Burnout levels among Portuguese family doctors: a nationwide survey

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ABSTRACT

Aim: To characterise the prevalence of burnout syndrome in a sample of family doctors (FDs) working in the Portuguese National Health System.

Design: Cross-sectional survey.

Setting: Primary healthcare centres from the 18 continental districts and two archipelagos of Portugal.

Method: The Portuguese version of the Maslach Burnout Inventory—Human Services Survey was sent to 40 randomly selected healthcare centres and distributed to the FDs employed. Socio-demographic and work-related data were also collected. Participants were classified as having high, average or low levels of emotional exhaustion (EE), depersonalisation (DP) and personal accomplishment (PA) dimensions of burnout.

Results: 371 questionnaires were sent, of which 153 (83 women, age range 29–64 years; response rate 41%) returned. One-quarter (25.3%, 95% CI 18.6% to 33.1%) of FDs scored high for EE, 16.2% (10.7% to 23.2%) for DP and 16.7% (11.1% to 23.6%) for lack of PA. On multivariate analysis, being married, of older age, having many years of practice or working in a personalised healthcare unit tended to be associated with increased burnout components. Men tended to present higher EE and DP but lower lack of PA than women. Finally, the prevalence (95% CI) of burnout ranged between 4.1% (1.5% to 8.6%) and 32.4% (25.0% to 40.6%), depending on the definition used.

Conclusions: High burnout is relatively common among Portuguese FDs. Burnout relief measures should be developed in order to prevent a further increase of burnout syndrome among Portuguese FDs.

INTRODUCTION

In the last 3 decades, burnout syndrome increased to worrisome levels in doctors, including family doctors (FDs). Despite the presence of burnout, most FDs usually do not seek help, which might lead to a decrease in their performance and even compromise adequate treatment of patients.

Burnout is consequent to job-related chronic stress and is characterised by a symptomatic triad of emotional exhaustion (EE) (feelings of tiredness and emptiness), depersonalisation (DP) (empathy disappear-

ARTICLE SUMMARY

Article focus

In the last 3 decades, burnout syndrome increased to worrisome levels in doctors, including FDs, and there are scarce data concerning this condition in Portuguese FDs.

Key messages

- The prevalence (95% CI) of burnout ranged between 4.1% (1.5% to 8.6%) and 32.4% (25.0% to 40.6%), depending on the definition used.

Strengths and limitations of this study

- First study assessing burnout among Portuguese FDs using a stratified random sample. The limitations of the study include the relatively low participation rate (but comparable to other similar studies) and the fact that the Portuguese version of the Maslach Burnout Inventory—Human Services Survey questionnaire has not been validated. Still, Cronbach’s α values ranged between 0.64 (for DP) and 0.90 (for EE), in agreement with the literature.

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Burnout in Portuguese family doctors

Burnout

Burnout was assessed using the Portuguese translation of the Maslach Burnout Inventory—Human Services Survey (MBI-HSS). Answers to the MBI-HSS were used to classify the participants as having high, average or low levels in EE, DP and PA dimensions of burnout. In agreement with a previous study, the following cut-offs were used to define low, average or high levels of each dimension of the MBI-HSS: EE: low, ≤13; average, 14–26; high, ≥27. DP: low, ≤5; average, 6–9; high, ≥10; PA: low, ≤33; average, 32–39; high, ≥40 (inverse scale). As the definition of burnout is a controversial subject, we applied different definitions as described in the literature: (1) high levels of EE and DP combined with low PA (C Maslach, personal communication, 2008); (2) high EE and/or high DP (3) high negative score on EE in combination with high DP or low PA. As to missing data, for each skipped MBI-HSS item, it was attributed the mean score calculated for that question’s dimension. Two skipped questions were coded as one skipped question and replaced by the average of that dimension. Two answers for the same item were coded as one skipped question and replaced by the average of that dimension.

Data regarding socio-demographic and work-related questions were also collected.

Statistical analysis

Statistical analysis was performed using SPSS V.19.0 (IBM SPSS statistics). Results were expressed as median (interquartile interval), mean±SD or number of subjects (percentage). Bivariate comparisons were performed using Mann–Whitney or Kruskal–Wallis non-parametric tests for quantitative data and by χ² for qualitative data. Multivariate analysis was conducted using SPSS complex samples logistic regression analysis stratifying samples by district/archipelago and including as main effects all variables which reached an α level of at least 0.25. Conversely, we did not take into account the clustering as for many health centres the number of participants was very low (<3). Results were considered significant if p<0.05.

RESULTS

Overall, 371 questionnaires were sent, of which 153 (response rate 41%) were retrieved. From these, only 150 were considered valid for the analysis. No information could be obtained regarding the socio-demographic characteristics of non-responders.

The main results are summarised in table 1 and 2. Men were older and had more years of professional activity than women. Overall, 25.3% (95% CI 18.6% to 33.1%) of participants scored high for EE, 16.2% (10.7% to 23.2%) for DP and 16.7% (11.1% to 23.6%) for low PA; 2.0% scored high for all three dimensions. Men had higher DP and PA scores than women, while no differences were found for EE (table 1).

No significant bivariate association was found between burnout components and most participants’ characteristics (table 2), with the exception of marital status, and

| Variables                        | All        | Men        | Women      | Test     |
|----------------------------------|------------|------------|------------|----------|
| Age                              | 54.5 (9.0) | 55.0 (5.0) | 53.0 (13.0)| 1813.0***|
| Years of professional activity   | 29.0 (10.3)| 30.0 (4.0) | 28.0 (5.0) | 2103.0*  |
| Hours of work per week           | 42.0 (3.0) | 42.0 (3.4) | 42.0 (2.0) | 2744.0**s|
| Hours of contact with patients per day | 7.0 (1.5) | 7.0 (1.6) | 7.0 (1.6) | 2201.0**s|
| Emotional exhaustion score       | 16.0 (19.0)| 17.0 (22.0)| 14.5 (16.3)| 2584.5**s|
| Depersonalisation score          | 4.0 (5.0)  | 6.0 (6.8)  | 3.0 (5.8)  | 2078.0*  |
| Personal accomplishment score    | 41.0 (8.0) | 42.5 (8.0) | 40.0 (8.0) | 2206.0*  |

*p<0.05. **p<0.001.

Results are expressed as median (interquartile interval) or number (percentage) of the total subjects. Comparisons performed with Mann–Whitney non-parametric test for quantitative data and by χ² for qualitative data. ns, not significant.
similar findings were obtained when mean scores were computed, although men presented higher DP and PA scores than women (supplementary table 1).

The number of participants with low, average and high burnout scores in none, one, two or three subscales is summarised in table 3 and in figure 1. The prevalence (95% CI) of burnout among Portuguese FDs was 4.1% (1.5% to 8.6%) for definition 1, 32.4% (25.0% to 40.6%) for definition 2 and 13.5% (8.5% to 20.1%) for definition 3.

Multivariate logistic regression was conducted separately for each burnout component taking into account stratification and including all variables, which were associated at p<0.025. The results are summarised in table 4. Men showed a lower likelihood of presenting with low PA. Conversely, no other variable was significantly associated with burnout components, although positive (deleterious) trends were found for male sex (high EE and DP), being married (high EE and DP), older age (high PA), increased years of activity (high DP and low PA) and working in a PHCU (high EE and low PA). Similar findings were obtained when the analysis was conducted without taking into account sample stratification (supplementary table 2).

Table 2 Prevalence of burnout components according to selected participants’ characteristics

|                | Emotional exhaustion Test (p value) | Depersonalisation Test (p value) | Personal accomplishment Test (p value) |
|----------------|------------------------------------|----------------------------------|---------------------------------------|
| Gender         |                                    |                                  |                                       |
| Man            | 30.9 (20.2 to 43.3) 2.03 (0.16)     | 22.1 (12.9 to 33.8) 3.16 (0.08)   | 11.8 (5.2 to 21.9) 2.15 (0.14)        |
| Woman          | 20.7 (12.6 to 31.1)                | 11.3 (5.3 to 20.3)               | 20.7 (12.6 to 31.1)                   |
| Age (years)    |                                    |                                  |                                       |
| ≤45            | 22.6 (9.6 to 41.1) 0.14 (0.71)      | 9.7 (2.0 to 25.8) 1.13 (0.29)     | 6.5 (0.1 to 21.4) 2.52 (0.11)         |
| >45            | 25.9 (18.2 to 34.8)                | 17.5 (11.1 to 25.8)              | 18.1 (11.6 to 26.3)                   |
| Children       |                                    |                                  |                                       |
| Yes            | 13.3 (1.7 to 40.5) 1.27 (0.26)      | 6.7 (0.2 to 31.9) 0.47§          | 26.7 (7.8 to 55.1) 0.28§              |
| No             | 26.7 (19.4 to 35.0)                | 17.3 (11.3 to 24.8)              | 15.6 (9.9 to 22.8)                    |
| Marital status |                                    |                                  |                                       |
| Single/divorced| 11.8 (3.3 to 27.5) 4.12 (0.04)      | 6.1 (0.1 to 20.2) 3.02 (0.08)     | 17.6 (6.8 to 34.5) 0.02 (0.89)        |
| Married/union  | 28.9 (20.8 to 38.2)                | 18.6 (11.9 to 27.0)              | 16.7 (10.3 to 24.8)                   |
| Practice years |                                    |                                  |                                       |
| ≤20            | 19.4 (8.2 to 36.0) 0.82 (0.34)      | 8.3 (1.8 to 22.5) 2.23 (0.14)     | 8.3 (1.8 to 22.5) 2.43 (0.12)         |
| >20            | 27.4 (19.5 to 36.6)                | 18.9 (12.1 to 27.5)              | 19.5 (12.6 to 27.8)                   |
| Hours/day patient |                                    |                                  |                                       |
| ≤7             | 25.6 (16.4 to 37.8) 0.04 (0.85)     | 19.2 (11.1 to 29.7) 0.70 (0.40)   | 15.4 (8.2 to 25.3) 0.26 (0.61)        |
| >7             | 27.1 (16.4 to 40.3)                | 13.8 (6.1 to 25.4)               | 18.6 (9.7 to 30.9)                    |
| Hours/week inst. |                                    |                                  |                                       |
| ≤40            | 25.0 (14.7 to 37.9) 0.01 (0.91)     | 16.7 (8.3 to 28.5) 0.01 (0.93)    | 18.3 (9.5 to 30.4) 0.17 (0.68)        |
| >40            | 25.8 (17.1 to 36.2)                | 16.1 (9.1 to 25.5)               | 15.7 (8.9 to 25.0)                    |
| Practice unit  |                                    |                                  |                                       |
| FHCU           | 16.3 (6.8 to 30.7) 1.92 (0.17)      | 18.6 (8.4 to 33.4) 0.41 (0.52)    | 9.3 (2.6 to 22.1) 2.26 (0.13)         |
| PHCU           | 27.2 (18.4 to 37.4)                | 14.3 (7.8 to 23.2)               | 19.6 (12.0 to 29.1)                   |
| Other inst.    |                                    |                                  |                                       |
| Yes            | 24.7 (16.5 to 34.5) 0.01 (0.92)     | 15.6 (9.0 to 24.5) 0.00 (0.95)    | 17.5 (10.6 to 26.6) 0.08 (0.78)       |
| No             | 25.5 (14.3 to 39.6)                | 16.0 (7.2 to 29.1)               | 15.7 (7.0 to 28.6)                    |

Results are expressed as % and (95% CI). Comparisons were performed with $\chi^2$ or Fisher’s exact test ($\dagger$). FHCU, family healthcare unit; inst, institution; PHCU, personalised healthcare unit.

Table 3 Number of participants with low, average and high burnout scores in none, one, two or three subscales

|                | 0       | 1       | 2   | 3   | Total     |
|----------------|---------|---------|-----|-----|-----------|
| Average burnout|         |         |     |     |           |
| 0              | 29 (19.6)| 13 (8.8)| 6 (4.1)| 6 (4.1)| 54 (36.5)|
| 1              | 42 (28.4)| 16 (10.8)| 10 (6.8) |–| 68 (45.9)|
| 2              | 15 (10.1)| 7 (4.7) |– |– | 22 (14.9)|
| 3              | 4 (2.7) |– |– |– | 4 (2.7)|
| Total          | 90 (60.8)| 36 (24.3)| 16 (10.8)| 6 (4.1)| 148 (100.0)|

The possible combinations for the different subscales describing increasing burnout are shown in the table. Participants with low burnout scores in one dimension are represented by excluding average or high burnout. Results are expressed as number (percentage) of the total subjects.
Table 5 compares the results of the current study with those reported from other countries. Overall, Portuguese FDs tended to present a lower prevalence of burnout components than in other countries.

DISCUSSION
To our knowledge, this is the first study ever to assess rates of burnout among FDs in Portugal. Our study also complements the previous findings of the EGPRN study, which assessed burnout among FDs from 12 European countries. Our results suggest that Portuguese FDs tend to present lower burnout levels for the three subscales EE, DP and PA than in other European countries.

Although men scored higher than women, no significant difference was found regarding the prevalence of high EE, high DP or low PA between genders. Still, multivariate analysis showed that men had a lower likelihood of presenting with low PA after adjusting for years of activity, and a similar trend was found after adjusting for age. Conversely, men tended to present higher levels of EE and DP than women, and this trend persisted after multivariate adjustment. Overall, our results suggest that Portuguese male FDs are more likely to present with EE or DP than their female colleagues but that they feel more accomplished than women FDs. A possible explanation might be the greater female involvement with family and home organisation in comparison to men, since having children has been regarded as protective for burnout development, and that little time for family contact and support increases its risk. Many other recent studies regarding burnout on FDs have also found higher burnout trends among men FDs. Still, further investigation is warranted as different results and possible explanations have been described.

Married or cohabitating FDs tended to present higher EE and DP than single colleagues. Still, having children was not associated with burnout components. These two findings compromise the hypothesis of the family workload as a factor of stress. Another possible explanation might be related to increased marital problems among Portuguese FDs since it is known that FDs who have marital problems tend to have negative emotional and behavioural changes.

Older age (and also longer time of practice) tended to be associated with higher levels of burnout components. The responsibility of a FD within a HCC is no longer related to age due to medical career freezing for more than 14 years now. Moreover, burnout is described to be more common among younger FDs, so a possible hypothesis for these results might be a greater incidence of other clinical syndromes among older FDs and that...
can contribute to exhaustion, like depression, empty nest syndrome and middle age crisis.

The prevalence of burnout ranged from 4.1% to 32.4%, depending on the definition used. This wide range is due to the different combinations of EE, DP and PA subscales, as indicated in figure 1. Furthermore, the cut-offs used were those reported in the EGPRN study, which differ slightly from the cut-offs provided in the original version of the MBI-HSS. This was done in order to compare our results with those from the literature. Still, using the cut-offs of the ‘original’ version led to similar conclusions (supplementary tables 3 and 4). Hence, it would be of interest that future studies on burnout report their results using one or several definitions and state the cut-offs used to facilitate comparisons.

Our results also show that working in PHCUs was related to higher burnout levels. This can be explained by the recent transfer of FDs to FHCUs from PHCUs that could have increased workload in PHCUs. Furthermore, the Portuguese Ministry of Health shows interest in transforming PHCUs into FHCUs, a fact that may leave PHCUs financially discriminated. Finally, teamwork is better established in FHCUs, and FDs in these units have more autonomy regarding schedules and clinical practice decisions—a burnout preventing trait.

Portuguese FDs tended to present lower burnout scores and also lower prevalence of burnout components than FDs from other European countries (see table 5). A possible explanation might be related to a slightly lower workload among Portuguese FDs compared with their colleagues from other countries. For instance, Portugal has 198.3 FDs per 100 000 inhabitants, a much higher number in comparison with the UK, which only has 78.3 FDs per 100 000. Furthermore, a Portuguese FD has on average 1500 patients, again a value lower than in the UK (1800). Still, further studies are advisable to better understand the lower burnout prevalence and scores among Portuguese doctors relative to their European counterparts.

This study has some limitations worth noting. First the response rate (41%) was rather low but identical to the one reported by the EGPRN study. Neither the Portuguese version of the MBI-HSS nor the questionnaire used to measure demographic variables were formally validated, although we are relatively confident that the responses related to demographic variables were adequately provided by the participants. Still, it would be of interest to validate the MBI-HSS so that future studies can rely upon an adequate instrument; still, Cronbach’s α values ranged between 0.64 (for DP) and 0.90 (for EE), also in agreement with those reported in the EGPRN study. A pre-study sample size analysis indicated that a minimum sample size of 384 responders was necessary to achieve an absolute precision of 0.05 for the prevalence rates. Unfortunately, this sample size could not be obtained due to a low response rate. Furthermore, for logistic and financial reasons, it was not possible to send more questionnaires or to sample more health centres. Hence, it is likely that this study is underpowered to detect associations between burnout and the demographic variables studied. Still, it provides the first estimation of burnout syndrome among Portuguese doctors, and it would be of interest to confirm these findings by a larger adequately powered study. Finally,

| Table 5 | Results for each burnout subscale in previous and recent European studies |
|-----------------|-----------------|-----------------|-----------------|
| EGPRN study, overall (2008, n=1393) | EE | DP | PA |
| Overall (n=1393) | 43.0 (40.5 to 45.6) | 35.3 (32.9 to 37.9) | 32.0 (29.6 to 34.5) |
| Bulgaria (n=69) | 62.3 (50.5 to 72.8) | 30.4 (20.8 to 42.1) | 18.8 (14.4 to 29.6) |
| Croatia (n=117) | 41.9 (33.3 to 50.9) | 12.0 (7.3 to 19.1) | 13.7 (8.6 to 21.1) |
| France (n=178) | 33.7 (27.2 to 40.9) | 35.4 (28.7 to 42.7) | 27.5 (21.5 to 34.5) |
| Greece (n=45) | 31.8 (20.0 to 46.6) | 73.3 (59.0 to 84.0) | 93.2 (81.8 to 97.7) |
| Hungary (n=87) | 36.8 (27.4 to 47.3) | 35.6 (26.4 to 46.1) | 26.4 (18.3 to 36.6) |
| Italy (n=147) | 68.0 (60.1 to 75.0) | 55.1 (47.0 to 62.9) | 40.8 (33.2 to 48.9) |
| Malta (n=129) | 36.4 (28.6 to 45.0) | 31.0 (23.7 to 39.4) | 24.8 (18.2 to 32.9) |
| Poland (n=150) | 48.0 (40.2 to 55.9) | 34.0 (26.4 to 41.9) | 30.0 (23.2 to 37.8) |
| Spain (n=86) | 30.2 (21.5 to 40.6) | 34.9 (25.7 to 45.4) | 25.6 (17.5 to 35.7) |
| Sweden (n=109) | 45.9 (36.8 to 55.2) | 34.9 (26.6 to 44.2) | 11.9 (7.1 to 19.3) |
| Turkey (n=112) | 15.2 (9.7 to 23.0) | 15.2 (9.7 to 23.0) | 69.4 (60.3 to 77.2) |
| England (n=164) | 54.3 (46.6 to 61.7) | 44.5 (37.1 to 52.2) | 32.9 (26.2 to 40.4) |
| Portugal (this study) (n=150) | 25.3 (16.7 to 35.5) | 16.2 (9.3 to 25.4) | 16.7 (9.7 to 25.7) |

Results are expressed as mean±standard deviation, median (interquartile range) or percentage (99% CI).
*Corresponds to the year of publication, not to the time of survey.

DP, depersonalisation; EE, emotional exhaustion; FD, family doctor; PA, personal accomplishment.
only FDs present at the HCCs answered, thus excluding those on sick leave; hence, it is possible that the burnout rates reported are underestimated. Still, in the absence of other studies available, our results provide the first estimation of the burnout rates among FDs in Portugal.

The results of our study have important implications. In Portugal, there is currently no aid for dealing with burnout among health professionals. Hence, it would be of uttermost importance that the Portuguese Ministry of Health, the Portuguese College of Physicians or the Regional Health Administrations provide some support at institutional and individual levels. Finally, another study would be desirable to assess the progression of burnout among Portuguese FDs.

In summary, our results suggest that a significant percentage of Portuguese FDs present with burnout and that male gender, older age and being married tend to increase burnout. These values are nevertheless lower than reported in other European countries.

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