

Relationships between personality variables and burnout: A meta-analysis

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Most burnout research has focussed on environmental correlates, but it is likely that personality factors also play an important part in the development of burnout. Previous meta-analyses, however, have been limited in scope. The present meta-analysis examined the relationship between personality and three dimensions of the Maslach Burnout Inventory (MBI): emotional exhaustion, depersonalization, and personal accomplishment. Consistent with our hypotheses, self-esteem, self-efficacy, locus of control, emotional stability, extraversion, conscientiousness, agreeableness, positive affectivity, negative affectivity, optimism, proactive personality, and hardiness, each yielded significant relationships with burnout. Type A Personality, however, was only related to personal accomplishment. Furthermore, regression analysis found that core self-evaluations, the Five-Factor Model personality characteristics, and positive and negative affectivity explained significant variance in each of the burnout dimensions. Finally, moderator analyses found several instances in which the strength of personality–burnout relationships depended upon whether burnout was assessed with the Human Services Survey of the MBI or the General Survey version of the MBI. It is concluded that employee personality is consistently related to burnout. Given the practical importance of employee burnout, it is recommended that personality variables be included as predictors in future research on burnout.

Keywords: Personality; burnout; Five-Factor Model; meta-analysis; Maslach Burnout Inventory; positive affectivity; work-related stress

Introduction

Burnout is a negative emotional reaction to one's job that results from prolonged exposure to a stressful work environment (Maslach & Jackson, 1984; Maslach, Schaufeli, & Leiter, 2001). Burnout is an important variable not only because it is an indicator of poor employee well-being, but also because it is related to employee attitudes, health, and behaviour (Cordes & Dougherty, 1993; Lee & Ashforth, 1996; Maslach, 2003; Maslach & Goldberg, 1998; Maslach et al., 2001). Although most burnout research has focussed on environmental correlates, it is likely that individual difference factors also play an important role in the development of burnout (Maslach et al., 2001). Indeed, the personality–burnout relationship has received attention in previous meta-analyses. Unfortunately, those studies have been limited in scope in relation to burnout. A meta-analysis by Ng, Sorensen, and Eby (2006),

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for example, examined only locus of control as a predictor of burnout. A meta-analysis by Thoresen, Kaplan, Barsky, Warren, and deChermont (2003) examined only positive affectivity and negative affectivity as predictors of burnout. Although these and other traits have been found to yield worthwhile relationships with burnout, it appears that a systematic overview of the relationships between a range of possibly relevant personality variables and burnout is currently lacking.

Furthermore, a review of the literature suggests considerable variability across studies in the strength of personality–burnout relationships. Meta-analysis would help identify whether this variability is artefactual or is due to substantive moderators (Hunter & Schmidt, 2004). Thus, the purpose of the current study is to use meta-analysis to examine the relationships between employee personality (core self-evaluations (CSE); characteristics of the Five-Factor Model of personality traits; positive and negative affectivity; optimism; proactive personality hardiness; and Type A Personality) and the sub-dimensions of burnout. First, however, we briefly review the specific nature of the burnout construct.

The nature of the burnout construct

The first studies of burnout were conducted using samples of workers employed in the helping professions (e.g. nursing, psychotherapy, and social work; Maslach & Jackson, 1981). Researchers have long recognized that people working in those occupations often experience extreme fatigue and a loss of idealism, which inspired the development of the Maslach Burnout Inventory Human Services Survey (MBI-HSS; Maslach & Jackson, 1981). The MBI-HSS assesses three sub-dimensions of burnout: emotional exhaustion, depersonalization, and reduced personal accomplishment.

Emotional exhaustion is characterized by a lack of energy, negative affect, and a perception that one's emotional resources have been depleted (Maslach & Jackson, 1984). Depersonalization, which involves a callous or uncaring response towards people encountered at work (e.g. clients, co-workers), can be viewed as an attempt to cope with work stress by distancing oneself from others (Maslach & Jackson, 1984; Maslach et al., 2001). Finally, reduced personal accomplishment represents a decrease in one's perceived professional efficacy (Maslach & Jackson, 1984; Maslach & Leiter, 1997). That is, workers may come to believe that they cannot perform their jobs adequately or that they cannot be successful in meeting their work-related goals.

More recently, researchers have recognized that burnout may not be unique to human service jobs (Fusilier & Manning, 2005). This has led to the development of the MBI General Survey (MBI-GS; Maslach, Jackson, & Leiter, 1996), which measures similar burnout dimensions to the original MBI, but can be used to assess burnout in any job regardless of whether or not it involves human service work. Since the inception of the MBI-HSS and MBI-GS, the measure has been the primary tool used in research and clinical diagnosis of burnout (Schaufeli & Enzmann, 1998).

Specific personality traits and burnout

In the following sections we discuss several personality characteristics that are hypothesized to be predictors of burnout, including CSE (Judge, Erez, Bono, &

Thoresen, 2003), the Five-Factor Model characteristics (Costa & McCrae, 1992), positive and negative affectivity (Watson, Clark, & Tellegen, 1988), optimism (Scheier & Carver, 1985), proactively personality (Bateman & Crant, 1993), hardiness (Kobasa, 1979), and Type A Personality (Friedman & Rosenman, 1974).

Core self-evaluation

CSE, which represents an individual's fundamental beliefs about his or her own competence and self-worth, is a higher-order construct consisting of four traits: self-esteem, general self-efficacy, emotional stability, and internal locus of control (Judge et al., 2003). Although these traits have traditionally been treated as four separate variables, more recent research suggests that they are each manifestations of a single CSE construct (Bono & Judge, 2003).

CSE may influence burnout via effects of both the perceived and the objective nature of one's work environment. First, high-CSE individuals may be predisposed to perceive the work environment favourably regardless of the objective nature of their jobs (Brunborg, 2008; Judge, Locke, Durham, & Kluger, 1998). Whereas low-CSE individuals may view a difficult work assignment as threatening or stressful, for example, high-CSE individuals may view the same assignment as a challenge or an opportunity to succeed. Furthermore, CSE may influence the objective nature of one's work environment (Judge, Bono, & Locke, 2000). Because of their high levels of self-confidence, high-CSE employees may self-select into enriched job environments. Low-CSE employees, on the other hand, may feel threatened by challenging jobs and pursue routine or repetitive work.

Hypothesis 1: CSE will be negatively associated with burnout.

Five-factor model

Much of the recent research on personality has been based on the Five-Factor Model, which organizes personality traits under five broad dimensions: emotional stability, extraversion, conscientiousness, agreeableness, and openness (Costa & McCrae, 1992). In the following paragraphs we define each of these personality characteristics and discuss their potential relationships with burnout.

Emotional stability. Emotional stability is the general tendency to be free of negative emotions, such as anxiety, depression, hostility, frustration, and guilt (Costa & McCrae, 1992). Because it is part of the CSE construct, we refer the reader to the previous section for an explanation of the relationship between emotional stability and burnout. Although it is expected to be negatively associated with burnout, we have not included a separate hypothesis for emotional stability because that prediction is subsumed under Hypothesis 1.

Extraversion. Extraversion, which reflects the extent to which one is cheerful, gregarious, fun-loving, and enthusiastic (Costa & McCrae, 1992), is expected to yield a negative relationship with burnout. This relationship is expected to be mediated by both employee perceptions of and the objective nature of the work environment. Specifically, individuals high in extraversion may generally perceive the work environment more positively than do individuals who are low in extraversion (Lau, Hem, Berg, Ekeberg, & Torgersen, 2006). Extraversion may also have an impact on the objective nature of one's work environment. Extraverts, for example,

may generally experience positive social environments at work, because they often evoke positive responses from their co-workers (Bowling, Beehr, & Swader, 2005).

Hypothesis 2a: Extraversion will be negatively associated with burnout.

Conscientiousness. Conscientiousness is the extent to which one is achievement-oriented, dependable, organized, and responsible (Costa & McCrae, 1992). We expect that conscientiousness would be negatively associated with burnout and that the objective nature of one's work environment would mediate this relationship. A relationship between conscientiousness and the objective work environment may occur for several reasons. Because of their proactive nature, for example, high-conscientiousness employees who are exposed to stressors may actively manipulate their work environments in ways that reduce or eliminate stressful working conditions (Barrick & Mount, 1991). Low-conscientiousness employees, on the other hand, may engage in few behaviours that actively address such stressors. Conscientiousness may also be related to burnout via the evocation of responses from one's work environment. Compared with their low-conscientiousness counterparts, for example, high-conscientiousness employees are more likely to elicit positive responses from their supervisors and co-workers (Kim, Shin, & Umbreit, 2007). This may occur because high-conscientiousness workers are generally viewed by others as being dependable, responsible, and trustworthy (Costa & McCrae, 1992). Conscientiousness will follow the aforementioned order of strengths of correlation for the same reasons.

Hypothesis 2b: Conscientiousness will be negatively associated with burnout.

Agreeableness. Agreeableness is the extent to which one is cooperative, caring, trusting, and sympathetic towards others (Costa & McCrae, 1992) and is expected to influence burnout via effects on the objective nature of one's work environment. In particular, agreeable employees are expected to behave in ways that evoke favourable responses from their social environments. They may, for example, be treated kindly by co-workers as a response to their own kind behaviour (Bowling et al., 2004). These positive social interactions in turn are expected to make workers less susceptible to burnout.

Hypothesis 2c: Agreeableness will be negatively associated with burnout.

Openness. Openness reflects the extent to which one desires uniqueness, change, and variety (Costa & McCrae, 1992). Individuals high in openness are imaginative, independent thinkers, who are tolerant of ambiguity, and are amenable to new experiences and ideas. Researchers have reported that openness has little or no relationship with burnout (Piedmont, 1993) and we see little theoretical basis for expecting such a relationship. Rather than including a formal hypothesis for openness, we instead conducted exploratory analyses of the relationship between openness and burnout.

Positive affectivity and negative affectivity

Positive affectivity is the general tendency to experience positive emotional states such as happiness, excitement, and energy, whereas negative affectivity is the tendency to experience negative emotional states such as sadness, anxiety, and hostility (Watson et al., 1988). These two variables, have been found to be distinct

from each other (Connolly & Viswesvaran, 1999), are expected to be related to burnout via effects on both the perceived and objective nature of the work environment. Workers who are high in positive affectivity, for example, may be predisposed to perceive their work environment as being pleasant or favourable, whereas workers who are high in negative affectivity may be predisposed to perceive their work environment as being unpleasant or stressful (Connolly & Viswesvaran, 2000). Indeed, research has found that negative affectivity is negatively related to burnout and that NA is positively related to perceptions of work stressors (Connolly & Viswesvaran, 2000; Thoresen et al., 2003).

Positive affectivity and negative affectivity may also influence the objective nature of one's work environment (Kohn & Schooler, 1982; Spector, Jex, & Chen, 1995; Spector, Zapf, Chen, & Frese, 2000). High-positive affectivity individuals, for instance, may generally perform better in job interviews than do their low-positive affectivity counterparts (Fox & Spector, 2000). As a result, those high in positive affectivity may have relatively more employment opportunities and thus they may work in objectively more favourable jobs. Negative affectivity may also affect the objective nature of one's work environment. For example, high-negative affectivity workers may generally express negative emotions at work (e.g. anger, anxiety), which in turn could evoke unfavourable interpersonal responses from supervisors, co-workers, or customers.

Hypothesis 3a: Positive Affectivity will be negatively associated with burnout.

Hypothesis 3b: Negative Affectivity will be positively associated with burnout.

Dispositional optimism

Dispositional optimism is the general tendency to believe that good things will occur in the future and that bad things will not occur (Carver & Scheier, 2002; Scheier & Carver, 1985). Several mechanisms explain why dispositional optimism may be negatively related to burnout. First, optimists may perceive work stressors as temporary conditions that will soon improve, whereas pessimists may perceive the same stressors as enduring conditions that are unlikely to change. Compared with stressors that are perceived to be temporary, those seen as permanent are more likely to result in burnout (Koslowsky, 1998). Optimism may also influence the objective nature of one's work environment. Given that they generally believe that negative work conditions can be improved, optimists are more likely than pessimists to engage in behaviours aimed at actively reducing or eliminating work stressors (Scheier, Weintraub, & Carver, 1986).

Hypothesis 4: Optimism will be negatively associated with burnout.

Proactive personality

Proactive personality is defined as a person who is relatively not impeded by situational forces and subsequently alters the environment (Bateman & Crant, 1993). The proactive person is an active participant in the environment, rather than a passive member. Proactive people scan for opportunities, take action, show initiative, and persevere until they produce change or reach closure. Individuals high in proactive personality will actively change their environment so as to relieve stressors.

The importance of the situational context with this personality variable leads us to hypothesize that proactive personality will be negatively related to burnout. The proactive person may self-select into environments that enable the individual to change the work environment because an important aspect of this personality is changing the environment. These individuals may self-attract from environments that lack control. We thus expect that proactive personality would influence burnout by influencing behaviours directed at manipulating the objective nature of the work environment.

Hypothesis 5: Proactive personality will be negatively associated with burnout.

Hardiness

Hardiness is a personality construct that reflects the extent to which a person is able to endure stressors without experiencing ill effects, such as psychological or physical strains (Kobasa, 1979; Maddi, 1999). Hardy individuals tend to believe that they can control the events that happen to them, they generally perceive stressors as challenges rather than as threats, and they have several life domains (e.g. family, friends, religion) that they feel committed to. Research has primarily examined hardiness as a moderator of stressor-strain relationships (Beehr & Bowling, 2005). It is also likely, however, that hardiness has a main effect on burnout. More specifically, hardiness is expected to yield a negative relationship with burnout via effects on both the perceived and objective nature of the work environment. Hardy employees, for example, are likely to perceive difficult work situations as challenges and not as threats. Furthermore, because hardiness influences problem-focussed coping strategies (Benishak & Lopez, 1997), hardy individuals are likely to manipulate or transform their work environments in ways that reduce or eliminate stressors (Kobasa, Maddi, & Kahn, 1982).

Hypothesis 6: Hardiness will be negatively associated with burnout.

Type A personality

Type A Personality reflects the extent to which one is hostile, aggressive, and impatient (Friedman & Rosenman, 1974; Spence, Pred, & Helmreich, 1989). Several theoretical mechanisms potentially link Type A Personality to burnout. First, Type A individuals are likely to perceive the work environment negatively, independent of the objective nature of one's job (Kirmeyer, 1988). For example, due to their tendency to become easily angry, Type A individuals may perceive even minor or accidental slights as major injustices. Furthermore, Type A individuals are likely to evoke negative responses from co-workers (Spector & O'Connell, 1994), to manipulate their jobs in ways that produce stressors (Caplan & Jones, 1975), and they may self-select into jobs that are inherently stressful (Burke & Deszca, 1982).

Hypothesis 7: Type A Personality will be positively associated with burnout.

Method

We used meta-analysis to examine the hypothesized dispositional correlates of emotional exhaustion, depersonalization, and reduced personal accomplishment.

Below, we discuss the literature search strategy and the analytic methods used to conduct the meta-analysis.

Literature search

We used the PsycINFO, MEDLINE, and Social Sciences Citation Index computer databases to conduct our initial literature search in the summer of 2008. In the PsychINFO and MEDLINE searches we used the terms “burnout,” “emotional exhaustion,” “depersonalization,” “cynicism,” “personal accomplishment,” or “reduced personal accomplishment” in combination with either “personality,” “disposition,” or the name of each personality trait (e.g. extraversion). For the Social Sciences Citation Index search we searched citations of seminal articles (Lee & Ashforth, 1993; Maslach & Jackson, 1981; Maslach et al., 1996; Maslach et al., 2001). We identified additional relevant samples by reviewing the reference sections of previous burnout meta-analyses (Lee & Ashforth, 1996; Ng et al., 2006; Thoresen et al., 2003) and of the studies we found during the PsycINFO search.

Inclusion criteria

Sources that were non-empirical were excluded from our analyses. We included studies that reported correlation coefficients between a disposition and any of the three burnout dimensions (i.e. emotional exhaustion, depersonalization, or reduced personal accomplishment), but excluded studies that reported only a total burnout score (e.g. Best, Stapleton, & Downey, 2005). The combination of the scores is not recommended because the dimensions are seen as three distinct constructs, and combining the subscales will reduce the reliability of the instrument and confound the construct (Maslach et al., 2001). Each of the relationships included in the meta-analysis was examined in a minimum of four primary studies.

These inclusion criteria yielded a final total of 114 samples from published studies and seven samples from unpublished doctoral dissertations and conference presentations. (For a list of references used in the meta-analysis please contact the first author.) Of these samples, 41 used the MBI-HSS (Maslach & Jackson, 1981), 31 used the MBI-GS (Maslach et al., 1996), and 14 used the MBI-ED (Maslach & Jackson, 1986). The remaining 35 samples used the MBI, but the authors of those studies did not specify which version of the measure they used. We excluded studies that used a measure of burnout that was conceptually different from the MBI, such as the Bergen Burnout Inventory (Mathiesen & Dyregrov, 1992), OLBI (Demerouti, Bakker, Vardakou, & Kantas, 2003), and the Malach-Pines (Malach-Pines, 2005).

Meta-analytic strategy

We used Hunter and Schmidt's (2004) method to conduct the meta-analyses. Specifically, we computed the average-weighted mean corrected correlation (r) between each disposition and emotional exhaustion, depersonalization, and reduced personal accomplishment. We used artefact distributions to estimate missing reliability data. Specifically, missing reliability data were replaced by calculating the mean reliability for each variable (p) using the primary samples in the relationship. In addition, we computed 95% confidence intervals to test the

significance of the relationships and the percentage of variance accounted for by artefacts to detect potential moderation. If the percentage of variance was less than 75%, potential moderators were considered. Finally, we conducted moderator analyses comparing the results from the MBI-GS with those of the MBI-HSS. We tested the difference in relationship strength with a comparison of confidence intervals. If the confidence intervals failed to overlap, the two relationships were deemed significantly different.

Results

We examined employee personality–burnout relationships separately for emotional exhaustion, depersonalization, and personal accomplishment. The results of these analyses are reported in Tables 1–3 and are discussed in the following sections.

Emotional exhaustion

As shown in Table 1 (where k = number of samples and N = total sample size), self-esteem ($\rho = -.34$, $k = 21$, $N = 6159$), general self-efficacy ($\rho = -.29$, $k = 20$, $N = 7757$), internal locus of control ($\rho = -.26$, $k = 6$, $N = 2065$), and emotional stability ($\rho = -.50$, $k = 32$, $N = 13,550$) were each negatively associated with emotional exhaustion. These findings provide support for Hypothesis 1. Extraversion ($\rho = -.26$, $k = 26$, $N = 11,484$), conscientiousness ($\rho = -.21$, $k = 23$, $N = 8740$), and agreeableness ($\rho = -.17$, $k = 19$, $N = 8358$) were also negatively related to emotional exhaustion, which is consistent with Hypotheses 2a, 2b, and 2c. Positive Affectivity yielded a mean corrected correlation of $-.42$ ($k = 13$, $N = 3237$) with emotional exhaustion, whereas Negative Affectivity yielded a mean corrected correlation of $.49$ ($k = 25$, $N = 9039$), supporting hypotheses 3a and 3b. As predicted by Hypotheses 4, 5, and 6, optimism ($\rho = -.31$, $k = 8$, $N = 2673$), proactive personality ($\rho = -.21$, $k = 7$, $N = 1697$), and hardiness ($\rho = -.42$, $k = 10$, $N = 2171$) were each negatively related to emotional exhaustion. Contrary to Hypothesis 7, however, Type A Personality was only weakly related to emotional exhaustion ($\rho = .07$, $k = 5$, $N = 530$). Exploratory analyses found that openness and emotional exhaustion were unrelated ($\rho = -.01$, $k = 18$, $N = 5883$), as the confidence interval included zero.

Depersonalization

Analyses for the relationships between employee personality and depersonalization are reported in Table 2. As shown in the table, Hypothesis 1 was supported. Specifically, self-esteem ($\rho = -.26$, $k = 16$, $N = 4747$), general self-efficacy ($\rho = -.31$, $k = 17$, $N = 6030$), internal locus of control ($\rho = -.15$, $k = 5$, $N = 1465$), and emotional stability ($\rho = -.40$, $k = 26$, $N = 10,837$) were each negatively associated with depersonalization. We also found that extraversion ($\rho = -.26$, $k = 19$, $N = 8408$), conscientiousness ($\rho = -.26$, $k = 16$, $N = 5926$), and agreeableness ($\rho = -.35$, $k = 13$, $N = 5236$) were negatively associated with depersonalization, which is consistent with Hypotheses 2a, 2b, and 2c. Consistent with Hypotheses 3a and 3b, we found that Positive Affectivity ($\rho = -.42$, $k = 12$, $N = 3185$) yielded a negative association with depersonalization and that NA ($\rho = .43$, $k = 20$, $N = 7019$) yielded a positive association. Other analyses found that optimism ($\rho = -.27$, $k = 5$,

Table 1. Meta-analyses for the relationships between employee personality and emotional exhaustion.

Variable	<i>k</i>	<i>N</i>	Mean <i>r</i>	<i>SD r</i>	Mean ρ	<i>SD ρ</i>	% artefact variance	95% confidence interval
General self-esteem	20	5,847	-.26	.09	-.33	.12	27.00	-.29, -.22
General self-efficacy	16	6,687	-.21	.11	-.24	.13	13.59	-.26, -.15
Locus of control	6	2,065	-.21	.00	-.26	.00	100.00	-.21, -.21
Emotional stability	31	13,047	-.42	.07	-.50	.09	22.47	-.44, -.39
Extraversion	25	10,981	-.21	.06	-.26	.08	34.58	-.23, -.18
Conscientiousness	22	8,237	-.16	.09	-.19	.11	22.77	-.19, -.12
Agreeableness	18	7,855	-.12	.08	-.15	.10	24.20	-.15, -.08
Openness	17	5,380	-.00	.05	-.01	.07	48.21	-.02, .02
Positive affectivity	13	3,237	-.36	.09	-.42	.11	27.76	-.40, -.31
Negative affectivity	23	8,731	.41	.13	.49	.14	11.65	.35, .46
Optimism	8	2,673	-.26	.06	-.31	.08	36.15	-.30, -.21
Proactive personality	5	1,087	-.18	.16	-.23	.19	14.37	-.32, -.03
Hardiness	10	2,171	-.36	.08	-.42	.10	32.18	-.40, -.31
Type A	5	530	.06	.04	.07	.05	24.84	.02, .09

Note: *k* = number of samples; *N* = total sample size; Mean *r* = Average-weighted correlation coefficient; mean ρ = average-weighted correlation coefficient corrected for unreliability in both the predictor and criterion; % artefact variance = percentage of variance accounted for by artefacts.

Table 2. Meta-analyses for the relationships between employee personality and depersonalization.

Variable	<i>k</i>	<i>N</i>	Mean <i>r</i>	<i>SD r</i>	Mean ρ	<i>SD ρ</i>	% artefact variance	95% confidence interval
General self-esteem	15	4615	-.21	.16	-.26	.20	9.93	-.28, -.13
General self-efficacy	16	6687	-.21	.11	-.24	.13	18.18	-.26, -.15
Locus of control	5	1465	-.12	.13	-.15	.17	14.87	-.23, .00
Emotional stability	26	10,837	-.32	.09	-.40	.11	26.06	-.35, -.28
Extraversion	19	8408	-.20	.06	-.26	.08	40.70	-.22, -.17
Conscientiousness	16	5926	-.20	.10	-.26	.13	19.44	-.24, -.15
Agreeableness	13	5236	-.27	.13	-.35	.09	38.43	-.30, -.23
Openness	13	3937	-.05	.01	-.06	.02	91.72	-.05, .04
Positive affectivity	12	3185	-.36	.10	-.42	.11	26.98	-.41, -.30
Negative affectivity	18	6711	.34	.09	.43	.12	21.79	.30, .37
Optimism	5	1168	-.22	.09	-.27	.12	29.01	-.29, -.14
Proactive personality	4	980	-.20	.11	-.25	.15	23.36	-.30, -.09
Hardiness	10	2171	-.33	.10	-.42	.12	26.91	-.39, -.26
Type A	4	580	-.07	.10	-.09	.12	8.63	-.16, .02

Note: *k* = number of samples; *N* = total sample size; mean *r* = average-weighted correlation coefficient; mean ρ = average-weighted correlation coefficient corrected for unreliability in both the predictor and criterion; % artefact variance = percentage of variance accounted for by artefacts.

Table 3. Meta-analyses for the relationships between employee personality and personal accomplishment.

Variable	<i>k</i>	<i>N</i>	Mean <i>r</i>	<i>SD r</i>	Mean ρ	<i>SD ρ</i>	% artefact variance	95% confidence interval
General self-esteem	16	4747	.24	.14	.30	.18	13.30	.17, .30
General self-efficacy	12	4742	.38	.10	.48	.12	19.94	.32, .43
Locus of control	4	1170	.19	.05	.26	.06	54.95	.14, .23
Emotional stability	26	8913	.24	.16	.29	.20	9.08	.17, .30
Extraversion	20	6777	.29	.11	.36	.14	18.03	.24, .33
Conscientiousness	16	4615	.18	.14	.22	.18	14.40	.11, .24
Agreeableness	13	3775	.19	.10	.23	.13	22.97	.13, .24
Openness	14	4203	.16	.00	.22	.00	100.00	.16, .16
Positive affectivity	9	2231	.40	.09	.50	.12	30.14	.34, .45
Negative affectivity	15	5783	-.17	.13	-.22	.16	13.02	-.23, -.10
Optimism	5	1168	.19	.08	.23	.10	36.53	.11, .26
Proactive personality	4	980	.29	.09	.38	.12	29.59	.20, .37
Hardiness	10	2171	.36	.09	.45	.12	28.67	.30, .41
Type A	5	580	.29	.05	.37	.06	15.70	.24, .33

Note: *k* = number of samples; *N* = total sample size; Mean *r* = average-weighted correlation coefficient; mean ρ = average-weighted correlation coefficient corrected for unreliability in both the predictor and criterion; % artefact variance = percentage of variance accounted for by artefacts.

$N=1168$), proactive personality ($\rho = -.25$, $k=4$, $N=980$), and hardiness ($\rho = -.42$, $k=10$, $N=2171$) were each negatively related to depersonalization. These latter findings provide support for Hypotheses 4, 5, and 6. Contrary to Hypothesis 7, however, Type A Personality and depersonalization were unrelated ($\rho = -.09$, $k=4$, $N=580$), as the confidence interval included zero. Similarly, exploratory analyses found that openness was not related to depersonalization ($\rho = -.06$, $k=13$, $N=3937$).

Personal accomplishment

Analyses examining the relationships between personality and personal accomplishment are presented in Table 3. As shown in the table, self-esteem ($\rho = .30$, $k=16$, $N=4747$), general self-efficacy ($\rho = .50$, $k=13$, $N=4935$), internal locus of control ($\rho = .26$, $k=4$, $N=1170$), and emotional stability ($\rho = .29$, $k=26$, $N=8913$) were each positively related to personal accomplishment. These findings support Hypothesis 1. Additional analyses showing that extraversion ($\rho = .36$, $k=20$, $N=6777$), conscientiousness ($\rho = .22$, $k=16$, $N=4615$), and agreeableness ($\rho = .23$, $k=13$, $N=3775$) were each positively related to personal accomplishment provide support for Hypotheses 2a, 2b, and 2c. Consistent with Hypotheses 3a and 3b, Positive Affectivity ($\rho = .50$, $k=9$, $N=2231$) yielded a positive relationship with personal accomplishment and NA ($\rho = -.22$, $k=15$, $N=5783$) yielded a negative relationship. We also found that optimism ($\rho = .23$, $k=5$, $N=1168$), proactive personality ($\rho = .38$, $k=4$, $N=980$), hardiness ($\rho = .45$, $k=10$, $N=2171$), and Type A Personality ($\rho = .37$, $k=4$, $N=580$) were related to personal accomplishment. These findings support Hypotheses 4, 5, and 6. Exploratory analyses found that openness and personal accomplishment were positively associated ($\rho = .22$, $k=14$, $N=4203$).

Regression analyses

We conducted regression analyses to examine the unique and combined effects of employee personality on burnout. More specifically, we conducted three sets of analyses in which the dimensions of burnout were regressed onto: (1) CSE, (2) the Five-Factor Model traits, and (3) positive affectivity and negative affectivity. Unfortunately, we were unable to conduct regression analyses for all 14 of the personality traits examined above due to a lack of primary studies examining the correlations between each personality trait. Previous meta-analyses were used to complete the correlation matrices required to run the regression analyses. Specifically, the relationships between the CSE traits were taken from Judge, Heller, and Mount (2002), between the FFM traits were taken from Ones (1993), and between positive affectivity and negative affectivity was taken from Connolly and Viswesvaran (1999). In addition, sample size used for the regression analyses was calculated using the harmonic mean (Viswesvaran & Ones, 1995).

Core self-evaluation. The four CSE traits together predicted 26% ($R^2 = .26$, $p < .01$, $N=3796$) of the variance in emotional exhaustion, 17% ($R^2 = .17$, $p < .01$, $N=3405$) of the variance in depersonalization, and 30% ($R^2 = .30$, $p < .01$, $N=3159$) of the variance in personal accomplishment. With regard to emotional exhaustion, self-efficacy ($\beta = -.12$), self-esteem ($\beta = .17$), emotional stability ($\beta = -.49$), and locus

of control ($\beta = -.10$) each explained unique variance. In addition, self-efficacy ($\beta = .15$), self-esteem ($\beta = -.24$), emotional stability ($\beta = -.37$), and locus of control ($\beta = .05$) each explained unique variance in depersonalization. Last, self-efficacy ($\beta = -.47$), self-esteem ($\beta = .87$), and emotional stability ($\beta = .06$) each explained unique variance in personal accomplishment, whereas locus of control ($\beta = -.00$) was not significant.

Five-factor model. The Five-Factor Model traits as a whole explained 29% ($R^2 = .29$, $p < .01$, $N = 24,824$) of the variance in emotional exhaustion, 26% ($R^2 = .26$, $p < .01$, $N = 17,355$) of the variance in depersonalization, and 23% ($R^2 = .23$, $p < .01$, $N = 14,726$) of the variance in personal accomplishment.

As regards emotional exhaustion, conscientiousness ($\beta = -.08$), extraversion ($\beta = -.19$), emotional stability ($\beta = -.45$), agreeableness ($\beta = -.01$), and openness ($\beta = .09$), each explained unique variance. Similarly, conscientiousness ($\beta = -.13$), extraversion ($\beta = -.17$), emotional stability ($\beta = -.29$), agreeableness ($\beta = -.22$), and openness ($\beta = .03$) each explained unique variance in depersonalization. Last, conscientiousness ($\beta = .17$), extraversion ($\beta = .29$), emotional stability ($\beta = .15$), agreeableness ($\beta = .08$), and openness ($\beta = .14$) each explained unique variance in personal accomplishment. Furthermore, emotional stability had especially strong unique relationships with emotional exhaustion ($\beta = -.45$) and depersonalization ($\beta = -.29$) and personal accomplishment had an especially strong unique relationship with extraversion ($\beta = .29$).

Positive affectivity and negative affectivity. Positive and negative affectivity together explained 32% ($R^2 = .29$, $p < .01$, $N = 6077$) of the variance in emotional exhaustion, 27% ($R^2 = .29$, $p < .01$, $N = 5654$) of the variance in depersonalization, and 25% ($R^2 = .29$, $p < .01$, $N = 4315$) of the variance in personal accomplishment. As regards emotional exhaustion, both positive ($\beta = -.30$) and negative affectivity ($\beta = .40$) explained unique variance. Both positive ($\beta = -.32$) and negative affectivity ($\beta = .33$) explained unique variance in depersonalization. Last, both positive ($\beta = .47$) and negative affectivity ($\beta = -.07$) explained unique variance in personal accomplishment.

Moderator analyses examining type of burnout measure

We conducted moderator analyses to explore whether the personality–burnout relationships differed depending on whether the MBI GS or HSS was used. Only the personality–burnout relationships represented by at least three samples were included in these analyses. To test whether the relationships were significantly different, the confidence intervals of the two relationships were compared.

Analyses for emotional exhaustion found that the relationships with general self-efficacy (ρ for HSS = $-.33$; ρ for GS = $-.16$), conscientiousness (ρ for HSS = $-.31$; ρ for GS = $-.23$), and agreeableness (ρ for HSS = $-.26$; ρ for GS = $-.17$) were stronger when the HSS was used rather than the GS, whereas negative affectivity (ρ for GS = $.54$; ρ for HSS = $.43$) yielded a stronger relationship when using the GS. Similarly, moderator analyses for depersonalization found that relationships with general self-efficacy (ρ for HSS = $-.30$; ρ for GS = $-.20$) and agreeableness (ρ for HSS = $-.39$; ρ for GS = $-.31$) were stronger with the HSS, and that extraversion (ρ for GS = $-.27$; ρ for HSS = $-.13$) and conscientiousness (ρ for GS = $-.32$; ρ for HSS = $-.03$) were

stronger with the GS. Finally, analyses for personal accomplishment found that emotional stability (ρ for GS = .40; ρ for HSS = .32), conscientiousness (ρ for GS = .39; ρ for HSS = .18), and agreeableness (ρ GS = .39; ρ HSS = .26) yielded stronger relationships when using the GS than with the HSS. Use of the different types of scale did not moderate the relationship between emotional exhaustion and emotional stability, extraversion, and openness to experience. Similarly, the scale type did not moderate the relationship between depersonalization and emotional stability, openness to experience, and negative affectivity. Last, the type of scale did not moderate the relationship between personal accomplishment and extraversion, openness to experience, and negative affectivity.

Discussion

With this meta-analysis we found that employee personality was consistently related to the three dimensions of burnout. Specifically, self-esteem, general self-efficacy, internal locus of control, emotional stability, extraversion, conscientiousness, agreeableness, positive affectivity, negative affectivity, optimism, proactive personality, and hardiness were each related to emotional exhaustion, depersonalization, and personal accomplishment in the directions predicted in our hypotheses. We also found that Type A Personality was related to personal accomplishment, but unexpectedly it was unrelated to emotional exhaustion and depersonalization. These latter findings may have resulted from the fact that Type A Personality includes separate dimensions of achievement striving and irritability/anger (Cooper, Dewe, & O'Driscoll, 2001; Edwards, Baglioni, & Cooper, 1990). Achievement striving might yield a negative relationship with burnout and irritability/anger might yield a positive relationship with burnout. Thus, the positive relationship for irritability/anger may be cancelled out by a negative relationship for achievement striving.

Although our hypotheses simply predicted that each personality trait would be related to each of the three burnout dimensions, we should note that some personality traits yielded stronger relationships with burnout than did others. Emotional stability, positive affectivity, and negative affectivity, for example, each had relatively stronger relationships with emotional exhaustion than did the other personality traits. The strength of these relationships may be attributed to the fact that these three personality characteristics and emotional exhaustion are all affective-oriented variables (Thoresen et al., 2003). This explanation is based on the notion that affective-oriented variables will yield stronger relationships with other affective-oriented variables than with non-affective variables (Weiss, 1996). Similar reasoning may also explain why emotional stability, positive affectivity, and negative affectivity had relatively strong relationships with depersonalization. The relatively strong relationship between agreeableness and depersonalization is also of note and may have resulted from both variables sharing an interpersonal focus (Costa & McCrae, 1995; Maslach et al., 2001). That is, because high agreeableness reflects favourable perceptions of people in general, agreeable individuals are unlikely to experience negative responses (e.g. depersonalization) towards people in specific domains, such as the workplace.

General self-efficacy and positive affectivity yielded stronger relationships with personal accomplishment than did the other personality traits. The relatively strong relationship between general self-efficacy and personal accomplishment may have

occurred because of conceptual overlap shared by the two variables. Schaufeli and Bakker (2004) have proposed that the personal accomplishment component of burnout is not a part of the burnout construct, but rather a personality construct that develops independently. That is, general self-efficacy and personal accomplishment both involve feelings of competence and success (Gecas, 1989; Maslach et al., 2001). The strong relationship between positive affectivity and personal accomplishment may be attributable to the tendency of high positive affectivity individuals to be energetic and engaged (Watson & Tellegen, 1985). These positive emotions may contribute to effective performance and thus result in feelings of accomplishment.

Hardiness yielded relatively strong negative relationships with all three dimensions of burnout. Although we hypothesized that it would be related to burnout, it is unclear why hardiness yielded stronger relationships than did most of the other personality traits. Future research should thus examine the hardiness–burnout relationship.

Last, positive affectivity consistently yielded stronger relationships with emotional exhaustion, depersonalization, and reduced personal accomplishment than did extraversion. This suggests that positive affectivity and extraversion are very different variables. However, negative affectivity and emotional stability yielded similar correlations across all three dimensions of burnout. These findings are in contrast to both Judge and Larsen (2001) who found that emotional stability and extraversion were different from negative affectivity and positive affectivity, respectively, and Watson and Clark (1997) who hypothesized that emotional stability and extraversion are the same constructs as negative affectivity and positive affectivity, respectively.

Moderator analyses

We conducted moderator analyses to explore whether the strength of the personality–burnout relationships depended upon whether the MBI-GS or the MBI-HSS was used to assess burnout. These analyses found some evidence of moderator effects. The results of these exploratory analyses are difficult to interpret, however, because whether a study used the GS or the HSS was largely confounded with whether or not the study used participants employed in human service occupations. Specifically, the MBI-HSS studies primarily used human service employees, whereas the MBI-GS studies used participants employed in a variety of different occupations. Thus, it is difficult to determine whether differences in relationships for the GS and HSS are due to differences between the instruments or to differences in sample characteristics.

Limitations

We should note a few limitations of the current research that we analysed. First, most of the primary studies included in our meta-analysis used cross-sectional designs. Although this allows us to test whether personality and burnout are related, it does not allow us to test causal relationships. Second, the primary studies relied exclusively on self-report data, which leaves our results vulnerable to common-method variance. Although many researchers assume that common-method variance is a serious problem in organizational research, others have questioned whether this assumption

is correct (Spector, 2006). In reference to the current research, self-reports might in fact be the most valid measurement method, because a participant is the best person to report on their own personality and level of burnout.

In addition, the small number of samples for some of the moderator analyses that we conducted may be a limitation. Although some researchers suggest that one can use as little as 10 samples for meta-analyses (Hunter & Schmitt, 2004), research has demonstrated that Type I errors may occur when using 15 or fewer studies in a meta-analysis (Field, 2001).

Practical implications

The results of our meta-analysis have important practical implications. Although conditions in the work environment clearly contribute to burnout (Lee & Ashforth, 1996; Maslach & Leiter, 1997; Maslach et al., 2001), our findings suggest that burnout is also associated with employee personality. Thus, even when organizations use burnout interventions that focus on changing the work environment (e.g. by reducing or eliminating job stressors), some individuals may still experience high levels of burnout as a result of their personalities. Organizations could use personality testing to identify employees who are prone to burnout. This information could be used to determine which employees would likely benefit most from stress-reduction training, or it could be used to identify which employees should or should not be given stressful work assignments.

Future research

Additional research is needed that examines the relationship between personality and burnout. Given that most burnout research has employed cross-sectional designs (Lee & Ashforth, 1996; Maslach et al., 2001), we encourage future studies using longitudinal data. Such research would not only provide stronger tests of causal relationships than are possible with cross-sectional data, but they would also allow researchers to examine how personality predicts temporal changes in burnout. Personality traits, for example, may predict which employees experience increases, decreases, or constant levels of burnout over time.

More research is also needed to examine the theoretical mechanisms linking personality to burnout. We have suggested that perceptions of and the objective nature of the work environment may mediate personality–burnout relationships. Unfortunately, few studies of mediation effects have included objective measures of the work environment, thus preventing direct tests of those processes. The dependence on cross-sectional data also limits the ability to test mediation, given that longitudinal designs provide the most rigorous tests of mediation effects (Maxwell & Cole, 2007).

More research is also needed to examine moderators of personality–burnout relationships. That is, personality may be more strongly related to burnout in some situations than in others. In extremely stressful work environments, for example, burnout may be inevitable for nearly all employees. A lack of variability in burnout scores may therefore result, with personality being found to be weakly related to burnout in high-stressor environments. Similar effects may be observed in low-stressor jobs. That is, so few employees may experience burnout in stressor-free

environments that personality and burnout will be weakly related. These possibilities suggest that personality and burnout may be most strongly related in medium-stressor situations.

In summary, from our meta-analysis, we found that employee personality was consistently related to burnout. In addition, personality types may also be used as indicators for individuals in need of support in the workplace. Given the practical importance of employee burnout, we recommend that personality variables be included in future research on burnout. The various personality dimensions demonstrate an influence on perceptions of burnout through several theoretical mechanisms. To better understand the process of burnout researchers should explore the mechanisms through which personality influences burnout.

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Note: A list of references used in the meta-analysis is available from the first author.

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