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Burnout syndrome and common mental disorders among community-based health agents

ABSTRACT

OBJECTIVE: To estimate the prevalence of the burnout syndrome and of common mental disorders among community-based health agents, also identifying associated factors.

METHODS: A cross-sectional survey was carried out in 2006 with 141 community-based health agents who had been working for at least six months in primary care units in the city of São Paulo (Southeastern Brazil). The participants answered three questionnaires: one about sociodemographic, health- and work-related characteristics, the Self Reporting Questionnaire, and the Maslach Burnout Inventory, which allows the assessment of three dimensions of the burnout syndrome: emotional exhaustion, depersonalization and reduced personal accomplishment. Multivariate logistic regression was used to examine associations between variables.

RESULTS: Overall, 24.1% of the interviewees presented burnout syndrome. Moderate or high levels of emotional exhaustion, depersonalization and reduced personal accomplishment were observed in 70.9%, 34.0% and 47.5% of the participants, respectively. The prevalence of common mental disorders was 43.3%. Positive correlations between the three dimensions of burnout, were observed. Presence of common mental disorder was independently associated with higher levels of emotional exhaustion and reduced personal accomplishment.

CONCLUSIONS: The high frequency of intense levels of burnout and the high prevalence of common mental disorders among community-based health agents point to the need of intervention strategies in these individuals' daily lives and of further studies to better understand the actual picture and the determinants of burnout.

DESCRIPTORS: Health Personnel. Burnout, Professional, epidemiology. Mental Disorders, epidemiology. Risk Factors. Occupational Health. Cross-Sectional Studies.

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INTRODUCTION

In June 1991, Brazil's Ministry of Health created the *Programa de Agentes Comunitários de Saúde* (Community-Based Health Agents Program), which was expanded in 1994 into the *Programa Saúde da Família* (PSF – Family Health Program), as a strategy to promote the reorganization of primary care actions in the municipal systems. The *equipes de saúde da família* (ESF – family health teams) are composed of one doctor, one nurse, one or two nursing assistants or technicians and four to six *agentes comunitários de saúde* (ACS

– community-based health agents).[a] In 2006, the number of ESF reached 26,729, covering 85.7 million people, with investments above R$ 3.2 billion.[a] This shows the importance of the PSF to the country, mainly because it is a source of jobs for thousands of health professionals who work full-time.

The ACS act as the link between the team and the community, being a bridge between scientific knowledge and popular knowledge. The ACS deal with contradictions, as they experience the reality and health practices of the neighborhoods in which they live and work and because they are educated based on biomedical references.[14] Nowadays, the ACS are responsible for the care provided for 109.7 million people in Brazil.[a]

The burnout syndrome and common mental disorders (CMD) have been increasingly identified and researched among health professionals.[17] They are frequently associated with incapacitation and high social, economic and individual cost, absenteeism, decrease in productivity, high turnover, increasing demand for health services, and abusive use of tranquilizers, alcohol and other drugs.[6,12] In the literature, factors associated with burnout include age, marital status, how long the individual has been working as a health professional, work overload, interpersonal conflicts, conflicts between workers and their clientele, lack of social support, of autonomy and of participation in decision-making processes.[4,11] The health professionals are among the most affected[17] because they generally have a humanistic work philosophy and face a dehumanized health system. The relationship between burnout and CMD has been studied by many authors, who consider that the syndrome is an important risk factor for psychiatric morbidity.[7,13]

There are still few studies on the health conditions of PSF workers, especially the ACS, the most recent professional category of the health team. Besides, these professionals are subject to a particular labor dynamics of living and working in the same community, which can generate additional pressure and overload. The present study aimed to estimate the prevalence of the burnout syndrome and of common mental disorders among ACS, and to identify associated factors.

METHODS

This is a cross-sectional study whose target population included the ACS of six *unidades básicas de saúde* (UBS – primary care units) in a region of the city of São Paulo (Southeastern Brazil), in 2006. This corresponds to 40% of the region's units that have PSF teams. The UBS located in the neighborhoods Butantã, Lapa and Pinheiros were selected due to easy access and

because they are connected with an institution that has a partnership with the *Secretaria Municipal de Saúde* (Municipal Health Department). All the agents who had been working for at least six months in the UBS in June 2006 were considered eligible. Among 143 eligible individuals, there were two refusals (1.4%).

The studied areas had heterogeneous characteristics concerning socioeconomic indicators, such as the aging index (Lapa: 67.0; Pinheiros: 110.9; Butantã: 26.2) and the human development index (HDI). Regarding the six studied UBS, five are located in the districts of Butantã and Lapa, whose HDI range from 0.52 to 0.81 and from 0.52 to 0.78, respectively; Pinheiros has higher levels (0.68 to 0.84). However, those five units are located in the neighborhoods that have the lowest HDI of the region, between 0.52 and 0.62, below the municipal index (0.841). Another difference is in the map of social exclusion/inclusion: the neighborhoods Jaguaré and Raposo Tavares, where four studied UBS are located, have higher social exclusion rates when compared to Pinheiros and Lapa.[b]

The following questionnaires were used:

1. A questionnaire about sociodemographic data, socioeconomic data and issues related to the interviewee's work and health: age; sex; marital status; schooling; monthly family income; religion; how many people live with the ACS; how many rooms the domicile has; how long he/she has lived in the area and worked as ACS; if he/she attended a qualification course and when, after he/she began working as ACS; if he/she was absent from work in the 30 days before the interview and why; if he/she has enrolled population living in shanty towns, slums or invaded areas (risk micro-area); if he/she uses sedatives, tranquilizers or antidepressants; if, in the interviewee's opinion, there is any additional aspect related to burnout and what it is.

2. Maslach Burnout Inventory (MBI): developed by Maslach & Jackson[11] (1981), it is used to identify the professional's level of burnout. This instrument approaches three dimensions: emotional exhaustion, depersonalization and reduced personal accomplishment (disappointment). The answers are the frequency with which the interviewee perceives or experiences the feeling or attitude: never (0), few times a year (1), no more than once a month (2), few times a month (3), once a week (4), few times a week (5) and daily (6). Total scores are calculated for each one of the three dimensions and cut-off points are used to classify into high, medium and low levels. The combination of the obtained levels of exhaustion, depersonalization and disappointment defines

the burnout degree. Thus, high degree of burnout corresponds to high scores obtained simultaneously in the three dimensions; moderate degree reflects moderate levels; and low degree indicates the obtention of low scores in the three aspects. In Brazil, the MBI has been validated by Carvalho[a] (1995) in a study with teachers of primary and secondary government-run schools and by Tamayo[b] (1997), who studied nurses and nursing assistants.

3. Self Reporting Questionnaire (SRQ-20): developed by the World Health Organization to be used in studies in developing countries,[19] it identifies possible CMD cases in primary care services and in the community. The questionnaire contains 20 yes/no questions about emotional and physical symptoms associated with psychiatric manifestations. To each question, the value 1 is attributed when the symptom is present and zero when it is absent, and the reference is the month before the interview. The questionnaires were administered by an interviewer. The SRQ has been validated in international and national studies with sensitivity ranging from 62.9% to 90%, and specificity ranging from 44% to 95%. In a study conducted in Brazil, Mari & Willians[9] (1986) established the 7/8 cut-off point as the one that offered the best sensitivity and specificity values; respectively, 83% and 80%.

The questionnaires were administered after having been previously scheduled with the community-based health agents of each UBS, at places that guaranteed the participant's privacy. The average duration of the interviews was 23 minutes.

Besides these questionnaires, information was obtained in the *Sistema de Informação da Atenção Básica* (Primary Care Information System), to characterize the areas where the ACS worked: number of people enrolled in the micro-area, population up to 14 years of age, destination of garbage and sewage.

For the statistical analysis, the software Stata 8.0 was used. Initially, a descriptive analysis of the distributions was carried out, as well as the verification of data consistency and the categorization of continuous or discrete variables. Logistic regression was applied to bivariate and multivariable analyses to obtain estimates of association of sociodemographic, socioeconomic, work-related and health-related variables with burnout dimensions and with CMD, and of associations of the variables emotional exhaustion, depersonalization and disappointment with CMD. Odds ratios (OR) were calculated with respective confidence intervals of 95% (95% CI). Statistical significance was examined with likelihood ratio tests. The criterion for inclusion of explanatory variables in the multivariable model was a p-value ≤0.20 obtained in the bivariate analysis. The explanatory variables with values p≤0.05 were maintained in the multivariable models. Four logistic regression models were generated: emotional exhaustion (0: low – 1: moderate and high), depersonalization (0: low – 1: moderate and high), disappointment (0: low – 1: moderate and high) and CMD (0: non-case – 1: case). Some interactions between explanatory variables were tested.

The research was approved by the Ethics Committee of the *Faculdade de Medicina* of *Universidade de São Paulo* and by the Ethics Committee of the Municipal Health Department of São Paulo. All the subjects who participated in the study signed an informed consent. The authorization to use the MBI was acquired in the company that represents the authors in Brazil.

RESULTS

The average age of the participants was 38.9 years (SD=11.4). The predominance was: age group 31 to 40 years (33.3%), women (92.2%), complete primary or secondary education (73%), stable union (55.4%), Catholic religion (51.1%), and white skin color (41.1%) (Table 1). The majority of participants lived with three or more people, and the most frequent household crowding (number of people per room) was 0.76 to 1.00. Average monthly family income was R$ 1,672.43 (SD=1,340.15).

The participants had been working as ACS for an average period of time of 40.9 months, and 92.9% stated that they had attended a qualification course (Table 2). The average number of people enrolled per micro-area was 517, with proportions of individuals up to 14 years old ranging between 9.9% and 41.6%. The coverage of families by private medical care systems ranged from zero to 57%, with average of 21.9%. Approximately 37% of the interviewees followed up people who lived in shanty towns, slums or invaded areas, which characterized risk micro-areas. Public garbage collection occurred for 83.2% of the enrolled families, and for 36.9%, sewage was deposited in pits or left on the ground.

The existence of aspects related to the burnout syndrome was mentioned by 84.4% of the participants, mainly in the relationship with the community (33.6%) and with the PSF and UBS team (37.6%). A total of 27.8% of the participants were absent from work due to the following reasons: illness (41%), ill relative (30.8%), medical visit (17.9%) and others (10.3%).

[a] Carvalho MMB. O professor - um profissional, sua saúde e a educação em saúde na escola [doctoral thesis]. São Paulo: Faculdade de Saúde Pública da USP; 1995.
[b] Tamayo MR. Relação entre a síndrome do burnout e os valores organizacionais no pessoal de enfermagem de dois hospitais públicos. [master's dissertation]. Brasília: Universidade de Brasília; 1997.

Table 1. Bivariate analysis of sociodemographic and socioeconomic characteristics of community-based health agents with aspects of burnout and common mental disorder. São Paulo, Southeastern Brazil, 2006. N=141

| Variable | n (%) | Burnout aspects | | | | | | Case SRQ-20 | |
| | | Exhaustion | | Depersonalization | | Disappointment | | | |
		OR (95% CI)	p	OR (95% CI)	p	OR (95% CI)	p	OR (95% CI)	p
Sex									
Male	11 (7.8)	1		1		1		1	
Female	130 (92.2)	2.18 (0.63;7.58)	0.22	0.26 (0.07;0.95)	0.04	2.59 (0.66;10.18)	0.17	8.57 (1.07;68.91)	
Age group (years)									
≤30	35 (28.8)	1		1		1		1	
31 to 40	47 (33.3)	0.40 (0.14;1.16)	0.09	0.43 (0.18;1.07)	0.07	0.08 (0.33;1.96)	0.62	0.61 (0.25;1.46)	0.26
41 to 50	34 (24.1)	0.43 (0.14;1.35)	0.15	0.35 (0.13;0.95)	0.04	0.37 (0.14;0.97)	0.04	0.36 (0.13;0.96)	0.04
Over 50	25 (17.7)	0.44 (0.13;1.48)	0.18	0.11 (0.03;0.46)	<0.001	0.15 (0.04;0.49)	0.002	0.42 (0.15;1.21	0.11
Skin color									
White	58 (41.1)	1		1		1		1	
Mulatto	49 (34.8)	1.05 (0.45;2.48)	0.9	1.21 (0.55;2.64)	0.63	1.48 (0.69;3.17)	0.34	0.67 (0.31;1.45)	0.3
Black	23 (16.3)	0.17 (0.25;2.01)	0.52	2.86 (1.05;7.79)	0.04	1.55 (0.59;4.08)	0.38	1.25 (0.48;3.29)	0.65
Other	11 (7.8)	0.67 (0.17;2.59)	0.56	0.58 (0.11;3.0)	0.52	1.70 (0.46;6.22)	0.42	0.66 (0.17;2.49)	0.53
Marital status									
Married/partner	78 (55.4)	1		1		1		1	
Single	41 (29.1)	1.21 (0.52;2.81)	0.65	1.21 (0.55;2.64)	0.63	0.91 (0.43;1.94)	0.80	0.92 (0.43;1.97)	0.82
Widow(er)/ separated	22 (15.6)	1.19 (0.41;3.40)	0.75	0.56 (0.18;1.67)	0.29	0.88 (0.34;2.27)	0.79	1.08 (0.42;2.79)	0.87
Religion									
Catholic	72 (51.1)	1		1		1		1	
Evangelical	37 (26.2)	0.80 (0.34;1.89)	0.61	1.66 (0.72;3.80)	0.23	2.17 (0.96;4.89)	0.06	1.98 (0.89;4.45)	0.09
Other	32 (22.7)	0.98 (0.39;2.48)	0.97	1.46 (0.61;3.51)	0.4	0.90 (0.39;2.11)	0.82	2.13 (0.91;4.97)	0.08
Schooling									
Primary/ Secondary education	103 (73.0)	1		1		1		1	
Other (technical course)	20 (14.2)	0.84 (0.31;2.30)	0.73	0.96 (0.35;2.62)	0.94	0.68 (0.26;1.80)	0.44	0.47 (0.17;1.33)	0.15
Incomplete or complete higher education	18 (12.7)	3.61 (0.78;16.62)	0.1	0.51 (0.16;1.66)	0.26	0.82 (0.30;2.23)	0.69	0.55 (0.19;1.58)	0.27
Family income (minimum salaries)									
<4	58 (41.1)	1		1		1		1	
4 to 5	40 (28.4)	0.54 (0.22;1.31)	0.17	0.33 (0.14;0.82)	0.02	0.52 (0.23;1.19)	0.12	0.58 (0.26;1.31)	0.19
6 to 7	14 (9.9)	1.06 (0.26;4.37)	0.94	0.64 (0.19;2.14)	0.46	0.65 (0.20;2.12)	0.48	0.48 (0.14;1.62)	0.24
> 7	29 (20.6)	0.47 (0.18;1.25)	0.13	0.37 (0.14;0.99)	0.04	0.93 (0.38;2.38)	0.88	0.39 (0.15;1.00)	0.05
People living with the individual									
≤1	32 (22.6)	1		1		1		1	
2	20 (14.2)	1.36 (0.39;4.80)	0.63	1.47 (0.46;4.71)	0.52	0.55 (0.17;1.80)	0.32	0.48 (0.15;1.50)	0.2
3	40 (28.4)	1.20 (0.43;3.32)	0.73	0.94 (0.34;2.58)	0.91	1.42 (0.56;3.62)	0.46	0.59 (0.23;1.50)	0.27
4	35 (24.8)	0.87 (0.31;2.42)	0.79	1.47 (0.54;4.02)	0.45	1.71 (0.65;4.51)	0.27	0.93 (0.36;2.44)	0.9
More than 4	14 (10.0)	1.67 (0.38;7.32)	0.5	0.88 (0.22;3.50)	0.85	0.96 (0.27;3.43)	0.95	0.24 (0.06;1.03)	0.05
Household crowding									
≤0.75	50 (35.4)	1		1		1		1	
0.76-1.00	52 (36.8)	1.16 (0.49;2.75)	0.73	2.40 (1.01;5.73)	0.05	2.24 (1.01;4.97)	0.04	1.19 (0.54;2.61)	0.66
≥1.01	39 (27.6)	0.96 (0.39;2.40)	0.94	2.47 (0.98;6.22)	0.056	1.87 (0.80;4.39)	0.15	1.29 (0.55;3.0)	0.56

Current use of medication such as sedatives, tranquilizers or antidepressants was reported by 17% of the interviewees, with predominance of antidepressants.

Moderate or high levels of emotional exhaustion (70.9%), depersonalization (34%) and disappointment (47.5%) were observed. According to the MBI criteria, 24.1% of the interviewees presented burnout syndrome.

In the bivariate analysis, no statistically significant associations were observed between the sociodemographic variables or work-related aspects and moderate or high emotional exhaustion (Tables 1 and 2). The risk for presenting moderate or high depersonalization was lower in women, in subjects aged 41 years or more, in those with monthly family income between four and five and above seven minimum salaries, in those who lived in domiciles with four or more rooms, and among the interviewees who worked in micro-areas with 20% or more users of private medical care systems. The subjects who presented the highest chances of having depersonalization were the ACS who referred themselves as black-skinned, those who lived in homes with household crowding from 0.76 to 1.0, those who were absent from work once in the 30 days before the interview, and those in whose micro-area the garbage was burnt or left on the ground (Tables 1 and 2). The risk for moderate or high disappointment was inversely associated with age group. On the other hand, the risk was higher for subjects who lived in domiciles with household crowding from 0.76 to 1.0, who were absent from work twice or more times in the 30 days before the interview, who worked in risk micro-areas, with population up to 14 years of age over 20% (Tables 1 and 2).

The three burnout dimensions proved to be associated. Moderate or high disappointment was an independent predictor of emotional exhaustion in moderate or high levels (adjusted OR=3.06; 95% CI[1.19;25.5]; p=0.02). Likewise, the individual with moderate/high exhaustion had higher chance of having moderate or high depersonalization (adjusted OR =3.18; 95% CI[1.22;8.3]; p=0.01) and moderate or high disappointment (adjusted OR =3.92; 95% CI[1.4;11.0]; p=0.009).

The prevalence of CMD cases found in the studied population was 43.3% (95% CI[35.0; 51.5]). The risk for CMD was higher among women, in interviewees working in risk micro-areas and in those who were absent from work twice or more times in the previous month. Individuals aged 41 to 50 years and whose monthly family income was higher than seven minimum salaries presented lower chance of having CMD (Tables 1 and 2).

The proportion of participants classified as CMD cases with high levels of emotional exhaustion (78.7%), depersonalization (19.7%) and disappointment (42.6%) was higher than that of non-cases (20%, 2.5% and 7.5%, respectively). The associations were statistically significant: moderate/high emotional exhaustion (OR=12.26; 95% CI[4.06;37.02]; p<0.001), moderate/high depersonalization (OR=2.55; 95% CI[1.25;5.20]; p=0.01) and moderate/high disappointment (OR=7.41; 95% CI[3.49;15.74]; p<0.001). Multivariable logistic regression identified moderate and high emotional exhaustion (adjusted OR =7.75, 95% CI[2.43;24.71]; p=0.001) and moderate and high disappointment (adjusted OR =4.63; 95% CI[2.05;10.5]; p<0.001), adjusted for risk micro-areas, as independent predictors for CMD (Table 3). Interactions between explanatory variables were not observed.

DISCUSSION

In the present study, there were found high proportions of ACS with moderate or high levels of emotional exhaustion, depersonalization and disappointment, as well as high frequency of probable CMD cases. The three burnout dimensions proved to be strongly associated among each other and independently associated with the likelihood of being a probable CMD case.

It is possible that some ACS who presented burnout syndrome and/or CMD did not participate in the study because they were on leave or had changed their profession, which may have led to an underestimation. The capacity for results generalization and the study's statistical power are limited due to the small number of investigated subjects (141), who are from one single region of the city of São Paulo and hired by the same foundation. In addition, the sample was constituted predominantly by women (92.2%); therefore, it is not possible to make many inferences regarding the male sex. Concerning the calibration bias, it is possible that some ACS suffering from depression were feeling well at the moment of the interview and were not considered CMD cases. Besides, the SRQ-20 does not provide formal diagnoses; it only reveals suspect cases.[19] Thus, the association between burnout syndrome and common mental disorder may also have been underestimated. Finally, the cross-sectional design of the present study does not allow us to establish a temporal relationship between burnout syndrome and CMD.

The prevalence of the burnout syndrome in the present study (24.1%) was higher than the one found in Brazilian oncologists (7.8%)[5] and in nursing workers (16.2%) assessed by Tamayo,[a] but below the average described for health professionals in other countries (33.8%).[8,17]

[a] Tamayo MR. Relação entre a síndrome do burnout e os valores organizacionais no pessoal de enfermagem de dois hospitais públicos. [Master's thesis]. Brasília: Universidade de Brasília; 1997.

Table 2. Bivariate analysis of work-related characteristics of community-based health agents with aspects of burnout and common mental disorder. São Paulo, Southeastern Brazil, 2006. N=141

Variable	n (%)	Burnout aspects						Case SRQ-20	
		Exhaustion		Depersonalization		Disappointment			
		OR (95% CI)	p	OR (95% CI)	p	OR (95% CI)	p	OR (95% CI)	p
Period of time in the job									
≤42 months	72 (51.1)	1		1		1		1	
>42 months	69 (48.9)	1.76 (0.84;3.69)	0.13	1.56 (0.77;3.15)	0.21	1.02 (0.53;1.98)	0.94	1.14 (0.59;2.22)	0.69
Enrolled people									
≤530	72 (51.1)	1		1		1		1	
>530	69 (48.9)	1.53 (0.73;3.19)	0.26	1.01 (0.46;2.21)	0.98	0.91 (0.47;1.77)	0.79	0.81 (0.41;1.57)	0.53
Risk micro-area									
No	89 (63.1)	1		1		1		1	
Yes	52 (36.9)	1.9 (0.85;4.21)	0.11	1.56 (0.76;3.18)	0.22	2.47 (1.22;4.98)	0.01	2.9 (1.43;5.89)	<0.001
Period of time when qualification started (months)									
1 month	111 (84.7)	1		1		1		1	
Two or more	20 (15.3)	0.86 (0.30;2.46)	0.78	0.76 (0.27;2.13)	0.6	0.83 (0.32;2.17)	0.71	0.93 (0.36;2.42)	0.88
Absences from work (in the 30 days before the interview)									
No absence	102 (72.3)	1		1		1		1	
One absence	22 (15.6)	0.76 (0.29;2.01)	0.58	3.02 (1.18;7.76)	0.02	1.06 (0.42;2.66)	0.91	1.68 (0.67;4.26)	0.27
Two or more absences	17 (12.1)	3.27 (0.71;15.19)	0.13	1.76 (0.62;5.07)	0.29	3.04 (1.00;9.26)	0.05	4.04 (1.32;12.3)	0.01
Additional burnout aspect									
No	22 (15.6)	1		1		1		1	
Yes	119 (84.4)	2.37 (0.93;6.02)	0.07	1.45 (0.53;4.00)	0.47	1.72 (0.67;4.41)	0.26	1.78 (0.68;4.68)	0.24
Population below 14 years of age									
≤20%	67 (47.5)	1		1		1		1	
>20%	74 (52.5)	0.81 (0.39;1.69)	0.58	1.63 (0.08;3.30)	0.18	2.81 (1.41;5.57)	<0.001	1.42 (0.72;2.77)	0.31
Destination of garbage									
Public collection	116 (82.3)	1		1		1		1	
Burnt or left on the ground	25 (17.7)	1.37 (0.50;3.72)	0.54	3.07 (1.27;7.44)	0.01	1.51 (0.63;3.61)	0.35	1.26 (0.53;3.00)	0.6
Destination of sewage									
Public network	89 (63.1)	1		1		1		1	
Pit or left on the ground	52 (36.9)	1.18 (0.55;2.53)	0.67	1.78 (0.87;3.63)	0.11	1.17 (0.59;2.32)	0.65	1.75 (0.87;3.49)	0.11
People with private medical care systems									
≤20%	67 (47.5)	1		1		1		1	
>20%	74 (52.5)	0.94 (0.45;1.94)	0.86	0.45 (0.22;0.92)	0.03	0.78 (0.40;1.52)	0.46	0.89 (0.46;1.73)	0.73

Emotional exhaustion is considered a central factor of the burnout syndrome, characterized by emotional distress and a sensation of lack of energy, showing inverse association with work performance. Emotional exhaustion is generally associated with excessive demands and personal conflicts, predominating in single and divorced individuals and people with higher schooling. [12,20]

Depersonalization refers to lack of motivation, anxiety, irritability and reduced idealism, making the individual

Table 3. Gross and adjusted odds ratio for common mental disorder, according to the variables that remained in the multivariable logistic regression models. São Paulo, Southeastern Brazil, 2006. N=141

Variable	Gross OR	Adjusted OR	95% CI	p
Emotional exhaustion (ref: Low)				
Moderate and high	12.26	7.75	2.43;24.71	<0.001
Disappointment (ref: Low)				
Moderate and high	7.41	4.63	2.05;10.50	<0.001
Risk micro-area (ref: No) *				
Yes	2.90	2.20	0.95;5.09	0.06

* Confounding variable

treat clients and colleagues as objects and deservers of the problems they have. Psychological distancing occurs as a defensive strategy of confrontation, developed to deal with emotional exhaustion.[13] Youths and people with higher schooling are more susceptible.[11] The results showed that being older was associated with lower risk for depersonalization, but there was no association with level of schooling. Among the three burnout dimensions, depersonalization was the least observed in the ACS. A similar finding was described in other studies that assessed health workers.[1,7] One of the characteristics that predicted higher chance of presenting moderate or high depersonalization, besides the presence of emotional exhaustion, was working in a community in which more than 20% of the enrolled families had their garbage burnt or left on the ground. This leads to the hypothesis that working with a population that has precarious socioeconomic conditions is associated with the elaboration of coping mechanisms that may culminate in depersonalization.

The third aspect of the burnout syndrome, disappointment, is related to the feeling of incompetence and inadequacy, negative self-evaluation, decrease in productivity and lack of fulfillment at work. It can be aggravated by lack of social support and of opportunities for personal development.[13] Almost half of the sample (47.5%) presented moderate or high disappointment levels. The significantly associated variables were emotional exhaustion and CMD.

In the literature, the prevalence of CMD varies between 7% and 30%[7] and Brazilian studies describe rates between 22.7% and 35%,[2,8] below the one found in the present study (43.3%). The association found between psychiatric morbidity and burnout syndrome is reported by many authors[5,7,13] and the meaning of this association has been recently discussed. It is thought that burnout may not be a precursor of CMD, but an alternative form of manifesting emotional distress.[13] The proportion of interviewees that stated they regularly use antidepressants (17%) was higher than in the population of the city of São Paulo (10%)[10] and of Pelotas (9.9%).[16] However, there was no association between use of this medication, burnout syndrome and CMD, perhaps because the subjects that used antidepressants were already presenting less psychiatric symptoms and lower burnout levels.

To some authors, interpersonal conflicts at the workplace are greater stressors than the relationship with clients.[15] In the present research, for the majority of the participants (84.4%), the relationship with the team (37.6%) and the relationship with the community (33.6%) were aspects related to burnout syndrome. The labor dynamics of the ACS has particular characteristics, as these workers experience the reality of the neighborhood where they live and work, but their qualification occurs based on biomedical references, which transforms them into bearers of many contradictions. The access of clients/neighbors to the ACS frequently occurs outside working hours and at any place in the neighborhood. Another question is how these workers cope with complex situations, such as family dynamics of difficult intervention, violence, drug traffic, often without an instituted social network and without the necessary interdisciplinary team. These conditions are connected with the fact that the identity of the ACS is still under construction,[18] and there may be insecurity or indecision regarding the real role of the ACS in the community and in the team. Role ambiguity, the relationship between the worker and his/her clientele, and mainly the emotional demand contribute to the burnout syndrome.[4,13] In a reality that is part of the daily lives of the PSF workers, particularly the ACS, in which the client feels pain, anguish or anger,[3] can lead to work overload, dissatisfaction, feelings of inadequacy and incompetence and the development of burnout and CMD.

The results of the present study show that there is urgent need for new research studies, with larger and more representative samples and involving the other professionals of the PSF teams. Studies with longitudinal design, starting at the moment that workers join the profession, investigation of work overload and events that produce stress, evaluation of the reasons for leaves and turnover, should also contribute to a better understanding of the causal factors. Thus, they would imply the elaboration of organizational and individual strategies of intervention, such as training, qualification and supervision of PSF professionals, so as to minimize the damages to their health and to improve the quality of life at the workplace, reflecting on the quality of the services provided for the population.

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