BURNOUT IN SWEDEN AND THE UNITED STATES:
A CROSS-CULTURAL COMPARISON

by
Gina G. Barker

A Dissertation Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

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Abstract

This dissertation begins with a background on the phenomenon of burnout. A review and examination of the literature on burnout is offered, including diagnoses, symptoms, and assessments; causes and antecedents; the related concepts of demands, motivation, and stress; prevention, intervention, and treatment; and cultural influences. Research on cross-cultural differences between Swedish and American cultures is addressed. The review concludes with a rationale, research questions, and hypotheses to guide this cross-cultural investigation of burnout in Sweden and the United States. Next, the research design is described and illustrated. This study examined how cultural dimensions, self-efficacy, and performance-based self-esteem moderate the relationships among demands and perceived stress, role conflict, and role ambiguity that result in burnout. Data were collected through surveys from 79 Swedish and 79 American participants. The questionnaires included demographic questions and eleven measures, which are described and evaluated. The data analysis approach, explained next, consisted of reliability testing; creation of composite variables; calculation of correlations, means, and standard deviations; and t-tests. A process macro model was used to test the moderated mediations that were hypothesized in the study. The statistical findings, which are discussed next, revealed that Americans have a higher level of self-efficacy, while Swedes have a higher level of performance-based self-esteem. Demands predicted burnout and the relationships between demands and perceived stress, role conflict, role ambiguity, self-efficacy and performance-based self-esteem, respectively, were significant; however, only perceived stress mediated the relationship between demands and burnout. None of the hypothesized moderations were significant. Finally, the results of the study are discussed and evaluated in light of previous burnout research. The validity and limitations of the research are addressed and recommendations for further research are offered.
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**Introduction**

“When a person is affected by burnout outwardly, it has the appearance of a fundamental problem-related collapse, with on the one hand aspects of demands and duties and, on the other hand, commitment, personal ability and strength” (Arman, Hammarqvist, & Rehnsfeldt, 2011, p. 297). This quote captures some of complexity inherent in current conceptualizations of burnout. The term was originally associated with negative effects of drug use but was reframed as a psychological concept by Freudenberger (1974) who, in his initial research article, shared his own experience of encountering burnout while working in free clinics, crisis intervention centers, and shelters. He identified internal guilt and external pressure as key factors that drive human services workers. He explained, “We feel a pressure from within to work and help and we feel a pressure from the outside to…. even further giving and ultimate exhaustion” (p. 161). Building on his ideas, Maslach (1976, 1982) conducted extensive research on human services professionals. Burnout came to be understood as a psychological state of long-term exhaustion and diminished interest caused by a heavy workload and extensive dealings with people who are troubled or facing major problems. The central components of her model emerged as emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach & Jackson, 1981). Characterized by reaching a breaking point where one is unable to function due to extreme exhaustion and fatigue that no amount of rest seems to relieve, the burnout experience came to be described in Sweden as “hitting the wall” (Hallsten, Bellaagh & Gustafsson, 2002).

In Sweden, like in many other European countries, burnout moved quickly from popular conception to psychiatric diagnosis and an object of public health policy in the 1990s and 2000s, which gave the syndrome status as an epidemic (Friberg, 2009). The total number of people on sick leave for more than a year increased from 75,000 in 1997 to 120,000 in 2001. Burnout became not only a hotly debated topic (Friberg, 2009) but also a socially accepted phenomenon.
Hallsten et al. (2002) suggested that the underlying contextual reason was that the work environment in Sweden shifted from a primary focus on production to a greater emphasis on service, professionalism, and goal-oriented management processes. The public sector underwent significant budget cuts and reduction in staff. Major reorganizations became normative in the corporate sector as well. Those affected reported uncertainty, ambiguous expectations, reduced resources to meet goals, and lacking support from superiors.

Burnout is a global phenomenon that has serious long-term physical and mental health implications for individuals who experience it and serious financial implications for societies where long-term sick leave or short-term disability caused by burnout is both common and publicly funded. In fact, core social functions such as education and health care may be compromised when a large portion of the workforce is suffering from burnout and college students are, consequently, deterred from pursuing careers in such fields. In the U.S., where burnout is unrecognized as a medical condition, it has remained more hidden, although it was highlighted in a recent Harvard Business Review article (Seppala & Moeller, 2018) that suggested one in five employees may be at risk. The phenomenon has been investigated extensively in Western and industrialized Asian nations, and it is evident that incidence rates vary across countries (Lee, Seo, Hladkyj, Lovell & Schwartzmann, 2013; Perrewé et al., 2002; Peterson et al., 1995). Yet, between-country differences have received little attention. This is surprising in light of the overall volume of burnout research. Leone, Wessely, Huibers, Knottnerus, and Kanta (2011) offered the following explanation:

There are only a few countries in which burnout is considered and treated as a diagnostic entity with all its related benefits…This raises the important issue of the role society and culture play in shaping and forming illnesses. That is, the same set of symptoms may attract different labels in different eras, countries and cultures…There are a number of
possible reasons for accepting or refuting a certain diagnosis including the prevailing welfare system, beliefs held by clinicians, beliefs held by patients, and the cultural acceptance of psychological or somatic labels. (p. 456)

The lack of cross-cultural burnout research is also surprising because recent burnout research has identified the underlying cause as chronic stress resulting from perceptions of threat (Johnson & Naidoo, 2017). While neurobiological responses to threat are universal, perceptions of threat are largely culturally conditioned (Bracken, 2002). Burnout—whether occurring in work contexts or other domains—stems from experiences of unresolvable demands and insufficient resources to meet them (Chrousos, 2009; Pines & Keinan, 2005; Weber & Jaekel-Reinhard, 2000). Specifically, such circumstances may threaten one’s professional identity and self-image (Semmer et al., 2015); one’s core personal values and relationships (Gabel, 2012), or one’s sense of adequacy, ability, and significance (Pines, 2004; Stoeber & Rennert, 2008). It is currently not clear how culture-specific values, behavioral norms, and beliefs about self in relation to society influence the process of developing burnout in different cultural contexts.

Leaning on a definition provided by Benet-Martínez, Leu, Lee, and Morris (2002), culture is conceptualized in this study as a framework that includes cognitive, affective, and behavioral aspects that enables people to orient themselves in relation to one another and the rest of the world and to experience and interpret the world in similar ways. Culture exists simultaneously as an individually internalized reality and as a socially shared, external reality that undergirds all domains of society and the institutions that uphold them (Berry, 2009; Hofstede, 1984). Cultural differences translate into different management styles, operating methods, job designs, personnel policies, and reward systems in organizations (Clausen, 2007; Rodríguez, 2005; Zimmermann, Holman & Sparrow, 2003) as well as different identities, roles, and practices in the private and family domains (Navas, Rojas, García & Pumares, 2007).
Culture also governs how individuals orient themselves in relation to their communities and societies (Barker, 2015).

Swedish researchers have begun to identify specific antecedents to burnout that seem to unveil values, beliefs, and attitudes that are fostered within Swedish culture, as identified primarily by Triandis (1995) and House et al. (2004). For example, Hallsten et al. (2002) found that burnout is most likely to affect individuals with an initially high motivation and engagement whose self-esteem is derived from their own evaluation of their performance and achievements. A strong need to meet the—often nebulous—standards for being duktig drive such individuals to push themselves while ignoring signals that their own health is at risk. Duktig implies sole responsibility to act competently. Arman et al. (2011) offered the following analysis:

A person with burnout sees him/herself as solely responsible for his/her own life and the value given to it. The main value of this kind of understanding of life is to make achievements to, in the eyes of others, be seen as an executer of things that are seen to be “right.”

We see a paradox in this, where the person takes on a responsibility to “arrange” his/her own understanding of life, but at the same time is dependent on others to value his/her achievements. The intrinsic message of this paradox could be interpreted as an unconscious or silent inner longing or ethical demand for interdependence with others. (p. 300)

Building on these findings, the purpose of this study was to examine how culture influences the burnout process by investigating whether people in the U.S. develop burnout differently or for different reasons than people in Sweden. Surveys were collected from 79 Swedes and 79 Americans. A model was designed specifically to test how culture moderates the relationships among known causes and antecedents to chronic stress that results in burnout and how culture co-varies with role ambiguity, role conflict, self-efficacy, and performance-based self-esteem. The cross-cultural differences in these variables were evaluated as well.
Review of the Literature

Burnout research spans the psychology, counseling, medical, and organizational literature. This review will first examine how burnout has been conceptualized, contextualized, and assessed, and then review studies that shed light on antecedents and causes. Literature on the associated phenomena of demands, motivation, and stress is examined and a brief review of recent research on symptoms, prevention, and treatment is offered. Lastly, the limited body of research on cultural influences and cross-cultural differences is reviewed.

Diagnoses, Symptoms, and Assessment of Burnout

In the U.S., burnout is not considered to be a psychiatric disorder and is, therefore, not included in the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2013). It has largely remained linked to secondary or vicarious traumatization through exposure to clients’ traumatic material and to compassion fatigue (Baird & Kracen, 2006; Craig & Sprang, 2010; Garcia, McGeary, Finley, McGeary, Ketchum & Peterson, 2016; Jacobowitz, Moran & Best; 2015; Killian, 2008; Lim, Kim, Kim, Yang & Lee, 2010; Thompson, Amatea & Thompson, 2014; Tyler, 2012). When diagnosed, burnout has often been categorized as an undifferentiated somatoform disorder or an adaptation disorder (Danhof-Pont, van Veen & Zitman, 2010). Since burnout is neither considered a psychological disorder or a medical condition, incidence rates in the U.S. are unknown.

By contrast, burnout has ranked as one of the top five most frequently diagnosed long-term illnesses in Sweden after it was included in the World Health Organization’s (1992) International Statistical Classification of Diseases and Related Health Problems, which is applied in the Swedish health care system. Diagnostic criteria were initially vague, but in 2005 the social security offices, which handle medical claims, started requiring burnout diagnoses to be made by a psychiatrist rather than a general practitioner (Friberg, 2009). In a general
population sample of over 25,000 Swedes aged 20-46, one fifth scored above the cut-off for burnout symptomology, with higher scores reported by women (Mather, Blom & Svedberg, 2014). Other studies have suggested that 9.3% of women and 4.6% of men in the general adult Swedish population have symptoms of burnout (Hallsten et al., 2002) and that 5.7% of women and 2.3% men have been formally diagnosed (Nordin & Nordin, 2013).

While the World Health Organization (1992) classified burnout as a “state of vital exhaustion” (Z73.0) and categorizes it as “problems related to life-management difficulty” (Z73) and not as a disorder, the term now used in Sweden for clinical burnout translates to exhaustion disorder. Diagnostic criteria include: (A) psychological and physical exhaustion experienced for at least two weeks, developed as a consequence of clearly identified stressors present for at least six months; (B) a significant lack of psychological energy or endurance that dominates the clinical picture; and (C) presence of at least four of the following symptoms every day for the past two weeks, not attributable to any other cause than stress at work or in the private sphere: (1) memory or concentration problems; (2) significantly decreased ability to handle demands or to perform under time pressure; (3) emotional lability or irritability; (4) sleep disturbances; (5) significant physical fatigue and lack of endurance, (6) muscular pain, chest pain, heart palpitations, gastrointestinal issues, dizziness, or hypersensitivity to sound (Grossi, Perski, Osika & Savik, 2015).

An extensive review of empirical studies (Kahill, 1988) identified common burnout symptoms to include irritability, anxiety, guilt, helplessness, and anger. Depression is also a frequent symptom (Schaufeli & Enzmann, 1998; Van Dam, Keijzers, Verbraak, Eling & Becker, 2015). It has been debated if burnout should be considered as a type of depressive disorder. However, Toker, Shirom, Shapire, Berliner and Melamed’s (2005) research suggested that the actual phenomenological overlap between burnout and major depressive disorder is quite small.
Grossi et al.’s (2015) extensive review of the available burnout research provided a comprehensive overview symptomology inclusive of neurobiological and physiological correlates. They first noted that sleep disturbances—including poor sleep quality and insomnia—are well documented symptoms. Second, cognitive impairments—including delayed recall of non-verbal memory; impaired working and episodic memory; deficits in executive control functioning and the prefrontal cortex; reduced attention and response control; and increased reaction time—were identified. Third, symptoms related to neurobiological mechanisms—including under-utilization of the prefrontal cortex when processing cognitive tasks; a functional disconnection between the amygdala and the medial prefrontal cortex resulting in a reduced ability to inhibit stress responses of the limbic system; reduced serotonin receptor binding in the hippocampus, anterior insular cortex, and anterior cingulate cortex; and reduced ability to down-regulate negative emotion—were discussed, noting that these research results include some inconsistencies. Fourth, they found that studies of physiological changes to the hypothalamic-pituitary-adrenocortical (HPA) axis have generated positive, negative, and non-significant results. Some longitudinal studies have observed a decrease in morning cortisol levels; others a small decrease in daytime cortisol levels. Finally, studies reporting changes to other hormonal systems along with effects on the cardiovascular, metabolic, and immune systems were examined; however, Grossi et al. (2015) concluded that these results to date are also inconclusive.

When examining burnout conceptually, the related phenomenon of chronic fatigue syndrome (CFS) must be considered, as burnout patients with fatigue also meet the diagnostic criteria for CFS (Huibers et al., 2003). Leone et al., (2011) traced the philosophical roots of both, noting they initially coincided in the earlier concept of neurasthenia with almost identical symptomology. In time, burnout was conceptualized as work-related fatigue by psychology,
organizational, and environmental medicine researchers, while CFS ended up conceptualized as a somatic phenomenon studied in the medical fields of virology and immunology. Burnout was treated as a psychological process, whereas CFS came to be viewed as a medical condition. Burnout research has typically focused on etiology, correlates, and consequences rather than on the process of burnout itself, about which less is known.

Interestingly, there has been an increasing emphasis on psychological factors in the study of CFS (Leone et al., 2011), but even though stress is believed to increase the vulnerability to CFS, it has not been accepted as the main cause, thereby avoiding the stigma of a psychological or psychiatric label. Even though the cause of CFS is yet unknown and the cause of burnout is assumed to be adverse work conditions, both phenomena share the commonality of having external, rather than individual, attributions. Also, what is known about the process leading up to CFS is nearly identical to that of burnout, i.e. a history of stressful events causing an overload which triggers a breakdown (Arman et al., 2011; Hallsten et al., 2002). The core symptom is also the same, i.e. depletion of energy. Van Dam et al. (2015) investigated whether fatigue is experienced differently in burnout patients than in patients with major depression or anxiety disorders and found this is not the case.

Another associated concept is adrenal fatigue; a condition that is believed to occur when the adrenal glands function below-normal levels after a period of intense and prolonged stress that forced them to produce high levels of cortisol (McEwen & Kalia, 2010). Pranjić, Nuhbegović, Brekalo-Lazarević, and Kurtić (2012) reported that in a clinical sample of Croatian burnout patients who had chronic stress and who had experienced mobbing or acts of violence at work also had all symptoms associated with adrenal fatigue. Recognizing the overlapping symptoms caused by dysregulated HPA axis activity, McEwen and Kalia (2010) noted, “Although lower-than-normal cortisol has been reported in burnout along with higher-than-
normal sensitivity to dexamethasone suppression of the HPA axis, this is not always reported; and the underlying physiology is undoubtedly more complex, as it appears also to be for CFS” (p. S13). A systematic review and meta-analysis of existing studies did not generate conclusive findings due to inconsistencies in research parameters and measurement (Danhof-Pont et al., 2010) and the medical community remains skeptical (Cadegiani & Kater, 2016).

Since the diagnostic picture of burnout is not yet clear, it is important to consider how burnout is assessed. Several researchers have expressed concerns about how the dominant assessment instrument—the Maslach Burnout Inventory (Maslach & Jackson, 1981)—has come to define burnout globally, even though it was developed for non-clinical samples based on research among human services professionals (Bianchi, Truchot, Laurent, Brisson & Schonfeld, 2014; Hallsten et al., 2002; Pines & Aronson, 1988; Schaufeli, Bakker, Hoogduin, Schaap & Kladler, 2001). The vast majority of studies have been conducted among the working population, thus excluding people with burnout symptoms so severe that they are unable to work and people developing burnout symptoms in other domains. Consequently, clinical burnout may have been inadequately investigated (Grossi et al., 2015). Shirom and Melamed (2006) questioned the construct validity of the subscales redefined in the updated Maslach Burnout Inventory—General Survey (Maslach, Jackson & Leiter, 1996). They argued that although the scale is reliable as a whole, only the exhaustion subscale measures the core symptoms of depletion of physical and emotional energy resulting in fatigue. The cynicism subscale—which reflects depersonalization and indifference—and the inefficacy subscale—which reflects a reduced sense of accomplishment and competence—are actually sequentially linked in that cynicism is a coping mechanism and reduced efficacy an outcome of burnout. As such, they also measure phenomena that are not exclusive to burnout. A similar critique was offered by Kristensen, Borritz, Villadsen, and Christensen (2005). In addition, these authors identified American cultural biases
when translating and testing the Maslach Burnout Inventory (MBI) in Denmark. Other
researchers have identified a reduced sense of accomplishment as an antecedent to burnout
(González-Morales, Peiró, Rodríguez & Bliese, 2012; Hallsten et al., 2002).

By contrast, the Burnout Measure (Pines & Aronson, 1988) and the Shirom-Melamed
Burnout Measure (Shirom & Melamed, 2006) include only items for gauging physical,
emotional, and mental/cognitive exhaustion (Qiao & Schaufeli, 2011). Having tested the
convergent validity of these three and the Oldenburg Burnout Inventory (Demerouti &
Halbesleben, 2005), Qiao and Schaufeli (2011) argued that burnout consists of two highly
correlated but conceptually distinct dimensions: exhaustion, i.e. inability from lack of energy,
and withdrawal, i.e. unwillingness from lack of motivation. These two dimensions are captured
in the Oldenburg Burnout Inventory subscales of exhaustion and disengagement. Qiao and
Schaufeli (2011) also found positively phrased scale items unsuitable, because they measure
phenomena that are not strictly opposite of burnout. Schaufeli et al. (2001) contrasted the
Burnout Measure with the MBI by surveying people who sought psychological help for work-
related clinical burnout and other work-related issues, including mood disorders. They concluded
that, with the exception of the MBI’s personal accomplishment subscale for the group not
diagnosed with burnout, both scales have good internal consistency and high reliability and that
the Burnout Measure is more specific but less sensitive in its measurement.

Four additional measures should be mentioned: First, the Copenhagen Burnout Inventory
(Kristensen et al., 2005) has subscales for personal, work-related, and client-related burnout.
Second, the Karolinska Exhaustion Scale (Saboonchi, Perski & Grossi, 2012) includes an
inventory of stressors and subscales for recovery, cognitive exhaustion, somatic symptoms, and
emotional distress. Third, the Karolinska Exhaustion Disorder Scale (Beser, Sorjonen, Wahlberg,
Peterson, Nygren & Asberg, 2014) identifies exhaustion symptoms. Fourth, the Stress Related
Exhaustion Disorder Scale (Glise, Hadzibajramovic, Jonsdottir & Ahlborg, 2010) predicts absenteeism due to stress-related disorders.

**Causes and Antecedents of Burnout**

In her initial research, Maslach (1993) identified emotionally charged interactions with clients as the chief cause of burnout. However, when comparing the results of 16 different studies among human service professionals, Schaufeli and Enzmann (1998), found that workload, time pressure, and role conflicts predicted burnout better than stressors such as difficult interactions with clients and frequent contact with chronically ill patients. In general, excessive workload—both in quality and quantity—emerges in the literature as the most significant antecedent of burnout. Related factors include overtime, low levels of control and autonomy in one’s work (Garcia et al., 2016; Hallsten et al., 2002), lack of social support, and poor performance feedback (Bakker, Demerouti, Taris, Schaufeli & Schreurs, 2003). Fiorilli, Albanese, Gabola, and Pepe (2017) confirmed that teachers’ level of dissatisfaction with social support was a critical factor, whether the type of support sought was external or internal. Low levels of perceived organizational belongingness stemming from not feeling valued, needed, supported, and important to one’s organization is another known antecedent (Somoray, Shakespeare-Finch & Armstrong, 2017) as is perceptions of negative working conditions (Thompson et al., 2014).

In the human services field, several researchers have examined how the volume, nature, and severity of client problems affect counselor burnout. Lim et al.’s (2010) meta-analysis of burnout studies among mental health professionals revealed trends of higher levels of burnout among younger, more educated practitioners working longer hours in agency—as opposed to private—settings. Appraising that clients are benefitting from treatment along with receiving supervisor, peer, and staff support have been shown to be negatively correlated with burnout.
Conversely, treating clients who are ambivalent about change has been shown to have a positive association (Warren, Schafer, Crowley & Olivardia, 2012).

Craig and Sprang (2010) reported that utilization of evidence-based treatments and training in trauma counseling, specifically, was associated with lower burnout levels among trauma specialists, while an increased percentage of clients with posttraumatic stress disorder (PTSD) on the caseload predicted higher levels of burnout, as did younger age and impatience. Voss-Horrell, Holohan, Didion, and Vance (2011) found that providing PTSD treatment to younger veterans, guard or reserve troops, and veterans with comorbid substance abuse or a traumatic brain injury leads to burnout among clinicians. Jacobowitz et al. (2015) also reported a significant link between PTSD and burnout symptoms in psychiatric hospital staff, thereby also confirming an earlier study showing higher burnout incidence rates among psychiatric nurses working with aggressive patients and those suffering from personality disorders (Melchoir, Bours, Schmitz & Wittich, 1997). By contrast, while Garcia et al.’s (2016) study of psychologists, social workers, and counselors working for the Veterans Health Administration revealed high levels of burnout attributable to workplace factors and workload, the hypothesized association between patient characteristics and burnout was not significant.

A large number of studies have shown burnout to be common in professions outside of the human services (Shirom & Melamed, 2006). Different occupations have specific risk factors. Incident rates are particularly high among teachers and physicians (Hallsten et al., 2002; Lee et al., 2013; Schaufeli & Enzmann, 1998). Burnout among teachers is associated with emotional demands (Fiorilli et al., 2017; Schaufeli & Enzmann, 1998), whereas burnout among physicians is predicted by insufficient experience; pressure to acquire skills quickly; making critical decisions; poor patient relationships; patient deaths; and treating patients who are in pain, experiencing severe side-effects, violent, or terminal (Guveli et al., 2015).
Burnout has been viewed predominantly as an occupational phenomenon with work treated as a distinctive feature of the construct itself (Bianchi et al., 2014). Consequently, the vast majority of studies have focused on the contextual work conditions that cause burnout rather than on the vulnerability to burnout of particular individuals (Halbesleben & Buckley, 2004; Pines, 2004). Bianchi et al. (2014) argued that the justification for this limitation of scope is weak, since chronic, unresolvable, and traumatic stress resulting in exhaustion, cynicism, and inefficacy is not confined to the occupational domain. Rather, they reasoned, burnout can occur as the result of chronic difficulties in any sphere of life where people derive a sense of meaning from their activity and interaction. Examples include caring for a chronically ill child or disabled family member, experiencing sexual assault or severe suffering, going through a divorce, facing major illness, and having a death in the family, which all have been associated with burnout (Mather et al., 2014). Family-work conflict has also consistently been related to burnout (Cinamon & Rich, 2010; Rupert, Stevanovic & Hunley, 2009). Additionally, there is compelling evidence of burnout occurring among students (Salmela-Aro, Savolainen & Holopainen, 2009). Research in Sweden supports the notion that burnout may stem from sources of long-term stress outside of work contexts (Åsberg, Nygren, Helrlofson, Rylander & Rydmark, 2005). Hallsten et al. (2002) reported that in a random sample of Swedes, burnout rates were higher among unemployed individuals, early retirees, and students than among employees. It should be noted, however, that the highest incidence rates were among those on sick leave/short-term disability for a year or more, who assumedly had developed burnout at work.

Rössler, Hengartner, Ajdacic-Gross, and Angst (2015) argued that the impact of environmental variables such as working conditions may have been overestimated and individual variables underestimated. Pines (2004) reasoned that, from an existential perspective, the root cause of burnout lies in people’s need to believe that their lives are meaningful and in their
efforts to derive a sense of significance from their work, which makes them vulnerable to perceptions of failure, helplessness and hopelessness. Exploring an existential perspective, Pines and Keinan (2005) tested the relationships among work stressors, strain, burnout, work importance, and outcomes such as job satisfaction and performance on a sample of Israeli police officers. Results suggested that while work stressors predicted strain more than burnout, both work importance and job satisfaction were more closely associated with burnout than with strain, implying that people can handle stressful situations as long as they feel they make a difference, but when their contributions seem insignificant or insufficient, they are at risk for burnout. A qualitative study of highly educated Swedish women working in male dominated occupations (Löve, Hagberg & Dellve, 2011) revealed that interviewees struggled to determine whether their output was good enough and constantly found themselves taking on too much.

Predicting burnout from broad personality traits such as the five-factor model comprised of neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness (McCrae & Costa, 1995) has been a popular line of inquiry (Alarcon, Eschleman & Bowling, 2009; Somoray et al., 2017). Neuroticism, in particular, has been found to predict emotional exhaustion (Bakker, Van der Zee, Lewig & Dollard, 2006; Lent & Schwartz, 2012). Opposite of emotional stability, neuroticism captures the ease and frequency with which individuals get upset, distressed, moody, or anxious, according to Carver and Connor-Smith (2010), who also noted, “anxiety and sensitivity to threat is indeed its emotional core” (p. 681). Personality traits also seem to explain experiences of both acute traumatic stress and chronic stress (Löckenhoff, Terracciano, Patriciu, Eaton & Costa, 2009). Neuroticism is associated with adjustment difficulties following stressful or traumatic events (Carver & Connor-Smith, 2010). A Swiss study (Rössler et al., 2015) suggested that vulnerability to burnout may also be related to psychopathology and mental disorders, as measured on the SCL-90-R. The results showed the
exhaustion dimension of burnout being associated with obsessive-compulsivity and depression, the inefficacy dimension being related to psychoticism and interpersonal sensitivity, and the cynicism dimension being linked to anxiety and interpersonal sensitivity.

Perfectionism is another individual variable of interest in burnout studies. Tashman, Tenenbaum, and Eklund (2010) reported that maladaptive perfectionism—i.e. concern over mistakes, rumination, and need for approval—predicted perceptions of stress leading to burnout among college sports coaches, whereas adaptive perfectionism—i.e. conscientiousness, planning, setting high standards, and striving for excellence—did not predict burnout directly or indirectly. They reasoned that maladaptive perfectionism causes individuals to assess a lack of resources to satisfy demands as more threatening than individuals with adaptive perfectionism, who are less neurotic, tend to react more positively to perceptions of demands, and tend to appraise needed resources as more readily available. Maladaptive perfectionism also predicted perceived stress as well as work-related and personal burnout to a greater degree than adaptive perfectionism among counselor educators (Moate, Gnilka, West & Bruns, 2016). Relatedly, Stoeber and Rennert (2008) reported that striving for perfection was linked to active coping, while negative reactions to imperfection in their sample were associated with perceptions of threat, loss, avoidant coping, and burnout.

Attachment theory offers another useful framework for examining individual differences in burnout experiences, as it explains personality-related characteristics that influence ways of coping with stressful situations. When parents fail to provide secure attachment, their children become maladapted with attachment styles that subsequently influence relationships. Although attachment levels tend to become more secure with age (Baptist, Thompson, Norton, Hardy & Link, 2012; Fraley, Heffernan, Vicary & Brumbaugh, 2011), when dealing with stressful situations, securely attached individuals use constructive coping skills derived from positive
expectations on others and confidence in themselves. By contrast, individuals with attachment anxiety tend to use proximity-seeking behaviors that overemphasize vulnerability and negative emotions, while individuals with attachment avoidance tend to suppress emotions, deny psychological distress, and withdraw from others (Reizer, 2015).

Examining the relationship between attachment and burnout, Pines (2004) conducted several studies with Israeli, Hungarian, and Arab samples. Burnout was consistently negatively correlated with secure attachment and positively correlated with insecure attachment across the different samples. She suggested that differences may be explainable by cultural factors, but did not elaborate on this argument. Exploring the relationship between attachment and burnout further, Simmons, Gooty, Nelson, and Little (2009) found that attachment explained 23 percent of the shared variance in burnout among employees at an assisted living center in the U.S. Similarly, Vanheule and Declercq (2009) examined the relationship between attachment styles and burnout among Belgian security guards and reported that secure attachment styles were negatively associated—while insecure attachment styles were positively correlated—with burnout. They also found attachment styles mediated the relationship between critical incidents and burnout, although effect sizes were small. Ronen and Mikulincer (2009) confirmed the link between insecure attachment burnout in an Israeli study. Attachment avoidance and anxiety explained six and eighteen percent of the variance in the burnout variable, respectively. They also found that lower levels of perceived organizational fairness fully mediated the association between attachment avoidance and burnout and that lower levels of perceived team cohesion partially mediated the association between attachment anxiety and burnout. Finally, Reizer (2015) reported that attachment avoidance and anxiety in another Israeli sample explained seven and eleven percent of the variance in the burnout variable, respectively, and that burnout mediated the relationship of both to life satisfaction.
Demands, Motivation, Stress, and Burnout

The fundamental cause of burnout—whether occurring in work contexts or other domains—is chronic, unresolvable stress (Chrousos, 2009; Pines & Keinan, 2005; Weber & Jaekel-Reinhard, 2000) and is often conceptualized within the framework of stress research. Bianchi et al. (2014) explained, “Any activity able to elicit an acute stress response in the organism can potentially elicit a chronic activation of the stress response—this is a question of frequency and intensity—and, therefore, contribute to the development of burnout, which is conceived of as a product of chronic stress” (pp. 358-359).

Examining burnout incidence rates across different professional contexts, Demerouti, Bakker, Nachreiner and Schaufeli (2001) discovered that burnout develops where there exists a discrepancy between demands and resources. In their model, demands refer to physical, psychological, social, or organizational aspects of one’s work that require skills and/or sustained effort, while resources refer to physical, psychological, social, or organizational aspects of one’s work that function to achieve work goals, reduce the costs associated with work demands, or stimulate personal growth, learning, and development. Bakker et al. (2003) explained that such resources may be located at four different levels of an organization: First, the organization at large provides pay, job security, and career opportunities. Second, social and interpersonal relationships provide supervisor and coworker support and a positive team climate. Third, the department/unit provides role clarity and participation in decision making. Fourth, the job itself provides identity, task significance, autonomy, and meaningful outcomes. Thus, work-related rewards are only one aspect of available resources.

Van Dam et al. (2015) reported that burnout patients in their study, contrary to expectations, were less likely to associate fatigue and reduced performance with an effort–reward imbalance than were patients with major depression or anxiety disorders. Resources are
motivational in nature, which is why a lack of resources has a detrimental effect on performance and job satisfaction. Bakker et al. (2003) identified an interaction effect between demands and resources, suggesting that the combination of high job demands and low resources result in higher risk for burnout than the main effects of these two variables alone. The effect size was small, which the researchers interpreted as an indication that increased resources only mitigate the negative effects of high demands to a limited degree.

It is not entirely clear what factors mediate the relationships among demands, resources, and burnout. Ventura, Salanova, and Llorens (2015) noted that work demands may be perceived as a challenge that promotes personal growth and accomplishment or a hindrance to achieve personal wellbeing, leading to completely different outcomes. They identified self-efficacy as a key personal resource that influences stress responses relative to perceived demands. Self-efficacy is rooted in people’s beliefs about their ability to act in ways that produce desired results, and thus influences motivation, mobilization of resources, and sense of control. Their data, collected from Spanish secondary school teachers and corporate employees, supported a so-called erosion process in which low levels of professional self-efficacy, combined with perceptions of hindrance demands, predict burnout. However, the hypothesis that low professional self-efficacy would be negatively related to burnout through perceptions of challenge demands was not supported. A similar Chinese study (Wang, Huang & You, 2016) showed that personal resources such as self-efficacy, self-esteem, and optimism mediated the relationship between work resources and burnout, but not the relationship between work demands and burnout. Choi, Lee, No, and Kim (2016) reported that self-efficacy partially mediated the relationship between compassion and burnout among nurses in Korea, whereas self-esteem had no effect. Finally, a meta-analysis of the relationship between self-efficacy and burnout including 57 studies indicated an average moderate effect size (Shoji et al., 2016).
Hallsten, Josephson & Torgén (2005) created a Performance-Based Self-Esteem scale to capture the recurring finding in qualitative studies that people who have a high level of initial motivation and engagement are at higher risk for burnout. In their initial study with two samples, performance-based self-esteem accounted for 18.5% and 20% of the variance in burnout, respectively. Svedberg, Hallsten, Narusyte, Bodin, and Blom (2016) further examined the association between performance-based self-esteem and burnout, reasoning that burnout primarily affects those who define their self-worth by their achievements within domains with self-worth investments, such as the human services. Blom (2012) had previously found that performance-based self-esteem mediated the relationship between work and life stressors and burnout in a sample of Swedish employees. Performance-based self-esteem explained 17% of the variance in burnout for women and 12% for men while fully mediating the stressor of workload in women and overtime work in men and partially mediating other stressors in both genders. A lack of resources, conflicting demands, and few opportunities to determine work pace were the most important predictors of burnout in men, while overtime predicted burnout in women. Not feeling significant and poor peer social support predicted burnout in both genders. By examining Swedish twins, Svedberg et al. (2016) concluded that genetic factors and environmental factors, respectively, account about equally for the shared variance between performance-based self-esteem and burnout.

Outar and Rose (2017) examined role identity as another potential mediator in the relationship between work demands and burnout among staff caring for individuals with an intellectual disability, but the model was not significant and role identity was neither associated with work demands nor burnout. However, role identity was only conceptualized as advisor versus servant role in the study. Another way to assess self-assigned work roles in a general sense is by examining type of work motivation. A Canadian study (Fernet, Chanal & Guay,
2017) showed that teachers who are intrinsically motivated or who derive extrinsic motivation from personal convictions and values are at lower risk for burnout than those whose work motivation stems from seeking to gain positive benefits, avoid negative consequences, decrease feelings of anxiety or guilt, or increase feelings of self-worth.

Another predictor of burnout that emerges from the literature is that of role stress, typically conceptualized as role ambiguity and role conflict (Peiró, González-Romá, Tordera & Mañas, 2001; Shyman, 2010). Role ambiguity refers to unpredictability and lack of information related to performance and expected behaviors, whereas role conflict refers to incongruent expectations between or within roles. For example, incompatible or difficult-to-prioritize requirements may be placed on an individual (Kuntz, Näswall & Bockett, 2013; Perrewé et al., 2002; Peterson et al. 1995). Role conflicts also occur when individuals face incompatible demands from work and home. (Cinamon & Rich, 2010; Rupert et al., 2009).

Individuals also experience inner conflict from seeking to reconcile external and internal expectations. Arman et al.’s (2011) qualitative study drawing upon interviews with Swedes diagnosed with clinical burnout revealed a pattern of continuously seeking confirmation that their performance was up to par. Even though they felt that they were high achievers, their performance was deemed unsatisfactory. As a result, they experienced a discrepancy between perceived and actual achievement. Löve et al.’s (2011) qualitative study of highly educated women similarly revealed that interviewees found it hard to be satisfied with their achievements, had difficulties determining what constituted satisfactory performance, were constantly comparing themselves to their peers, and over-performed to compensate for their gender. They were also frustrated that even when performing well enough according to their own standards, their work goals were unachievable due to high workloads and lack of time. The authors termed this experience ambiguity overload, thus highlighting another aspect of role stress.
Another line of Swedish burnout research, conducted mainly in the nursing field, has examined experiences of violating one’s conscience in order to meet work demands, leading to feeling caught between the needed, appropriate level of care they believe they should give and the level of care they are able and allowed to give (Åhlin, Ericson-Lidman, Norberg & Strandberg, 2012). Relatedly, Semmer et al. (2015) examined the concept of illegitimate tasks and found they predict low self-esteem, resentment towards one’s employer, and burnout. Tasks are perceived as illegitimate when employees think they are unnecessary, inappropriate, or unreasonable and when they violate employees’ norms regarding what should be expected of them; thus, illegitimate tasks send an implicit message of disrespect that threatens professional identity and self-image. Such discrepancies also affect emotions. For example, Kubicek and Korunka (2015) examined the effects of a perceived discrepancy between Austrian elder care workers’ felt emotions and emotions required to meet organizational and professional standards.

Childs and Stoeber (2012) reported that burnout among teachers in United Kingdom was predicted by socially prescribed perfectionism—i.e. beliefs that excessively high standards are expected by others whose approval is conditional on meeting these standards. Gorski and Chen (2015) found that burnout among social justice activists was predicted by a subculture of martyrdom which discouraged affected individuals from using available self-care resources. Jamil, Raja, and Darr (2013) demonstrated that burnout among Pakistani employees in various fields was predicted by perceived organizational breaches of psychological contracts. Such violations were also identified by Gabel (2012), who found demoralization to be closely linked to burnout. Demoralization occurs in situations where employees initially feel disregarded by authoritarian and insensitive decision-making processes that do not take their opinions or the welfare of those they serve into account. Next, they realize they are powerless to change the situation in a way that would allow them to achieve their goals. As a result, they end up feeling
threatened by the violation of their personal values and experiences of loss. When limited options for alternative employment exist, a closely related experience of defeat also predicts burnout, as reported in a study of teachers in Spain (Buunk, Peirá, Rodríguez & Bravo, 2007).

The notion of psychological stress as an outcome of transactions between the individual and his or her environment was initially articulated by Lazarus and Folkman (1984) who noted that in such a transaction, individuals primarily appraise whether or not the situation represents a threat and, secondly, what psychological and social resources are available in this situation. In the event of an imbalance between the primary and secondary appraisals, physiological reactions occur to cope with the transaction with the triggering of a stress response. If the threat is not neutralized quickly to where stress hormone levels return to normal, chronic fatigue and physical exhaustion eventually result (Grossi et al., 2015). Killian (2008) reported that burnout is typically preceded by long-term work stress that has reached a level where it interferes with leisure and family time. Relatedly, Löve et al., (2011) reported a tendency to ignore the body’s stress symptom signals and to postpone health-maintaining behaviors.

Due to the established link between chronic stress and burnout, some researchers have begun to assess burnout using the Perceived Stress Scale (Cohen & Williamson, 1988). There is also an increased focus on the exhaustion symptoms of burnout. Nordin & Nordin (2013) reported 50% shared variance between mental and physical exhaustion and perceived stress. Recognizing the critical link between perception and stress, Thompson et al. (2014) argued that people experience stress when they perceive the demands placed upon them as exceeding the perceived coping resources available. In their study, both perceived working conditions and perceived personal resources were significantly associated with burnout.

Arman et al.’s (2011) study drawing on interviews with nurses diagnosed with clinical burnout shed further light on the burnout process. Initially, workplace changes leading to ever
increasing demands on the staff were blamed. Despite great effort to meet demands, performance was deemed unsatisfactory or insufficient. Interviewees described a perception of being trapped with work encroaching on their personal life, goals, and wellbeing along with an inability to seek and gain support. In the next phase, fatigue, sleep disturbances, concentration difficulties, and a range of somatic symptoms—that were vague in nature and difficult to diagnose—emerged, eventually leading to a collapse in coping abilities. This breakdown was often experienced as a release from a constant struggle as these individuals gave themselves permission to let go. In this phase of rest, interviewees described shifting their focus from an external to an internal one with existential questions related to identity, doing, and being moving to the forefront. However, this phase was complicated by a sense of isolation, feeling misunderstood and questioned, and having to fight for sick leave/short-term disability compensation.

Kuntz et al. (2013) noted that the literature on burnout developing in extreme, unstable work and life contexts is scant. Their study of teacher burnout following two major earthquakes in Christchurch, New Zealand, showed that disaster-related variables were associated with cynicism—stemming mainly from lacking support for teaching staff and poor disaster responsiveness—but not with emotional exhaustion. Of the Belgian security guards studied by Vanheule and Declercq (2009), 41% reported having experienced a critical incident at work. Such experiences translated to higher scores on the exhaustion and cynicism subscales of burnout, but did not affect scores on the efficacy subscale, suggesting that the incident(s) did not impact that security guards’ sense of competence.

Mather et al. (2014) examined the association between stressful and traumatic life events and burnout in a large Swedish sample, reasoning that such events affect how individuals cope with stress long-term, as such events may overextend individuals’ coping abilities when faced with a demanding situation. After controlling for familial factors—using a sample consisting
only of twins—and other confounding variables, results suggested that stressful life events such as serious family problems, physical illness, and divorce or separation are independently associated with burnout. Burnout was also found to be independently associated with traumatic life events such as emotional abuse or neglect, traumatic events in the “other” category, and an accumulation of traumatic events. The associations between various traumatic life events and burnout were somewhat reduced after adjustment for familial factors, suggesting that certain genetic, trait, or environmental factors put individuals at risk for traumatic events as well as for burnout. However, controlling for other confounding variables such as sex, age, SES level, depression, anxiety, and neuroticism revealed that such factors have greater impact on the association between life events and burnout than familial factors. A number of studies have also demonstrated a link between burnout and PTSD (Ager et al., 2012; Boudoukha, Altintas, Rusinek, Fantini-Hauwel & Hautekeete, 2013; Jacobowitz et al., 2015; Mealor, Burnham, Goode, Rothbaum & Moss, 2009), supporting the notion that previous traumatic experiences may reduce individuals’ ability to withstand chronic stress.

**Burnout Prevention, Intervention, and Treatment**

Several researchers have identified protective factors that may reduce the risk of developing burnout. For example, Pereira-Lima and Loureiro (2015) reported lower levels of social skills among medical residents in Brazil with burnout syndrome than among those without symptoms. Fiorilli et al. (2017) examined the role of emotional competence in a sample of teachers in Italy and reported that while the association with emotion regulation was not significant, the intensity of emotions following an event that threatens a teacher’s sense of efficacy was associated with emotional exhaustion and reduced personal accomplishment. Gutierrez and Mullen (2016) found that counselors’ emotional intelligence—i.e. their ability to identify, regulate and express emotions effectively—reduced burnout and accounted for 38% of
the burnout variance in their sample of counselors in the U.S. Similarly, Wagaman, Geiger, Shockley, and Segal (2015) reported that emotion regulation predicted lower levels of burnout among American social workers.

Thompson et al. (2014) reported that maladaptive coping—such as substance use, denial, distraction, and self-blame—predicted burnout, whereas mindfulness attitudes, compassion satisfaction—i.e. a sense of accomplishment in the counselor role—and emotion-focused coping—including emotional support, humor, and religious beliefs—had inverse relationships with burnout. Gender and time in the field were not significant predictors in this study. Spataro, Tilstra, Rubio, and McNeil (2016) identified similar coping mechanisms among internal medicine residents. They also found gender differences; specifically, females used the maladaptive coping mechanism of self-blame and the adaptive coping mechanism of obtaining emotional support and instrumental support more often, whereas men used humor more often. The coping mechanisms of disengagement, denial, self-distraction, substance use, venting, acceptance, taking action, planning, positive reframing, and religion were also significant, but these did not vary based on gender. The role of religious beliefs and spirituality was also examined by Hardiman and Simmonds (2013) in a sample of Australian clinicians. They reported that existential wellbeing—i.e. a general sense of purpose—was negatively associated with burnout, whereas religious wellbeing—i.e. personal faith and religious practice—was not. Existential wellbeing also moderated the relationship between perceived severity of client trauma and emotional exhaustion for clinicians with high existential wellbeing. It should be noted that the reported levels of burnout in were low overall.

In addition to serving as a strategy for coping with burnout, mindfulness may also potentially prevent burnout; however, longitudinal data needed to determine temporal precedence is typically not available. Yang, Meredith, and Kahn (2017) reported significant
negative correlations between five mindfulness facets—particularly acting with awareness—and both stress and burnout among mental health professionals in Singapore. Their results confirmed a previous study among psychologists in Australia that demonstrated a negative association between mindfulness and burnout (Di Benedetto & Swadling, 2014). Mindfulness training is often incorporated into interventions to prevent or reduce burnout. A recent meta-analysis (West, Dyrbye, Erwin & Shanafelt, 2016) of 2,617 articles—reporting results of 15 randomized trials including 716 physicians and 37 descriptive studies including 2,914 physicians—assessed the effects of such interventions in the U.S. The most common interventions involved mindfulness, stress management, small group discussions, and policies limiting hours on duty. The analysis showed similar results for individually-focused and organizationally-focused interventions with no specific type emerging as more effective than others.

Maricuțoiu, Sava and Butta (2016) identified four categories of interventions for individual burnout treatment: 1) interventions based on cognitive-behavioral techniques; 2) interventions focused on meditation and relaxation; 3) interventions aimed at developing interpersonal skills; and 4) interventions emphasizing knowledge and work-related skills acquisition. Their meta-analysis of 47 randomized, controlled trials showed significant—but small—effects on emotional exhaustion and general burnout measures, but no significant effects on the MBI cynicism and inefficacy subscales. Relaxation-focused interventions emerged as the most effective type, followed by interventions designed to improve role-related skills, and cognitive-behavioral interventions, respectively.

Jonas, Leuschner, and Tossmann (2017) recently tested the effectiveness of an Internet-based, solution-focused intervention in a randomized, controlled trial involving Germans above the cut-off score for work-related burnout. The intervention utilized stress identification and relaxation techniques, cognitive-behavioral therapy principles, and support-seeking exercises.
After three and 12 months, participants had significantly lower scores on cynicism and significantly higher scores in professional efficacy than the control group with medium to large effect sizes, as measured with the MBI. The between-group differences on emotional exhaustion were not significant, thus mirroring the results of Maricuțoiu et al.’s (2016) meta-analysis. Danhof-Pont et al. (2010) argued that treatment incorporating relaxation therapy, cognitive therapy, coping skills development, and reactivation all are effective in reducing burnout symptoms, but that individuals differ widely in their rate of recovery. The critical need for self-care and resilience has been emphasized by several authors (e.g. Crowe, Sullivan, Miller-Smith & Lantos, 2017 and Potter, Pion & Gentry, 2015).

Lastly, Johnson and Naidoo (2017) conducted stress and burnout group interventions with South African teachers using a before-after control research design. The interventions—which effectively reduced stress and burnout symptoms—were derived from neurological research on brain responses to threat. The first intervention used tension/trauma release exercises to restore balance in the nervous system by releasing body tension. The second intervention used transpersonal psychology techniques to focus on emotions and cultivate coherence and calmness. The third intervention used transactional analysis to help teachers gain social psychological insights about cognitions and behavior.

**Cultural Influences on Burnout**

Cross-cultural comparisons of burnout are uncommon. Golembiewski’s (2001) research among public service agency employees suggested that incidence rates were similar across 25 nations. Perrewé et al. (2002) examined the associations of role stress, self-efficacy with burnout among managers across nine regions (i.e., U.S., Germany, France, Brazil, Israel, Japan, China, Hong Kong, and Fiji). While reported levels of burnout, role stress, and self-efficacy varied across regions, role conflict was found to predict burnout only in the U.S., Israel, and Fiji. Role
ambiguity was found to predict burnout in all regions except France. Self-efficacy was negatively associated with burnout in all nine regions and universally mediated the relationship between role conflict/role ambiguity and burnout.

In an earlier study, Peterson et al., (1995) examined whether cultural value dimensions predict differences in perceived role stress by comparing scores from managers in 21 different nations. While role stress levels—not otherwise explained by demographic or organizational factors—varied across nations, role stress variance was not associated with the value dimensions developed by Hofstede (1984). In general, the results suggested that managers in cultures with low power distance—i.e. low tolerance for hierarchical social structures and status differences, which is normally fostered in Western industrialized countries—experience lower levels of role overload but higher levels of role ambiguity than do those in non-Western countries.

A notable meta-analysis of correlates of physician burnout (Lee et al., 2013) compared samples in the Americas with samples in Europe. They found that physicians in the Americas were at lower risk for emotional exhaustion than physicians in Europe when quality and safety culture and career development opportunities were present but at higher risk when work-life conflict was present. A positive work attitude played a greater role to reduce the risk among European physicians. Physicians in the Americas were at higher risk for depersonalization than physicians in Europe when quality and safety was compromised and when work-life conflict was present. Results from an earlier study (Armstrong-Stassen, al-Ma'Aitah, Cameron & Horsburgh, 1994) showed that type of work, amount of work, and future career opportunities were associated with burnout among both Canadian and Jordanian nurses.

A few studies have focused on assessment. For example, Schwarzer, Schmitz, and Tang (2000) compared levels and dimensions of teacher burnout in Hong Kong and Germany. Carrola, Yu, Sass and Lee (2012) examined assessment of counselor burnout in South Korea and in the
U.S. In their concluding discussion, they suggested that people from collectivist cultures have a greater need for socially oriented achievement and rely on their ability to seek connectedness and interpersonal harmony, whereas people from individualist cultures have a greater need for individually oriented achievement and rely on self-efficacy. Consequently, for Korean counselors, poor client relationships tend to evoke feelings of detachment and incompetence which translate to work dissatisfaction, whereas American counselors tend to be more negatively affected by a work environment that is not conducive to individual accomplishments. Shin, Yuen, Lee, and Lee (2013) also addressed collectivistic and individualistic cultural factors in their assessment of counselor burnout in Hong Kong, Japan, South Korea, and the U.S., noting that the data from Hong Kong aligned closely with those from the U.S.

Results from González-Morales et al.’s (2012) study of teachers in Spain suggests that the social environment within an organization and the perception of collective burnout at the organizational level partly explains individual burnout. The researchers theorized that the process of emotional contagion, i.e. the tendency to automatically mimic and synchronize facial expressions, vocalizations, postures, and movements in interpersonal interactions and—consequently—mirror associated emotions, along with the tendency to intentionally tune into and empathize with others, lie at the root. Thus, being around coworkers who feel exhausted, depleted, exploited, and cynical influences individuals emotionally, while negative perceptions of the organization, its characteristics, overarching attitudes toward its employees, and level of support influences individuals cognitively. As a result, an organizational environment characterized by collective burnout becomes a source of stress for the individuals.

Cross-Cultural Differences between Sweden and the United States

The institutionalized and shared aspects of culture have allowed researchers to identify dimensions of cultural variability across several nations for cross-cultural comparison. Some of
the major differences between Swedish and American cultures have previously been identified by House, Hanges, Javidan, Dorfman, and Gupta (2004), Hofstede (1984), and Triandis (1995). House et al. (2004) found that Sweden outranked the other countries examined in its practice of institutional collectivism, even though Sweden generally is identified as having a highly individualistic culture along with the U.S. Triandis (1995) noted, however, that individualism in Sweden is horizontal, which causes Swedes to strive to be similar, achieve equality, and reduce differences among individuals based on a low tolerance toward people who stand out. By contrast, vertical individualism in the U.S. causes Americans to see themselves as unique and to strive to differentiate themselves from each other through individual achievements.

Hofstede’s (1984) masculinity/femininity dimension captured other prominent differences between the two cultures. Sweden emerged as the most feminine country in his study, featuring values associated with benevolence, nurturance, caring, protecting the environment, quality of life, interdependence, fluid gender roles, and gender equality. Swedish culture was contrasted with the more masculine American values of assertiveness, ambition, performance orientation, economic growth, success, independence, male domination, and differentiated gender roles. A higher level of gender egalitarianism—i.e., minimized gender differentiation as evidenced by men and women having equal education levels, status, positions of authority, community influence, and occupational diversity—in Swedish culture was also identified by House et al. (2004). Hofstede (1991) argued that feminine societies tend to be more permissive than masculine societies. Observing that dominant cultural values translate into political priorities, he explained, “Masculine culture countries strive for a performance society; feminine countries for a welfare society” (p. 97).

Rush (2011) offered additional insight into how the Swedish egalitarian model provides more child-rearing opportunities for fathers, whereas the American differentiated model expects
men to be providers first and fathers second. A related study (Freeman & Karlsson, 2012) compared learning experiences for children in the two countries, noting greater use of hands-on activities, and developmental play in Sweden. Barker and Cornwell (2015) found that children are perceived as more equal to adults in Sweden compared to the U.S. and, consequently, allowed more independence earlier. The also described Swedish families as less inclusive of outsiders than American families. McCroskey, Burroughs, Daun, and Richmond (1990) found Swedes to be more introverted than Americans and less willing to communicate in a variety of settings and situations. Barker (2016) confirmed that Swedish culture fosters a greater degree of communication apprehension and introversion, while American culture fosters a greater willingness to communicate, particularly in public.

A few other differences in communication patterns exist. Americans tend to talk more, faster, and louder, whereas Swedes tend to be quieter, listen more, and ensure everyone gets a chance to speak. When it comes to argumentativeness and self-disclosure, Barker (2016) reported that Swedes tend to put forth corporately held views while Americans tend to debate based on personally held opinions. Americans are more likely to address problems directly, while Swedes tend to avoid conflicts. Also, Swedes’ self-disclosure tends to have a negative valence and be less immediate, while Americans’ self-disclosure tends to have a positive valence and involve openly articulating opinions, expectations, and personal information. There are also differences in nonverbal communication, particularly display of affect and eye-contact. Americans are not only more open and willing to engage strangers verbally as well as nonverbally, but typically smile more than Swedes.

Summary, Rationale, Research Questions, and Hypotheses

What emerges from the above literature review is a reasonably clear conceptualization of burnout as a global phenomenon that has been studied extensively in Western and industrialized
Asian nations. It is also clear that although a formal diagnosis for clinical burnout has yet to be established in some countries—including the U.S.—the condition has severe and long-term consequences for those who suffer from it with core symptoms of emotional, cognitive, and physical exhaustion, concentration/memory difficulties, irritability, anxiety, sleep disturbances, depression, and somatic problems as well as experiences characterized by depersonalization, withdrawal, reduced accomplishment, and feelings of inadequacy, guilt, cynicism, and anger.

Burnout typically develops in work contexts and, although incidence rates are higher in the human services and professional fields, the phenomenon occurs across professional contexts. Additionally, there exists sufficient evidence that burnout is not exclusively work-related, but is also experienced by students and those facing exceedingly difficult and problematic circumstances in the private/family domain. Known causes are an excessive workload, extreme time pressure, and/or heavy exposure to others’ suffering, coupled with a lack of control over one’s situation, a lack of autonomy, a lack of support, and unavailability of a real solution (Bakker et al., 2003; Craig & Sprang, 2010; Garcia et al., 2016). This translates into a situation where the discrepancy between real or perceived demands and real or perceived resources presents a threat which, in turn, generates a stress response. In time, prolonged or chronic stress leads to exhaustion and fatigue (Bianchi et al., 2014; Chrousos, 2009; Leone et al., 2011; Pines & Keinan, 2005; Weber & Jaekel-Reinhard, 2000). The above review also examined researchers’ attempts at explaining individual differences, including gender, personality differences, attachment experiences, and prior exposure to trauma.

What is not yet fully understood are the mediating and moderating variables that explain why some individuals—but not others who are faced with nearly identical circumstances—develop burnout symptoms. Among such variables, role ambiguity (Arman el al., 2011; Löve et al., 2011; Shyman, 2010), role conflict (Kuntz et al., 2013; Perrewé et al., 2002; Rupert et al.,
2009), self-efficacy (Choi et al., 2016; Shoji et al., 2016; Ventura et al., 2015; Wang et al., 2016), and performance-based self-esteem (Blom, 2012; Hallsten et al., 2005; Svedberg et al., 2016) emerge as some of the important contributors to burnout that need to be examined further.

Also, because perceptions of unresolvable demands that threaten an individual’s wellbeing and associated stress responses are largely culturally conditioned, the role of culture needs to be more carefully investigated. It is not clear how culture-specific values, behavioral norms, and beliefs about self in relation to society influence the process of developing burnout in different cultural contexts. To address this void, a cross-cultural examination of the burnout processes in Sweden and the U.S. was needed. The few cross-national studies that were found reveal differences in incidence rate between select countries but offer only speculations as to why. Cultural differences can explain this broadly, as values and norms cultivated and shared within a particular society translate to political and socio-economic priorities (Hofstede, 1984). No study has previously compared burnout in Sweden and in the U.S., specifically.

A major social and socioeconomic problem in Sweden, burnout has been a central component in the public debate there for the last 15 years. Reported rates range from a high 20% of the general population having burnout symptoms to a conservative 5.7% of women and 2.3% men have been formally diagnosed (Hallsten et al., 2002; Nordin & Nordin, 2013). Corresponding data for the U.S. do not exist, but burnout appears to me more hidden and is not recognized as an actual disorder (Danhof-Pont, 2010; Grossi et al., 2015). The differences in burnout occurrences and experiences in Sweden and the U.S. made a cross-cultural comparison between these two countries—that generally are considered more similar than different—ideal.

This study thus examined how cultural dimensions, self-efficacy, and performance-based self-esteem—which arguably are influenced by cultural values and practices—moderate the relationships among known causes and antecedents to chronic stress that results in burnout. The
study also controlled for emotional stability and gender as potential covariates. Since self-efficacy and performance-based self-esteem had not been evaluated as culturally conditioned variables, two research questions were formulated:

(RQ1) Do Americans have a higher level of self-efficacy than Swedes?

(RQ2) Do Swedes have a higher level of performance-based self-esteem than Americans?

To assess the proposed moderated mediation of demands and burnout by perceived stress, role conflict, and role ambiguity, six hypotheses were developed:

(H1) Demands will be positively related to perceived stress through the moderating roles of self-efficacy (1a) and performance-based self-esteem (1b) such that this effect will be weaker for those who have a high level of self-efficacy and stronger for those who have a high level of performance-based self-esteem.

(H2) Perceived stress will be positively related to burnout.

(H3) Demands will be positively related to role conflict through the moderating roles of vertical individualism (3a), horizontal individualism (3b), and masculinity/femininity (3c) such that this effect will be stronger for those who have a high level of masculinity and vertical individualism and weaker for those who have a high level of horizontal individualism.

(H4) Demands will be positively related to role ambiguity through the moderating roles of vertical individualism (4a), horizontal individualism (4b), and masculinity/femininity (4c) such that this effect will be stronger for those who have a high level of femininity and horizontal individualism and weaker for those who have a high level of vertical individualism.

(H5) Role conflict will be positively related to burnout.

(H6) Role ambiguity will be positively related to burnout.
Research Method

Based on the previous review of the burnout literature, a quantitative research method was deemed appropriate. The relationship between the independent variable of demands and the dependent variable of burnout was hypothesized to be mediated by perceived stress, role conflict, and role ambiguity. Self-efficacy and performance-based self-esteem were hypothesized to moderate the relationship between demands and perceived stress. In addition, the assumption that self-efficacy is cultivated more in American culture and performance-based self-esteem is cultivated more in Swedish culture was evaluated, as articulated in the two research questions. The cultural dimensions masculinity/femininity, vertical individualism, and horizontal individualism were hypothesized to moderate the relationship between demands and role conflict as well as the relationship between demands and role ambiguity in that Americans—who were expected to score higher on masculinity and vertical individualism—would react more negatively to role conflict, while Swedes—who were expected to score higher on horizontal individualism and femininity (i.e. lower on masculinity)—would react more negatively to role ambiguity. The hypothesized relationships among the variables are illustrated in Figure 1 below:
Participants

Having obtained permission to conduct this study by the Liberty University Institutional Review Board, a convenience/snowball sample of respondents in Sweden and the U.S. was recruited and directed to complete an online survey available via Qualtrics January-April, 2018. The researcher reached out to her personal network as well as to online communities consisting of members who were suffering from burnout and asked participants to recruit additional ones with and without burnout symptoms. The questionnaire was available in English for the U.S. sample and in Swedish for the Swedish sample. The sampling method was chosen to ensure that participants with varying degree of burnout symptoms developed in various work contexts and domains were included in the sample. Screening question about cultural background were
included in the questionnaire to exclude participants who grew up outside the U.S. and Sweden, respectively, and/or who has at least one parent who grew up abroad. This was not to disregard the cultural and ethnic variation that exists within each country, but to ensure that all participants had been sufficiently exposed to the mainstream culture in their home country.

**Measures**

In addition to the measures described below, demographic data were obtained from participants, including age, gender, years of education, type of work, and work context. The scales that did not already exist in Swedish were translated and then back-translated by a certified linguist for verification. Permission to use the scales was obtained where possible, necessary, and appropriate.

**Burnout**

The Burnout Measure (Pines & Aronson, 1988) was used to measure burnout and exhaustion symptoms. It was designed specifically to gauge physical, emotional, and mental/cognitive exhaustion. Although it covers these three dimensions, the 21-item scale should be treated as unidimensional measure without subscales. Items are evaluated on a seven-point scale on which respondents rate the frequency in which they experience each of them ranging from “never” to “all the time.” The scale includes questions such as, “How often during the last 12 months have you felt low?”, “How often during the last 12 months have you felt emotionally exhausted?”, and “How often during the last 12 months have you felt run down?” Four items are positively worded and reverse-coded. The Burnout Measure has been examined using correlational analyses with several other theoretically relevant measures. It has been found to have good internal consistency and high construct validity. Highly correlated with the emotional exhaustion subscale of the Maslach Burnout Inventory (Maslach & Jackson, 1981), it is the second most frequently used measure for the assessment of burnout (Schaufeli, Enzmann &
Noelle, 1993), cited nearly 1,900 times. Since it is context-free, it may be used with all occupational as well as non-occupational groups and clinical and non-clinical samples. It has been used in several different countries, including Sweden. Chronbach’s alpha coefficients are usually above .90 (Schaufeli et al., 2001). The scale’s alpha in the current study was .96.

**Perceived Stress**

The Perceived Stress Scale (PSS) measures stress-related aspects of unpredictable, uncontrollable, and overloading life events. This scale was used in this study to gauge the level of chronic stress that is predictive of burnout. The short version of the PSS (Cohen & Williamson, 1988) includes 10 of the original 14 items, four of which are positively worded. Respondents indicate on a five-point scale ranging from “never” to “very often” how often, in the past month, they have felt or thought a certain way. Sample items include “…been unable to control the important things in your life” and “… felt difficulties were piling up so high that you could not overcome them.” Cited 27 times, the measure has been widely used in several different countries, including Sweden, and has shown good construct validity and internal consistency with Chronbach’s alpha coefficients ranging between 0.84 and 0.86 (Cohen & Williamson, 1988). Nordin and Nordin (2013) reported an alpha coefficient of .83 in a large Swedish sample. The scale’s alpha in the current study was .91.

**Role Conflict and Role Ambiguity**

Role conflict and ambiguity were measured using a shorter and modified version of Rizzo, House, and Lritzman’s (1970) scales, which have been validated and used in about 85% of studies on the topic (González-Romá & Lloret, 1998). The original scales consist of eight and six items, respectively. The Role Conflict Scale was designed to gauge the experience of facing incompatible and incongruent directives and expectations that compromise one’s ability to be accountable and execute tasks successfully. The origin of such conflicts may be internal—
creating a discrepancy between personal, inner standards and defined role behavior—or external—e.g. when the available time, resources, and capabilities do not match performance expectations or one is forced to play dual or incompatible roles. The Role Ambiguity Scale was designed to gauge a lack of goal clarity and guidance that result in uncertainty about duties, responsibilities, authority, behavioral consequences, and outcomes. Because several items are specific to organizational domains, they have been tailored by researchers in different ways to fit different professional contexts. This study followed the example of Reknes, Einarsen, Knardahl and Lau (2014) who used three items from the original Role Conflict Scale and three items from the original Role Ambiguity Scale, reporting Cronbach’s alpha coefficients of .67 and .83, respectively. To ensure all items are essentially context free, one item in the former scale was gently reworded to “I have to carry out tasks without needed aids and resources” and one item in the latter scale was similarly modified to: “Clearly defined goals exist for the things I do.”

Responses are indicated on a 7-point Likert scale ranging from “strongly disagree” to “strongly agree.” All items on the role ambiguity scale are negatively worded, meaning they articulate role clarity rather than ambiguity before reverse-coded. In the current study, the Cronbach’s alpha coefficients were .79 for The Role Conflict Scale and .84 for the Role Ambiguity Scale.

**Self-Efficacy and Performance-Based Self-Esteem**

Self-efficacy was measured using the short version of the Generalized Self-Efficacy Scale originally developed by Schwarzer and Jerusalem (1995) to capture a confidence in one’s ability to deal with demanding or unexpected situations and beliefs in one’s ability control challenges by taking adaptive action. The short version has six items including “It is easy for me to stick to my aims and accomplish my goals” and “No matter what comes my way, I’m usually able to handle it” evaluated on a four-point scale with response options ranging from “not at all true” to “exactly true.” The short version of the scale was validated by Romppel et al. (2013) and
has been cited 29 times. The Chronbach’s alpha coefficients verifying the short scale’s internal consistency ranged from .79 to .88. The scale’s alpha in the current study was .89.

Performance-based self-esteem was measured using the four-item Performance-Based Self-Esteem Scale developed by Hallsten et al. (2005). The scale gauges cognitions of self-esteem as contingent on one’s performance and ego-oriented beliefs. Not domain-specific, items include: “I think that I sometimes try to prove my worth by being competent” and “At times, I have to be better than others to be good enough myself.” Responses are given on a 5-point Likert scale ranging from “fully disagree” to “fully agree.” Cited 159 times, examinations of the scale’s convergent validity and internal consistency have generated Chronbach’s alpha coefficients ranging between .85 and .89. Svedberg et al. (2016) reported an alpha coefficient of .86. The scale’s alpha in the current study was .90.

**Emotional Stability**

Emotional stability was measured using the 10-item neuroticism subscale of the International Personality Item Pool Big Five measure (Goldberg, 1999). The measure uses short phrases such as “Get upset easily” and “Change my mood a lot” that are captured on a 5-point Likert scale ranging from “very inaccurate” to “very accurate.” Two items are reverse-coded. Cited over 3,050 times, the measure has good convergent and discriminant validity and has been found to correlate well with the NEO Personality Inventory (Costa & McCrae, 1992) with Chronbach’s alpha coefficients averaging .80 (Goldberg, 1999). Ypofanti et al. (2015) recently reported an alpha coefficient on the Emotional Stability of .85 in a Greek sample. The scale’s alpha in the current study was .82.

**Cultural Dimensions**

To assess cultural differences between Sweden and the U.S., three subscales that have previously revealed differences between the mainstream cultures in the two countries were used.
First, Hofstede’s (1979, 1984) Masculinity/Femininity Scale consists of ten items that capture dimensions associated with masculine values such as assertiveness, ambition, independence, differentiated gender roles, and performance orientation and dimensions associated with feminine values such as benevolence, interdependence, quality of life, fluid gender roles, and gender equality. Sample items include, “It is very important for me to receive recognition for my work,” “The most important things to my career are a good salary and a job that I do well and like;” “My job is only one of many parts of my life;” and “People will achieve organizational goals without being pushed.” The feminine items are reverse-coded so that femininity is treated as low masculinity. The scale uses a five-point Likert scale ranging from “strongly disagree” to “strongly agree”. One of four initial subscales used in 40 countries, the instrument has dominated cross-cultural research across disciplines, with Hofstede (1984) cited over 49,000 times. The scale’s Chronbach’s alpha coefficient in the current study was .33.

Second, Triandis, & Gelfand’s (1998) four-item Vertical Individualism and four-item Horizontal Individualism subscales were used. Vertical individualism captures the tendency of individuals within a culture to differentiate themselves from each other and earn special status through competition and individual accomplishments, measured by items such as, “It is important that I do my job better than others.” By contrast, horizontal individualism captures the tendency of individuals within a culture to strive for independence and self-reliance while achieving equality and reducing differences; and having a low tolerance for people who stand out, measured by items such as, “I rely on myself most of the time; I rarely rely on others.” Items are measured on a nine-point Likert scale ranging from “strongly disagree” to “strongly agree.” The full scale also includes subscales for vertical and horizontal collectivism and has eight items in each subscale. Cited over 10,250 times, the instrument is well-established in cross-cultural research. Singelis, Triandis, Bhawuk, & Gelfand (1995) reported a Chronbach’s alpha coefficient
of .74 for the original vertical individualism subscale and .67 for the original horizontal individualism subscale. Zhang and Lee (2013) recently reported alpha coefficients of .79 and .88, respectively, also for the 8-item vertical individualism and horizontal individualism subscales. The alpha was .78 for the Horizontal Individualism Scale and .83 for the Vertical Individualism Scale in the current study.

**Demands**

An extensive review of ways the independent variables that predict burnout have been captured in previous studies revealed that validated measures typically do not treat long-term demands-resources discrepancy as a distinct dimension, but rather, include elements of perceived stress (e.g. Bhagat, McQuaid, Lindholm & Segovis, 1985) or role conflict/ambiguity (e.g. Kristensen, Hannerz, Høgh & Borg, 2005) in the measurement. Some scales are too narrow, e.g. conceptualizing work demand only in terms of time pressure (Spector & Jex, 1998). Several researchers have, therefore, created work demand scales or survey items tailored to specific professional contexts (Demerouti et al., 2001; Outar & Rose, 2017; Shyman, 2010; Thompson et al., 2014). However, most of these focus solely on demands faced in work contexts and do not include difficulties in other life domains.

In the interest of ascertaining the triggering circumstances for burnout both in work and family contexts, a 12-item demands inventory was created specifically for this study, drawing on the wording of items in several previous studies: Shyman (2010) differentiated between quantitative demands, measured with items such as “Do you have to work very fast?”; cognitive demands, gauged by items such as “Do you have to keep your eyes on a lot of things while you work?”; and emotional demands, operationalized as “Do you get emotionally involved in your work?” Demerouti et al. (2001) also included physical demands, measured with items such as “It is physically taxing for me to get used to my working times” and organizational demands,
captured with items such as “It often occurs that my work schedule changes at the very last moment.” Thompson et al. (2014) assessed fairness in administrative decision-making, adequate financial compensation, flexibility of hours worked, quality of supervision, quality of coworker relationships, nature of job tasks, and overall organizational climate. Finally, Blom (2012) included personal life conditions such as energy-consuming domestic tasks and peer social support, measured with items such as “I have home demands that require all my energy.” The resulting demands inventory that was used in this study includes items that are not specific to a domain, such as, “I have too much to do” and “I have sufficient training for what I do,” items that pertain to work, such as “There is enough staff at my job for the amount of work that has to be done” and “My supervisor solves the problems I face in my job,” and items that address demands and difficulties related to family relationships, such as, “I have home demands that require too much time and energy” and “My family life is exceptionally difficult.” Six positively worded items were reverse-coded.

**Results**

The data were reviewed for consistency and participants who had not completed at least one scale were removed from the data set, resulting in a sample of 79 Swedes and 79 Americans. Participant demographics are displayed in Table 1. The average age of participants was 47, the range being 21-76. The sample included 32 men and 126 women with 16.5 years of education on average. Chronbach’s alpha coefficients were calculated for all scales and subscales to assess their reliability after necessary reverse-coding of items had been conducted. The model was pruned to exclude the Masculinity/Femininity variable along with Hypothesis 3c and Hypothesis 4c because the scale was not reliable (α = .33). Composite variables were created from all remaining scales, reflecting mean scores. Correlations, means, and standard deviations are displayed in Table 2.
Table 1

Participant Demographics

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<thead>
<tr>
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<th>N or Range</th>
<th>% or M</th>
</tr>
</thead>
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<td>Age</td>
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</tr>
<tr>
<td>Years of education</td>
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<td>16.5</td>
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</tr>
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<td></td>
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<tr>
<td>Swedish</td>
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<td>50</td>
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<tr>
<td>Profession/Occupation</td>
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</tr>
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<td>27.2</td>
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<tr>
<td>Education</td>
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<td>23.4</td>
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<tr>
<td>Administration</td>
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</tr>
<tr>
<td>Executive/professional</td>
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<td>12.0</td>
</tr>
<tr>
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<td>9.5</td>
</tr>
<tr>
<td>Technical/engineering/skilled labor</td>
<td>14</td>
<td>8.9</td>
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</table>

Data Analysis Approach

Two different *t*-tests were performed in order to evaluate research questions one and two. For the main analyses and hypotheses testing, Hayes’s (2017) Process macro, model nine was first used to assess the degree to which perceived stress, role control and role ambiguity mediate the relationship between demands and burnout and to what degree these mediated relationships are moderated by vertical individualism and horizontal individualism, respectively. A second analysis was conducted to further assess to what degree self-efficacy and performance-based self-esteem, respectively, moderate the relationship between demands and burnout, mediated by perceived stress. The Hayes (2017) model was applied to generate regression coefficients, *p*-values, and confidence intervals (10,000 bias-corrected bootstrap samples) for each of the
regression analyses necessary for testing whether the sizes of each indirect effect via different mediators differ significantly from each other. Gender and emotional stability were assessed as covariates in all analyses.

Table 2
Pearson’s r, Means, and Standard Deviations

<table>
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<tr>
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<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<th>8</th>
<th>9</th>
<th>10</th>
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<td>Burnout (1)</td>
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<td>.437*</td>
<td>.411*</td>
<td>- .672*</td>
<td>.443*</td>
<td>.746*</td>
<td>.018</td>
<td>-.111</td>
<td>.107</td>
<td>.624*</td>
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<td>- .692*</td>
<td>.416*</td>
<td>.769*</td>
<td>.046</td>
<td>-.153</td>
<td>.096</td>
<td>.577*</td>
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<td>-.086</td>
<td>.318*</td>
<td>.328*</td>
<td>.063</td>
<td>.044</td>
<td>.137</td>
<td>.471*</td>
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<td>.188*</td>
<td>.395*</td>
<td>.014</td>
<td>- .225*</td>
<td>.073</td>
<td>.328*</td>
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<td></td>
<td></td>
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<td>-.589**</td>
<td>.007</td>
<td>.277**</td>
<td>.086</td>
<td>-.389**</td>
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<tr>
<td>Performance-Based Self-Esteem (6)</td>
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<td>.200*</td>
<td>.119</td>
<td>.406**</td>
<td>.277**</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Emotional Stability (7)</td>
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<td>-.115</td>
<td>.236*</td>
<td>.482**</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
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<td>Masculinity/Femininity (8)</td>
<td>1</td>
<td>.061</td>
<td>.367**</td>
<td>.062</td>
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<td></td>
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<td>Horizontal Individualism (9)</td>
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<td>.369**</td>
<td>-.078</td>
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<td></td>
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<tr>
<td>Vertical Individualism (10)</td>
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<td></td>
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<tr>
<td>Demands (11)</td>
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<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

| Mean   | 3.68 | 1.81 | 3.75 | 3.06 | 2.71 | 3.53 | 2.88 | 2.92 | 6.67 | 4.36 | 2.98 |
| SD     | 1.10 | .74  | 1.46 | 1.36 | .68  | 1.17 | .76  | .43  | 1.45 | 1.88 | .62  |
| Scale  | 1-7  | 0-4  | 1-7  | 1-7  | 1-4  | 1-5  | 1-5  | 1-5  | 1-9  | 1-9  | 1-5  |
| Cronbach’s α | .96  | .91  | .79  | .84  | .89  | .90  | .82  | .33  | .78  | .83  | .73  |

*Correlation is significant at the .05 level (2-tailed).
**Correlation is significant at the .01 level (2-tailed).

Statistical Findings

The first research question guiding this study addressed whether Americans have a higher level of self-efficacy than Swedes. The analysis yielded a significant difference between the two cultures ($t(124.35) = 4.34, p < .001$). Specifically, American participants produced a higher mean score of 2.94 ($SD = .51$), while Swedish participants produced a slightly lower mean score of
2.48 ($SD = .76$). The effect size ($d = .71$) was medium, as determined by Cohen’s (1988) guideline.

The second research question addressed whether Swedes have a higher level of performance-based self-esteem than Americans. The analysis yielded a small, but significant, difference between the cultures ($t(148) = 2.0$, $p < .05$). Swedish participants produced a mean score of 3.72 ($SD = 1.15$), while American participants produced a mean score of 3.34 ($SD = 1.17$). The effect size ($d = .33$) was small, as determined by Cohen’s (1988) guideline.

As displayed in Table 3, demands predicted burnout. The relationships between demands and perceived stress, role conflict, and role ambiguity, respectively, were significant; however, only perceived stress mediated the relationship between demands and burnout, whereas role conflict and role ambiguity did not. Thus, hypothesis two was supported, while hypotheses five and six were not supported. Neither vertical nor horizontal individualism moderated the relationship between demands and role conflict; thus, hypotheses 3a and 3b were not supported. Horizontal individualism was negatively associated with role ambiguity but did not moderate the relationship between demands and role ambiguity. Vertical individualism did not moderate this relationship either; thus, hypotheses 4a and 4b were not supported. Self-efficacy and performance-based self-esteem predicted perceived stress, but neither variable moderated the relationship between demands and perceived stress; thus, hypotheses 1a and 1b were not supported. Gender was not a significant covariate in any of the analyses. Emotional stability was a covariate in the relationships between demands and perceived stress, demands and role ambiguity, and perceived stress and burnout, respectively.
Table 3  
*Process Analysis Results for Moderated Mediation Model*

<table>
<thead>
<tr>
<th>Source</th>
<th>$b$</th>
<th>$se$</th>
<th>$t$</th>
<th>$p$</th>
<th>LLCI</th>
<th>ULCI</th>
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<tbody>
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<td>Perceived Stress</td>
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<td></td>
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<td>Demands</td>
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<td>.442</td>
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<td>Vertical Individualism</td>
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<td>.020</td>
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<td>Demands x Horizontal Individualism</td>
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<td>-0.98</td>
<td>.922</td>
<td>-.105</td>
<td>.095</td>
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<td>Demands x Vertical Individualism</td>
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<td>.034</td>
<td>.753</td>
<td>.453</td>
<td>-.042</td>
<td>.093</td>
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<tr>
<td>Gender</td>
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<td>.092</td>
<td>.389</td>
<td>.698</td>
<td>-.147</td>
<td>.219</td>
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<td>11.030</td>
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<td>.521</td>
<td>.748</td>
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<td>Role Conflict: $R = .511, R^2 = .261, MSE = 1.657, F(7, 132) = 6.656, p &lt; .001$</td>
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<td>Demands x Vertical Individualism</td>
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<td>.593</td>
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<td>Role Ambiguity: $R = .482, R^2 = .232, MSE = 1.548, F(7, 132) = 5.700, p &lt; .001$</td>
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<td>-.042</td>
</tr>
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<td>.065</td>
<td>.716</td>
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<td>-.082</td>
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<td>.099</td>
<td>1.262</td>
<td>.209</td>
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<td>.159</td>
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<td>.151</td>
</tr>
<tr>
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<td>.166</td>
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<td>.826</td>
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<tr>
<td>Burnout: $R = .890, R^2 = .793, MSE = .263, F(6, 133) = 84.804, p &lt; .001$</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Demands</td>
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<td>3.153</td>
<td>.002</td>
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<td>.462</td>
</tr>
<tr>
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<td>9.183</td>
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<td>.761</td>
<td>1.179</td>
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<tr>
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<td>.035</td>
<td>.450</td>
<td>.653</td>
<td>-.053</td>
<td>.085</td>
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<td>Role Ambiguity</td>
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### Table 4
**Process Analysis Results for Moderated Mediation Model**

<table>
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<tr>
<th>Source</th>
<th>b</th>
<th>se</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
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<td>&lt;.001</td>
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<td>2.198</td>
<td>.030</td>
<td>.007</td>
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<td>.078</td>
<td>.809</td>
<td>.420</td>
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<td>.216</td>
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<td>6.928</td>
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<td>.546</td>
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</table>

Burnout: $R = .890$, $R^2 = .792$, $MSE = .259$, $F(4, 136) = 129.486$, $p < .001$

<table>
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<tr>
<th>Source</th>
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<th>t</th>
<th>p</th>
<th>LLCI</th>
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<tr>
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<td>.085</td>
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<td>&lt;.001</td>
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### Discussion

Some of the results of this study are as expected, while others are surprising. The finding that perceived stress predicts burnout was already confirmed in previous research. Specifically, chronic, unresolvable stress has been identified as the fundamental cause of burnout (Bianchi et al., 2014; Chrousos, 2009; Pines & Keinan, 2005; Weber & Jaekel-Reinhard, 2000). When an individual perceives his or her environment as threatening in some way, an automatic stress response is triggered. If the threat is not neutralized quickly because accessible resources to do so are inadequate, the tendency is to ignore the body’s stress symptoms until the resulting exhaustion has reached a critical level (Arman et al., 2011; Grossi et al., 2015; Löve et al., 2011; Thompson et al., 2014). Due to the established link between chronic stress and burnout (Nordin & Nordin, 2013), some researchers are assessing burnout using the Perceived Stress Scale.
In the current study, perceived stress and burnout were highly correlated ($r = .864$, $p < .001$).

The Burnout Measure (Pines & Aronson, 1988) was appropriate for this study, as it operationalizes burnout in terms of its core symptoms, i.e. emotional, cognitive, and physical exhaustion, which over time causes those who experience them to reach a breaking point where they are unable to function. Related symptoms of Exhaustion Disorder, as diagnosed in Sweden, include decreased tolerance for performing under time pressure; irritability; anger; helplessness; anxiety; guilt; depression; memory and concentration problems; sleep disturbances; somatic pain, gastrointestinal issues, dizziness, and hypersensitivity (Grossi et al., 2015; Van Dam et al., 2015). As noted earlier, burnout is currently neither considered a psychological disorder nor a medical condition in the U.S., although the phenomenon has been known since the 1970s.

A new measure to predict burnout was created for this study, focusing specifically on conditions that are known to produce the type of chronic stress that, over time, causes burnout. The demands inventory includes items that gauge cognitive, emotional, and physical demands-versus-resources discrepancies in professional as well as private domains. It includes known antecedents to burnout such as unmanageable workload, time pressure, uncertainty, lack of training and support, inadequate staffing, unfair compensation, etc. (Bakker et al., 2003; Blom, 2012; Demerouti et al., 2001; Fiorilli et al., 2017; Garcia et al., 2016; Hallsten et al., 2002; Schaufeli & Enzmann, 1998; Shyman, 2010). Demands predicted burnout, mediated by perceived stress, in the current study, The Demands Inventory and Perceived Stress Scale (Cohen & Williamson, 1988) had a moderately strong correlation ($r=.577$, $p<.001$). Burnout was initially viewed as a phenomenon particular to the human services professions (Shirom & Melamed, 2006), but has since been identified across occupations. Incident rates are particularly high among teachers and physicians (Hallsten et al., 2002; Lee et al., 2013; Schaufeli & Enzmann,
Although they did not all have burnout symptoms, the largest group of participants in the current study were categorized as working in the medical/dental/mental health/or human services fields, followed by education.

Another expected result of the study is that emotional stability acts as a significant covariate. Neuroticism, or lack of emotional stability, has been found to predict emotional exhaustion (Bakker et al., 2006; Lent & Schwartz, 2012), as well as adjustment difficulties following stressful events (Carver & Connor-Smith, 2010; Löckenhoff et al., 2009). The current study also controlled for gender as a covariate, because burnout is more frequent among women than men (Hallsten et al., 2002; Mather et al., 2014; Nordin & Nordin, 2013). However, the impact of gender was not significant in any of the analyses. It should be noted that nearly eighty percent of the sample was female.

The impact of role conflict and role ambiguity on burnout had sufficient support in the burnout literature to justify inclusion in this study, but the nature of these relationships was not entirely clear from previous research. Both role conflict and role ambiguity have been found to predict burnout (Peiró et al., 2001; Shyman, 2010). Individuals who experience burnout have been reported to wrestle with an inner conflict stemming from seeking to reconcile external and internal expectations (Arman et al., 2011). They find it difficult to determine what constitutes satisfactory performance relative to their peers (Löve et al., 2011) and feel conflicted between appropriate and endorsed levels of performance (Åhlin et al., 2012; Semmer et al., 2015).

Demands predicted both role conflict and role ambiguity in the mediation analyses conducted for the current study. However, although burnout was significantly correlated with both role conflict \( r = .437, p < .001 \) and role ambiguity \( r = .411, p < .001 \), neither variable mediated the relationship between demands and burnout as predicted, whereas perceived stress did. Reasons may be that role conflict and role ambiguity are not necessarily experienced as inherently or
chronically stressful. Alternatively, those who experience demands that lead to role conflict or role ambiguity may find ways to access and acquire the resources needed to meet these demands.

The purpose of this study was to examine how culture influences the burnout process by investigating whether people in the U.S. develop burnout differently or for different reasons than people in Sweden. Therefore, the theoretical model was designed specifically to test how culture moderates the relationships among demands, perceived stress, role conflict, role ambiguity and burnout. Surprisingly, the results did not reveal any of the cross-cultural differences in the burnout process that were hypothesized. These cross-cultural differences were theorized based on a view of culture as a socially shared framework that is maintained and reinforced in all societal domains and institutions (Berry, 2009; Clausen, 2007; Hofstede, 1984; Navas et al., 2007; Rodríguez, 2005; Zimmermann et al., 2003) and that includes cognitive, affective, and behavioral aspects that enables people to orient themselves in relation to one another and to experience and interpret the world in similar ways (Benet-Martínez et al., 2002).

Cross-cultural differences in burnout processes were theorized because although neurobiological responses to threat are universal (Johnson & Naidoo, 2017), perceptions of threat are largely culturally conditioned (Bracken, 2002). This is because culture governs how individuals orient themselves in relation to their communities and societies (Barker, 2015), including how they perceive their professional identity and self-image; their sense of adequacy, ability, and significance; and the availability of resources to meet demands (Chrousos, 2009; Pines, 2004; Pines & Keinan, 2005; Semmer et al., 2015; Stoeber & Rennert, 2008; Weber & Jaekel-Reinhard, 2000). Cross-cultural differences in burnout processes might also explain why burnout incidence rates vary across countries (Lee et al., 2013; Perrewé et al., 2002; Peterson et al., 1995). Previous cross-national burnout studies were few in number and offered limited guidance. Such studies have examined differences in role stress (Peterson et al., 1995); different
emphases on quality, safety, and career development coupled with differences in work-life
conflict and work attitude (Armstrong-Stassen et al., 1994; Lee et al., 2013). Because of the
limited existing cross-cultural burnout research, the present study was by default exploratory.

The three measures included in the research design—Hofstede’s (1979, 1984) Masculinity/Femininity scale and Triandis, and Gelfand’s (1998) vertical individualism and horizontal individualism subscales—were carefully chosen because their validity was pre-established and they had clearly differentiated between Swedish and American mainstream cultural values and practices in previous research. Therefore, the low reliability of the masculinity/femininity scale was surprising. The scores did not differentiate between the Americans and Swedes in the sample either. Reasons for this may lie in the age of the scale. Hofstede’s (1979) research was conducted in the 1970s. Hofstede (2001) argued that cultural values are stable over time, which is consistent with mainstream views of culture (Berry, 2009). However, Hofstede (2001) also noted that cultures sometimes do shift as a result of major changes or over the course of a generation. Another reason might be that the wording of the scale items is outdated and no longer effectively gauge the actual values as understood and practiced in Sweden and the U.S.

Although the vertical individualism subscale was reliable in the current study, it did not distinguish between American and Swedish culture as expected and it did not moderate the relationships in the theoretical model as hypothesized. Horizontal individualism predicted role ambiguity; however, although the means for Swedes (6.16) and Americans (7.13) were significantly different ($t(143) = 4.27, p < .001$), the direction was opposite from the theorized expectation that Swedes would score higher. The variable did not moderate the relationship. Reasons for failure of these scales to perform as expected might be similar to those suggested above, although the underlying data were collected in the 1990s (Singelis et al., 1995). It is also
possible that scale items such as “It is important that I do my job better than others” and “I rely on myself most of the time; I rarely rely on others” measured burnout-related—rather than cultural—phenomena.

The results generated by the two research questions indicate that Americans tend to have higher levels of self-efficacy than Swedes, while Swedes tend to have higher levels of performance-based self-esteem than Americans. These differences have been identified in previous research but have not been examined cross-culturally. Self-efficacy—which is associated with a cultural orientation toward high individualism (Carrola et al. 2012)—has been found to influence motivation, mobilization of resources, and sense of control; impact stress responses relative to perceived demands; correlate negatively with burnout; mediate the relationship between work resources and burnout; mediate the relationship between role conflict/role ambiguity and burnout; and mediate the relationship between compassion and burnout (Choi et al., 2016; Perrewé et al. 2002; Shoji et al., 2016; Ventura et al., 2015; Wang et al., 2016). In the current study, self-efficacy predicted perceived stress, but did not moderate the relationship between demands and perceived stress as expected. This result was surprising and efforts to explain it would be speculative, at best.

The concept of performance-based self-esteem has emerged from Swedish burnout research. The Performance-Based Self-Esteem Scale (Hallsten et al., 2005) captures the Swedish notion of duktig, which requires individuals to derive their sense of self-worth and self-esteem from their own evaluation of their performance and achievements and strive to do things just right (Arman et al., 2011; Hallsten et al., 2002). Not surprisingly, performance-based self-esteem, coupled with initial high motivation and engagement, has been found to predict burnout and to mediate the relationship between work and life stressors and burnout (Blom, 2012; Svedberg et al., 2016). In the current study, performance-based self-esteem predicted perceived
stress. It was hypothesized that it would also moderate the relationship between demands and perceived stress. Although the hypothesis was not supported, the interaction approached significance at the $p = .05$ level. Thus, analysis of a larger sample might have offered additional insights into the role of performance-based self-esteem as a cultural phenomenon that influences burnout experiences and processes.

**Validity and Limitations**

Since this is a descriptive—rather than experimental—study, its internal validity must be considered low (Hepner, Wampold, Owen, Wang, & Thompson, 2016). Also, when a questionnaire is used in two different languages, the instrumentation poses a possible threat to the study’s internal validity. To reduce this threat, existing validated translations of scales were used when available and new translations were verified by back-translation. A thorough review of the literature was conducted to ensure that key variables of interest were operationalized in line with previous research findings. That, coupled with the bicultural researcher’s own cultural knowledge and familiarity with the two cultural contexts in which data were collected, increased the construct validity of this study. Still, the researcher was careful not to claim causation where the data and statistical tests used only indicated covariance.

The opportunity to generalize the results, although higher in descriptive research designs, was limited by the sampling method. The risk of obtaining a sample with a very small percentage of participants having clinical burnout was weighted against the risk of obtaining a biased sample with the former determined a greater threat to the study’s external validity. A threat to the statistical validity of the proposed research was posed by the small sample size, as it increases the chances of Type II errors. As expected, effect sizes were generally small. Another potential threat to statistical validity was violation of assumptions for the statistical test used, such as normal distribution of the data and adjusting the significance level for multiple observations. In
order to increase the statistical validity, measures with high historic and recent reliability were used and the internal consistency of each scale was tested. Despite the limitations of this study; as the first of its kind, it shed light on the role cultural values, norms, and beliefs play in the burnout process and provided direction for further research.

**Recommendations for Further Research**

Reliable and valid measures that distinguish between the values and practices of different cultures are essential for all cross-cultural research, and new measures that clearly and accurately differentiate between mainstream American and Swedish cultures need to be developed. House et al.’s (2004) research, which is more current than the cultural measures used in this study, identified Sweden as higher in institutional collectivism and lower in gender differentiation than the U.S.; however, the focus of their research was mainly leadership and management oriented.

Alternatively, qualitative research involving both Swedish and American participants who have experienced burnout may reveal more about the antecedents, contexts, core variables, and processes that are key for understanding cross-cultural differences, if they do exist. Such research should build on the work of Löve et al. (2011) and Arman et al. (2011), which offered insights into how initially engaged, energetic, and motivated individuals reach a breaking point at which they collapse in sheer exhaustion. Their interviewees described the burnout process as constantly questioning whether their output was up to par; perceiving their performance was unsatisfactory despite great effort; overcompensating by taking on too much; being frustrated when performing well by their own standards only to find work goals unachievable; feeling trapped as work encroached on their personal life and wellbeing; and being unable to seek and gain support. Qualitative studies would allow researchers to compare the experiences of Americans to those of Swedes and identify the culture-specific values, beliefs, norms, and practices that influence the burnout process in each country.
Although the causes and antecedents of burnout have been examined in numerous studies and seem reasonably clear, what is not yet fully understood are the mediating and moderating variables that explain why some individuals—but not others who are faced with nearly identical circumstances—develop burnout symptoms. To understand how the discrepancy between demands and resources is perceived by individuals, attention needs to shift from environmental variables—such as working conditions—to individual variables that explain vulnerability to perceptions of failure, inadequacy, and helplessness, as noted by Pines (2004) and Rössler et al., (2015) among others. The current study explored how cultural dimensions, role conflict, role ambiguity, self-efficacy, and performance-based self-esteem mediate and moderate the relationships among known causes and antecedents to chronic stress that results in burnout. Among these variables, performance-based self-esteem (Blom, 2012; Hallsten et al., 2005; Svedberg et al., 2016) emerged as an important contributor to burnout that needs to be examined further. However, the influence of role conflict, role ambiguity, and self-efficacy also has significant literature support and need further investigation as well.

Burnout is a global phenomenon, and the varying incidence rates in across countries (Lee et al., 2013; Perrewé et al., 2002; Peterson et al., 1995) coupled with the knowledge that perceptions of threat to one’s professional identity, self-image, sense of adequacy, ability, significance, core values, and relationships (Gabel, 2012; Pines, 2004; Semmer et al., 2015; Stoeberr & Rennert, 2008) that cause chronic stress—and eventually burnout—are culturally conditioned leave plenty to opportunities to compare burnout processes across different cultural and subcultural/professional contexts. Such studies are needed to fill the gap that remains in the otherwise extensive body of burnout research. It is not clear how culture-specific values, behavioral norms, and beliefs about self in relation to society influence the process of developing burnout in different cultural contexts. Unfortunately, the current study offered little insight.
To more fully understand how the discrepancy between real or perceived demands and real or perceived resources presents a threat which, in turn, generates a stress response that over time leads to burnout, as discussed by Bianchi et al., (2014), Chrousos (2009), Leone et al., (2011), Pines & Keinan (2005), and Weber & Jaekel-Reinhard (2000), researchers should look more closely at the impact of developmental trauma and insecure attachment. Pines (2004) conducted several studies across different cultures and reported that burnout was consistently negatively correlated with secure attachment and positively correlated with insecure attachment. She suggested that differences may be explainable by cultural aspects but did not elaborate on this argument. Beyond cross-cultural research, building on the work of Simmons et al. (2009), Vanheule and Declercq (2009), Ronen and Mikulincer (2009) and Reizer (2015), future research should further examine how developmental trauma and insecure attachment causes vulnerability to burnout later in life.

The relationship between the experiences leading up to burnout-related chronic stress and trauma-related acute stress also warrant further attention. Kuntz et al. (2013) noted that research on burnout developing in extreme, unstable work and life contexts is scant. Yet, Mather et al. (2014) reported that serious, stressful life events, emotional abuse and neglect, and other traumatic experiences are associated with burnout and argued that traumatic life events affect how individuals handle stress long-term, as such events may overextend individuals’ coping abilities when faced with a demanding situation. This notion is supported by a number of studies, reviewed earlier, that demonstrate a link between burnout and PTSD (Ager et al., 2012; Boudoukha et al., 2013; Jacobowitz, et al., 2015; Mealor et al., 2009).

Conclusions

Those at risk for developing burnout may benefit from the research that shows emotional intelligence, emotion regulation, mindfulness attitudes, a sense of accomplishment, a sense of
purpose, emotional support, humor, and religious beliefs to have an inverse relationships with burnout (Di Benedetto & Swadling, 2014; Gutierrez & Mullen, 2016; Hardiman & Simmonds, 2013; Thompson et al., 2014; Wagaman et al., 2015; Yang et al., 2017). Also, symptoms may effectively be treated with mindfulness training, stress management, relaxation therapy, cognitive-behavioral techniques, and interpersonal skills training (Danhof-Pont et al., 2010; Johnson & Naidoo, 2017; Maricuțoiu et al., 2016; West et al., 2016).

Untreated, burnout has serious long-term physical and mental health implications for individuals who experience it and serious financial implications for societies where burnout is common and long-term disability is publicly funded. The Swedish-American cross-cultural differences in how burnout is viewed are in and of themselves extremely interesting. In Sweden, burnout is diagnosed as Exhaustion Disorder and is openly recognized as one of the top health problems in the country with incidence rates ranging from a high 20% of the general population having burnout symptoms to a conservative 5.7% of women and 2.3% men having been formally diagnosed (Hallsten et al., 2002; Nordin & Nordin, 2013). According to Leone et al. (2011), Sweden is one of only a few countries where a specific burnout diagnosis exists.

In the U.S., burnout is a largely hidden phenomenon and is neither considered a psychological disorder nor a medical condition; therefore, incidence rates are unknown, although a recent estimate suggested that one in five employees may be at risk (Seppala & Moeller, 2018). Available related diagnoses include Undifferentiated Somatoform Disorder, Adaptation Disorder (Danhof-Pont, van Veen & Zitman, 2010), and Chronic Fatigue Syndrome (Huibers et al., 2003). The condition is also popularized as Adrenal Fatigue (Pranjić et al., 2012), which is also not endorsed by the medical community. Leone et al. (2011) raised the question of what role society and culture play in shaping and forming illnesses, when the same set of symptoms attract different labels in different countries. They suggested reasons for accepting or refuting a certain
diagnosis may include political, financial, and cultural—as well as medical—ones. It is not yet clear how culture-specific values, norms, practices, and beliefs about self in relation to society influence the process of developing, recognizing, diagnosing, and treating burnout in different cultural contexts; however, it is clear that whether hidden or open, burnout is a highly complex and multifaceted phenomenon.
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Stockholm, Sweden: Arbetslivsinstitutet.


