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Analysis of Burnout Prevalence among German Physicians Working in a Palliative Care Setting: A Survey of the AIO Quality of Life Working Group

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Keywords
Burnout · Palliative care · Exhaustion · Disengagement · Oldenburg Burnout Inventory

Abstract

Introduction: Palliative care physicians (Pcps) face special challenges caring for terminally ill patients. We conducted this study to evaluate the burnout (bo) prevalence among pcps and sought to identify risk as well as protective factors as a basis for the development of preventive measures. ***Methods:*** Participants (Pcs) were invited via e-mail to complete an online survey between May and June 2022. Besides the Oldenburg Burnout Inventory assessing the bo dimensions of exhaustion (exh) and disengagement (dis), sociodemographic data were collected. ***Results:*** The study found that 58% (cut-off mean value [*M*] ≥2.18) or more specifically, 38% (cut-off *M* ≥2.5) of the pcs showed increased scores in the exh subscale as a key dimension of bo. All dimensions were correlated with the level of medical and palliative care training, with higher scores for physicians in training. Furthermore, pcs without preventive measures like employee appraisals at work were more likely to be considered exhausted, disengaged, or burned out. The discrepancy between high exh and low dis scores shows that the polled pcps, despite feeling exh, nevertheless considered their work meaningful. ***Conclusion:*** Bo prevalence among pcps exceeds that of the general population and other specialties, whereas inexperienced pcps might be at high risk of shifting from exh to bo and could therefore benefit from tailored support. Further preventive measures including individual and organizational aspects are necessary to prevent bo and promote health among medical staff, thereby preserving quality of patient care. Elementary preventive measures such as employee appraisals can have a protective effect against bo.

Introduction

In 1974, Herbert Freudenberger discussed the topic of burnout (bo) among physicians as one of the first scientists [1]. Especially in recent years, this subject has aroused growing attention. Bo syndrome is defined by the three dimensions of exhaustion (exh), depersonalization, and a reduced efficacy or accomplishment, following as a "response to chronic interpersonal stressors on the job" [2, p. 399] combined with intense emotional demands without adequate resources [2, 3]. As already shown in several studies, the bo prevalence among physicians is significantly higher than within the general population with still an increasing prevalence. However, differences can also be observed between the different medical specialties [4]. Bo can lead to negative consequences for

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the physicians themselves such as depression, alcohol/drug abuse, or other concomitant illnesses [5, 6], thereby negatively affecting quality of patient care. As reported in literature, there is a clear association between bo and an increased rate of treatment errors in everyday professional life as well as lower patients' satisfaction [7–9]. From an economic perspective, reduced productivity and working hours, increased missing hours, change of medical specialty, or even leaving the medical profession completely are known to have relevant consequences [2, 10, 11]. On the contrary, factors that positively enhance the quality of working life among physicians might also improve the quality of care for the patients [12]. The reported bo prevalence among palliative care physicians (pcps) varies significantly. In a meta-analysis, including 59 studies published from 2008 to 2020, bo prevalence was in the range of 3–66%, whereby most studies had a prevalence above 18%. The majority of the mentioned studies focused on different palliative care professions, resulting in quite heterogeneous study populations. Only one of the studies was conducted in Germany [13]. There is only one more recent relevant study that determined bo prevalence among Canadian Pcps using the Maslach Burnout Inventory (MBI). It aligns with the results of the meta-analysis: 38% scored high for bo measured by high emotional exh or high depersonalization, and 36% scored high in emotional exh [14]. In general, existing data are difficult to compare due to inconsistent cut-off values for the diagnosis of bo, the use of heterogeneous assessment instruments, and different healthcare systems. As pcps may face special challenges during the care of terminally ill patients, this study was conducted to evaluate their bo prevalence and identify risk as well as protective factors as a basis for the development of intensified preventive measures.

Material and Methods

Study Population

A request for participation was sent by e-mail using a database of the German Society for Palliative Medicine extended by further online research. This way, initially, a total of 408 palliative care units were identified and contacted, either through a designated contact person or a general e-mail address. Since we are unaware of the extent to which the e-mail was forwarded within the units as requested, it is not possible to provide an exact number of ultimately contacted physicians. If no response was received, a reminder e-mail was sent after 2 weeks. Inclusion criteria was the current medical practice in an inpatient palliative care setting. Using the link in the e-mail, participants (pcs) were led to the survey on the validated online platform SoSciSurvey, available from May to June 2022. Participation in this non-interventional, prospective cross-sectional study was voluntary and anonymous, without compensation. The study was supported by the Quality of Life and Patient Reported Outcome working group of the Arbeitsgemeinschaft für Internistische Onkologie (AIO) of the German Cancer Society.

Questionnaire

The 16-item self-report Oldenburg Burnout Inventory (OLBI, original version can be found as online suppl. 1; for all online suppl. material, see https://doi.org/10.1159/000536020 within the online supplementary material) was chosen as assessment instrument for bo risk, which has a high convergent validity with the gold standard MBI [15]. Eight questions related to the dimension of exh and eight to disengagement (dis), while half of them were inverted. Measured on a four-point Likert scale, the two dimensions were coded (1–4) and added up to a score whereby higher values indicated a higher level of bo. Exh refers to "general feelings of emptiness, overtaxing from work, a strong need for rest, and a state of physical exhaustion" [15, p. 17] including also an affective and cognitive level of stress. Dis means "distancing oneself from the object and the content of one's work and to negative, cynical attitudes and behaviors toward one's work in general" [15, p. 17]. Permission to use the OLBI was previously obtained from the author. Since there are no standard cut-off values using the OLBI, a mean value (M) of $M \geq 2.18$ was chosen for better comparability with the results of other studies. For the exh subscale, a second consideration was made using the stricter cut-off $M \geq 2.5$, while for the dis subscale, the range of values was divided into the three subgroups low, medium, and high [16]. Last, the two dimensions were combined by the cut-off $M \geq 2.18$, resulting in four groups: non-bo (both dimensions <2.18), disengaged (exh <2.18, dis ≥2.18), exhausted (exh ≥2.18, dis <2.18), and bo (both dimensions ≥2.18). In addition, sociodemographic data and information about working conditions were assessed. At the end of the survey, the pcs had the opportunity to leave comments in a free text field (see online supplementary 2 for detailed questionnaire information).

Statistics

Analysis was done using the statistics program "Statistical Analysis System (SAS)" by SAS Institute, Inc. (Cary, NC, USA). Pcs with incomplete data were excluded, and obviously misinterpreted responses were also censored or adjusted when possible. For descriptive analysis, absolute and relative frequencies were calculated for categorical data. Standard statistical measures such as mean values were calculated for continuous variables. Thus, sociodemographic data, work characteristics, and the results of the OLBI were presented. Second, bivariate correlations between the different variables and scores were tested using χ^2 and Fisher's exact test for categorical data. To compare continuous variables, Spearman correlation was used. In this way, possible predictors for both dimensions and the bo risk in total were identified. Third, odds ratios were calculated to quantify the strength of the association between predictors and bo risk. A significance level of $p \leq 0.05$ was set for all test procedures.

Results

Pcs' Characteristics and Working Conditions

From $n = 408$ contacted palliative care units, $n = 126$ pcps participated in the survey. Due to the anonymous setting, information about the number of institutions the pcs were affiliated was unavailable. Median age was 52 (26–68) years, while $n = 73$ (58%) were female and worked a median of 45 (20–72) hours per week. Anesthesiologists ($n = 42$, 33%) and internists with ($n = 29$,

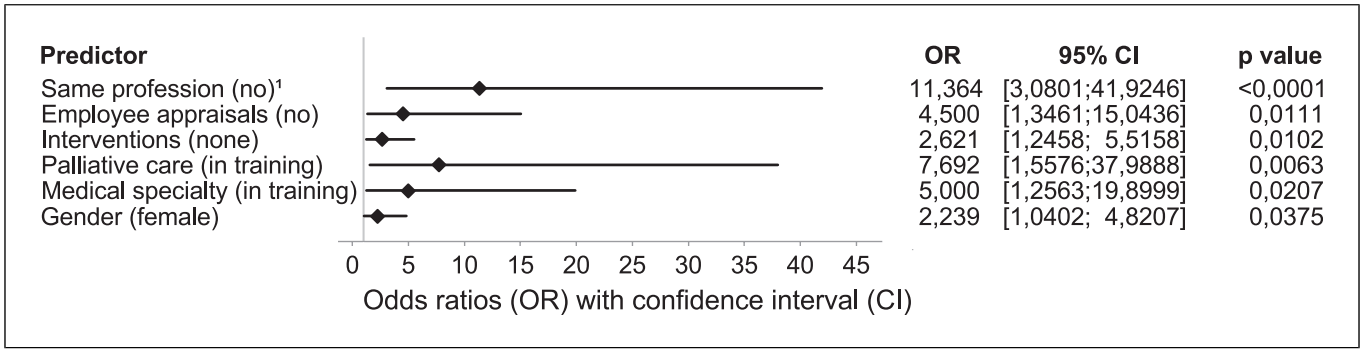

Fig. 1. Forest plot: odds ratios of the factors influencing the development of exh (cut-off mean value [*M*] ≥2.5). [1]Pcs who would not choose the same profession again with their present experiences.

23%) or without hematology oncology (*n* = 40, 32%) made up the majority, with *n* = 115 (91%) having already completed their medical specialty and *n* = 114 (90%) their palliative care training (online suppl. 3). Half of the pcs (*n* = 63, 50%) stated that preventive measures were implemented in their institution, and of these, *n* = 56 (89%) had more than one type of such measure. Group supervisions (*n* = 61, 97%) and team meetings (*n* = 53, 84%) were stated most frequently. In addition, *n* = 35 (56%) pcs regularly had employee appraisals, and *n* = 12 (19%) named other measures such as psychological support, sporting activities, or morning prayers. A total of *n* = 108 (86%) would take the same career path again with their present experience.

Exhaustion

The mean value on the exh subscale was 2.30 ± 0.57 out of a maximum of four points (online suppl. 4). *N* = 21 (17%) pcs reported that they had already missed work due to exh symptoms. Based on the cut-off *M* ≥2.18, *n* = 73 (58%) pcs showed increased values for exh. With the more specific cut-off *M* ≥2.5, the number of pcs above the cut-off was still high, with *n* = 48 (38%) (online suppl 5). Pearson's χ^2 test showed a correlation between the level of exh and the preventive measures taken (χ^2 = 6.60, *p* = 0.01). Pcs whose institution did not provide employee appraisals were more likely to be exhausted (71% vs. 29%, *p* = 0.01). Furthermore, a correlation was observed regarding the question of whether pcs would choose the same profession again with their present experiences; among those not considered to be exhausted, *n* = 75 (96%) would choose the profession again. In contrast, *n* = 15 (83%) of those who would not choose the profession again had increased exh scores (χ^2 = 18.22, *p* < 0.001). Using Fisher's exact test, associations between the degree of exh and gender were found, with women being more likely to be affected than men (*p* = 0.03). Board-certified physicians in general, but especially those with completed palliative care training, were less exhausted (*p* = 0.02 and *p* = 0.01, respectively). These findings were also reflected in the calculated risks (odds ratios) (Fig. 1). Physicians still in medical specialty training had a 5.0-fold (*p* = 0.02) and those still in palliative care training a 7.7-fold (*p* = 0.01) higher risk of being exhausted than those who had already completed their training. Pcps working in larger palliative care units in terms of bed capacity showed more likely symptoms of exh in comparison to colleagues in smaller palliative care units (Spearman correlation test; r_s = 0.23, *p* = 0.01). For those who would not choose the same profession again, the risk for exh was 11.4 (*p* < 0.001) times higher (Fig. 1).

Disengagement

With 1.71 ± 0.41 (1.00–3.25), the mean value on the dis subscale was lower than the one on the exh subscale (online suppl. 4). Based on the cut-off *M* ≥2.18, a total of *n* = 12 (9.5%) pcs had an increased score (online suppl. 5). Considering the subgroups, the majority of *n* = 80 (63%) pcs could be assigned to low dis, *n* = 40 (32%) to medium dis, and *n* = 6 (4.8%) to high dis. Similar to the results for exh, Fisher's exact test found a significant correlation between dis and non-completed medical specialty training (*p* = 0.001) or palliative care training (*p* = 0.02). In case of risks (odds ratio), physicians who were still in medical specialty training had a 12.9-fold (*p* = 0.001) and those still in palliative care training a 5.7-fold (*p* = 0.04) higher risk for increased dis scores. Negative correlations also were found with physicians' professional status: the lower the professional status, the higher the score on the dis subscale (*p* = 0.003). Fellows were at a 42.0 (*p* = 0.002) higher risk for dis compared to senior or head physicians. Higher dis scores were also observed among pcs without regular employee appraisals (*p* = 0.03), as well as among pcs who would not choose the same profession again (*p* = 0.002). For pcs who would not choose the same profession again, risk for dis was 8.5 (*p* = 0.002) times higher. Pcs had a 6.6-fold (*p* = 0.01) higher risk for dis, if stated that they already had been absent from work due to exh-like symptoms (Fig. 2).

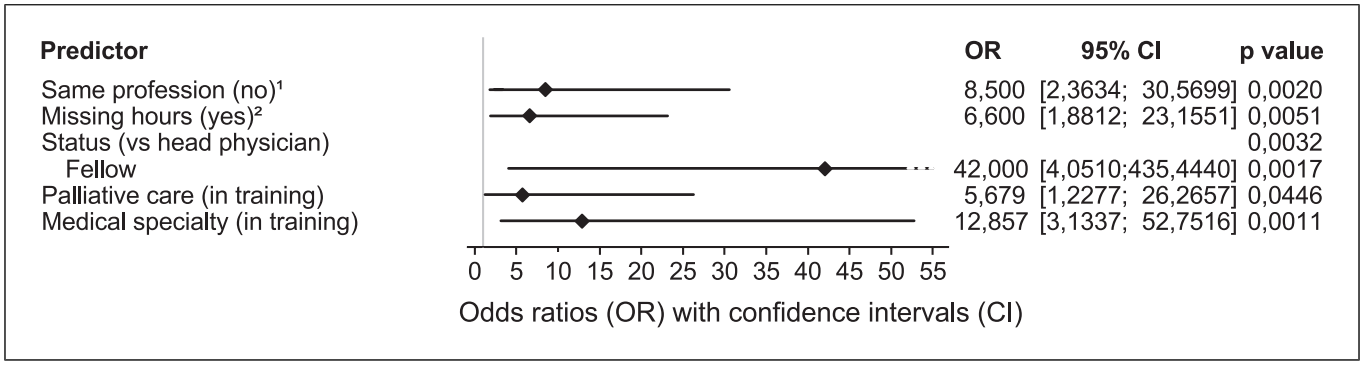

Fig. 2. Forest plot: odds ratios of the factors influencing the development of dis (cut-off $M \geq 2.18$). [1]Pcs who would not choose the same profession again with their present experiences. [2]Pcs who have already been absent from work due to exh-like symptoms.

Overall Bo

Considering the overall bo score set up by both exh and dis, the mean value was 2.00 ± 0.44 (1.19–3.38) (online suppl. 4). With $n = 62$ (49%), most of the pcs belonged to the exhausted group (Fig. 3). Comparing the groups bo and non-bo, the risk for bo was increased by 13.6 ($p = 0.003$) for physicians who were still in medical specialty training and by 10.5 ($p = 0.03$) for those in palliative care training. Negative correlations were found with the professional status ($p = 0.02$), as fellows had a 35.0 ($p = 0.005$) higher risk to shift from non-bo to bo compared to senior or head physicians. In addition, pcs without employee appraisals ($p = 0.02$), those who had already missed work due to exh-like symptoms ($p = 0.02$), and those who would not choose the same profession again ($p < 0.001$) had a worse prognosis regarding their bo risk (Fig. 4). Significant correlations were also found in the comparison of exh and bo. Still being in medical specialty training implied a 16.4-fold ($p = 0.001$) and having the professional status as a fellow compared to senior or head physicians a 52.5-fold ($p = 0.003$) increased risk for progression from exh to bo. Furthermore, pcs with missing hours due to exh-like symptoms in the past ($p = 0.03$) and those who would not choose the same profession again ($p = 0.02$) were more likely to shift from exh to bo (Fig. 5).

Qualitative Analysis

Altogether, $n = 39$ (31%) pcs left a voluntary comment at the end of the survey. As positive aspects, enrichment of life through the work with palliative patients and the meaningfulness of the profession itself were mentioned several times ($n = 9$). Negative statements primarily pointed at the high amount of bureaucratic work, overtime hours, personnel shortages, and the missing appreciation by superiors ($n = 10$). Working within a multi-professional team and a functioning work-life balance were repeatedly mentioned to have a protective effect against bo ($n = 6$).

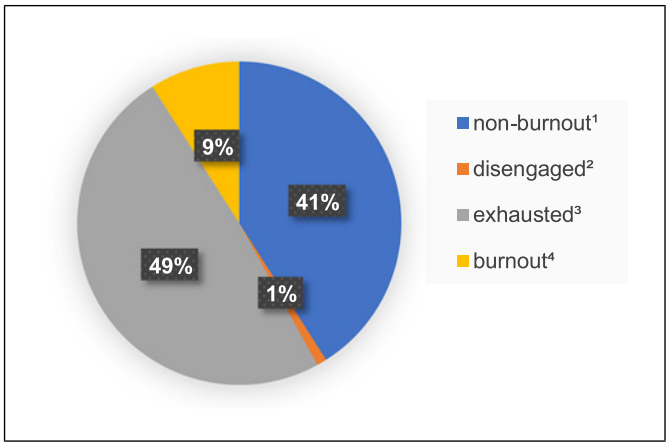

Fig. 3. Division of the physicians into subgroups. [1]Non-bo = exh <2.18, dis <2.18. [2]Disengaged = exh <2.18, dis ≥2.18. [3]Exhausted = exh ≥2.18, dis <2.18. [4]Bo = exh ≥2.18, dis ≥2.18.

Discussion

Our study was conducted to gather data about bo prevalence among physicians working in an inpatient palliative care setting. The composition of the current study cohort is representative, based on recently published demographic statistics for Germany, showing that most of the medical specialists in this field are at an age of 40–65 years [17]. This study demonstrated that according to OLBI criteria, 38% ($M \geq 2.5$) of the pcs showed increased scores in the exh subscale which is one dimension of bo. This prevalence is consistent with the international data presented in the introduction. These findings were significantly related to some sociodemographic factors, working conditions, and the level of training. In the first instance, this rate seems surprisingly high. However, for medical specialists treating critically ill patients, high rates of exh have been documented before. For example, a German study using the OLBI for assessment of bo

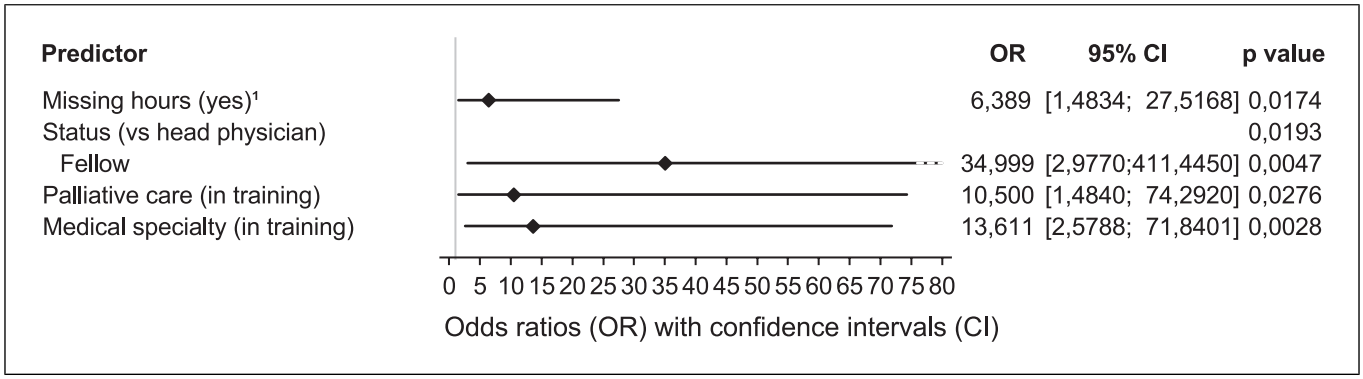

Fig. 4. Forest plot: odds ratios of the factors influencing the development of bo. [1]Pcs who have already been absent from work due to exh-like symptoms.

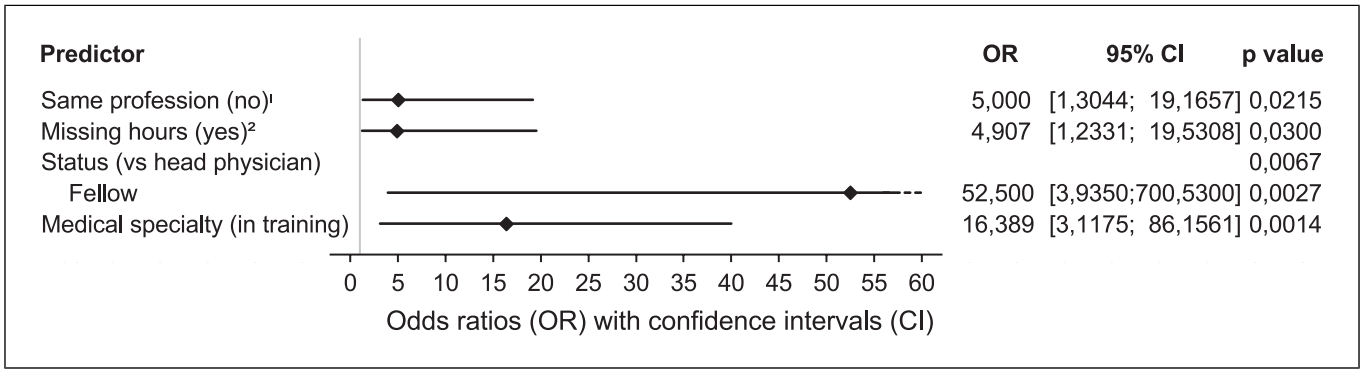

Fig. 5. Forest plot: odds ratios of the factors influencing the development of bo compared to being exhausted (cut-off $M \geq 2.18$). [1]Pcs who would not choose the same profession again with their present experiences. [2]Pcs who have already been absent from work due to exh-like symptoms.

among German oncologists showed an even higher rate of 44% for exh recently [16]. The apparently more favorable situation for pcps compared to oncologists was also observed before, showing higher satisfaction with the working conditions and lower bo risk among pcps [18]. However, even if the bo rates among pcps might be lower than among oncologists, they clearly exceed those observed among other medical specialties and non-medical professions [4]. A clear correlation was found between the bo dimensions and medical specialty training status, as board-certified physicians reached lower scores. Having been observed in some studies before [2, 16], this emphasizes the importance of providing support to young and inexperienced physicians. They could benefit from the experience of senior physicians in the role of mentors in everyday clinical practice. In contrast, additionally to other factors, a good quality of training may lead to reduced bo scores in all dimensions [19]. In this study, a discrepancy between the exh and the dis scores was found with mean values of 2.30 ± 0.57 and 1.71 ± 0.41, respectively. Only 4.8% (n = 6) of our pcs had high dis scores, notably less compared to the scores of the oncologists [16]. Originally, both dimensions should play an equal role for estimation of bo risk according to OLBI criteria. It seems as if in palliative care, dis might be less relevant and bo might be reflected in higher rates of exh in the first place. This stands in line with some of the free comments assessed in our survey: pcps might identify quite well with their work itself and consider it to be meaningful but, in contrast, also criticize the working environment and conditions. Nevertheless, an elevated state of exh might lead to high dis scores in the near future [20]. Since many of our pcs already had increased exh scores, it could be a matter of time before they finally showed dis, and thus, by definition, bo. Given the fact that bo among physicians provokes numerous consequences, specific preventive measures are inevitable. However, only half of our pcs stated to have any preventive measures – with great inconsistency about the type and implementation in clinical routine. Studies also have shown associations between bo score and excessive burden of administrative tasks [21]. Too many regulatory

or documentational duties may not only incriminate physicians mentally but also deter them from patient contacts which might give their occupation meaning and purpose [14, 22]. In accordance, most of the pcs' negative comments in our survey referred to poor general working conditions including the immoderation of bureaucracy or overtime hours. In contrast, most of the pcs disagreed to be disconnected from work or feel sickened by work tasks. Therefore, reduction of administrative tasks as well as periodic constructive reflections of the competences in the setting of employee appraisals as one way of preventive measures might lead to more satisfaction with work and result in less bo. In our study, pcs without offers for any kind of personal meeting with their superiors reached significantly higher scores for exh, dis and overall bo. Structural and organizational preventive measures could be more important than such affecting only the individual itself [23]. Not only do these measures effectively reduce bo but are also cost-effective in economic terms by offsetting the costs of all the consequences bo would have [24, 25]. At best, an extensive range of measures including individual as well as organizational aspects should get in focus to prevent bo within the group of pcps [2, 13, 23, 26].

Strengths and Limitations

This study was the first to evaluate the prevalence of bo among physicians in inpatient palliative care settings in Germany and, notably, the first study to identify both protective and risk factors in this context. Nevertheless, it also has some limitations. The question arises whether physicians already suffering from bo symptoms are more likely to respond due to their interest in clarification or, in contrast, do not respond because of their high state of exh or lack of time. Further, the lower scores among more experienced pcs in our survey could reflect the so-called survival bias: since affected physicians may have already changed medical specialty or even profession, they were not accessible for the survey [2]. Finally, due to the non-longitudinal design and the absence of a prior survey, it is not possible to assess the impact of the COVID-19 pandemic on exh and dis, despite their potential significance.

Conclusion

In this study, based on self-assessment using OLBI, the scores for the two bo dimensions were seriously high, especially for younger pcs at an early point of their medical specialty training. In addition, the exh rate as a key dimension of bo was higher within our study cohort compared to other medical specialties. Precautionary measures were implemented rarely and inconsistently, although the risk for bo increased for pcs without any offers to reflect and communicate potential incriminating factors to their superiors. For successful bo prevention, it seems important to provide measures early, thus preventing all negative consequences of bo syndrome. At best, the measures should be available to all employees and not only to those who actively seek help. Alongside regularly implemented preventive measures, it might be obligate in daily routine to support young or inexperienced physicians with palliative care specialists in the role of mentors.

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Statement of Ethics

This study was conducted according to the principles of the Declaration of Helsinki and was approved by the Local Ethical Committee, Medical Ethics Commission, Faculty of Medicine Mannheim, University of Heidelberg, Germany (2022-548). Written informed consent was obtained from all individual participants included in the study.

Conflict of Interest Statement

Prof. Ralf-Dieter Hofheinz is a member of the editorial board of Oncology Research and Treatment. Apart from that, no other conflicts of interest are to be disclosed.

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Author Contributions

Lena Herbrand developed the study design, collected and analyzed data, and was major contributor in writing the manuscript. Wolf-Karsten Hofmann gave critical feedback concerning the manuscript. Ralf-Dieter Hofheinz gave critical feedback concerning the manuscript. Sylvia Büttner supervised data analysis and gave critical feedback concerning the manuscript. Georg Martin Haag developed parts of the study design and gave critical feedback concerning the manuscript. Deniz Gencer developed the study design and was major contributor in writing the manuscript. The final manuscript was approved by all authors prior to submission.

Data Availability Statement

All data generated or analyzed during this study are included in this article and its online supplementary material files. Further inquiries can be directed to the corresponding author.

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