

**Are Work Stress Relationships Universal?
A Nine Region Examination of Role Stressors, General Self-Efficacy, and Burnout**

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Abstract

Cross-national studies of job stress have not kept pace with other streams of research in the international milieu. To begin to address this lack of development, we examined the relationships among role stressors, general self-efficacy (GSE), and burnout across nine regions (i.e., U.S., Germany, France, Brazil, Israel, Japan, China, Hong Kong, and Fiji). Findings indicated GSE had a universally, negative association with burnout across all regions. Further, self-efficacy mediated the relationship between role conflict and/or role ambiguity and burnout across eight of the nine cultures. Conclusions center around how low self-efficacy may help to explain why occupational role stressors have a positive association with burnout. Implications and directions for future research are discussed.

The literature on occupational stress and burnout has grown exponentially over the past two decades. One reason for the expansive interest is the consistent finding that experienced stress can have deleterious effects on individuals' mental and physical health (e.g., Ganster & Schaubroeck, 1991; Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964; Westman, 1992), as well as negative effects on organizational outcomes such as performance (e.g., Westman & Eden, 1992) and turnover (e.g., O'Driscoll & Beehr, 1994). Because stress has been shown to lead to the harmful consequences noted above, identifying models that begin to explain *why* these negative effects occur represents a great challenge for researchers. Adding further complexity to the study of job stress is the understanding that organizations are operating more globally and that research assessing the impact of job stress on a variety of work outcomes in other domains has been minimal. Many authors have noted that cross-national management research is needed more than ever because we can no longer assume that Western concepts and theories transcend cultural and national boundaries (e.g., Peng, Peterson, & Shyi, 1991; Trompenaars & Hampden-Turner, 1998).

The purpose of this study is to investigate the cross-national universality of the impact that role stressors have on work outcomes and to further explore *why* these relationships occur. Early arguments that the "self" should be viewed as representing an active role in work organizations (Bandura, 1978; Brief & Aldag, 1981) has stimulated research interest in the individual as exerting significant effects on both behaviors and the environment. Indeed, recent work on self-efficacy has illustrated its relevance to the cross-cultural literature (Shaffer, Harrison, & Gilley, 1999), as well as to stress research (Bandura, 1997). To a great extent, however, researchers have failed to incorporate stress variables in cross-national stress research in a theoretically meaningful manner despite recent appeals to do so (Bond & Smith, 1996; Jamal, 1999). To address this limitation, we focus our attention on role conflict and role ambiguity as stressors and burnout as the

psychological outcome, with general self-efficacy serving as the intermediate linkage or explanatory variable in this relationship.

Review of Study Constructs

Stressors – Role Conflict and Role Ambiguity

Since the early work of Kahn et al. (1964), the antecedents and consequences of role stress have been central to the study of occupational stress. As a result, much of this research has focused on role ambiguity and role conflict. Role ambiguity refers to both the unpredictability of performance consequences as well as information deficiency regarding expected role behaviors (Pearce, 1981). Conversely, role conflict refers to incongruent expectations, and it can occur both between as well as within roles (Schaubroeck, Cotton, & Jennings, 1989). For over two decades, research has shown role ambiguity and conflict to be linked with a number of dysfunctional outcomes including uncertainty, job dissatisfaction, psychological strain, and intentions to leave the organization (Jackson, 1993; Schaubroeck et al., 1989). Another often examined consequence of role conflict and ambiguity is experienced burnout. These variables have been shown to be related to each other across a variety of occupations including public service lawyers (Jackson, Turner, & Brief, 1987), nurses (Leiter & Maslach, 1988), teachers (Schwab & Iwanicki, 1982), and female human service professionals (Brookings, Bolton, Brown, & McEvoy, 1985).

Burnout

Burnout is a specific type of strain that reflects a belief that the resources for coping with stressful conditions are scarce or non-existent, leading one to experience a sense of hopelessness, fatigue, and cognitive defeat (Lee & Ashforth, 1993). Researchers have linked burnout to a variety of mental and physical health problems (Ganster & Schaubroeck, 1991; Jackson & Maslach, 1982; Maslach & Pines, 1977), the deterioration of family and social relationships (Jackson & Schuler,

1983), increased turnover and absenteeism (Jackson, Schwab, & Schuler, 1986), and decreased quality and quantity of job performance (Maslach & Jackson, 1984).

Early research on burnout focused almost exclusively on the environmental factors surrounding specific jobs (e.g., Maslach, 1982; Pines, Aronson, & Kafry, 1981). Given that an extensive empirical base has linked conflict and ambiguity to numerous personal and organizational consequences including job satisfaction, organizational commitment, absenteeism, and withdrawal (Jackson & Schuler, 1985), it is not surprising that researchers have looked to chronic role stressors as a major factor in predicting burnout. In fact, role stressors represent the most widely investigated correlates of burnout (Cordes & Dougherty, 1993). Particularly relevant to the present study is that role ambiguity and conflict have been associated with a number of dysfunctional outcomes across both individualist and collectivist cultures (Bhagat et al., 1994). Thus, based upon Bhagat's cross-cultural findings, and in conjunction with the literature linking role stressors and burnout, conflict and ambiguity may be universal antecedents to burnout across countries and cultures (Etzion & Bailyn, 1994), and reflect "...the same psychological processing operating in all humans independent of culture" (Poortinga, 1992, p. 13). Despite the fact that research has examined role conflict and ambiguity as precursors to burnout, little is known about the underlying causes of these relationships. We argue those chronic role stressors may affect general self-efficacy which, in turn, leads to experienced burnout.

Self-Efficacy

Self-efficacy "...refers to beliefs in one's capabilities to organize and execute the course of action required to produce given attainments" (Bandura, 1997, p. 5). Self-efficacy is not concerned with the skills one possesses, but rather the judgment of what one can do with these skills. Essentially, self-efficacy refers to a sense of mastery and control over one's environment. Self-efficacy has been argued to be an increasingly important construct in the organizational

sciences (Gist & Mitchell, 1992), often examined as an individual difference factor capable of influencing the relationship between antecedents and consequences. Research has shown that employees who report perceptions of personal efficacy cope better when faced with change (Hill, Smith, & Mann, 1987), resist the acceptance of negative feedback (Nease, Mudgett, & Quinones, 1999), and persist at performing tasks longer, even in the face of adversity (Lent, Brown, & Larkin, 1987).

Taken one step further, self-efficacy has been argued to be an important variable when examining the health consequences of occupational stress. For example, exposure to stressors without the perceived ability to exercise adequate control can impair the functioning of the immune system (Shavit & Martin, 1987), and increase blood pressure which has predictive implications for cardiovascular disease (Schaubroeck & Merritt, 1997). Moreover, perceived self-efficacy can buffer the negative biological reactions to short-term environmental stressors (Bandura, 1997) by eliciting an individuals' emotional reactions and initiating coping behaviors (Haney & Long, 1995). Finally, Saks (1994) found that newcomers to an organization who had a high sense of efficacy experienced less anxiety, coped better with situational demands, were more satisfied with their job, had a stronger commitment to their profession, and had lower intentions of leaving the organization. Thus, self-efficacy may be expected to be associated with positive, personal organizational outcomes, and may be a critical variable in the study of cross-national occupational stress. Given the role of self-efficacy as an increasingly important construct in organizational research, in general (Gist & Mitchell, 1992), and to the examination of burnout, specifically (Bandura, 1997), we examine GSE as a psychological construct that may explain the role stressor – burnout relationship by intervening between these two variables.

One important distinction made regarding self-efficacy is the difference between general self-efficacy and state self-efficacy. Eden and Kinnar (1991) argued that the trait-like general self-

efficacy (GSE) is suited for the role of a moderating variable. As such, GSE represents a general belief about self-competence. Conversely, specific self-efficacy (SSE) is a perception of competence when performing a specific task. Although research examining how GSE (in the role of a moderator) might change a causal relationship is needed, examining situations that affect GSE is also an important, yet neglected, area of study. If self-efficacy can alter the way individuals interpret their environment, determining situations that might affect GSE is of paramount importance. Self-efficacy can influence the judgment process by which people interpret their outcomes, but environmental variables also influence self-efficacy (Bandura, 1997; Gist & Mitchell, 1992). There is ample evidence that specific self-efficacy (SSE) can be enhanced (e.g., Eden & Zuk, 1995), however, this does not preclude examining conditions that may affect GSE. Although SSE can be affected in the short-term (e.g., training), GSE is argued to be affected over a longer period of time. Therefore, pervasive, chronic stressors may very well alter GSE. This study examines pervasive organizational environmental conditions in organizations (i.e., role stressors) that may negatively affect individual GSE.

Research Questions

Bandura's (1997) argument that role stressors can impede personal capabilities suggests role conflict and ambiguity represent stimuli that may negatively affect GSE or feelings of personal competence. According to Jones (1986), future self-efficacy expectations are directly associated with perceptions of one's ability to have successfully navigated past situations. Hence, if cues provided in the immediate work context were previously positive and supportive of success, self-efficacy would be elevated. Conversely, self-efficacy would be attenuated if the environment provided cues that made the likelihood of success questionable. Environments historically fraught with ambiguity and conflict would inherently lead individuals to question their

personal competency. Thus, experiencing chronic role stressors may lead to a decrease in GSE over time.

Similar to the arguments made by Martinko and Gardner (1982), properties of the formal organization, (e.g., role stressors), may condition employee failure or perceptions of not being able to perform effectively. Hence, the organization may inadvertently induce a sense of general helplessness in employees that may manifest itself in lower perceptions of self-efficacy. Gist and Mitchell (1992) argued that the more people believe that the causes of their performance are uncontrollable (e.g., as is the case in environments of high role ambiguity and conflict), the lower should be their self-efficacy. Further, Gecas (1989) argued that individuals possessing high levels of self-efficacy not only perceive themselves to be in control, but also possess the motivation to be in control. It follows, then, that those possessing low self-efficacy would generally feel defenseless and their assessment of future performance would depreciate. Lee and Ashforth (1990) confirmed this contention in reporting that self-efficacy perceptions (e.g., helplessness and self-appraisal of performance) were significantly associated with emotional exhaustion, depersonalization, and personal accomplishments. Thus, a lower level of GSE may explain why role stressors have a significant effect on burnout. Given that burnout is a strain based upon long-term exposure to stressors, we argue that exposure to chronic stressors will lower overall GSE which, in turn, gives impetus to experienced burnout.

The evidence suggesting dysfunctional effects for role stressors across countries (Bhagat et al., 1994) leads us to posit that the relationships among variables will be consistent across countries and cultures, not necessarily the absolute levels of these variables. Although, research supports the view that those employed in comparable occupations (e.g., airline pilots, nurses) perceived work stressors similarly, regardless of national culture or country residence (Armstrong-Strasses,

Al-Ma'Aitah, Cameron, & Horsburgh, 1994; Merritt, 1997), research in this area is far from conclusive (Peterson et al., 1995).

The research questions are twofold. First, in industrialized and industrializing societies, do the absolute levels of role conflict, role ambiguity, burnout and self-efficacy differ significantly across country regions? Second, regardless of the absolute levels of these four variables, does the relationship among them differ significantly from one region to another? In essence, this study will begin to explore the issue of whether stress across regions is universal, at some level, with an investigation that includes the U.S., Germany, France, Brazil, Israel, Japan, Hong Kong, China, and Fiji. Based on the empirical and conceptual evidence presented, we predict that self-efficacy will mediate the relationships between role stressors and burnout.

Method

Participants

In order to examine our research questions from a truly global perspective, we wanted to sample representative cultures from the major industrialized and industrializing economies of the world (i.e., North America, Western Europe, Asia, and the Middle East). Thus, the nine regions examined in this study are the U.S., Germany, France, Brazil, Israel, Japan, China, Hong Kong (data were collected in 1996 before the Hong Kong reunification), and Fiji. We included Fiji because it is considered one of the most successful South Pacific Islands in terms of industrialization and effective organization behavior—perhaps, due to the decades of British influence until the 1970s.

Sample

The sample consisted of 923 managers from eight countries plus the former Hong Kong territory: Brazil (n=124); China (n=83); Fiji (n=88); France (n=113); Germany (n=84); Hong Kong (n=99); Israel (n=119); Japan (n=92); and the United States (n=121). All subjects were

professional or managerial level employees and were citizens of their representative country. The data collection process was managed by at least one member of the research team who either lived or spent considerable time in that country. All measures were translated and back translated from the English version for use in the other regions. Data collection procedures ensured respondent anonymity. In most regions, no more than 5 subjects came from any one company. Further, data were collected from more than one company in all regions. Demographic data for these subjects are presented in Table 1.

Measures

Role stressors. The Rizzo, House, and Lirtzman (1970) scale measured role ambiguity and role conflict. Role ambiguity was a 6-item scale and role conflict was an 8-item scale, both with response ranges from strongly disagree (1) to strongly agree (7). A sample item for role ambiguity is “I have clear, planned goals and objectives for my job” (reverse-scored). A sample item for role conflict is “I work under incompatible policies and guidelines.”

Burnout. The 21-item Pines, Aronson and Kafry (1982) Burnout Questionnaire measured experienced burnout. Responses ranged from never (1) to always (5). Sample items from this measure include, “being emotionally drained” and “feeling depressed.”

Self-Efficacy. The self-efficacy indicator was assessed using 7 items representing confidence in one’s ability to perform on the job. This measure is conceptually similar to the self-efficacy measure used by Prussia, Anderson, and Manz (1998). The specific measure was adapted from Pearlin and Schooler’s (1978) 7-item mastery scale. Responses ranged from strongly disagree (1) to strongly agree (7). Sample items included “I have little control over the things that happen to me” (reverse-scored) and “I can do just about anything I really set my mind to do.”

Analyses

Mediation relationships. Following Baron and Kenny (1986), a series of three regression equations were estimated on the nine country region data to test the mediating effect of self-efficacy on the relationship between role stressors and burnout. First, the mediator (i.e., self-efficacy) was regressed on the independent variable (i.e., role stressors). Second, the dependent variable (i.e., burnout) was regressed on the independent variable (i.e., role stressors). Third, the dependent variable (i.e., burnout) was regressed on both the independent variable (i.e., role stressors) and mediator (i.e., self-efficacy). In order for mediation to be established, the effect of the independent variable on the dependent variable must be less in the third equation than in the second. If the beta is less in the third equation, but significant, partial mediation has been established. If the beta is no longer significant in the third equation, full mediation has been established. The same approach was used for the all country regions.

Comparison of study variable across country regions. This part of the analysis consisted of four steps. The first step of the analysis was to calculate a one-way MANCOVA to determine if there are differences across the nine country regions for the four study variables (i.e., role conflict, role ambiguity, burnout, and self-efficacy). Second, if a significant effect was found for the MANCOVA, univariate analyses (ANCOVAs) were calculated for the four study variables, using the demographics identified in Table 1 as covariates. Third, covariates that contributed significantly to each of the four study variables were identified, and the ANCOVA was rerun using only the significant covariates. For each significant variable identified by the ANCOVA, Duncan multiple comparison tests were run to identify which of the nine cultures were different from one another (Kirk, 1982). Finally, the three demographic variables that contributed significantly to the study variables (i.e., gender, marital status, and position) were entered as controls prior to conducting the mediation analysis.

Results

Scale Reliabilities

The internal consistency estimates (Cronbach alpha) ranged by country from .72 to .85 for role conflict, .67 to .85 for role ambiguity, .64 to .80 for self-efficacy and .85 to .93 for burnout. The reliabilities for the variables were modest to high.

A Cross-Cultural Comparison of the Consistency in the Four Study Variables

The MANCOVA indicated a significant Wilks' lambda effect [$\lambda = .82$, $df=3,8,922$, $p<.001$]. Given this finding, univariate ANCOVAs were calculated to determine the significance of each of the four study variables—role conflict, role ambiguity, self-efficacy and burnout. All four ANCOVAs were significant. The means, standard deviations, and F-test results of these ANCOVAs are reported in Table 2. Since all ANCOVAs were significant, Duncan multiple comparison tests were run for each of the four study variables. These Duncan results are also reported in Table 3.

The differences found by the ANCOVA analyses clearly indicate that the levels of the role stressors (role conflict and role ambiguity) vary across cultures. Likewise, the tendency to burnout and the degree of self-efficacy are not universal across cultures and are, therefore, not necessarily comparable to the degree of role stressors found in the U.S. However, perhaps more interesting are the results of the Duncan multiple comparison tests. On a culture-by-culture basis across the nine cultures of this study some very roughly defined trends can be found. For example, in the U.S. and Israel, where role conflict and ambiguity are low to moderate, we find high self-efficacy and low burnout. Conversely, in Hong Kong, where role conflict and ambiguity are also low to moderate, we find low self-efficacy and high burnout. However, the findings for some of the other cultures are not consistent with these results. Thus, the ANCOVA/multiple comparison test results provide an affirmative answer our first question—are there degree differences on the study variables across cultures? However, these analyses are not sufficient to answer the second question—are the relationships among the study variables universal, even if the level of each were not? Therefore, the next step is to examine the proposed stressor – self-efficacy - burnout model for each of the country regions.

A Cross-National Comparison of the Stress Model

The regression mediation results for each of the nine country regions are reported in Tables 4-12.

United States. Role conflict had a negative effect on self-efficacy ($B = -.40, p < .01$) and a positive effect on burnout ($B = .22, p < .05$). As can be seen in Table 2, when self-efficacy was entered into the equation, role conflict no longer affected burnout. Thus, self-efficacy fully mediated the relationship between role conflict and burnout, which partially supports the hypothesis. Role ambiguity had no relationship with self-efficacy but had a positive relationship with burnout ($B = .23, p < .05$). Testing for mediation, thus, was not possible.

Germany. Role ambiguity has a negative relationship with self-efficacy ($B = -.41, p < .01$) and a positive relationship with burnout ($B = .25, p < .10$). Role conflict has no effect on self-efficacy, thus, no further analysis for mediation is warranted. As shown in Table 5, when self-efficacy is entered into the equation, self-efficacy has a negative relationship with burnout ($B = -.36, p < .01$) but role ambiguity no longer has a significant impact. Thus, self-efficacy fully mediates the relationship between role ambiguity and burnout.

France. Role ambiguity is found to have a negative relationship with self-efficacy ($B = -.23, p < .01$), but has no relationship with burnout (see Table 6). Role conflict has no relationship with either self-efficacy or burnout. When self-efficacy is entered into the equation, it has the predicted negative relationship with burnout ($B = -.50, p < .01$). No mediation effects were found for the France sample.

Brazil. Role ambiguity has a negative relationship with self-efficacy ($B = -.18, p < .05$) and a positive relationship with burnout ($B = .29, p < .01$). As can be seen in Table 7, after it is entered into the equation, self-efficacy has a negative relationship with reported burnout ($B = -.65, p < .01$) while role ambiguity still has a positive relationship with burnout, although the strength of the relationship drops ($B = .18, p < .05$). Thus, we argue that self-efficacy partially mediates the relationship between role ambiguity and burnout. Self-efficacy does not mediate the relationship between role conflict and burnout. Role conflict has a negative effect on self-efficacy ($B = -.11, p < .01$) but has no effect on burnout for the Brazilian sample, thus, mediation was not found.

Israel. Role ambiguity has a negative relationship with self-efficacy ($B = -.26, p < .01$) and a positive relationship with burnout ($B = .16, p < .05$). As can be seen in Table 8, when self-efficacy is entered into the equation, role ambiguity no longer has a significant positive relationship with reported burnout. Role conflict has no relationship with self-efficacy but has a positive relationship with reported burnout ($B = .31, p < .01$). These findings suggest a partial mediating effect for self-efficacy in the role ambiguity – burnout relationship. Given no relationship exists for role conflict and self-efficacy, no mediation was found.

Japan. Role ambiguity has a negative relationship with self-efficacy ($B = -.35, p < .01$) and a positive relationship with burnout ($B = .28, p < .05$). As can be seen in Table 9, when self-efficacy is entered into the equation, role ambiguity still has a positive relationship with burnout ($B = .17, p < .05$). The beta drops from .28 to .17, thus, suggesting partial mediating effects for self-efficacy in the role ambiguity-burnout relationship. Role conflict has no relationship with self-efficacy or burnout.

Hong Kong. Role ambiguity has a negative relationship with self-efficacy ($B = -.31, p < .05$) and a positive relationship with burnout ($B = .38, p < .05$). Role conflict has no relationship with either self-efficacy or burnout. As can be seen in Table 10, when self-efficacy is entered into the equation, it has a negative relationship with burnout ($B = -.51, p < .01$). Role ambiguity still has a positive relationship with burnout ($B = .22, p < .05$) but the beta drops, thus, suggesting a partial mediating effect for self-efficacy in the role ambiguity-burnout relationship.

China. Role ambiguity has a negative relationship with self-efficacy ($B = -.46, p < .01$) and a positive relationship with burnout ($B = .35, p < .01$). Role conflict has no relationship with self-efficacy or burnout; thus, no further mediation analysis is needed. As can be seen in Table 11, when self-efficacy is entered into the equation, self-efficacy has a negative relationship with reported burnout ($B = -.63, p < .01$) and role ambiguity no longer has a relationship with burnout, thus, self-efficacy fully mediates the relationship between role ambiguity and burnout.

Fiji. Role ambiguity has a negative relationship with self-efficacy and a positive relationship with burnout ($B = -.18, p < .05$; $B = .26, p < .01$). Similarly, role conflict has a negative relationship with self-efficacy and a positive relationship with burnout ($B = -.35, p < .01$; $B = .18,$

$p < .05$). As expected, when self-efficacy is entered into the equation, self-efficacy has a negative relationship with burnout ($B = -.47, p < .01$). Neither role ambiguity or role conflict maintains a relationship with burnout when self-efficacy is entered into the equation; thus, support is found for full mediation.

Summary of Results

A country-by-country summary of the relationships for role conflict, role ambiguity, burnout, and self-efficacy is provided in Table 13. This table also reports the hypothesis support for self-efficacy as a mediating variable between role conflict/role ambiguity and burnout.

The relationships between role conflict and self-efficacy and role conflict and burnout are not consistent across cultures. Role conflict is found to have a negative relationship with self-efficacy for only the U.S., Brazil, and Fiji; no statistically significant relationships are found for any of the other six country regions. Similarly, role conflict is found to have a positive relationship with burnout for only the U.S., Israel, and Fiji.

The relationships between role ambiguity and self-efficacy and role ambiguity and burnout are much stronger across country regions. Interestingly, except for the U.S., role ambiguity has a negative relationship with self-efficacy across all cultures. Further, role ambiguity has a positive relationship with burnout for all country regions, except France. It appears that role ambiguity has the more pervasive and deleterious relationships with personal outcomes globally. Finally, all nine of the country regions have a statistically significant negative relationship between self-efficacy and burnout.

In regard to the self-efficacy mediation hypotheses, all countries (with the exception of France) exhibit either partial or full mediation in the role conflict and/or role ambiguity – burnout relationship. Self-efficacy mediates the relationship between role conflict and burnout for only the U.S. and Fiji. In support of Bandura's (1997) notion of role ambiguity negatively affecting self-efficacy, our findings indicate strong support for the mediating effects of self-efficacy in the role ambiguity – burnout relationship. Specifically, self-efficacy partially or fully mediates the role ambiguity – burnout relationship in Germany, Brazil, Israel, Japan, Hong Kong, China, and Fiji.

Interestingly, for the Fiji sample, full mediation for self-efficacy was found in *both* the role conflict – burnout and the role ambiguity – burnout relationships.

Discussion

In our introductory section, we identified two research questions. First, are levels of the study variables (role conflict, role ambiguity, self-efficacy, and burnout) consistent across the country regions of the study? Second, are the relationships among the four study variables consistent across the country regions, regardless of whether the actual levels are consistent? Our findings indicate varying degrees of support for our proposed stress model.

A Cross-Cultural Comparison of the Levels of the Four Study Variables

As can be seen in Table 3, our findings clearly indicate that the actual levels of role conflict, role ambiguity and burnout differ significantly across the nine cultures of this study. In addition, the level of perceived self-efficacy also varies significantly.

Stressors – role conflict and role ambiguity. For role conflict, France and Fiji were high; Israel, Brazil and Germany were low, with the other four in the moderate range. For role ambiguity, France was high and Fiji and China were low. In the moderate range, Brazil and Germany were moderately high and Israel, Hong Kong, Japan and the U.S. were moderately low. While France was consistently high on both stressors, in general there was a good deal a difference across the cultures—Fiji, Germany and Brazil being the primary examples. Thus, it appears clear that when doing business abroad and working with individuals from different cultures, the things that will be a source of stress can vary significantly across cultures.

Burnout. Our findings for burnout broke very cleanly into two groups. The high burnout cluster of counties is Japan, Fiji, Hong Kong and Brazil, while the low cluster is Israel, France, Germany, China and the U.S. From research, both empirical and anecdotal, it seems easy to understand the high burnout in Japan and Hong Kong. Fiji and Brazil, on the other hand, do not appear to be intuitive obvious members of this category. However, there has been minimal organizational research done in these areas, especially Fiji. Thus, these findings would seem to support the need for good empirical research on economies beyond those on which we typically focused. For the low burnout group, France is the most interesting member, given its high levels

of both role conflict and role ambiguity. The seemingly paradoxical findings of the French respondents will be discussed in more detail in the subsequent section.

Self-efficacy. The U.S. was the highest on the measure of self-efficacy, with France being on the low end. The other country regions could be described as moderate on this measure. Thus, country regions appear to be associated with one's self-concept about one's ability. This finding, therefore, has implications for those doing business in the global marketplace. For example, individuals from different countries may be willing to take on responsibility at work to varying degrees, depending on one's disposition toward self-efficacy.

Given the differences in the levels found for stressors, burnout and self-efficacy across the nine countries of our study, it becomes much more important to investigate the cross-national relationship among these variables. We now want to see if the relationships of these variables are consistent although their actual levels are not.

A Cross-Cultural Comparison of the Relationships among the Four Study Variables

Previous international research examining role stressors has focused on differences in culture as antecedents to role stressors (e.g., Peterson et al., 1995). The ultimate aim of this study was to examine cross-culturally the consistency of the consequences of organizational role stressors on burnout using self-efficacy as a possible mediating variable that would explain why role stressors are associated with dysfunctional consequences. Perhaps the most salient finding was the consistency in which self-efficacy was associated with lower levels of burnout. We found that for every country region, self-efficacy had a negative association with burnout. Thus, it appears that low self-efficacy has deleterious associations with burnout universally.

Role ambiguity had dysfunctional associations with self-efficacy for all country regions except for the U.S. Perhaps Hofstede's (1980) finding that countries in the Anglo country cluster have a low to medium score on the uncertainty avoidance index may shed some light on these findings. Low uncertainty avoidance implies a higher tolerance for ambiguity, hence, the lack of negative associations with role ambiguity and self-efficacy. Role ambiguity simply may not have as strong an effect on U.S. employees' perceptions of their capabilities as employees' perceptions in other cultures. Regarding mediation, self-efficacy mediated the relationship between role ambiguity and

burnout for all samples except the U.S. and France. Role ambiguity had a positive relationship with burnout for all cultures except France. Thus, role ambiguity appears to be cross-nationally a reasonably consistent stressor with dysfunctional consequences. Interestingly, French respondents reported the highest level of role ambiguity, but very low levels of burnout.

Role conflict operated less consistently than role ambiguity as role conflict had a negative association with self-efficacy in the U.S., Brazil, and Fiji and a positive association with burnout in the U.S., Israel, and Fiji. Role conflict had no association with self-efficacy and burnout in Germany, France, Japan, Hong Kong, or China. It is clear that role conflict does not operate in a similar fashion across the various clusters. In summation, although self-efficacy was more consistently related to role ambiguity than role conflict across country regions, as shown in Table 13, there was no universal relationship. Thus, it appears that self-efficacy is relevant as a mediating effect on the role stressor – outcome relationship, but that it is not universal for all stressors, nor consistent across all countries. Therefore, it appears that the next step in explaining the differential effects of role conflict across countries is to identify more specifically the cultural dynamics that may be occurring within these country regions.

Limitations

One of the limitations of this study is that our country selection does not tap all of the major country regions. This study was originally designed to include eleven countries: The nine countries discussed here (U.S., Germany, France, Brazil, Israel, Japan, China, Hong Kong and Fiji), plus Egypt, and Argentina. We wanted to have representative countries from the major industrialized and industrializing economies of the world (North America, Western Europe, Asia, and the Middle East). We also wanted these countries to represent Ronen and Shenkar (1985) “country clusters” as well as including relevant independent countries that did not fit the specific cluster of their geographic region. Unfortunately, we were unable to collect data in Argentina and Egypt. Argentina would have been our South America, Latin American cluster representative. As mentioned earlier, Brazil is an independent according to Ronen and Shenkar’s classification, presumably due to the language difference. Finally, Egypt would have been our Mid-East cluster representative. Similar to Brazil, Israel is also an independent, presumably due to religious

differences with other countries in the Mid-East cluster. Although most would agree that a nine-country study that spans the globe as these countries do is acceptable, there are nonetheless “holes” in our design that prevents us from capturing all of today’s developed and developing economic regions of the world.

Another limitation is that the country culture was not measured directly. Rather, we utilized past conceptual work as well as empirical research findings to support our conceptual explanations for the findings, and to offer directions for future research. Although arguments were made that the respective country represents these cultures, direct measures of culture would enhance this program of research.

Implications

The present study sought to examine the dysfunctional consequences of role stressors across a wide range of country cultures. Findings from this study contribute to the current literature in several ways. First, in general, low self-efficacy is associated with higher burnout across countries. Thus, experiencing feelings that one is not able to successfully accomplish one’s job is associated with higher reports of burnout globally.

Secondly, environmental role stressors (particularly role ambiguity) are associated with lower levels of self-efficacy across countries. Although role conflict and role ambiguity may have differential effects on self-efficacy depending upon the country region, all respondents reported lower levels of self-efficacy to role conflict, role ambiguity or both.

Finally, self-efficacy or mastery appears to be an explanatory/mediating variable in the role stressor-burnout relationship that has predictive power globally. Although there may be other variables that contribute to the explanation regarding why environmental role stressors affect burnout, self-efficacy appears to be a fairly consistent construct cross-nationally. The findings from this research suggest that environmental role stressors are associated with lower perceived self-efficacy, which in turn has a negative effect on burnout. The findings point to the important role of self-efficacy in the stressor-strain relationships. As there is some evidence that self-efficacy can be enhanced (Eden & Kinnar, 1991; Eden & Zuk, 1995), one important practical implication is to introduce programs designed for the enhancement of self-efficacy. Earley’s

(1994) findings from his multi-cultural study suggest that for individualists, self-focused training has a stronger impact on self-efficacy and performance than group-focused training. Conversely, for collectivists, group-focused training has a stronger effect on self-efficacy and performance than self-focused training. Extending his research to burnout (as well as other outcomes), it is plausible that the same processes operate. Based upon the current findings coupled with Earley's (1994) study, future research is needed to examine the effects of self- and group-focused training on self-efficacy and burnout cross culturally.

The present study, although exploratory in nature, has identified some very interesting relationships among role stressors, self-efficacy, and burnout across cultures. Although the level of role conflict, role ambiguity, self-efficacy, and burnout differed across cultures, many of the relationships among these variables were consistent. Identifying relationships that are similar across country regions is suggested to be a first step in understanding the dynamics of occupational stress from a global perspective. For practicing professionals, knowing the relative levels of work-related stressors globally should be important. But perhaps more important is the knowledge as to whether one can expect stressors to have the same impact as those found in their home country, and why.

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TABLE 1

Demographic Data for the Subjects (n=922) from the Nine Countries in the Study

		U.S. (n=121)	Germany (n=84)	France (n=113)	Brazil (n=124)	Israel (n=119)	Japan (n=92)	Hong Kong (n=99)	China (n=83)	Fiji (n=88)
Age:	(Mean Years)	44.9	41.1	41.4	41.5	37.3	31.1	34.3	41.7	40.7
Gender:	(% Male)	69.1%	65.2%	62.8%	56.5%	32.1%	75.0%	43.4%	76.8%	75.0%
Education:	(% University Degree)	82.8%	82.6%	52.3%	68.3%	13.4%	79.3%	37.4%	49.4%	5.8%
Marital Status:	(% Married)	75.7%	68.5%	71.7%	56.9%	82.4%	51.1%	48.5%	89.2%	76.7%
Position:	(Professional)	13.2%	21.7%	10.6%	9.3%	0.5%	65.2%	45.4%	36.3%	79.3%
	(Managerial)	86.8%	78.3%	89.4%	90.7%	99.5%	34.8%	54.6%	63.7%	20.7%
Company Size:	(% >100 Employees)	65.1%	58.7%	64.6%	83.9%	66.9%	90.2%	51.5%	77.2%	95.8%
Years Worked:	(Mean Years)	22.4	18.7	18.1	20.5	13.0	9.1	12.0	19.8	19.0
Hours Worked:	(Mean Hours/Week)	50.9	48.7	47.2	44.9	44.5	49.8	45.9	43.5	39.2

TABLE 2

ANCOVA Results for the Four Study Variables across the Nine Cultures

Study Variables	Cultures	Mean	SD	F
Role Conflict ^{a,b}	Israel	2.86	1.17	22.37***
	Brazil	2.92	1.14	
	Germany	3.15	1.11	
	U.S.	3.24	1.18	
	Japan	3.29	0.77	
	Hong Kong	3.33	1.05	
	China	3.37	0.93	
	Fiji	3.84	1.13	
	France	4.52	1.36	
Role Ambiguity ^c	Fiji	2.49	0.82	78.80***
	China	2.71	0.87	
	Israel	2.90	0.78	
	Hong Kong	2.96	0.84	
	U.S.	3.03	1.14	
	Japan	3.12	0.79	
	Brazil	3.27	1.19	
	Germany	3.71	0.87	
	France	5.19	1.03	
Self-Efficacy ^c	France	4.30	0.91	118.91***
	Germany	3.04	0.86	
	Hong Kong	4.56	0.95	
	Fiji	4.58	1.03	
	Brazil	4.87	1.27	
	China	4.95	0.70	
	Japan	5.12	0.76	
	Israel	5.47	1.05	
	U.S.	5.70	0.90	
Burnout ^{a,c}	Israel	2.19	0.43	8.19***
	France	2.23	0.47	
	Germany	2.27	0.48	
	U.S.	2.30	0.48	
	China	2.33	0.42	
	Brazil	2.50	0.61	
	Hong Kong	2.57	0.49	
	Fiji	2.57	0.44	
	Japan	2.60	0.48	

*** p < .001.

Covariates included in the analysis: ^a Gender, ^b Marital Status, ^c Current Position in Organization

TABLE 3

Duncan Multiple Comparison Test Results for the Nine Cultures on the Self-Efficacy, Burnout, Role Conflict and Role Ambiguity Variables

Dimensions	Countries									
Role Conflict	Israel									
	Brazil									
	Germany									
	U.S.	*	*							
	Japan	*	*							
	Hong Kong	*	*							
	China	*	*							
	Fiji	*	*	*	*	*	*	*		
	France	*	*	*	*	*	*	*	*	*
			Israel	Brazil	Germany	U.S.	Japan	HK	China	Fiji
Role Ambiguity	Fiji									
	China									
	Israel	*								
	Hong Kong	*								
	U.S.	*	*							
	Japan	*	*							
	Brazil	*	*	*	*					
	Germany	*	*	*	*	*	*	*		
	France	*	*	*	*	*	*	*	*	
			Fiji	China	Israel	HK	U.S.	Japan	Brazil	Germany
Self-Efficacy	France									
	Germany	*								
	Hong Kong	*	*							
	Fiji	*	*							
	Brazil	*	*	*	*					
	China	*	*	*	*					
	Japan	*	*	*	*					
	Israel	*	*	*	*	*	*	*		
	U.S.	*	*	*	*	*	*	*		
			France	Germany	HK	Fiji	Brazil	China	Japan	Israel
Burnout	Israel									
	France									
	Germany									
	U.S.									
	China									
	Brazil	*	*	*	*	*				
	Hong Kong	*	*	*	*	*				
	Fiji	*	*	*	*	*				
	Japan	*	*	*	*	*				
			Israel	France	Germany	U.S.	China	Brazil	HK	Fiji

where * indicates comparisons are significant at the p<.05 level, controlling for experiment-wise error rate.

TABLE 4

The Mediating Effects of Self-Efficacy on the Role Stress-Burnout Relationships for the United States

Variables In Equation	Self-Efficacy				Burnout			
	β	R ²	ΔR^2	F (step)	β	R ²	ΔR^2	F (step)
1. Gender	-.12				.20*			
Marital	.05				.07			
Position	.01	.02	.02	.62	-.07	.06	.06	2.72*
2. Gender	-.02				.13			
Marital	.01				.10			
Position	-.19*				.10			
Role Ambiguity	-.16				.23*			
Role Conflict	-.40**	.21	.19	5.96**	.22*	.16	.10	4.85**
3. Gender					.12			
Marital					.10			
Position					-.01			
Self-Efficacy					-.51**			
Role Ambiguity					.15*			
Role Conflict					.01	.38	.22	11.68**

N = 121

* p < .05

** p < .01

TABLE 5

The Mediating Effects of Self-Efficacy on the Role Stress-Burnout Relationships for Germany

Variables In Equation	Self-Efficacy				Burnout			
	β	R ²	ΔR^2	F (step)	β	R ²	ΔR^2	F (step)
1. Gender	-.03				.15			
Marital	.05				-.02			
Position	-.01	.01	.01	.12	-.14	.05	.05	1.30
2. Gender	.07				.11			
Marital	.08				-.03			
Position	-.05				-.10			
Role Ambiguity	-.41**				.25*			
Role Conflict	.06	.15	.14	2.72	.09	.14	.09	2.40
3. Gender					.14			
Marital					.01			
Position					-.12			
Self-Efficacy					-.36**			
Role Ambiguity					.11			
Role Conflict					.12	.25	.11	4.12**

N = 84

* p < .05

** p < .01

TABLE 6

The Mediating Effects of Self-Efficacy on the Role Stress-Burnout Relationships for France

Variables In Equation	Self-Efficacy				Burnout			
	β	R ²	ΔR^2	F (step)	β	R ²	ΔR^2	F (step)
1. Gender	-.05				.13			
Marital	-.03				.07			
Position	-.06	.01	.01	.17	.01	.03	.03	.99
2. Gender	-.03				.14			
Marital	-.07				.05			
Position	-.02				.03			
Role Ambiguity	-.23**				-.13			
Role Conflict	-.10	.09	.08	2.09*	-.06	.06	.03	1.25
3. Gender					.16			
Marital					.09			
Position					.04			
Self-Efficacy					-.50**			
Role Ambiguity					-.01			
Role Conflict					-.02	.29	.23	7.25**

N = 113

* p < .05

** p < .01

TABLE 7

The Mediating Effects of Self-Efficacy on the Role Stress-Burnout Relationships for Brazil

Variables In Equation	Self-Efficacy				Burnout			
	β	R ²	ΔR^2	F (step)	β	R ²	ΔR^2	F (step)
1. Gender	-.14				.09			
Marital	.14				.06			
Position	.15*	.06	.06	2.72	-.13	.03	.03	1.25
2. Gender	-.11				.05			
Marital	.14				-.05			
Position	-.12				-.06			
Role Ambiguity	-.18*				.29**			
Role Conflict	-.11**	.12	.06	3.11**	.07	.13	.10	3.46**
3. Gender					-.02			
Marital					.04			
Position					.02			
Self-Efficacy					-.65**			
Role Ambiguity					.18*			
Role Conflict					.01	.50	.40	19.87**

N = 124

* p < .05

** p < .01

TABLE 8

The Mediating Effects of Self-Efficacy on the Role Stress-Burnout Relationships for Israel

Variables In Equation	Self-Efficacy				Burnout			
	β	R ²	ΔR^2	F (step)	β	R ²	ΔR^2	F (step)
1. Gender	-.02				.22**			
Marital	-.33**				.21*			
Position	-.04	.10	.10	4.45**	-.19*	.19	.19	8.92**
2. Gender	-.02				.26			
Marital	-.25**				.18*			
Position	.01				-.17*			
Role Ambiguity	-.26**				.16*			
Role Conflict	-.15	.23	.13	6.59**	.31**	.39	.20	13.82**
3. Gender					.25**			
Marital					.11			
Position					-.17*			
Self-Efficacy					-.27**			
Role Ambiguity					.09			
Role Conflict					.27**	.44	.05	14.33**

N = 119

* p < .05

** p < .01

TABLE 9

The Mediating Effects of Self-Efficacy on the Role Stress-Burnout Relationships for Japan

Variables In Equation	Self-Efficacy				Burnout			
	β	R ²	ΔR^2	F (step)	β	R ²	ΔR^2	F (step)
1. Gender	.01				-.01			
Marital	-.24				.37**			
Position	-.09	.05	.05	1.45	-.01	.14	.14	4.76**
2. Gender	.04				-.03			
Marital	-.16				.31**			
Position	-.12				.02			
Role Ambiguity	-.35**				.28*			
Role Conflict	-.02	.16	.11	3.30**	.07	.26	.12	5.02**
3. Gender					-.02			
Marital					.25			
Position					-.01			
Self-Efficacy					-.31**			
Role Ambiguity					.17*			
Role Conflict					.06	.31	.05	6.31**

N = 92

* p < .05

** p < .01

TABLE 10

The Mediating Effects of Self-Efficacy on the Role Stress-Burnout Relationships for Hong Kong

Variables In Equation	Self-Efficacy				Burnout			
	β	R ²	ΔR^2	F (step)	β	R ²	ΔR^2	F (step)
1. Gender	-.01				.28*			
Marital	.12				-.03			
Position	.13	.03	.03	1.02	-.09	.09	.09	2.98*
2. Gender	-.05				.22			
Marital	.15				-.08			
Position	.04				.01			
Role Ambiguity	-.31*				.38*			
Role Conflict	-.09	.14	.11	3.05**	.05	.23	.14	5.19**
3. Gender					.19			
Marital					-.01			
Position					.04			
Self-Efficacy					-.51**			
Role Ambiguity					.22*			
Role Conflict					.01	.45	.31	11.85**

N = 99

* p < .05

** p < .01

TABLE 11

The Mediating Effects of Self-Efficacy on the Role Stress-Burnout Relationships for China

Variables In Equation	Self-Efficacy				Burnout			
	β	R ²	ΔR^2	F (step)	β	R ²	ΔR^2	F (step)
1. Gender	.13				-.01			
Marital	-.01				.22			
Position	.35**	.13	.13	3.73**	-.05	.05	.05	1.38
2. Gender	-.09				.05			
Marital	-.06				.26*			
Position	.37**				-.08			
Role Ambiguity	-.46**				.35**			
Role Conflict	.09	.31	.18	6.78**	.05	.17	.12	3.12**
3. Gender					.11			
Marital					.22**			
Position					.14			
Self-Efficacy					-.63**			
Role Ambiguity					.05			
Role Conflict					.18	.45	.28	9.68**

N = 83

* p < .05

** p < .01

TABLE 12

The Mediating Effects of Self-Efficacy on the Role Stress-Burnout Relationships for Fiji

Variables In Equation	Self-Efficacy				Burnout			
	β	R ²	ΔR^2	F (step)	β	R ²	ΔR^2	F (step)
1. Gender	-.14				-.10			
Marital	.35**				-.12			
Position	.16	.18	.18	6.04**	-.19	.07	.07	1.94
2. Gender	.06				-.05			
Marital	.32**				-.13			
Position	.04				-.10			
Role Ambiguity	-.18*				.26**			
Role Conflict	-.35**	.33	.15	7.79**	.18*	.16	.09	3.09**
3. Gender					-.02			
Marital					.02			
Position					-.08			
Self-Efficacy					-.47**			
Role Ambiguity					.17			
Role Conflict					.01	.31	.15	5.92**

N = 88

* p < .05

** p < .01

TABLE 13

A Summary of the Relationship Findings for
 Role Conflict, Role Ambiguity, Burnout, and Self-Efficacy across the Nine Cultures of the Study

Countries	Role Conflict and Self-Efficacy	Role Conflict and Burnout	Role Ambiguity and Self-Efficacy	Role Ambiguity and Burnout	Self-Efficacy and Burnout	Mediation Hypotheses Support
U.S.	-	+	0	+	-	partial
Germany	0	0	-	+	-	partial
France	0	0	-	0	-	none
Brazil	-	0	-	+	-	partial
Israel	0	+	-	+	-	partial
Japan	0	0	-	+	-	partial
Hong Kong	0	0	-	+	-	partial
China	0	0	-	+	-	partial
Fiji	-	+	-	+	-	full

where, + = a significantly positive relationship
 - = a significantly negative relationship
 0 = no significant relationship