)	Emotional Exhaustion (High and average levels vs. Low level of burnout in each dimension)	Lack of Professional Accomplishment	Depersonalization
Objective Network Non-work or Family- related	OR = 5.97 IC = 3.54-10.05 p = .001	OR = 1.86 IC = 1.17-2.97 p = .007	OR = 4.45 IC = 2.72-7.29 p = .001
Subjective Network Non-work or Family-related	OR = 5.46 IC = 3.26-9.14 p = .001	OR = 1.54 IC = 0.98-2.41 p = .0582	OR = 5.60 IC = 3.46-9.07 p = .001
Objective Network Work-related	OR = 3.98 IC = 2.45-6.46 p = .001	OR = 1.92 IC = 1.29-2.87 p = .001	OR = 3.06 IC = 1.95-4.80 p = .001
Subjective Network Work-related	OR = 3.77 IC = 2.36-6.00 p = .001	OR = 1.50 IC = 1.05-2.16 p = .023	OR = 3.08 IC = 2.02-4.71 p = .001

In Table 6, the associations between the different types of social support are displayed, subjective and objective, non-work-related and work-related, in greater detail than before. It is worth mentioning that with the exception of subjective, non-work-related support, all other types of social support were associated with all of the dimensions of burnout.

Discussion

Actually, the state in Mexico where the traffic police from the present study work occupies the fourth place among Mexico's most heavily populated areas. The projected population for the year 2030 for that state is 7,788,000 inhabitants with a growing proportion of elderly adults. 2,944,800 people make up the economically active population, where 59.8% work in the service/consumer sector

(Instituto Nacional de Geografía e Informática: INEGI, 2006). Nevertheless, increasing numbers of people find themselves out of work and those who are employed find themselves working under unfavorable conditions, having to conform and adapt to their work, regardless of whether or not it is satisfying to them. Where level of education is concerned, on the other hand, it may be said that has been on the rise. However, that increase ensures neither professional improvement nor advancement, especially considering that the average level of education in this particular state of Mexico is only two years of secondary schooling. Furthermore, 63 percent of the economically active population work without any type of legal agreement, and even less than half work under a fixed contract. These and other indicators may be intertwined, and also may have influenced the observed results of the subjects in the present study.

It is widely known that Burnout Syndrome is frequent among healthcare professionals and teachers. However, the reported prevalence of it among our subjects, traffic police (54.9%), is alarming if one compares it with other studies. Even though those other studies made no reference to the actual shift, or time of day, in which one works, in a certain way, their results support the understanding, the transcendence and the magnitude of the variable being studied. Of those studies, take for example the Restrepo et al., (2006) study of certified teachers in Medellín, Colombia in which it was found that 23.4% of those interviewed reported signs and symptoms of burn-out, and an additional, equal percentage was found to be at risk of suffering from it. A study by Palmer et al., (2005) inferred a prevalence of 44% among anesthesiologists. Matía et al., (2006) reported prevalence rates of 21.6% among primary care physicians in Burgos. Distinctive from other studies, a study by Aranda, Pando, Aldrete, & Pérez (2006) found that the prevalence of burnout was 68% among female university professors, higher than it was for traffic police in the present study.

On another note, social support has been much more widely studied in recent years. However, prior to this study, the populations studied had never included traffic police. Sepúlveda, Troncoso and Alvarez (1998), in their study of 30 psychology students, obtained negative correlations between the quantity of people that comprise one's support system, one's level of satisfaction with that network, and clinical manifestations ($r = -.310$, $p < .095$ and $r = -.036$, $p < .851$). Topa and Morales (2007) refers to a negative relationship ($r = -.35$) between lack of professional efficiency and groupal identification, concluding that individuals who identify with their own group obtain lower levels of burnout and that social support curbs the relationships between identification with a group and the emotional exhaustion dimension.

Sources of social support such as relatives, children, spouses, partners, friends, neighbors, co-workers, supervisors and directors are highly relevant to the bio-psycho-social integration of the individual into a whole.

Considering that in this study of social networks, both work-related networks and non-work, or family-related networks, were found to be "good or large" in terms of frequency of contact and level of satisfaction, and yet associations were found between those measures of social support and the development of Burnout Syndrome in almost all its dimensions (with the exception of the subjective aspects of the non-work, family-related, network with lack of occupational fulfillment), it must be that those social networks are still insufficient.

From that point, we may deduce that the perception that a traffic police officer has of his or her support system is inadequate, that Burnout Syndrome is present and possible repercussions may manifest themselves on one's health. Unfortunately, the health variable was not identified in the present study.

It has been said that without support, sickness is able to insinuate itself. Then, what may we expect of the attention that traffic police provide to the public? What might be their attitudes in critical moments? Do they awake in the mornings motivated to go to work? Do they feel that their job is a heavy burden? Are they in optimal health conditions to be on their feet for hours on end at work, exposing themselves to smog, to the sun's rays, etc.? Do we truly realize whether or not we have the support of family, or whether we have support at work? We invite the reader to reflect upon these questions.

Burnout Syndrome presents itself both gradually and chronically, and brings with it health repercussions to those who suffer from it. Unfortunately, it has not been paid the attention and concern it warrants. In many countries, its very existence remains unknown and in some of the countries where it is known of, it is still not recognized as a work-related illness. Also a lot has been written about burnout and preventive strategies and/or guided solutions for each of its dimensions, and in a general manner, but, in spite of the studies that are being carried out even now demonstrate that Burnout Syndrome is present and that its rates of prevalence are worrisome and when on top of this a poor and inadequate social support system is at work, the consequences on one's health may be grave.

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