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Multidimensional factors of burnout within general practice: A cross-sectional survey

Marie Bayot*, PhD, postdoctoral researcher¹, Anke Boone, PhD student², Lode Godderis,
MD, Professor^{2,3}, Anne-Laure Lenoir, MD, Professor¹

¹Department of Clinical Sciences, Université de Liège, CHU du Sart Tilman – Quartier Hôpital
– B23, Avenue Hippocrate 13, 4000 Liège, Belgium

²Centre for Environment and Health, Katholieke Universiteit Leuven, Kapucijnenvoer 35 blok
d - box 7001, 3000 Leuven, Belgium

³Idewe, External Service for Prevention and Protection at Work, Interleuvenlaan 58, 3001
Heverlee, Belgium

*Corresponding author: marie.bayot@uliege.be

ORCID IDs

Marie Bayot: 0000-0001-9789-532X

Anke Boone: 0000-0002-4075-3571

Lode Godderis: 0000-0003-4764-8835

Anne-Laure Lenoir: 0000-0002-3059-2911

Table 1. Summaries of regression models for exhaustion and disengagement among GPs ($N = 283$)

Model	Exhaustion					Disengagement				
	R^2	$AdjR^2$	ΔR^2	$F (df)$	p	R^2	$AdjR^2$	ΔR^2	$F (df)$	p
1	.05	.03		2.6 (5, 277)	0.03	.11	.09		6.77 (5, 277)	< .001
2	0.69	.66	0.65	25.91 (21, 256)	< .001	0.63	.59	0.52	17.12 (21, 256)	< .001

$AdjR^2 =$ adjusted R^2

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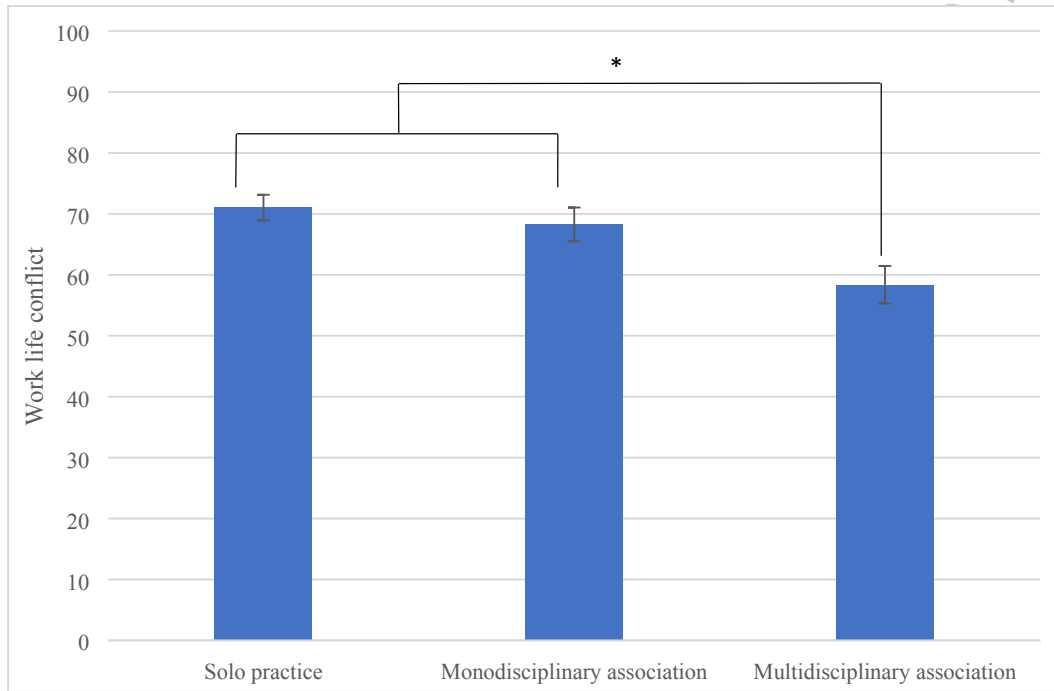


Figure 1. Reported work life conflict (COPSOQ-III) by type of practice among GP. Error bars represent standard error. Asterisk indicate significant differences.

Multidimensional factors of burnout in general practice: A cross-sectional survey

Abstract

Background: General practitioners (GPs) are particularly vulnerable to job burnout. Tailored prevention and intervention strategies are needed.

Aim: To investigate organisational, interpersonal and individual factors contributing to exhaustion and disengagement at work among GPs.

Design and Setting: We conducted a cross-sectional study in a sample of Belgian GPs.

Method: A total of 358 doctors (73% females, 301 with complete data) completed an online anonymous questionnaire assessing job burnout, psychosocial characteristics of the work environment, perceived social support in the private domain, emotional competence, and self-compassion.

Results: GPs reported moderate levels of exhaustion and disengagement. Regression models showed that included factors jointly explained 69% of the variance in exhaustion and 63% in disengagement. Exhaustion was significantly predicted by sex (being a woman) (β effect size = -.1), high perceived emotional demands ($\beta = .19$), as well as low self-compassion ($\beta = -.14$) and low emotional competence ($\beta = .09$). Disengagement was significantly predicted by low seniority ($\beta = -.12$) and limited opportunities for development ($\beta = -.16$). Both exhaustion and disengagement were predicted by low perceived quality of work ($\beta = -.19$ and $-.14$ respectively), meaning of work ($\beta = -.17$ and $-.31$ respectively) and role clarity ($\beta = .09$ and $.12$ respectively), as well as high perceived work-life conflict ($\beta = .46$ and $.21$ respectively). Moreover, GPs working in a multidisciplinary group reported lower levels of exhaustion and disengagement

than those working in a monodisciplinary group or a solo practice, and this difference was associated with factors such as work-life conflict.

Conclusion: Organisational, interpersonal and intrapersonal factors interact to predict a substantial part of burnout in general practice. The most significant risk factors were perceived work-life conflict and poor meaning of work. Policy-makers should work to support more sustainable practices based on the specific needs and constraints reported by GPs.

Keywords: job burnout; general practice; work environment; social support; emotional intelligence; self-compassion

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How this Fits in

Many factors influence individuals' mental health at work. We need to understand the multidimensional determinants of burnout among general practitioners (GPs) to tailor prevention and intervention. More particularly, there is no evidence to our knowledge regarding the influence of psychological factors and their potential interaction with work-related factors. This cross-sectional survey found that perceived quality of work, meaning of work, role clarity and work-life conflict were associated with GP burnout. Exhaustion was specifically associated with sex, perceived emotional demands, self-compassion and emotional competence, whereas seniority and opportunities for development had a significant effect only on disengagement. Moreover, GPs working in a multidisciplinary group (vs. monodisciplinary group and solo practice) were least vulnerable to burnout and reported least work-life conflict. Future studies should investigate moderating variables as well as causality, and extend this investigation to GP trainees. Policy makers should use these findings to support more sustainable practices.

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Introduction

Job burnout, which entails emotional exhaustion, disengagement, and a low level of personal accomplishment (1), has gained increasing attention from the scientific and politic realms over the past 50 years. While rising burnout rates have challenged the work community as a whole, health care workers (HCW) have stood out for their particular vulnerability to burnout and the deleterious impact it has on HCW's health (2), quality of care (3), and health systems' sustainability (4,5). Among doctors, trainees, junior physicians, and general practitioners have been identified as most prone to burnout (6–9). According to a recent international meta-analysis, burnout prevalence estimates for general practitioners (GPs) vary between 6 and 33% (10).

Burnout in HCW has been linked to some of the features of working in healthcare, such as being exposed to human suffering and having on-call duties. Although studies have focused on these professional factors more, individual and psychological factors also have a significant impact on the risk of burnout and individuals' sense of well-being (11,12). For example, perfectionism - or the tendency to set very high performance standards for oneself - induces higher levels of daily stress (13,14). Conversely, self-compassion - or the tendency to welcome one's own experiences of failure with understanding and hindsight - greatly reduces the risk of burnout (15,16). Similarly, emotional intelligence acts as a buffer against the deleterious impact of negative emotions on burnout (17).

Despite a growing body of literature, the factors involved in burnout specifically in GPs remain underexplored. Risk factors include socio-demographic characteristics (e.g., sex, number of children), which are not modifiable but important to design tailored interventions, practice characteristics such as emotional demands (e.g., dealing with the psychosocial components of general medicine), high workload, time pressure during visits, chaotic working

conditions (i.e., disordered, tense), prolonged sitting, uncertainty, low work control, and practice-related economic constraints, social characteristics such as practice culture (e.g., isolation, lack of support, quality of relationships), patients' expectations, exposure to workplace violence, working in a rural area, and working in a group (vs. solo) practice, as well as personal characteristics such as using few stress-regulating measures (e.g., playing sports, talking to friends), insufficient physical activity, and difficulties in balancing one's professional and private lives (18–23). Protective factors include benefitting from group supervision, and teamwork quality (24,25). However, there is no evidence to our knowledge regarding the influence of psychological factors and their potential interaction with work-related factors. Examining individual and work-related factors together would enable comparisons to be made in their respective associations with burnout. Therefore, the aim of this study was to jointly investigate organisational, interpersonal and individual burnout risk and protective factors among GPs, in order to support tailored prevention and intervention.

Methods

Participants

From the convenience sample of 358 Belgian doctors who participated in the online study, 301 completed the whole questionnaire, which is sufficient to test our regression model according to standard rules-of-thumb (i.e., 30 observations for one independent and one dependent variable, plus an additional 10 observations for every additional independent variable included: $30 + (25 \times 10) = 280$). Seventy-two percent of participants were female, and mean seniority was $M = 16.76$ years ($SD = 12.14$). Both main language communities (Dutch-speaking and French-speaking) were represented (49% and 51% respectively). Among participants, 45% reported working in a solo practice, 26% in a monodisciplinary group, and 29% in a multidisciplinary group. Practice-location varied from rural to urban (i.e., 12% reported

working in communities of < 10 000 people, 33% between 10 and 20 000, 19% between 20 and 30 000, 36% > 40 000).

Procedure

Participants were recruited via e-mail and newsletters from academic and professional institutions. The invitation to participate included a short description of the study and a link to the survey, housed on Qualtrics, a secure online data collection software. After the request for informed consent, sociodemographic and study variables were measured with a forced-choice format to prevent missing data during completion.

Measures

We used the Oldenburg Burnout Inventory (OLBI) (26), in its original Dutch version and its French version (27) to measure self-reported exhaustion and disengagement at work. Psychosocial characteristics of the work environment were assessed using 38 items that applied to the context of general practice, selected from the third version of the Copenhagen Psychosocial Questionnaire (COPSOQ-III) (28). Perceived social support in the private domain was measured using the Multidimensional Scale of Perceived Social Support (MSPSS), in its Dutch (29) and French (30) versions. Emotional competence was measured using the Short Profile of Emotional Competence (S-PEC) (31). Self-compassion was measured using the Self-Compassion Scale - Short Form (SCS-SF), in its original Dutch version (32) and its French version (33). A detailed presentation of measures can be found in Supplementary material.

Data analysis

As risk and protective factors may influence exhaustion and disengagement differently, we ran analyses for both these dimensions of burnout separately. To explore unconditional effects of each predictive factor on exhaustion and disengagement, we performed Pearson's bivariate correlations (see Table S1 in Supplementary material). To test the added value of other variables, above and beyond sociodemographic factors, and investigate their respective weight in the prediction of job burnout dimensions, we used a hierarchical linear regression model. In step 1, we entered sex, seniority, language community, type of practice, and workplace population as sociodemographic control factors (Model 1). In step 2, we added psychosocial characteristics of the work environment (COPSOQ-III), emotional competence (S-PEC), perceived social support in the private domain (MSPSS), and self-compassion (SCS-SF) as predictive factors (Model 2). Post-hoc analyses were performed for categorical variables with a significant beta. As type of practice was significantly associated for both exhaustion and disengagement in Models 1, we conducted one-way ANOVAs and post-hoc comparisons (LSD) to compare the three categories (i.e., solo practice, monodisciplinary group, and multidisciplinary group) on all variables. All analyses were conducted using IBM SPSS Statistics (version 25.0).

Results

GPs reported moderate levels of exhaustion ($M = 2.68$, $SD = 0.55$) and disengagement ($M = 2.38$, $SD = 0.5$) ($N = 358$).

Regression analyses

As shown in Table 1, the hierarchical linear regression models showed a significant contribution of sociodemographic factors to the prediction of exhaustion and disengagement

(Model 1). The model supplemented with other potential predictors (Model 2) accounted for much more variance than Model 1.

Please insert Table 1 here.

Variables that remained significantly associated with exhaustion in the final model were language community ($\beta = -.11, p = .01, 95\% \text{ C.I.} = [-0.23, -0.03]$), sex ($\beta = -.10, p = .01, 95\% \text{ C.I.} = [-0.23, -0.03]$), emotional competence ($\beta = .09, p = .03, 95\% \text{ C.I.} = [0.01, 0.22]$), self-compassion ($\beta = -.14, p = .003, 95\% \text{ C.I.} = [-0.18, -0.04]$), perceived quality of work ($\beta = -.19, p < .001, 95\% \text{ C.I.} = [-0.01, -0.003]$), emotional demands ($\beta = .19, p < .001, 95\% \text{ C.I.} = [0.004, 0.01]$), meaning of work ($\beta = -.17, p = .001, 95\% \text{ C.I.} = [-0.1, -0.002]$), role clarity ($\beta = .09, p = .04, 95\% \text{ C.I.} = [<0.001, 0.01]$), and work-life conflict ($\beta = .46, p < .001, 95\% \text{ C.I.} = [0.01, 0.01]$). See Table S2 for a detailed presentation of all regression coefficients.

Variables that remained significantly predictive of disengagement in the final model were seniority ($\beta = -.12, p = .02, 95\% \text{ C.I.} = [-0.01, -0.001]$), perceived quality of work ($\beta = -.14, p = .004, 95\% \text{ C.I.} = [-0.01, -0.001]$), opportunities for development ($\beta = -.16, p = .012, 95\% \text{ C.I.} = [-0.01, -0.001]$), meaning of work ($\beta = -.31, p < .001, 95\% \text{ C.I.} = [-0.1, -0.01]$), role clarity ($\beta = .12, p = .01, 95\% \text{ C.I.} = [0.001, 0.01]$), and work-life conflict ($\beta = .21, p < .001, 95\% \text{ C.I.} = [0.002, 0.01]$). See Table S3 for a detailed presentation of all regression coefficients.

Post-hoc analyses

One-way ANOVAs outlined a significant effect of sex for exhaustion ($F(1, 356) = 4.82, p = .03$), with women ($M = 2.72, SD = 0.54$) reporting significantly higher levels than men ($M = 2.58, SD = 0.57$), as well as a significant effect of type of practice on both

exhaustion ($F(2, 357) = 3.34, p = .04$) and disengagement ($F(2, 357) = 8.19, p < .001$). Multiple comparisons showed that GPs working in a multidisciplinary group reported significantly lower levels of exhaustion and disengagement than GPs working in a monodisciplinary group ($p = .018, 95\% \text{ C.I.} = [-0.34, -0.03], p = .009, 95\% \text{ C.I.} = [-0.32, -0.05]$ respectively) or a solo practice ($p = .035, 95\% \text{ C.I.} = [-0.28, -0.01], p < .001, 95\% \text{ C.I.} = [-0.36, -0.12]$ respectively).

One-way ANOVAs with predictive factors further showed significant effects of type of practice (see Table S4 for descriptive data and test results). In comparison to GPs working in a multidisciplinary group, GPs working in a solo practice reported more illegitimate tasks ($p = .006, 95\% \text{ C.I.} = [2.88, 16.6]$), less social support from family ($p = .011, 95\% \text{ C.I.} = [-0.85, -0.11]$), friends ($p < .001, 95\% \text{ C.I.} = [-1.16, -0.41]$) or a significant other ($p = .008, 95\% \text{ C.I.} = [-0.9, -0.13]$), less social support from colleagues ($p < .001, 95\% \text{ C.I.} = [-26.78, -14.58]$), a poorer sense of community at work ($p < .001, 95\% \text{ C.I.} = [-26.44, -14.66]$), fewer opportunities for development ($p = .002, 95\% \text{ C.I.} = [-13.4, -2.99]$), less meaning of work ($p = .012, 95\% \text{ C.I.} = [-11.46, -1.41]$), and less recognition ($p < .001, 95\% \text{ C.I.} = [-15.26, -4.92]$). Working in a monodisciplinary group rather than a solo practice was associated with the following protective factors: higher social support from friends ($p = .032, 95\% \text{ C.I.} = [-0.82, -0.04]$), control over working time ($p = .005, 95\% \text{ C.I.} = [-11.95, -2.18]$), social support from colleagues ($p < .001, 95\% \text{ C.I.} = [-22.56, -10.12]$), sense of community at work ($p < .001, 95\% \text{ C.I.} = [-25.32, -13.32]$), and recognition ($p = .002, 95\% \text{ C.I.} = [-13.61, -3.07]$). The protective factors associated with working in a multidisciplinary group rather than a solo practice or a monodisciplinary group were lower demands for hiding emotions ($p = .001, 95\% \text{ C.I.} = [-13.04, -3.43], p = .006, 95\% \text{ C.I.} = [-13.05, -2.22]$ respectively) and work-life conflict (see Figure 1) ($p < .001, 95\% \text{ C.I.} = [-19.64, -5.69], p = .014, 95\% \text{ C.I.} = [-17.76, -2.04]$ respectively).

Please insert Figure 1 here.

Discussion

Summary

GPs exhibited moderate levels of exhaustion and disengagement based on cutoff scores from the literature (34). Data analysis revealed several risk and protective factors with a small to medium effect size on job burnout. Risk factors for exhaustion were being a woman, high perceived emotional demands, as well as low self-compassion and low emotional competence. Risk factors for disengagement were low seniority and limited opportunities for development. Both exhaustion and disengagement were predicted by low perceived quality of work, meaning of work and role clarity, high perceived work-life conflict, as well as type of practice. Specifically, working in a multidisciplinary group (vs. monodisciplinary group and solo practice) was a protective factor against job burnout. Interestingly, working in a multidisciplinary group influenced several factors associated with exhaustion and disengagement at work, some of which are inherent to working in a group (e.g., social support from colleagues, sense of community at work in a group practice), while others were unexpected (e.g., demands for hiding emotions) and call for further investigation (e.g., with qualitative methods).

Strengths and limitations

Our regression models explained a substantial portion of variance in exhaustion (69%) and disengagement (63%) among GPs, leading us closer to our ultimate objective which consisted in identifying modifiable factors (unlike demographic factors) for burnout prevention and intervention in general practice.

However, the main limitation of this study lies in its cross-sectional nature, which precludes us from making any claims of causality. As regard to the effect of type of practice, several criteria that may have nuanced our results (e.g., remuneration mode, private vs. public sector) were not measured. Moreover, the self-report nature of our data precludes us from excluding social desirability bias in our results. Finally, the timing of our data collection, which occurred shortly after the COVID-19 crisis, which had a measurable impact on GPs' well-being and practice (35), may have influenced our findings.

Comparison with existing literature

Our findings confirm findings from previous studies of GP burnout, i.e., the effects of emotional demands, sex (women being more at risk than men), and work life balance (18–20). They also extend findings from studies of burnout in other HCW to GPs, i.e., the protective effects of perceived meaning of work (36), emotional competence (17) and self-compassion (37). Our study supplements previous findings by highlighting the effects of perceived opportunities for development, quality of work, and role clarity.

In contrast, some of our findings contradict previous observations. For example, type of practice (group vs. solo) was not significantly related to burnout in a study among Swiss primary care doctors (19), and was inversely associated with burnout (i.e., doctors working in group practices were more vulnerable to burnout) in a study of German GPs (22). While these discrepancies may be attributed to actual differences between samples (e.g., inherent to political and organisational variations from one country to another), we hypothesise that this may derive from different operationalizations of the variable (i.e., the criteria of categorization). Indeed, the effect of type of practice we observed may have been masked if specific categories (e.g., mono- and multidisciplinary groups) had been merged, as in the above-mentioned studies. Beyond type of practice, the quality of teamwork plays a key role in

mitigating burnout in group practices (25). Measuring this variable, as in our study (e.g., perceived sense of community at work, social support from colleagues and recognition), may therefore bring greater clarity to the mixed results observed.

Finally, our findings point to specific factors associated with exhaustion on the one hand, and disengagement on the other, in GPs. Interestingly, exhaustion was specifically associated with factors that either deplete (i.e., perceived emotional demands) or replenish (i.e., self-compassion and emotional competence) emotional resources, further showing the emotional mechanism behind this burnout dimension (1). Disengagement, was specifically associated with opportunities for development, which aligns with the literature on motivation and engagement at work (38).

Implications for research and practice

At the research level, moderating variables at play in the effect of burnout risk factors, as a function of personal or work characteristics, should be investigated in order to fully understand the mechanisms at stake and better prevent burnout in GPs. Furthermore, since GP trainees are exposed to specific working conditions, inherent to the educational environment (e.g., less autonomy, lower levels of responsibility, potential role of the relationship with supervisors) (39), our findings cannot be generalised to that particular population. Future studies are needed to identify burnout risk and protective factors among GP trainees to inform the design of tailored prevention and intervention. Studying GP trainees would also enable the examination of the role of generational and cultural factors in burnout, for example through an effect on work-life conflict.

At the practice level, policy makers should acknowledge organisational (e.g., work-life conflict), interpersonal (e.g., quality of teamwork), and intrapersonal (e.g., emotional

competence) burnout factors to support a more sustainable healthcare system. Concomitantly, evidence-based programs tailored to GPs' specific needs and constraints should be embedded into the continuing education curriculum. For example, interventions promoting physical and mental health (e.g., mindfulness-based programs) could be implemented (40,41).

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Ethical approval: The study was conducted in accordance with the Declaration of Helsinki, and approved by the Institutional Review Board of Université de Liège (protocol code 2021/249, August 10th 2021).

Competing interests: The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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