Clergy Burnout: A Comparison Study with Other Helping Professions

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Abstract

Clergy experience a large number of stressors in their work, including role overload and emotional labor. Although studies have found high rates of depression in clergy, the degree of work-related burnout in clergy compared to other occupations is unknown. The widely used Maslach Burnout Inventory (MBI) measures three aspects of burnout: emotional exhaustion, depersonalization, and personal accomplishment. We sought studies using comparable versions of the MBI for clergy; for social workers, counselors, and teachers because of those occupations' emotional intensity and labor; and for police and emergency personnel because of the unpredictability and stress-related physiological arousal in those occupations. We found a total of 84 studies and compared the ranges of burnout scores between the studies of clergy, each additional occupation, and MBI published mean norms. Compared to U.S. norms, clergy exhibited moderate rates of burnout. Across the three kinds of burnout, clergy scores were relatively better than those of police and emergency personnel, similar to those of social workers and teachers, and worse than those of counselors. Clergy may benefit from burnout prevention strategies used by counselors. The moderate levels of burnout found for clergy, despite the numerous stressors associated with their occupation, suggest that clergy generally cope well and may be models to study. Overall, there is room for improvement in burnout for all professions, especially police and emergency personnel. It is important to remember the variation within any profession, including clergy, and prevent and address burnout for those in need.

KEYWORDS

Clergy, Burnout, Maslach Burnout Inventory, Emotional exhaustion, Depersonalization, Personal accomplishment, Helping professions, Social workers, Teachers, Counselors, Police, Emergency personnel

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Introduction

Burnout in helping professions

Perhaps the first public use of the term 'burnout' appeared in Graham Greene's 1961 book *The Burn-Out Case*, where a "spiritually tormented and disillusioned architect quits his job and withdraws into the African jungle" (Maslach et al. 2001). In 1974, Herbert Freudenberger, a psychologist who devoted much of his time to the development of free health clinics, identified burnout based on his observation that new health care employees who worked with drug addicts became depressed, experienced lowered energy and motivation, and developed various physical symptoms (Freudenberger 1974). Freudenberger's description of burnout was quickly recognized by professionals working in social services, and, in 1993, Maslach described burnout as "a psychological syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with other people in some capacity" (Maslach 1993, p. 19).

The consequences of burnout are potentially serious not only for workers but also for recipients of the intended care. Consequences associated with professional burnout include impaired job dissatisfaction, absenteeism, decreased productivity, reduced organizational commitment, impaired physical health, reduced quality of life, loss of purpose, emotional problems, loneliness, lowered self-esteem, marital conflict, and a substantial loss of closeness and enjoyment in relationships both personally and professionally (Ayala & Carnero 2013; Guntupalli et al. 2014; Hall 1997; Maslach et al. 1996; Maslach et al. 2001; Melamed et al. 2006). Recent researchers (Ayala & Carnero, 2013; Poghosyan et al. 2010) purport that burnout is an increasingly important public health issue that has a significant impact on the health and well-being of health care workers that can, in turn, reduce the quality of patient care and increase health care costs. Burnout can also lead to changing jobs or leaving the profession altogether (Maslach et al. 2001).

Previous research indicates that there may be a sequence in the process of burnout that begins with emotional exhaustion (EE), the intrapersonal dimension, which then leads to depersonalization (DP), the interpersonal dimension. It is possible that after experiencing EE, people experience DP as a defense mechanism to distance themselves in order to cope with an

overwhelming workload (Cox 2005; Maslach et al. 2001). Maslach (1996, 2001) reported that personal accomplishment (PA), the cognitive self-appraisal dimension, may be directly or indirectly related to EE or DP, but there is some evidence to suggest that PA develops independently, parallel to the other two domains, and yet may reciprocally influence the other domains (Abu-Hilal & El-Emadi 2000; Cox 2005). Maslach (1996, 2001) indicated that the relationships between the three domains of burnout are still yet to be fully understood.

The Maslach Burnout Inventory (MBI) is the mostly widely used instrument to assess burnout among the caring professions. Three versions of the MBI exist, each of which assesses the three core dimensions of burnout for different occupations. The MBI-Human Services Survey (MBI-HSS) was designed exclusively for use with people working in human services and health care and was normed on a population that included teachers, physicians, nurses, police, probation officers, social workers, mental health professionals, attorneys, librarians, and clergy (Maslach et al. 1996). There is a large and growing literature on burnout using the standard measure by Maslach that allows for comparisons across occupations; however, no comparison studies that include clergy have been published.

Clergy vocation and stressors

The United States Department of Labor (2012) estimated that in 2012 there were 239,600 clergy of all faiths in the United States, with a predicted growth rate of 10%. These clergy serve an estimated 339,000 churches (Lindner 2009) with more than 145 million confirmed members (Lindner 2012)—approximately 47% of the U.S. population in 2010 (United States Census Bureau 2010). Although it is difficult to estimate the number of clergy in all faiths internationally, there are over 413,000 known Catholic priests in the world (Vatican Radio 2013) and more than 11,000 United Methodist Church clergy working outside of the United States (United Methodist Church General Council on Finance and Administration 2013).

The job description of clergy is diverse and includes leadership roles that involve constant engagement with others. Clergy roles have been grouped into six categories: (a) preacher, (b) deliverer of rituals and sacraments, (c) pastor, (d) teacher, (e) organizer, and (f) administrator (Blizzard 1956; Milstein et al. 2005). Taken together, these roles involve highly diverse competencies with numerous stressors. Clergy must frequently transition between roles, sometimes many times during a single day (DeShon 2012), resulting in potential role overload.

Also, the content of clergy work can be highly emotional, such as when officiating funerals and providing grief counseling. The stakes of providing good interactions with congregants are high; among other things, good pastoral care can be vitally important when linking congregants to mental health care. Of the people in the United States seeking help for a serious mental illness, one fourth approach their clergy person before anyone else (Wang et al. 2003). Furthermore, leading organizations composed of people with diverse priorities, histories, and personalities is complex work. Clergy attempt to create a shared vision for the congregation and lead the staff and congregants, most of whom work on a volunteer basis, to enact that vision. In the process, clergy negotiate conflict between congregants and take a leadership role in decision-making, such as how to spend limited funds or what positions to take on community issues. These decisions often lack clear right or wrong answers and make clergy vulnerable to criticism. In addition, clergy often have spouses and children who are closely observed by congregants, and for whom congregants may have high or even unrealistic expectations (Lee & Iverson-Gilbert 2003; Morris & Blanton 1994). Lee and Iverson-Gilbert (2003) have proposed

four essential ministry stressors for clergy and their families: (a) personal criticism, (b) boundary ambiguity, (c) presumptive expectations, and (d) family criticism. Overall, the stressors that clergy experience are interpersonal in nature as clergy serve a unique role within a social ecology (Proeschold-Bell et al. 2011).

We found only one study comparing clergy stress to other faith-based helping professionals, namely, counselors, teachers, nurses, and other health care workers. Clergy were found to report a higher level of the following stressors than this comparison group in (a) role ambiguity, (b) role conflict, (c) role overload, (d) boundary violations,(e) emotional triangulation, (f) emotional isolation, (g) exposure to crises, (h) interpersonal attack, (i) parishioners' need for help, and (j) administrative demands (Foss 2002). Furthermore, the study found that clergy burnout was positively correlated with role overload, role ambiguity, and role conflict (Foss 2002). In addition, clergy burnout was positively correlated with interpersonal demands from dependent parishioners, inadequate opportunity to process emotions, administrative overload, criticism, and lack of delegating tasks (Foss 2002). Rates of burnout were not reported in this study. Previous research indicates that external, systemic factors contributing to clergy burnout include work overload, excessive schedule demands, low social support, difficult parishioners, denominational structures, and being 'on call' 24/7 (Barnard & Curry 2012; Grosch & Olsen 2000). The unrelenting nature of these stressors can lead to chronic, stress-related physiological over-arousal among clergy (Hart 1984, 1995). Even the positive and exciting dimensions of ministry, such as preaching or comforting parishioners in crisis, likely contribute to physiological over-arousal and, consequently, adrenaline exhaustion. Adrenaline exhaustion is a physiological condition in which the adrenal system is over-taxed, resulting in emotional and physical difficulties (Foss 2002; Hart 1984, 1995). These findings suggest that clergy may experience a higher stress level in some respects than other helping professions but may or may not consequently experience higher burnout. For example, it may be that clergy have a lower rate of burnout in spite of higher stress levels due to buffering factors.

Many clergy appear to be leaving pastoral ministry prematurely (Beebe 2007), and an increasing number of pastors may be leaving the ministry due to burnout (Randall 2004; Spencer et al. 2012). Although overall clergy attrition numbers are unknown, a large study of clergy across five sizeable denominations found that burnout was among the top seven reasons for clergy attrition reported by clergy, and 14% of clergy who had left the ministry reported that "burnout" was the main reason (Hoge & Wenger 2005). Clergy and their parishioners uniquely attribute a sacredness to ministry work, which may drive them to work harder and longer than other helping professionals in order to avoid perceived failure, thus making them prone to burnout (Pargament & Mahoney 2005; Stewart-Sicking et al. 2011). Alternatively, the spiritual calling that clergy experience may increase their motivation and persistence and prevent burnout.

In sum, clergy are vital community leaders who interact with a large number of people, often on a regular basis. The energy that they do—or do not—bring to their work has the potential to affect people in a variety of ways, including in personal counseling, religious celebrations, and issues of social justice. Clergy impairment, reduced effectiveness, and attrition have numerous negative effects on clergy themselves, their congregations, and communities. With these important roles and the link between burnout and increased job

impairment and attrition, physical problems, and emotional and relational difficulties, it is critically important to understand the degree of burnout among clergy.

Comparing burnout in clergy to burnout in other helping professions

Although the concept of burnout is based on clinical and field observation rather than a theory (Cox 2005; Foss 2002; Maslach et al. 1996; Shirom 2005), the theory of effort-reward imbalance may partially explain burnout. In effort-reward imbalance theory, Siegrist (1996) proposes that high effort in the form of certain intrinsic and extrinsic demands combined with specific kinds of low reward result in emotional distress. Intrinsic demands include perfectionistic and passionate commitment to one's job, lack of detachment from work duties, and a high need for success and approval (Siegrist & Matschinger 1989). The domain of extrinsic demands includes high workload, inadequate resources, high responsibility, and role conflicts (Siegrist & Matschinger 1989). "Rewards" refers to tangible and intangible aspects of job fulfillment, such as making a difference in the world, financial compensation, approval by others, and the opportunity to influence one's own job stability and clearly define one's role (Siegrist 1996; Siegrist & Matschinger 1989). We contend that the helping professions in general, and the clergy profession in particular, are potentially high-effort, low-reward occupations.

Although pastoral ministry is an occupation, we found only a few studies comparing burnout between ministry and other helping professions. However, ministry has much in common with other helping professions that involve high effort and low rewards. For this study, we chose professions that include similar dimensions of job descriptions as well as comparable high effort and low rewards. The professions we chose that have a high degree of emotional labor and relational intensity are social work, counseling, and teaching. In addition, studies have noted that clergy experience regular physiological arousal due to the performance aspects of ministry, such as preaching to others, schedule unpredictability, and frequent crisis response of various kinds (Foss 2002; Hart 1984; 1985). We therefore sought to compare clergy to two sets of professionals who experience prolonged, stress-induced physiological over-arousal due to frequent crisis response: emergency personnel and police. Comparative information with other professions is needed to understand the appropriate degree of concern over burnout in clergy. Additionally, information on the rates of the specific burnout components of emotional exhaustion and depersonalization as well as of low feelings of personal accomplishment among clergy is needed to know whether and how to support clergy differently than other helping professionals in order to promote long and effective leadership. In this paper, we take advantage of the popularity of the MBI, whose ubiquitous use allows such comparisons.

Methods

Literature review

A computerized search was initiated using NCBI PubMed, PsycINFO, ProQuest Dissertations, and the Cochrane Library for original research published in the English language that concerned burnout in clergy, social workers, counselors, teachers, emergency personnel, and police officers. The references of selected papers were also reviewed to identify additional manuscripts. Combinations of keywords were used, including burnout, MBI, Maslach, clergy, social workers, counselors, teachers, emergency personnel, EMT, law enforcement officers, and

police officers. MeSH terms included 'professional burnout,' 'clergy,' 'police officers,' and 'school teachers.'

Studies were included if the following criteria were met: (a) the focus of the paper was one or more of the professions included in the review, (b) the authors reported means and standard deviations (or standard errors) for at least one of the three MBI subscales, and (c) the authors utilized the MBI-HSS or an unspecified 22-item version of the MBI that was determined to be the MBI-HSS or the MBI-ES (MBI Educator Survey). The MBI-ES is identical to the MBI-HSS except for the use of the word 'student' instead of 'recipient' within the 22 items. Papers that used other modified versions of the MBI were omitted because their scores would not be comparable to the selected MBI versions.

We report the MBI means (emotional exhaustion, depersonalization, and personal accomplishment) and standard deviations separately by study and offer readers the sample demographics for each study in Tables 1 and 2, allowing readers to discern differences in MBI means between diverse occupational and demographic characteristics. We report mean ranges by occupation to provide a simple summary of the data. Although we considered pooling data into a single mean (e.g., for emotional exhaustion) per occupation by using meta-analysis methods, we decided this approach would be misleading because of the unknown but likely heterogeneity within each occupation. Although each chosen occupation generally involves similar employee tasks, the context of those tasks can vary widely based on, for example, public versus private employers or the degree of respect that an occupation is given in a certain country or geographic area. These contextual factors are likely to affect burnout. Rather than overstate the relationship between burnout and an occupation through a single pooled score, we provide score ranges, along with study details in the tables, that allow the reader to know the population characteristics and compare between sets of specific studies. High burnout in the emotional exhaustion and depersonalization domains is indicated by high scores on these two MBI subscales. The personal accomplishment subscale is reverse scored, so higher scores indicate more feelings of personal accomplishment and therefore lower burnout and lower scores on this subscale indicate a higher level of burnout.

MBI manual norms

The authors of the MBI collected data on each of the measure's subscales across large samples of numerous professions (Maslach et al., 1996). Based on surveys from 11,067 participants from various helping professions, the MBI manual reports normative means for each burnout subscale for the overall sample, as well as occupation-specific normative means. In addition, the MBI authors suggest score ranges for each subscale that correspond to low, moderate, and high levels of burnout. We compare data from studies surfaced in our literature search to these MBI occupation-specific norms.

Analyses

We report means and 95% confidence intervals from clergy studies (Table 1) as well as from studies on other occupations that are comparable to clergy (Table 2). The studies in Tables 1 and 2 are arranged first by version of the MBI utilized and then by geographic location. A few studies appeared to report mean scores of burnout survey items rather than sum scores. We contacted authors to confirm this, and all who replied indicated that they did, in fact, report mean scores. We chose to retain studies in which we did not receive an author response and assume that they also reported a mean score; these studies are indicated as such in the tables.

We transformed the mean scores into sum scores for consistency with the remaining papers; for such studies, we assume survey items range from zero instead of one unless otherwise stated in the article's methodology.

Results

Burnout across clergy studies

Table 1 depicts the demographic details of 16 samples of burnout in clergy, with 8 of those samples using the 22-item MBI-HSS and 8 using an unspecified, 22-item version of the MBI. Figure 1 graphically depicts the burnout means and confidence intervals for clergy studies, including MBI published norm statistics. Studies in Table 1 and Figure 1 are listed in the same order and are organized first by version of the MBI utilized, then by denomination, and finally by geographic location or country.

It is necessary to consider the components of burnout separately. For emotional exhaustion (EE) in clergy, mean scores ranged from 12.9 to 23.5, with 12 of the 16 studies ranging from 16.0 to 19.2, which are classified as low to moderate in the MBI manual for the normative sample, including clergy. These means are lower than the published norm mean for EE of 21.4 (SD = 11.5). For depersonalization (DP), mean clergy scores ranged from 2.9 to 8.1, with 12 of the 16 studies ranging from 5 (low) to 7 (moderate). These means were also lower than the MBI published norm mean for DP of 8.11 (SD = 6.2). For personal accomplishment (PA), mean scores ranged from 32.8 (high burnout) to 40.8 (moderate burnout), with 11 of the 16 clergy studies ranging from 35.4 to 39.3 (moderate burnout). These means appear to be similar to or higher than the MBI norm sample mean of 36.4.

Burnout across studies of multiple professions

Table 2 depicts the demographic details for studies of burnout in the non-clergy helping professions of social workers, counselors, teachers, emergency personnel, and police. Figure 2 graphically depicts the burnout means and confidence intervals for social workers and counselors. Figure 3 depicts the burnout means and confidence intervals for teachers, and Figure 4 does the same for emergency personnel and police. Studies in Table 2 and Figures 2, 3, and 4 are listed in the same order and are arranged first by version of the MBI used and then by geographic location or country. For comparison purposes, Figures 2, 3, and 4 include the MBI-HSS occupation-specific norm statistics reported in the MBI manual based on the occupational group.

Social Workers. Social worker studies revealed a range of means for EE of 16.6 to 26.3, with 9 of the 13 studies falling in the low-moderate range of 16.6 to 19.3. This range appears to be lower than the MBI norm sample mean for social workers of 21.4 (SD = 10.5). Clergy levels of EE appear to be similar to those of social workers. For DP, social worker means across studies ranged from 4.0 to 16.6, with 9 of the 13 studies ranging from 4.0 to 5.4 (low burnout). Clergy studies appear to be slightly higher, suggesting that social workers may experience a slightly lower level of DP than clergy. For PA, social worker means ranged from 21.8 (high burnout) to 40.9 (low burnout), with a cluster of 5 of the 13 studies ranging from 36.1 to 37.2 (moderate burnout) and another cluster of 6 of the 13 studies ranging from 39.7 to 41.0 (low burnout). Social workers appear to exhibit similar or slightly higher means than clergy, indicating similar or slightly lower burnout for clergy in the PA domain.

Counselors. For EE, mean scores for counselors ranged from 8.6 to 42.4, with a cluster of 6 of the 16 studies ranging from 15.5 (low) to 19.75 (moderate burnout). Overall, counselors appear to exhibit a wider range of EE means than clergy, but this cluster of EE means for counselors appears to be similar to that of clergy. The level of DP for counselors ranged from 1.7 to 26.9, with a cluster of 8 of the 16 studies ranging from 3.7 to 5.0 (low burnout). Counselors generally appear to report levels of DP that are lower than those of clergy. The PA means for counselors ranged from 9.3 to 43.6, with a cluster of 9 of the 16 studies ranging from 39.0 (low burnout) to 42.4 (moderate burnout). Counselors appear to report generally higher PA means than clergy, indicating lower burnout for clergy in this domain.

Teachers. Burnout studies of teachers revealed a range of mean EE scores from 13.9 to 32.8, with 14 of the 22 studies falling between 18.1 and 25.9 (moderate burnout). Teachers appear to have somewhat higher levels of EE than clergy. For DP, teacher means ranged overall from 3.3 to 13.3, with 11 of the 22 studies ranging from 5.2 (low burnout) to 7.0 (moderate burnout). Clergy appear to have a similar level of DP as teachers. PA means for teachers ranged from 13.0 to 42.9, with a cluster of 10 of the 22 studies ranging from 33.5 to 39.2 (moderate burnout). Although teachers exhibited a wider range of PA than clergy, comparisons suggest that teachers generally display a level of PA that is similar to clergy, indicating a similar level of moderate burnout in this domain.

Emergency personnel. Studies of emergency personnel reported means for EE of 14.3 to 26.6, with 5 of the 7 studies falling in the 14.3 (low burnout) to 19.2 (moderate burnout) range. Reported means for emergency personnel exhibit a wider range of EE than clergy across studies, yet emergency personnel appear to have a low to moderate level of EE similar to clergy. For DP, emergency personnel means ranged from 6.5 to 13.7, with 4 of the 7 studies falling in the range of 8.4 to 9.3 (moderate burnout). These means are higher than clergy means, indicating that emergency personnel may display a higher level of DP than pastors. The PA means for emergency personnel ranged from 10.4 to 37.4, with 4 of the 7 studies clustering between 28 (high burnout) and 34.5 (moderate burnout). Emergency personnel appear to display a wider range of levels of PA than clergy as well as generally lower means, indicating they have higher burnout in the PA domain than clergy.

Police. EE means for police officers ranged from 5.3 (low burnout) to 20.9 (moderate burnout), with 6 of the 10 studies clustering between 19 and 21 (moderate burnout). Police studies displayed a much wider range of EE means than clergy studies, and police appear to generally exhibit a higher level of EE than clergy. Police studies reported means for DP ranging from 5.6 to 17.4, with 7 of the 10 ranging from 7 (moderate burnout) to 11.3 (high burnout). Police appear to exhibit a higher level of DP than clergy. Finally, PA means for police officers ranged from 11.2 to 42.7, with 5 of the 10 studies clustering between 32.2 (high burnout) and 37.4 (moderate burnout). Consequently, police officers appear to generally report lower PA means, indicating a higher level of burnout than clergy in the PA domain.

Summary. Compared to studies of other helping professionals, clergy appear to exhibit a similar level of EE as social workers, counselors, and emergency personnel and a lower level than teachers or police officers. Generally, clergy appear to report higher levels of DP than social workers or counselors, similar DP levels to teachers, and lower DP levels than emergency personnel and police officers. Clergy seem to display higher levels of burnout in the PA domain

than counselors, similar levels of burnout (moderate) in the PA domain to social workers and teachers, and lower levels of burnout in the PA domain than emergency personnel and police.

Teachers appear to have the highest level of EE of the professions included in this study. Police and emergency personnel reported a higher level of DP than the other professions included in the study. Police officers may have the highest levels of PA and therefore the highest levels of burnout, or the most diminished sense of efficacy, in this domain. Police officers appear to be the only profession included in the study to generally report higher levels of burnout than clergy in all three domains.

Discussion

Although the MBI has been utilized across a wide variety of helping professions, there are no previously published studies comparing burnout between helping professions and clergy. The clergy role is unique in many respects, but it also shares dimensions in common with professions that have high demands (such as emotional labor, relational intensity, and prolonged, stress-induced physiological over-arousal) or low rewards (such as job instability, low financial compensation, low approval from others, or limited ability to influence one's role). Clergy perform stressful roles, but it is unclear to what extent these stressors result in burnout.

Research indicates that clergy simultaneously experience burnout and ministry satisfaction (Barnard & Curry 2012; Carroll 2006; Doolittle 2010; Rowatt 2001; Stewart-Sicking et al. 2011). Given the extensive literature on stressors experienced by clergy, we anticipated that clergy may experience above-average rates of burnout. However, this was not the case. It may be that pastoral ministry is an experience of emotional extremes, and the joy or meaningfulness of ministry may be a protective factor against experiencing all three components of burnout. Previous research has indicated that negative correlates of clergy burnout include age, extraversion, satisfaction with leisure activities, positive attitude toward prayer, higher levels of self-differentiation, collaborative conflict management style, seeking mentors, positive self-esteem, and congregation size (Barnard & Curry 2012). Sabbath-keeping, mentoring relationships, and purposeful leisure activities likely buffer against clergy burnout (Beebe 2007). Also, most churches in America are small (Carroll, 2006), so the volume of social interaction may be less for some clergy than that for some other helping professionals, possibly reducing the risk of burnout. However, the nature of the clergy role is such that interpersonal stressors can be quite high even in a small congregation.

The MBI manual reports several sets of burnout means by occupation, and it assigns clergy to a group of helping professions that includes legal aid employees, attorneys, police officers, probation officers, librarians, and agency administrators. Compared to the published MBI norm means in this group, the clergy studies we found reported lower levels of EE (still in the moderate range) and DP (still in the moderate range) and a similar level of PA (also in the moderate range). Possibly, clergy burnout means are lower than the MBI manual means for helping professionals, and the inclusion of a wide range of helping professions in the MBI manual sample obfuscates the burnout means for clergy. These results suggest the need for clergy-specific MBI norms. We found that clergy experience less burnout symptoms, at least in the EE and DP domains, than the average comparable helping professional. Thus, even if clergy

are more stressed, or uniquely stressed (Foss 2002), they do not appear to be experiencing more EE or DP than other helping professionals.

In terms of EE, clergy appear to be most similar to social workers, counselors, and emergency personnel, possibly due to the amount of pastoral care and counseling, including crisis intervention, in which clergy engage. These professions all have frequent emotionally intense interactions with individuals and small groups. The lower level of EE for clergy compared to teachers and police officers may be due to the unique buffering factors of the clergy role identified above, such as ministry satisfaction, Sabbath-keeping, and mentoring relationships (Barnard & Curry 2012; Beebe 2007).

Clergy appear to have generally higher levels of DP than social workers or counselors, similar DP levels to teachers, and lower levels than emergency personnel and police officers. DP in pastoral ministry could have devastating consequences for all involved, given the highly relational and social nature of the clergy role. Clergy are likely to interact with a higher number of people in a wider variety of social situations in their role than social workers or counselors, many of whom only interact individually with their caseload. The social interaction of clergy may be more similar to that of teachers, who interact with both individuals and groups. Maslach (2001) reported that increased frequency of interaction with service recipients is related to increased DP. Foss (2002) found that emotional triangulation, personal attack by service recipients, and adrenaline exhaustion were positively correlated with DP for both helping professionals in general and clergy in particular. Uniquely among clergy (not among other helping professionals), adrenaline exhaustion was correlated with DP (2002). Clergy likely have a degree of secondary trauma exposure (Bledsoe 2013; Hall 1997; Jacobson 2014), which may be more frequent than for social workers or counselors who are not often first responders. However, clergy exposure to trauma and crisis intervention may be less frequent than that of police or emergency personnel. Clergy may also have greater theological and spiritual resources for coping with secondary exposure to trauma and the suffering of others, although clergy often do not receive any psychological training in coping with trauma. Faith convictions may lead clergy to humanize others in ways that decrease DP. Police officers are also called upon to commit violence against perpetrators to protect themselves or others, which could result in higher DP for them.

Across the studies we analyzed, clergy evidenced higher burnout in the PA domain than counselors. Counselors work with a smaller group of people in more limited contexts and have built-in boundaries that do not result in the same kinds of interpersonal stressors that clergy often face, such as frequent criticism. Furthermore, depending on their employment context and credentials, counselors may have the potential to control their caseload and make more income than clergy. In addition, a number of cultural shifts have occurred among parishioners that may lead to higher burnout in the PA domain for clergy. These include a more educated laity, less trust in centralized authority, less commitment to denominations and religious institutions, and lower social status for the clergy role (Hoge & Wenger 2005).

We found that clergy exhibit levels of burnout (i.e., moderate burnout) in the PA domain similar to those of social workers and teachers. Clergy may be similar to social workers in their level of PA burnout due to sharing similar challenges of role complexity, role conflict, and role ambiguity. In addition, pastoral work is ambiguous in nature, given that markers of success are not visible and tangible evidence of results is difficult to find in relation to spiritual formation

and growth in peoples' lives. A lack of concrete markers of effectiveness may contribute to burnout in the PA domain. It may also be the case that, like social workers and teachers, clergy do not always see immediate results of their work, as progress in the lives of those being helped can be slow or difficult to discern at times.

We found that, across studies, clergy reported lower levels of burnout in the PA domain than emergency personnel or police officers. Although clergy are often called upon to respond to traumatic incidents, the role complexity for clergy may actually provide some variety, giving breaks from intense interactions with parishioners that are not always possible for emergency personnel or police. In addition, given the sacred nature of their work, clergy experiences of faith, ministry satisfaction, and existential fulfillment may contribute to a greater sense of self-efficacy in their work.

Limitations and suggestions for future research

Although this study capitalizes on the widespread use of the MBI, it is also subject to the limitations of the conceptualization and measurement of burnout as defined by the MBI. The MBI has been criticized because it was derived from field and clinical observation rather than being based on a theoretical model or empirical evidence (Cox et al. 2005; Kristensen et al. 2005). Burnout has not been distinguished from stress theory, depression, or work engagement (Cox et al. 2005; Kristensen et al. 2005; Shirom 2005), and scholars do not agree upon a definitive conceptual model of burnout. Studies have examined how the three burnout constructs measured by the MBI may relate to each other across time, that is, whether there is an unfolding burnout process, but these empirical studies do not yet agree. In addition, the MBI may not be valid for use cross-culturally as many of the items are 'American' in their ideas or presuppositions (Kristensen et al. 2005). Consequently, the MBI may not fully capture the phenomenon of clergy burnout.

Clergy burnout may have unique dimensions not included in the Maslach burnout conceptualization (Foss 2002). This concern led several researchers to develop their own clergy-specific measures of burnout in order to capture the domains unique to the clergy role (Francis 2009; Hart 1984; Hills 2004). Hart (1984) conceptualized clergy burnout as composed of the domains of demoralization (MBI PA), depersonalization (MBI DP), detachment (MBI EE), distancing from social interaction, and defeatism. Hart's distancing and defeatism are unique aspects of clergy burnout not included in Maslach's conceptualization (Foss 2002). Francis (2009) incorporated MBI dimensions and questions, but reworded and added questions specific to the clergy work experience, confirming Maslach's three-factor model of clergy burnout. Oswald also created an empirically derived, clergy-specific burnout measure independent of Maslach's conceptualization, and initial psychometric exploration yielded a two-factor model of personal and social dimensions of clergy burnout (Hills 2004). Spiritual dimensions to burnout are also not included in Maslach's measure but are likely to be important for clergy.

Despite these possible shortcomings of the MBI, as a measure it has been used in hundreds of studies across professions, and we took advantage of its widespread use through this comparison study. Although the studies we included do not represent an exhaustive literature review, they do provide a representation of the possible trends in these occupational groups. Burnout research may be vulnerable to a survival bias; that is, clergy with high levels of burnout may have left ministry prior to research taking place (Maslach et al. 2001). Attrition rates for clergy and for other helping professions are unknown. Across the studies, clergy reported

generally moderate burnout means in all three domains. Most studies did not publish percentages of participants that fall in categories of burnout in each domain (low, moderate, high), so little is known about the prevalence of burnout symptoms as defined and measured by the MBI. It would be helpful if studies would report the prevalence of burnout symptoms by domain of burnout and low, moderate, and high levels in order to provide a clearer picture as to the seriousness and degree of burnout across professions. The moderate rates we found of clergy burnout across studies indicate that it cannot be assumed that clergy as a group are at either high or low risk for burnout. Instead, any given group of clergy should be assessed for burnout. In addition, clergy within a specific group likely range in their degree of burnout, such that individual clergy could be targeted for intervention. Based on burnout scores that qualify for high levels of burnout in the MBI manual, targeted intervention may also be needed for teachers for burnout in the EE domain, emergency personnel and police in the DP domain, and police in the PA domain.

Furthermore, a comprehensive, predictive, process model of clergy burnout is needed that delineates what combinations of personal and environmental stressors predict the three different dimensions of clergy burnout, and in what sequence. Longitudinal studies would be required to develop this model, but little longitudinal burnout research exists. Of note, one study suggests that burnout may be fairly stable over long periods of time (Shirom 2005). Finally, future research should further explore those clergy who appear to be exhibiting strong ministry engagement (Maslach et al. 2001), i.e., the clergy who have simultaneous low EE, low DP, and high PA. Identifying areas of clergy burnout can help identify more specific means of prevention and intervention among clergy, thus helping clergy as well as their families, congregations, and communities.

Given that being clergy is a profession with high interpersonal stress and the requirement of being on call around the clock, we found that clergy burnout is moderate compared to that of other professions, suggesting that clergy may have burnout prevention strategies worth studying. In fact, clergy appear to be doing better than police and emergency personnel. However, clergy burnout is worse than that of counselors. There may be strategies that counselors use, like having backup and on-call support that would benefit clergy. Overall, there is room for improvement in burnout for all professions, especially for police and emergency personnel. It is important to remember the variation within any profession, including clergy, and to prevent and address burnout for those in need.

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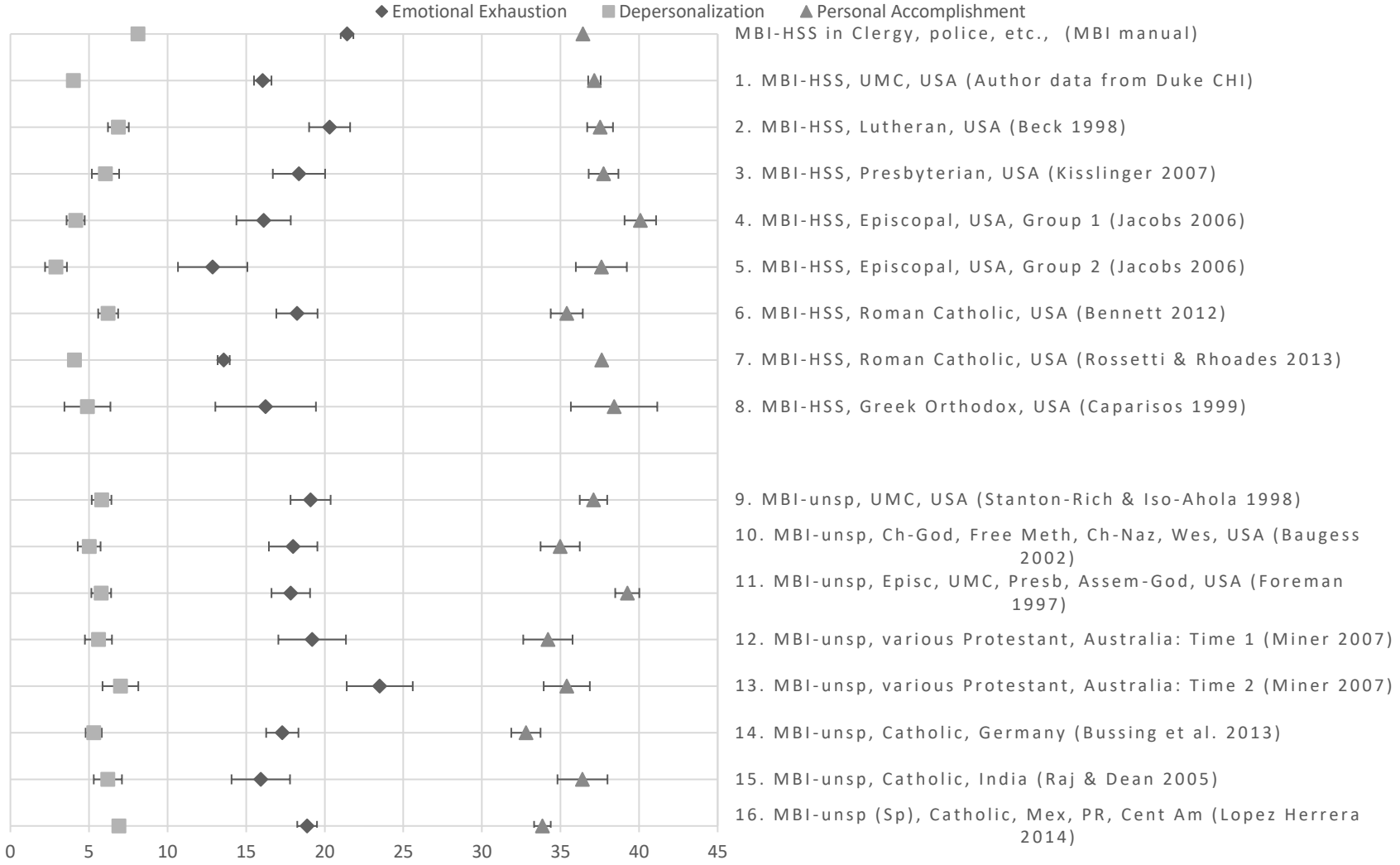
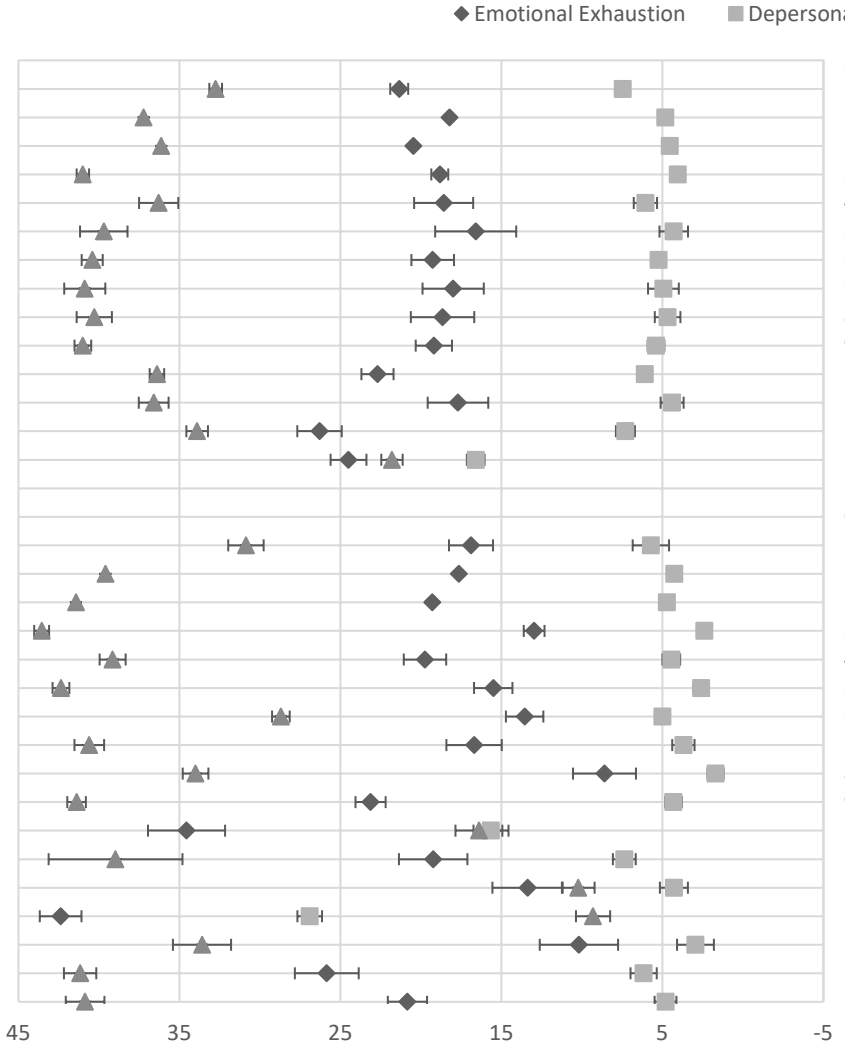
Figure 1. Burnout in All Clergy



Note: Study labels map to Table 1. CHI = Clergy Health Initiative; UMC = United Methodist Church; unsp = unspecified; Ch-God = Church of God; Meth = Methodist; Ch-Naz = Church of the Nazarene; Wes = Wesleyan; Presb = Presbyterian; Assem-God = Assemblies of God; Episc = Episcopal; Sp = Spanish; Mex = Mexico; PR = Puerto Rico; Cent Am = Central America; References may contain the name of the first author only, omitting "et al."

Figure 2. Burnout in Social Workers and Counselors

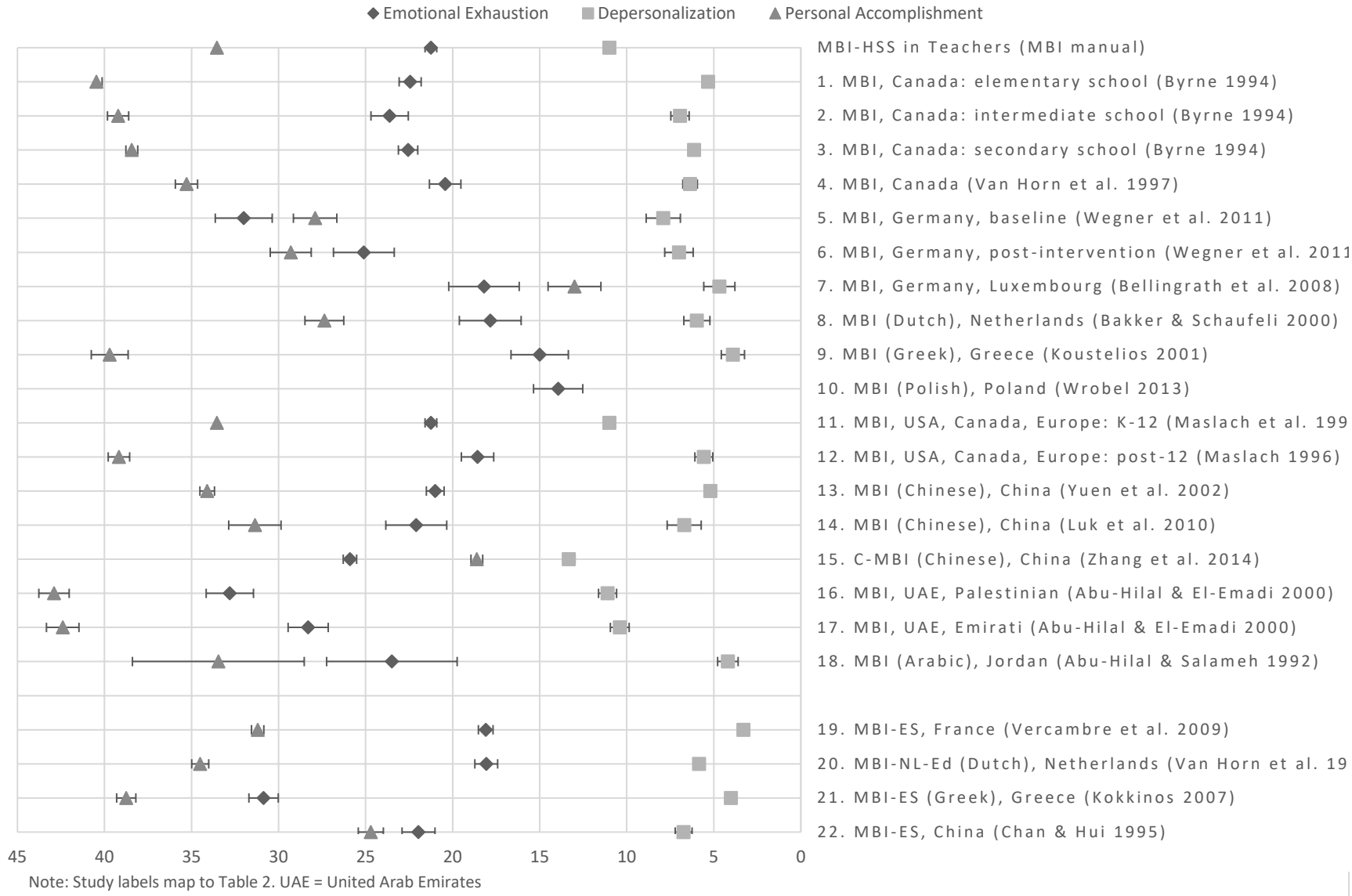


Social workers:
MBI-HSS in Social service workers (MBI manual)
1. MBI-HSS, USA, Shelter workers (Baker et al. 2007)
2. MBI-HSS, USA, SW (Boston 2009)
3. MBI-HSS, USA, SW (Kaladjian 2003)
4. MBI-HSS, 5 continents, Human. aid workers (Eriksson 2009)
5. MBI, USA, SW, CM, psych1, psych2, resid (Ballenger-Browning…
6. MBI, USA, Rural SW (Mackie 2008)
7. MBI, USA, Urban SW (Mackie 2008)
8. MBI, USA, Cystic fibrosis SW (Coady et al. 1990)
9. MBI, USA, Canada, Perinatal SW (Smith 2009)
10. MBI, Australia, SW, OT (Lloyd & King 2004)
11. MBI, GB, Staff for pts w/ pers disorders (Crawford 2010)
12. MBI in GB, Mental health SW (Evans et al. 2006)
13. MBI, Croatia, SW, nurses, psych1 (Ogresta et al. 2008)

Counselors:
MBI-HSS in Mental health workers (MBI manual)
1. MBI-HSS, USA, School coun (Lee 2010)
2. MBI-HSS, USA, in-pt coun, comm MH, priv prac (Lent et al. 2012)
3. MBI-HSS, USA, Grief coun (Lippert 2000)
4. MBI-HSS, USA, Rehabilitation coun (Templeton & Satcher 2007)
5. MBI-HSS, Australia, coun, psych2 (Hardiman & Simmonds 2013)
6. MBI-HSS, S Africa, Non-prof coun at banks (Fourie et al. 2008)
7. MBI, USA, Sex assualt & DV coun: paid staff (Baird & Jenkins…
8. MBI, USA, Sex assualt & DV coun: volunteer (Baird & Jenkins…
9. MBI, USA, School coun (Wilkerson & Bellini 2006)
10. MBI, USA, residential facility coun (Kruger et al. 1995)
11. MBI, USA, Rehabilitation coun (Maslach & Florian 1988)
12. MBI, USA, Self-help group leaders (Medvene et al. 1997)
13. MBI, Croatia, Substance abuse coun (Tatalovic Vorkapic 2012)
14. MBI (Dutch), Nether, Vol coun for terminal pts (Bakker et al.…
15. MBI-ES, USA, School coun (Thomas 2011)
16. MBI-ES, USA, School coun (Wilkerson 2009)

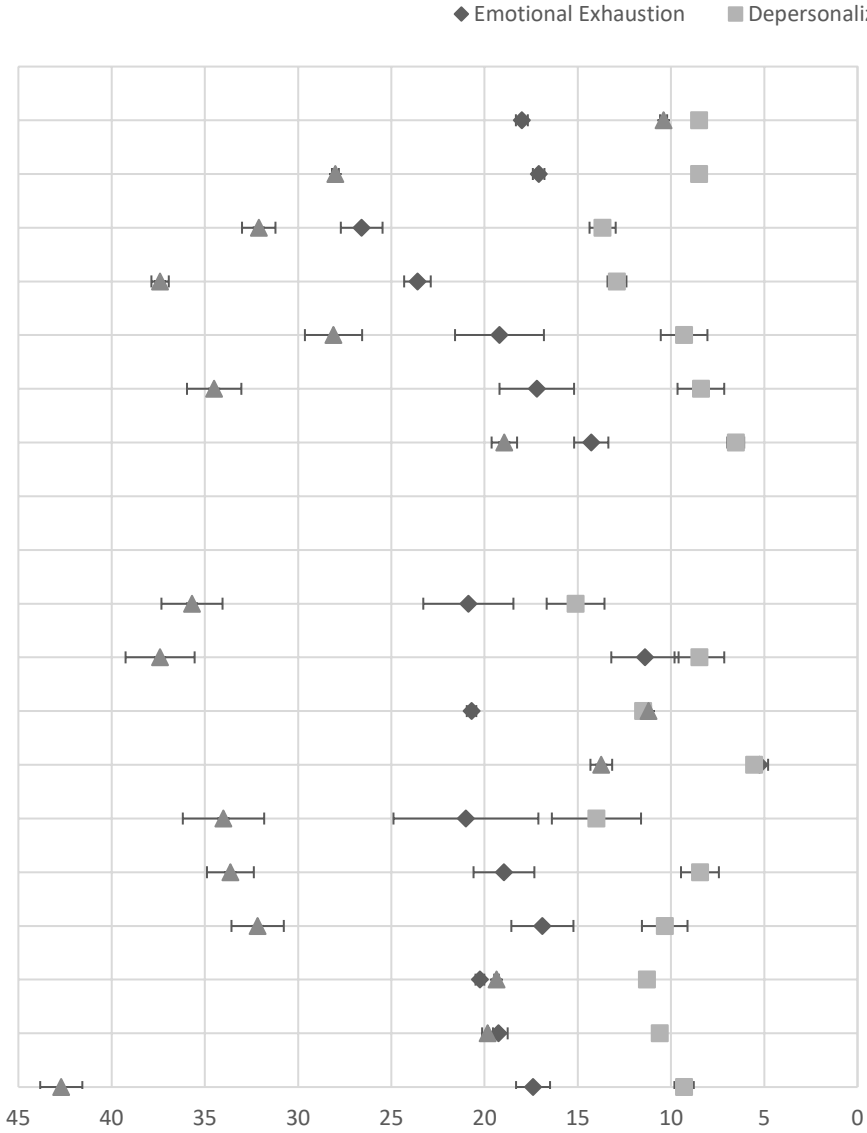
Note: Study labels map to Table 2. SW = social workers; human. = humanitarian; CM = case managers; psych1 = psychiatrists; psych2 = psychologists; OT = occupational therapists; GB = Great Britain; pt = patient; pers = personality; coun = counselors; comm = community; MH = mental health; priv = private; prac = practice; non-prof = non-professional; sex assault = sexual assault; DV = domestic violence; vol = volunteer; References may contain the name of the first author only, omitting "et al."

Figure 3. Burnout in Teachers



Note: Study labels map to Table 2. UAE = United Arab Emirates

Figure 4. Burnout in Emergency Personnel & Police Officers



Emergency personnel:

1. MBI-HSS, Norway, Ambulance workers, police (Sterud 2007)
2. MBI-HSS, Norway, Ambulance workers (Sterud 2008)
3. MBI-HSS, S Africa, EMTs, mgmt, med specialists (Naude 2006)
4. MBI, USA, EMTs (Boudreaux et al. 1998)
5. MBI, USA, EMTs (Weiss et al. 1996)
6. MBI, Scotland, paramedics, ambulance (Alexander & Klein 2001)
7. MBI (Turkish), Turkey, EMTs, doctors, nurses (Gokcen et al.…

Police officers:

1. MBI-HSS, USA, police (Kuchinka 2014)
2. MBI-HSS, USA, police (Ricca 2004)
3. MBI-HSS, Norway, ambulance, police (Sterud et al. 2007)
4. MBI, USA, police officers (Schaible & Gecas 2010)
5. MBI, USA, police (Anson & Bloom 1988)
6. MBI, Canada, police managers (Loo 1994)
7. MBI, Canada, Royal Canadian Mounted Police (Stearns et al.…
8. MBI, Norway, police: males (Berg et al. 2006)
9. MBI, Norway, police: females (Berg et al. 2006)
10. MBI, Italy, police special force unit (Garbarino et al. 2013)

Note: Study labels map to Table 2. police = police officers; S Africa = South Africa; EMT = emergency medical technician; mgmt = managemen med = medical; ambulance = ambulance workers; References may contain the name of the first author only, omitting "et al."

Table 1
Sample Characteristics of Clergy Studies

Label of Study as in Figure 1	Author	MBI Version	Country	Denomination	Hours worked per week	Clergy role
1. MBI-HSS, UMC, USA (Author data from Duke CHI)	Duke Clergy Health Initiative	MBI-HSS	USA	United Methodist	75% full-time; 4% 3/4 time; 13% half-time; 8% 1/4 time; Mean = 53 Hrs (SD = 9.1) for full-time	Parish pastors
2. MBI-HSS, Lutheran, USA (Beck 1998)	Beck (1998)	MBI-HSS	USA	Lutheran	Full-time	Parish pastors
3. MBI-HSS, Presbyterian, USA (Kisslinger 2007)	Kisslinger (2007)	MBI-HSS	USA	Presbyterian		
4. MBI-HSS, Episcopal, USA, Group 1 (Jacobs 2006)	Jacobs* (2006)	MBI-HSS	USA	Episcopal	Varied from full-time to retired	Parish and retired priests, deacons
5. MBI-HSS, Episcopal, USA, Group 2 (Jacobs 2006)	Jacobs* (2006)	MBI-HSS	USA	Episcopal	Varied from full-time to retired	Parish and retired priests, deacons
6. MBI-HSS, Roman Catholic, USA (Bennett 2012)	Bennett (2012)	MBI-HSS	USA	Roman Catholic	60–79 indicated by 39%	Diocesan clergy, e.g., pastors, administrators, educators, supervisors, retired, and other
7. MBI-HSS, Roman Catholic, USA (Rossetti & Rhoades 2013)	Rossetti & Rhoades (2013)	MBI-HSS	USA	Roman Catholic		Diocesan clergy, e.g., pastors, administrators, educators, supervisors, retired, and other

Table 1 (continued)

Label of Study as in Figure 1	Author	MBI Version	Country	Denomination	Hours per week	Clergy role
8. MBI-HSS, Greek Orthodox, USA (Caparisos 1999)	Caparisos (1999)	MBI-HSS	USA	Greek Orthodox	16% (20–30), 27% (40–49), 49% (50–99), 8% (> 100 hrs/wk)	
9. MBI-unsp, UMC, USA (Stanton-Rich & Iso-Ahola 1998)	Stanton-Rich & Iso-Ahola (1998)	MBI (English)	USA	United Methodist		
10. MBI-unsp, Ch-God, Free Meth, Ch-Naz, Wes, USA (Baugess 2002)	Baugess (2002)	MBI	USA	Church of God, Free Methodist, Church of the Nazarene, Wesleyan		Parish pastors, senior and assistant
11. MBI-unsp, Episc, UMC, Presb, Assem-God, USA (Foreman 1997)	Foreman (1997)	MBI	USA	Episcopal, Methodist, Presbyterian, and Assemblies of God		
12. MBI-unsp, various Protestant, Australia: Time 1 (Miner 2007)	Miner (2007) (2 articles with the same data)	MBI	Australia	Various Protestant		Graduating theological students
13. MBI-unsp, various Protestant, Australia: Time 2 (Miner 2007)	Miner (2007) (2 articles with the same data)	MBI	Australia	Various Protestant		Graduating theological students
14. MBI-unsp, Catholic, Germany (Bussing et al. 2013)	Bussing et al. (2013)	MBI	Germany	Catholic	Varied from 5–70	Parish priests, pastoral counselors, retired priests, academic and management positions

Table 1 (continued)

Label of Study as in Figure 1	Author	MBI Version	Country	Denomination	Hours per week	Clergy role
15. MBI-unsp, Catholic, India (Raj & Dean 2005)	Raj & Dean (2005)	MBI	India	Catholic		
16. MBI-unsp (Sp), Catholic, Mex, PR, Cent Am (Lopez Herrera 2014)	Lopez Herrera (2014)	MBI (Spanish)	Mexico, Puerto Rico, Central America	Catholic		

Note: UMC = United Methodist Church; unsp = unspecified; Ch-God = Church of God; Meth = Methodist; Ch-Naz = Church of the Nazarene; Wes = Wesleyan; Presb = Presbyterian; Assem-God = Assemblies of God; Episc = Episcopal; Sp = Spanish; Mex = Mexico; PR = Puerto Rico; Cent Am = Central America

*We assume this study originally reported mean scores for burnout components, not sum scores.

Table 2
Sample Characteristics of Non-Clergy Studies
Panel A: Social Workers

Label of Study as in Figure 2	Author	MBI Version	Country/Region	Occupation	Age: M = mean, Mdn = median (std dev) [range], in years	% Male
1. MBI-HSS, USA, Shelter workers (Baker et al. 2007)	Baker et al. (2007)	MBI-HSS	USA	Shelter workers	M = 37.0 (9.5)	0% (all female)
2. MBI-HSS, USA, SW (Boston 2009)	Boston (2009)	MBI-HSS	USA	Social workers	17.6% (21–30), 27.8% (31–40), 36.1% (41–50), 18.5% (50+)	9%
3. MBI-HSS, USA, SW (Kaladjian 2003)	Kaladjian (2003)	MBI-HSS	USA	Social workers	M = 48	19%
4. MBI-HSS, 5 continents, Human. aid workers (Eriksson 2009)	Eriksson et al. (2009)	MBI-HSS	44 countries, mostly Africa, Asia, Europe, North America, Australia	Humanitarian aid workers	M = 41	69%
5. MBI, USA, SW, CM, psych1, psych2, resid (Ballenger-Browning 2011)	Ballenger-Browning et al. (2011)	MBI	USA	Social workers, case managers, corpsmen, psychiatrists, psychologists, residents	M = 43.8	57%
6. MBI, USA, Rural SW (Mackie 2008)	Mackie (2008)	MBI	USA	Rural and urban social workers		22%
7. MBI, USA, Urban SW (Mackie 2008)	Mackie (2008)	MBI	USA	Rural and urban social workers		22%

Table 2, Panel A (continued)

Label of Study as in Figure 2	Author	MBI Version	Country/Region	Occupation	Age: M = mean, Mdn = median (std dev) [range], in years	% Male
8. MBI, USA, Cystic fibrosis SW (Coady et al. 1990)	Coady et al. (1990)	MBI	USA	Social workers at cystic fibrosis centers	18.1% (20–30), 49.5% (31–40), 22.9% (41–50), 8.5% (51–60), 1% (61–70)	11%
9. MBI, USA, Canada, Perinatal SW (Smith 2009)	Smith (2009)	MBI	USA, Canada	Perinatal social workers	5.7% (20–29), 23.7% (30–39), 26.5% (40–49), 37.4% (50–59), 6.7% (60+)	0% (all female)
10. MBI, Australia, SW, OT (Lloyd and King 2004)	Lloyd and King (2004)	MBI	Australia	Social workers and occupational therapists	SW: 59.7% age 20–30; OT: 16.7% age 20–30	OT: 9%; SW: 36%
11. MBI, GB, Staff for pts w/ pers disorders (Crawford 2010)	Crawford et al. (2010)	MBI	Great Britain	Staff working with pts with personality disorders	M = 42.0 (9.0)	38%
12. MBI in GB, Mental health SW (Evans et al. 2006)	Evans et al. (2006)	MBI	Great Britain	Mental health social workers	M = 46 (9.2)	39%
13. MBI, Croatia, SW, nurses, psych1 (Ogresta et al. 2008)	Ogresta et al. (2008)	MBI	Croatia	Social workers, nurses, psychiatrists	M = 41.2 (10.6) [20–64]	20%

Note: SW = social workers; human. = humanitarian; CM = case managers; psych1 = psychiatrists; psych2 = psychologists; resid = residents; OT = occupational therapists; GB = Great Britain; PT = patient; pers = personality

Table 2
Panel B: Counselors

Label of Study as in Figure 2	Author	MBI Version	Country	Occupation	Age: M=mean, Mdn=median (std dev) [range]	% Male
1. MBI-HSS, USA, School coun (Lee 2010)	Lee (2010)	MBI-HSS	USA	School counselors	M = 44.98 (10.4)	6%
2. MBI-HSS, USA, in-pt coun, comm MH, priv prac (Lent et al. 2012)	Lent & Schwartz (2012)	MBI-HSS	USA	Counselors in in-patient settings, community mental health, and private practice		25%
3. MBI-HSS, USA, Grief coun (Lippert 2000)	Lippert (2000)	MBI-HSS	USA	Grief counselors		
4. MBI-HSS, USA, Rehabilitation coun (Templeton & Satcher 2007)	Templeton & Satcher (2007)	MBI-HSS	USA	Rehabilitation counselors		25%
5. MBI-HSS, Australia, coun, psych2 (Hardiman & Simmonds 2013)	Hardiman & Simmonds (2013)	MBI-HSS	Australia	Counselors, psychotherapists	M = 49.7 (8.1) [31–70]	20%
6. MBI-HSS, S Africa, Non-prof coun at banks (Fourie et al. 2008)	Fourie et al. (2008)	MBI-HSS	South Africa	Non-professional counselors employed by 3 major banks	M = 40.0 (8.8) [20–60]	22%

Table 2, Panel B (continued)

Label of Study as in Figure 2	Author	MBI Version	Country	Occupation	Age: M=mean, Mdn=median (std dev) [range]	% Male
7. MBI, USA, Sex assault & DV coun: paid staff (Baird & Jenkin, 2003)	Baird & Jenkins (2003)	MBI	USA	Sexual assault and domestic violence counselors	16% (21–25), 21% (26–35), 24% (36–45), 22% (46–55), 9% (56–65)	4%
8. MBI, USA, Sex assault & DV coun: volunteer (Baird & Jenkins 2003)	Baird & Jenkins (2003)	MBI	USA	Sexual assault and domestic violence counselors	16% (21–25), 21% (26–35), 24% (36–45), 22% (46–55), 9% (56–65)	4%
9. MBI, USA, School coun (Wilkerson & Bellini 2006)	Wilkerson & Bellini (2006)	MBI	USA	School counselors	M = 43.2 (11.4) [24–70]	28%
10. MBI, USA, residential facility coun (Kruger et al. 1995)*	Kruger et al. (1995)	MBI	USA	Counselors at a residential facility	M = 22.5 (3.1)	30%
11. MBI, USA, Rehabilitation coun (Maslach & Florian 1988)	Maslach & Florian (1988)	MBI	USA	Rehabilitation counselors	M = 37 [27–59]	45%
12. MBI, USA, Self-help group leaders (Medvene et al. 1997)	Medvene et al. (1997)	MBI	USA	Self-help group leaders	[20–78]	20%
13. MBI, Croatia, Substance abuse coun (Tatalovic Vorkapic 2012)	Tatalovic Vorkapic & Mustapic (2012)	MBI	Croatia	Substance abuse counselors	M = 41.6 (8.9) [26–58]	18%

Table 2, Panel B (continued)

Label of Study as in Figure 2	Author	MBI Version	Country	Occupation	Age: M=mean, Mdn=median (std dev) [range]	% Male
14. MBI (Dutch), Nether, Vol coun for terminal pts (Bakker et al. 2006)	Bakker et al. (2006)	MBI (Dutch)	Netherlands	Volunteer counselors working with terminally ill pts	M = 54 (10.3)	44%
15. MBI-ES, USA, School coun (Thomas 2011)	Thomas (2011)	MBI-ES	USA	School counselors	Mean age = 42 + 11.4	24%
16. MBI-ES, USA, School coun (Wilkerson 2009)	Wilkerson (2009)	MBI-ES	USA	School counselors	M = 44.8 (10.3) [24–63]	19%

Note: coun = counselors; pt = patient; comm = community; MH = mental health; priv = private; prac = practice; psych2 = psychologists; non-prof = non-professional; sex assault = sexual assault; DV = domestic violence; vol = volunteer

*We assume this study originally reported mean scores for burnout components, not sum mean scores.

Table 2
Panel C: Teachers

Label of Study as in Figure 3	Author	MBI Version	Country	Age: M=mean, Mdn=median (std dev) [range]	Male
1. MBI, Canada: elementary school (Byrne, 1994)	Byrne (1994)	MBI	Canada	7.9% (20–29), 19.7% (30–39), 51.3% (40–49), 21.1% (50+)	42%
2. MBI, Canada: intermediate school (Byrne, 1994)	Byrne (1994)	MBI	Canada	5.5% (20–29), 19.2% (30–39), 55.0% (40–49), 20.2% (50+)	68%
3. MBI, Canada: secondary school (Byrne, 1994)	Byrne (1994)	MBI	Canada	4.7% (20–29), 20.6% (30–39), 49.3% (40–49), 25.4% (50+)	47%
4. MBI, Canada (Van Horn et al., 1997)	Van Horn et al. (1997)	MBI	Canada	M=42 (7.9)	45%
5. MBI, Germany, baseline (Wegner et al., 2011)	Wegner et al. (2011)	MBI	Germany	M=51.1 (6.7) [27–64]	33%
6. MBI, Germany, post-intervention (Wegner et al., 2011)	Wegner et al. (2011)	MBI	Germany	M=51.1 (6.7) [27–64]	33%
7. MBI, Germany, Luxembourg (Bellingrath et al., 2008)	Bellingrath et al. (2008)	MBI	Germany, Luxembourg	M=46.1 (9.2) [25–63]	30%
8. MBI (Dutch), Netherlands (Bakker & Schaufeli, 2000)	Bakker & Schaufeli (2000)	MBI (Dutch)	Netherlands	M=44 (9.0)	56%

Table 2, Panel C (continued)

Label of Study as in Figure 3	Author	MBI Version	Country	Age: M=mean, Mdn=median (std dev) [range]	Male
9. MBI (Greek), Greece (Koustelios, 2001)	Koustelios (2001)	MBI (Greek)	Greece	[28–59]	38%
10. MBI (Polish), Poland (Wrobel, 2013)	Wrobel (2013)	MBI (Polish)	Poland	M=41.7 (9.4)	19%
11. MBI, USA, Canada, Europe: K-12 (Maslach et al., 1996)	Maslach & Jackson (1996)	MBI	USA, Canada, Europe	18% (<31), 21% (31–40), 11% (41–50), 11% (51+)	40%
12. MBI, USA, Canada, Europe: post-12 (Maslach, 1996)	Maslach & Jackson (1996)	MBI	USA, Canada, Europe	18% (<31), 21% (31–40), 11% (41–50), 11% (51+)	40%
13. MBI (Chinese), China (Yuen et al., 2002)	Yuen et al. (2002)	MBI (Chinese)	China		29%
14. MBI (Chinese), China (Luk et al., 2010)	Luk et al. (2010)	C-MBI (Chinese)	China	[21–52]	23%
15. C-MBI (Chinese), China (Zhang et al., 2014)	Zhang et al. (2014)	C-MBI (Chinese)	China	Male M=34.5 (8.1), Female M=34.0 (7.7)	35%
16. MBI, UAE, Palestinian (Abu-Hilal & El-Emadi, 2000)	Abu-Hilal & El-Emadi (2000)	MBI	United Arab Emirates		56%
17. MBI, UAE, Emirati (Abu-Hilal & El-Emadi, 2000)	Abu-Hilal & El-Emadi (2000)	MBI	United Arab Emirates		56%

Table 2, Panel C (continued)

Label of Study as in Figure 3	Author	MBI Version	Country	Age: M=mean, Mdn=median (std dev) [range]	Male
18. MBI (Arabic), Jordan (Abu-Hilal & Salameh, 1992)	Abu-Hilal & Salameh (1992)	MBI (Arabic)	Jordan		0%
19. MBI-ES, France (Vercambre et al., 2009)	Vercambre et al. (2009)	MBI-ES	France	7.7% (< 30), 28.7% (30–39), 27.1% (40–49), 36.5% (50+)	35%
20. MBI-NL-Ed (Dutch), Netherlands (Van Horn et al., 1997)	Van Horn et al. (1997)	MBI-NL-Ed (Dutch)	Netherlands	Dutch: M=43.0 (7.8)	62%
21. MBI-ES (Greek), Greece (Kokkinos, 2007)	Kokkinos (2007)	MBI-ES (Greek)	Greece	M=33.8 (10.3)	21%
22. MBI-ES, China (Chan & Hui, 1995)	Chan & Hui (1995)	MBI-ES	China	M=31.1 (7.7) [21–61]	43%

Note: UAE=United Arab Emirates

Table 2
Panel D: Emergency personnel

Label of Study as in Figure 4	Author	MBI Version	Country	Occupation	Age: M=mean, Mdn=median (std dev) [range]	Male
1. MBI-HSS, Norway, Ambulance workers, police (Sterud, 2007)	Sterud et al. (2007)	MBI-HSS	Norway	Ambulance personnel, police	Ambulance M=36.8 (9.3) [18–66]; Police M=37.9 (8.1) [20–61]	Ambulance: 76.8%; Police: 82.4%
2. MBI-HSS, Norway, Ambulance workers (Sterud, 2008)	Sterud et al. (2008)	MBI-HSS	Norway	Ambulance personnel	Ambulance M=36.8 (9.3) [18–66]	Ambulance: 76.8%
3. MBI-HSS, S Africa, EMTs, mgmt, med specialists (Naude, 2006)	Naude & Rothmann (2006)	MBI-HSS	South Africa	EMTs, support services, mgmt, medical specialists	M=33.1 (8.1)	80%
4. MBI, USA, EMTs (Boudreaux et al., 1998)	Boudreaux et al. (1998)	MBI	USA	EMTs	M=29.7 (5.7)	71%
5. MBI, USA, EMTs (Weiss et al., 1996)	Weiss et al. (1996)	MBI	USA	EMTs	M=31.7 (7.2)	77%
6. MBI, Scotland, paramedics, ambulance (Alexander and Klein, 2001)	Alexander & Klein (2001)	MBI	Scotland	Paramedics and ambulance technicians	17% (20–29), 47% (30–39), 22% (40–49), 14% (50+)	86%
7. MBI (Turkish), Turkey, EMTs, doctors, nurses (Gokcen et al., 2013)	Gokcen et al. (2013)	MBI (Turkish)	Turkey	Paramedica, EMTs, doctors nurses, paramedics, health care officers	M=29.2 (6.9)	39%

Note: police=police officers; S Africa=South Africa; EMT=emergency medical technician; mgmt=management; med=medical; ambulance=ambulance worker.

Table 2
Panel E: Police Officers

Label of Study as in Figure 4	Author	MBI Version	Country	Occupation	Age: M=mean, Mdn=median (std dev) [range]	Male
1. MBI-HSS, USA, police (Kuchinka, 2014)	Kuchinka (2014)	MBI-HSS	USA	Police officers		
2. MBI-HSS, USA, police (Ricca, 2004)	Ricca (2004)	MBI-HSS	USA	Police officers	M=35 (7.3) [24–55]	98%
3. MBI-HSS, Norway, ambulance, police (Sterud et al., 2007)	Sterud et al. (2007)	MBI-HSS	Norway	Ambulance personnel, police	Ambulance M=36.8 (9.3) [18–66]; Police M=37.9 (8.1) [20–61]	Ambulance: 76.8%; Police: 82.4%
4. MBI, USA, police officers (Schaible & Gecas, 2010)	Schaible and Gecas (2010)	MBI	USA	Police officers		
5. MBI, USA, police (Anson & Bloom, 1988)	Anson and Bloom (1988)	MBI	USA	Police officers		
6. MBI, Canada, police managers (Loo, 1994)	Loo (1994)	MBI	Canada	Police managers	Mid-thirties to fifties	All Male
7. MBI, Canada, Royal Canadian Mounted Police (Stearns et al., 1993)	Stearns and Moore (1993)	MBI	Canada	Royal Canadian Mounted Police	Experienced: Male M=33.0 (6.9), Female M=27.1 (3.2); Recruit: Male M=23.9 (3.7), Female M=24.3 (3.5)	Experienced: 80.5%; Instructor: 100%; Recruit: 39.9%

Table 2, Panel E (continued)

Label of Study as in Figure 4	Author	MBI Version	Country	Occupation	Age: M=mean, Mdn=median (std dev) [range]	Male
8. MBI, Norway, police: males (Berg et al., 2006)	Berg et al.* (2006)	MBI	Norway	Police officers	[25–70]	84%
9. MBI, Norway, police: females (Berg et al., 2006)	Berg et al.* (2006)	MBI	Norway	Police officers	Age range = 25–70yo	84%
10. MBI, Italy, police special force unit (Garbarino et al., 2013)	Garbarino et al. (2013)	MBI	Italy	Police special force unit	M=35.4 (7.5)	99%

Note: police=police officers; ambulance=ambulance workers
*We assume this study originally reported not sum scores for burnout components but mean scores.