A meta-analysis of the relationship between role stress and organizational commitment: The moderating effects of occupational type and culture

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Abstract

The demand for employees to be more productive while also being adaptable to new organizational pressures has intensified the nature of work and the demands placed upon employees. We meta-analyzed the relationship between employee role stress and organizational commitment and tested the effects of two potential moderators of this relationship. One-hundred and five studies (N = 37,993 individuals) conducted from 2001 to 2019 were included in the meta-analysis. Significant negative relationships were found between three forms of role stress (role ambiguity, role conflict, and role overload) and affective organizational commitment. All role stressors had stronger relationships with affective commitment than with continuance commitment which was not found to be significantly related to any of the types of role stress tested. Overall, employees' perceived role stress was inversely associated with their desire to stay with the organization (affective commitment) but not their need to stay (continuance commitment) with the organization. Moderator analyses revealed that occupational type and culture significantly influenced role stressor-affective commitment relationships. Specifically, stronger relationships were found for studies conducted in transactional occupations and western cultures. Implications of findings for organizations are discussed and directions for future research are provided.

Keywords: affective commitment; continuance commitment; meta-analysis; organizational commitment; role stress; culture

A meta-analysis of the relationship between role stress and organizational commitment: The moderating effects of occupational type and culture

Much work over the last decade has drawn attention to elevated work demands, expectations, and stress (for a review, see Bliese, Edwards, and Sonnentag 2017). Organizational restructuring efforts, major workforce reductions, and work environments that pressure employees to "do more with less" have intensified the nature of work (Bhagat, Segovis, and Nelson 2016; Britt and Jex 2015; Conway, Kiefer, Hartley, and Briner 2014; Dewe, Cooper, and Cooper 2017). According to Schmidt, Rösler, Kusserow, and Rau (2014), "new positions have been created, and employees must assume a variety of frequently changing tasks associated with new or expanded roles" (p. 1). Furthermore, according to Demerouti, Bakker, and Gevers (2015), employee roles are "less frequently defined" than in the past (p. 87). Nevertheless, such increased workplace role demands have been shown to lead to physiological and psychological reactions (i.e., strain), which can cause significant harm to both employees and organizations (see reviews by Beehr and Glazer 2005; Kahn and Byoisere 1992).

Along with the broader changing nature of work, a stream of research has emerged on the consequences of role stress, which refers to the strain that results when an individual perceives that a set of expected behaviors exceeds their available resources (Kahn, Wolfe, Quinn, Snoek, and Rosenthal 1964; see also Kahn and Quinn 1970; Katz and Kahn 1978). Meta-analytic research has demonstrated that role stress is related to a range of undesirable outcomes such as reduced citizenship behavior (Eatough, Chang, Miloslavic, and Johnson 2011), decreased job performance (Gilboa, Shirom, Fried, and Cooper 2008), and depression (Schmidt et al. 2014). Organizational commitment is another undesirable outcome associated with role stress, and low levels of organizational commitment have been linked to increased rates of voluntary turnover (Meyer, Stanley, Herscovitch, and Topolnytsky 2002). Researchers' interest in the relationship between role stress and organizational commitment has grown steadily over the last several decades (see Figure 1). Much of this research has examined employees' perception of role ambiguity, role conflict, and role overload in association with affective and continuance commitment. This has produced a rich and complex array of study findings regarding how role demands are related to employees' feelings of dedication to their organization.

Furthermore, while research regarding the relationship continues to grow, there has not been a recent attempt to review and synthesize the extant literature. Rather, extant knowledge is based on a small-scale meta-analysis by Örtqvist and Wincent (2006) who synthesized research on role stress and several outcome variables, one

of which was general organizational commitment. Their meta-analysis reported negative effect sizes between the three role stressors and general organizational commitment. The results were based on 10 studies (3 to 14 effect sizes) and appear to be uncorrected for measurement error.

Although Örtqvist and Wincent's (2006) meta-analysis provides a useful starting point for understanding the role stress-organizational commitment relationship, additional knowledge about this relationship is needed. For example, the most recent study included in their meta-analysis was conducted in 2001; therefore, it is not clear whether their results generalize to current employees given significant changes that have occurred in the workplace over the last two decades. Furthermore, their meta-analysis examined broad organizational commitment which is a generalized perception of attachment to the organization. As work by Meyer and colleagues (2002) illustrates, however, it is now commonly accepted that organizational commitment is a multidimensional construct. Thus, insights that can be provided beyond general measures of organizational commitment will be particularly valuable to theory. Moreover, Örtqvist and Wincent's (2006) meta-analysis indicated that there was considerable variance in the results across studies, suggesting that there may be moderators of the role stress-organizational commitment relationship.

The current meta-analysis updates and extends Örtqvist and Wincent's (2006) meta-analysis in three ways. First, we examine relationships between different types of role stress (i.e., role ambiguity, role conflict, role overload) and two commonly examined components of organizational commitment including affective commitment ("I want to stay") and continuance commitment ("I need to stay"). To our knowledge, no previous meta-analysis has examined these components separately with role stressors utilizing current research. Second, we examine two potential moderators including occupational type and culture on role stressor-commitment relationships. Although Örtqvist and Wincent's (2006) meta-analysis did not examine moderators, these investigations are in line with role stress theory (Kahn et al. 1964) that suggests that variance in role stress effects can be explained by contextual moderators. Third, since 2001, the year of the most recent study included in the extant meta-analysis, the number of empirical studies on the role stress-organizational commitment relationship has increased ten-fold. The current meta-analysis includes 105 studies compared to the 10 studies included in Örtqvist and Wincent's (2006) meta-analysis. By aggregating results across many studies using current samples, more accurate and relevant estimates between role stressor-organizational commitment relationships can be obtained.

Role Stress

Contemporary understanding of role stress is based on role stress theory (Kahn and Quinn 1970; Kahn et al. 1964) which views role stress as comprising three key aspects: role ambiguity, role conflict, and role overload. *Role ambiguity* refers to unclear work expectations. It involves inadequate information regarding tasks, workplace processes, and the consequences of role performance (Kahn and Quinn 1970; Kahn et al. 1964; Rizzo, House, and Lirtzman 1970). *Role conflict* refers to incongruent or incompatible work expectations. This stressor entails the degree to which expectations from one or more stakeholders (e.g., supervisors, co-workers, customers) clash with one another. Finally, *role overload* refers to excessive work expectations. This stressor captures the extent to which an employee experiences a heavy workload (Beehr, Walsh, and Taber 1976; Schaubroeck, Cotton, and Jennings 1989). For an expanded discussion of conceptualizations of role stressors, see Kahn and Quinn (1970) and Rizzo et al. (1970).

Most scholars agree that role ambiguity, conflict, and overload are important obstacles to personal development and task achievement. For example, a meta-analytic review by Podsakoff, LePine, and LePine (2007), categorized all three role stressors as *hindrance stressors* as opposed to *challenge stressors*. Based on the challenge-hindrance framework (e.g., Cavanaugh, Boswell, Roehling, and Boudreau 2000), hindrance stressors are the opposite of challenge stressors and are appraised as threats to success. Work-related role demands, however, may not consistently be appraised as negative, although they are potentially stressful. For example, if an individual has the resources (e.g., time, knowledge, support) to take on a heavy workload, role overload may be appraised as a challenge that contributes to workplace rewards and feelings of self-accomplishment. Based on previous meta-analytic work (e.g., Bowling, Alarcon, Bragg, and Hartman 2015; Eatough et al. 2011; Örtqvist and Wincent 2006), role overload was only a weak predictor of undesirable work outcomes. In sum, research suggests the need to consider individual's perceptions regarding specific types of role stress when examining work outcomes such as organizational commitment.

Organizational Commitment

Broadly defined, organizational commitment refers to an attitude or mindset regarding an employee's attachment to the organization. Porter, Steers, Mowday, and Boulian (1974) defined organizational commitment as "a strong belief in and acceptance of the organization's goals and values; a willingness to exert considerable effort on behalf of the organization, and; a desire to maintain organizational membership" (p. 604). Current understanding

of organizational commitment is that it is a three-dimensional construct (Allen and Meyer 1990; Meyer and Allen 1991, 1997), including affective commitment, continuance commitment, and normative commitment. *Affective commitment* refers to an emotional attachment to the organization such that an employee desires to remain a part of the organization. *Continuance commitment* refers to an employees' need to stay with the organization due to an assessment of the perceived costs of leaving (e.g., loss or reduction of benefits, challenges of finding a new job). In contrast, *normative commitment* refers to an attachment based on a sense of obligation; normative commitment has been found to be highly correlated with affective commitment (Meyer et al. 2002). Accordingly, contemporary scholars generally focus on affective and continuance commitment as they are the most distinguishable components of organizational commitment.

In the present study, we focus on these two distinguishable components of organizational commitment. The distinction between affective and continuance commitment is an important one; these components of commitment are not mutually exclusive. Employees may both want and need to remain with the organization. Alternatively, employees may need to stay but not want to stay or vice versa.

Role Stressors and Organizational Commitment Components

The relationship between role stressors and affective organizational commitment can be explained through role stress and conservation of resources (COR) theories. According to role stress theory (Kahn and Quinn 1970; Kahn et al. 1964) increased role ambiguity, conflict, and overload lead to increased tension (e.g., anxiety) which ultimately translates into withdrawal from the workplace. Hobfoll's (1989) COR theory asserts that individuals seek to acquire and maintain resources (e.g., work-life balance, mental health) and subsequently, experience strain when they have insufficient resources to deal with stressful job demands. Thus, they may mentally and/or physically disengage from the workplace to protect their resources. Both perspectives suggest that employees may reduce their attachments to workplace relationships including to the organization overall. In their meta-analysis, Podsakoff and colleagues (2007) categorized all three role stressors along with other stressors (e.g., organizational politics, inadequate resources) as hindrance stressors and found that this overall hindrance construct was significantly negatively related to organizational commitment. This finding suggests that role stress perceptions may be related to frustrating or threatening experiences that are negatively associated with the desire to remain in the organization. In addition, role stress may lead to diminished organizational commitment through emotional exhaustion. Alcaron's (2011) meta-analysis revealed that perceptions of role stress were related to employee burnout—a reaction caused

by long-term stress. Being burned out may result in an employee evaluating the organization negatively which subsequently, may reduce their desire to stay with the organization. Furthermore, Meyer and colleagues' (2002) review has found that ambiguous and conflicting roles relate negatively to affective commitment. Given theorizing and meta-analytic results, we hypothesize:

> *Hypothesis 1:* Role stressors including role ambiguity (H1a), role conflict (H1b), and role overload (H1c) will be negatively related to affective commitment.

We also propose that role stressors will more strongly predict affective commitment than continuance commitment. Empirical findings support this supposition (e.g., Addae, Parboteeah, and Velinor 2008; Cicei 2012; Singh, Suar, and Leiter 2012). According to organizational commitment theory (Allen and Meyer 1990; Meyer and Allen 1991, 1997), affective commitment involves the desire to stay which develops mainly from positive job experiences (e.g., organizational support and fairness). Consequently, when faced with high levels of role demands, employees who have high levels of affective commitment are likely to withhold emotional attachment to the organization as they may view the organization as unsupportive (e.g., Ackfeldt and Malhotra 2013). In contrast, continuance commitment involves a need to stay with the organization and is described as more calculative (e.g., cost-based) than relational or emotional in nature (Meyer and Allen 1991). Employees who have high levels of continuance commitment may view the personal sacrifices associated with leaving the organization (e.g., earned job title and respect) as being more harmful than the discomfort felt from high levels of role demands. Thus, we hypothesize:

> *Hypothesis 2:* Role stressors including role ambiguity (H2a), role conflict (H2b), and role overload (H2c) will have stronger relationships with affective commitment than with continuance commitment.

Moderator Variables

Moderator analyses were based on variables examined or suggested as important in the literature on stress (Fila, Purl, and Griffeth 2017; Schmidt et al. 2014) and organizational commitment (e.g., Cohen and Lowenberg 1990; Jaramillo, Mulki, and Marshall 2005). We consider two potential contextual moderators: occupational type and culture. These variables are suspected to influence the magnitude of the relationships between role stressors and affective commitment. Only 19 of 105 studies included in this meta-analysis examined the continuance component of organizational commitment; of these, few used homogeneous subgroups with respect to occupational type and culture moderators. Thus, we were not able to test these potential moderators for role stress-continuance commitment relationships.

Occupational type. Occupations differ with respect to the role demands inherent in the core functions workers perform (e.g., Fogarty et al. 2000). There may be significant differences between occupations in terms of whether they are transactional or transformational in nature. *Transactional occupations* can be described as occupations that basically involve collecting a fee for service; they involve a simple business exchange. In the current study, we considered studies in finance and sales sectors as transactional in nature. Conversely, *transformational occupations* are those which generally involve facilitating personal development and deep change. In the current study, we considered studies conducted in educational and healthcare sectors as transformational in nature.

Transactional jobs such as sales and finance tend to be boundary spanning (e.g., Jaramillo et al. 2005; Schmidtz and Ganeson 2014), involving satisfying a wide variety of stakeholders both internal and external to the organization; accordingly, their expectations of the employee tend to clash. For example, role expectations for greater cost-savings may conflict with customer requests for better service and higher quality goods. Additionally, transactional jobs are generally more competitive in nature than transformational ones; pay and performance goals tend to be based on commission which may facilitate extrinsic motivation. Furthermore, employees in transactional jobs can move readily between organizations. When faced with high role demands, employees in transactional jobs may be less likely to want to or need to continue in the organization. Recent research supports this assertion (e.g., Mallin and Serviere-Munoz 2013; Oh, Rutherford, and Park 2014).

In contrast, transformational occupations such as healthcare and education include substantial internal motivators; external motivations are also provided to employees in transformational occupations, but they are typically not employees' primary source of motivation. According to Duffy and Sedlacek (2007), employees in transformational jobs such as healthcare and education often describe their work as a "calling," defined as work that "arises from some force outside the person and is thought to pertain to careers that an individual sees as meaningful and that promote the greater good in some way" (p. 591). Work by Hirschi, Keller, and Spurk (2019) found that having a sense of calling resulted in positive work-to-nonwork outcomes, specifically higher work-to-nonwork enrichment but not increased work-to-nonwork conflict. Employees in such occupations are involved in the evolution of their clients such as helping patients heal from illnesses and injuries or helping individuals achieve major developmental or personal milestones. These jobs may be more difficult to move between organizations due

to increasing benefits or issues such as tenure related to organizational longevity. Given the lack of theorizing on the subject, we offer the following as a research question:

> *Research Question 1:* Does occupational type (transactional vs. transformational) moderate relationships between various role stressors and affective commitment?

Culture. Culture broadly refers to the customs, values, beliefs and social expectations held by a group. Given differences in social expectations as a function of culture, we expect that culture will moderate the relationships between different role stressors and affective commitment. Culture influences individual's perceptions regarding their degree of commitment to the organization. In "Western" countries including but not limited to the U.S., Australia, and European countries for instance, employees tend to have individualistic values, which means that employees pursue personal interests over interests of the group as is the case in collectivist cultures (see Hofstede 2001). Such values may influence the level of emotional attachment to, or conversely emotional independence from, the organization. Employees are also likely to face different types and levels of role-related pressures across cultures (e.g., Bhagat et al. 2010; Peterson et al. 1995). Furthermore, differences in economic and social factors across Western and non-Western countries can account for differences in organizational support and employees' reactions to increased role demands. To our knowledge, previous meta-analyses on role stressors have not examined the moderating effect of culture. Therefore, given the lack of theoretical and empirical attention on the topic, we also propose the following as a research question:

> *Research Question 2:* Does culture (Western vs. non-Western) moderate relationships between role stressors and affective commitment?

Method

Literature Search

Studies were located by a comprehensive literature search of several electronic databases (i.e., PsycINFO, Web of Science, ABI/Inform, ERIC, Business Source Complete, Google Scholar, and Dissertation Abstracts International) using the following key terms: role stress *AND* organizational commitment. This search was limited to research conducted since 2001 and available in the English language. This process yielded approximately 9,200 studies. Another five studies were located by an electronic search of conference proceedings for the same time period of the *Society for Industrial and Organizational Psychology*, *American Psychological Association*, *Academy of Management*, *Society for Human Resource Management*, and *Proceedings of the Academy of Marketing Science*. Finally, we reviewed the reference sections of the extant meta-analysis (Örtqvist and Wincent 2006) and of all the

potentially eligible studies. The date of the last literature search was November 2019. This process yielded a total of 9,210 studies to be considered for inclusion.

Inclusion/Exclusion Criteria

A study was included in the current meta-analysis if it met the following three criteria: (a) included a measure of individual-level role ambiguity, role conflict, and/or role overload in association with an individual-level affective commitment measure (e.g., Allen and Meyer 1990; Mowday, Steers, and Porter 1979; Porter et al. 1974) and/or continuance commitment measure (e.g., Allen and Meyer 1990); (b) reported a correlation or other statistic that could be converted into a correlation, and; (c) was an original study, as opposed to an analysis of data included in a previously published study. These criteria reduced the number of eligible studies to 130. Of these studies, 25 studies were excluded from analysis for various reasons[1]. Specifically, 16 studies examined general organizational commitment; six studies measured general role stress; two studies were re-analyses, and one study was conducted at the organizational versus individual level of analysis. This process resulted in 105 studies for inclusion in the present meta-analysis.

Study Coding

Both authors independently coded all studies included in this meta-analysis. A coding manual and coding form were developed by the first author to standardize the coding protocol. For each study, we extracted data for sample size, effect size(s), reliabilities, culture, and occupational type. We coded culture based on the country or countries in which a study's sample was collected and whether that country is considered a Western or non-Western country based on standard of living, democratic values, and prominence of Judeo-Christian beliefs. We coded occupational type based on major classification systems (e.g., International Standard Classification of Occupations, North American Industry Classification System) and created four occupational groups: education, healthcare, sales, and finance. The education group included samples focused on educating, training, and/or teaching which included teachers, instructors, professors, and others in an educational context[2]. The healthcare group included samples focused on providing healthcare which included nurses, medical practitioners, psychiatric technicians, welfare/social workers, paramedical staff, and others in a healthcare setting[3]. The sales group included samples focused on selling goods and/or services which included salespersons, frontline sellers, and retail employees. The finance group

[1] The complete list of excluded studies as well as the primary studies included and their codings are available from the first author.
[2] The "other" educational category included one study (Karim 2010) that sampled "university librarians."
[3] The "other" healthcare category included two studies (Bernhard and Sverke [2003]; Chênevert, Vandenberghe, Doucet, and Ayed [2013]). These studies included samples comprised primarily of nurses but included other positions referred to as "staff in a hospital."

included samples focused on money matters or processing financial transactions which included bankers, loan administrators, accountants, financial auditors, tax preparers, and insurance agents. We found that a large portion of the studies, however, relied on mixed samples (i.e., employees from two or more occupations) and therefore, a limited number of studies fit into each of the four occupational groups. These small *k* values limit power in moderator analyses, so we grouped occupations into two broader categories: transactional occupations (i.e., sales, finance) and transformational occupations (i.e., education, healthcare).

During the coding process, we made three additional decisions: (a) to code only the last wave of data for the four studies that reported longitudinal data (i.e., Allen, Freeman, Russell, Reizenstein, and Rentz 2001; Idris 2009; Maia, Bastos, and Solinger 2016; Vandenberghe, Panaccio, Bentein, Mignonac, and Roussel 2011); (b) to use composite reliabilities when alphas were not reported as the differences between the two are relatively inconsequential for meta-analytic techniques (Peterson and Kim 2013), and; (c) to use the mean reliabilities (i.e., role ambiguity = .81; role conflict = .78; role overload = .81; affective commitment = .84; continuance commitment = .78) for the four articles that did not report alpha or composite reliability coefficients (i.e., Azeem 2018; McCleese and Eby 2006; Prajogo 2017; Rutherford, Hamwi, Friend, and Hartmann 2011). Overall, we erred on the conservative side in coding such as picking the smaller value when the N reported in the text and tables disagreed.

Interrater agreement was quite high (96%). Specifically, the agreement was: 94% for sample size, 97% for effect size estimates (strength and direction), 94% for predictor reliabilities, 97% for criteria reliabilities, 98% for occupational type, and 95% for culture. Most disagreements were due to inconsistencies in study reporting such as having different information reported in text and tables. All discrepancies were resolved through discussion.

Analyses

To quantitatively summarize results, we used Comprehensive Meta-Analysis (CMA) software, version 3.3 (Biostat 2014). Prior to entering data into CMA, we first used Hunter and Schmidt's (1990) meta-analytic procedures to correct effect sizes for measurement error. All data were analyzed using a 95% confidence interval and a random-effects model. A random-effects model makes less restrictive assumptions than a fixed-effects model which leads to more conservative conclusions (Kisamore and Brannick 2008). The prediction intervals were computed based on Borenstein's (2016) tutorial and worksheet. The *Q* statistic for heterogeneity of weighted corrected effect sizes across studies was then assessed. When the *Q* statistic was significant, subgroup analyses were conducted to examine the effects of moderators. Finally, to control for the fact that studies with significant and

larger mean effect sizes are more likely to be published (see Rothstein, Sutton, and Borenstein 2005), we tested for publication bias by examining funnel plots which plot a measure of study standard error as a function of effect sizes. Plots that are asymmetrical suggest publication bias is likely. To account for potentially omitted effect sizes based on the funnel plot, Duval and Tweedie's (2000) trim and fill procedure was undertaken. This method "trims" studies from the funnel plot to make it symmetric and then adjusts the effect size accordingly.

Results

One-hundred and five studies were identified (37,993 individuals). Of these studies, 89 were journal articles, nine were master's theses, six were dissertations, and one was a conference paper. Most of the samples were employee samples (98%), followed by student interns (1%), and volunteers (1%). The majority of participants were in transformational occupations (i.e., education, healthcare; 59%) and were in Western countries (70%).

Overall Effects

Prior to addressing our hypotheses and research questions, we examined overall role stress (i.e., a combination of role ambiguity, role conflict, and role overload) in relation to the criteria. As shown in Table 1, the inverse relationship between role stress and affective commitment was modest and significant (ρ = -.33), while the role stress-continuance commitment relationship was almost nil (ρ = -.02). This table also reveals significant heterogeneity among both the role stress-affective commitment (Q = 3380.49, p < .001) and role stress-continuance commitment (Q = 3409.84, p < .001) relationships, which suggests the presence of moderators. Furthermore, the funnel plots showed a degree of asymmetry indicating potential publication bias (see Figures 2 and 3). Finally, the trim and fill procedure for the role stress-affective commitment relationship suggested that there were potentially 29 missing studies; statistical correction of the results of these potentially missing studies decreased the mean effect size from ρ = -.33 to ρ = -.22. For the role stress-continuance commitment relationship, the trim and fill analysis imputed two potentially missing studies, but the mean effect size did not change.

Hypotheses and Research Questions

Results for the relationships between role stressors and organizational commitment components are reported in Table 1. Results of the moderator analyses for occupational type and culture are presented in Tables 2 and 3, respectively. Cohen's (1992) rule of thumb was used for interpreting effect size magnitude as follows: a small effect is less than or equal to .10; a medium effect is greater than .10 but less than .40, and; a large effect is greater than or equal to .40.

Hypothesis 1. H1 predicted that role stressors would have negative relationships with affective commitment. As expected, H1a, H1b, and H1c were supported. Specifically, role ambiguity (H1a; ρ = -.40), role conflict (H1b; ρ = -.33), and role overload (H1c; ρ = -.21) were significantly negatively related to affective commitment. The inverse effect sizes were large for the role ambiguity-affective commitment relationship, and medium for both role conflict and overload in relation to affective commitment. It is worth noting that the confidence interval for role overload does not overlap with the confidence intervals for either of the other two role stressors.

Hypothesis 2. Concerning differences between the relationships of role stressors with affective and continuance commitment, H2 predicted that all three role stressors would have stronger relationships with affective commitment than with continuance commitment. While affective commitment was significantly related to all three role stressors as indicated in results for Hypothesis 1, continuance commitment was not significantly related to any of the three role stressors including role ambiguity (ρ = .00), role conflict (ρ = -.04), and role overload (ρ = .10). As shown in Table 1, there was no overlap in confidence intervals for the relationships between each role stressor and affective commitment compared to those for each role stressor and continuance commitment. These findings support H2a, H2b, and H2c.

Research Question 1. RQ1 involved whether occupational type (transactional vs. transformational) moderated the relationships between the different types of role stress and affective commitment. As can be seen in Table 2, the analyses revealed significant moderation for only the relationship between role ambiguity and affective commitment (Q = 4.15, p < .05). Additionally, this inverse relationship was stronger for transactional occupations (ρ = -.51) than for transformational occupations (ρ = -.40).

Research Question 2. RQ2 was designed to investigate whether culture (Western. vs. non-Western) moderated the relationships between the three role stressors and affective commitment. As shown in Table 3, the moderating effect of culture was significant for two relationships: the role ambiguity-affective commitment (Q = 16.39, p < .001) and role conflict-affective commitment (Q = 10.10, p < .01) relationships. For both role ambiguity and role conflict, the inverse relationship with affective commitment was stronger for samples from Western ($\rho_{ambiguity}$ = -.46 and $\rho_{conflict}$ = -.38) than non-Western ($\rho_{ambiguity}$ = -.16 and $\rho_{conflict}$ = -.14) cultures (see Table 3).

Discussion

The present study examined the nature of the relationship between different role stressors and various components of organizational commitment based on the results of nearly 20 years of published and unpublished research. In support of our hypothesis based on both role stress and COR theories, we found that higher levels of role ambiguity, conflict, and overload are significantly associated with lower levels of affective commitment. Both theories suggest that the strain and tension employees experience from increased role demands are likely lead to employee disengagement and withdrawal. This finding supports Podsakoff and colleagues' (2007) suggestion that ambiguous, conflicting, and overloading roles are likely to be perceived as hindrance stressors—obstacles to task accomplishment and personal development, rather than as challenge stressors—opportunities for accomplishment and personal growth. When viewed as a threat to success and productivity, employees' desire to remain in the organization is likely to decline when faced with high levels of role stress. Nevertheless, consistent with previous work on role stress and organizational outcomes (e.g., Bowling et al., 2015; Eatough et al. 2011; Örtqvist and Wincent 2006), differences noted in the current meta-analysis suggest that role overload may be viewed as less of a hindrance in regards to affective commitment than are role ambiguity and role conflict.

Differentiating between components of organizational commitment is important if different correlational patterns or magnitudes exist for role stressors with affective versus continuance commitment. Our results revealed this to be the case. All three role stressors were more strongly associated with affective commitment than with continuance commitment which confirms the hypothesis. Continuance commitment develops mainly from personal investment in the organization, whereas affective commitment develops mainly from positive work experiences (Meyer and Allen 1997). Personal investment in the organization such as accumulated benefits and earned job title can deter employees from leaving the organization even when faced with high levels of role stress. The results of this study also revealed that none of the three role stressors were significantly related to continuance commitment. In sum, although there were significant differences between role stressor-organizational commitment relationships, perceptions of role stress are not related to employees' *need* to stay with the organization—only their *desire* to stay with the organization. Therefore, role stress and organizational commitment concepts should be considered from a multidimensional perspective and examined separately.

Further, our moderator findings suggest that occupational type (transactional vs. transformational) as well as cultural context (Western vs. non-Western) should be considered in interpreting and applying research findings. First, occupational type significantly influenced the role ambiguity-affective commitment relationship. In addition, the inverse role ambiguity-affective commitment relationship was stronger for employees in transactional (i.e., finance, sales) than transformational (i.e., education, healthcare) occupations. Many employees in transactional occupations are in boundary spanning roles. Scholars (e.g., Jaramillo et al. 2005) argue that in such roles, significant conflict may arise for an employee regarding how to meet the competing demands they face from a wide range of internal and external stakeholders. Additionally, employees in transactional occupations are likely to receive substantial and variable extrinsic rewards such as commission-based salary or bonuses. In contrast, professionals in transformational occupations tend to have their primary commitment to their profession rather than a specific organization. They are likely to receive considerable intrinsic rewards from their work in addition to more consistent extrinsic compensation. We can only speculate at this point, but it may well be that role stressors have less impact on affective commitment among members of transformational occupations given the work is viewed as more meaningful or because pay schedules are more predictable. Therefore, they may have little desire to leave their organization.

Finally, moderator analyses revealed that culture significantly moderated two role stressor-affective commitment relationships, specifically those involving role ambiguity and role conflict in association with affective commitment. These relationships were consistently stronger in Western than non-Western cultures. This suggests that there are important differences in employees' perceptions of role stress and commitment to the organization that vary by culture. For instance, an employee's level of attachment to the organization is influenced by the norms and values of a particular society (e.g., Allen and Meyer 1990). Western cultures are considered individualistic and employees in such cultures tend to have greater civil liberties (e.g., control over their environment) than do their counterparts in non-Western ones (Hofstede 2001). Thus, role stress perceptions of employees in Western cultures may be more strongly associated with their desire to stay with the organization. To our knowledge, these results are the first to indicate a general moderating impact of occupational type and culture on the three role stressors in relation to affective commitment.

Study Limitations

The present study should be considered in the light of several limitations. First, although efforts were made to reduce publication bias by including non-published research, it is possible that some relevant studies were not identified and thus excluded. Nonetheless, after adjusting the effect size for publication bias, the role stress-affective commitment remained negative and moderate. For the role stress-continuance commitment relationship, the effect size did not change from the original estimate. Thus, we can conclude that despite possible presence of publication bias, the overall conclusions drawn from the current study were not affected by such bias. Second, it is important to note that our meta-analysis synthesized correlational research results. Therefore, the present study does not allow for causal inferences regarding whether role stress directly affects the two components of organizational commitment or determination regarding whether other variables may account for the relationships found. Third, we did not attempt to summarize the data on the moderating effect of occupational type and culture on the role stress-continuance commitment relationships as less than five effect sizes were available for these moderator analyses. Finally, our prediction intervals are wide. Thus, the specific role stressor-organizational commitment relationships we examined are quite variable. The mean effect sizes we found are only rough approximations of what organizations and future researchers can expect to find.

Suggestions for Future Research

Overall, we see several avenues for future research based on the results of this meta-analysis. First, more research is needed to examine relationships between role stressors and organizational commitment in other occupational contexts. For example, few studies have examined these relationships in manufacturing, law enforcement, informational technology, and transportation occupations. Second, the role stress literature has almost exclusively focused on individual perceptions of role stress. Shared perceptions of role demands may give rise to a collective experience of role stress in teams (see Savelsbergh, Gevers, van der Heijden, and Poell 2012; see also Liu and Liu 2018). Team-level perceptions of role stress may have pronounced effects on an individual's attachment to the organization. Empirical examination of this prediction is important with the ongoing reliance on team-based work systems for achieving organizational goals. Third, future research should study role stressors with different work outcomes such as self-efficacy, trust, absenteeism, and safety behaviors. While these concepts have been linked to workplace stress in general, it is not yet possible to integrate findings from the role stress literature. Fourth, only a few longitudinal studies (i.e., $k = 4$) of the focal relationships have been conducted. Therefore, additional

longitudinal research is needed to assess whether there are time-lagged effects of role stress perceptions on affective and continuance type commitment components. Finally, additional research is needed to address the operationalization of role stress. At present, role stress is commonly perceived as comprising three dimensions, yet no scale has been published which measures all three types of role stress. Such a scale would be particularly useful to reduce the fragmentation in the literature.

Practical Implications

Our meta-analysis has a few practical implications. First, we found that employees who experience higher levels of role stress tend to have lower emotional attachment to their organization. On the other hand, role demands are not related to whether employees believe it will be too costly for them to leave the organization. Thus, those who can leave because they have desirable alternatives may do so while those who do not have alternatives are likely to stay. That is, organizations that do not mitigate role stress may drive away the very people they most want to stay while retaining those who are less effective but who have no viable alternatives. In addition, because role ambiguity appears to be most problematic for organizations given its strong negative association with an employee's desire to stay, organizations should consider enhancing the clarity of employee responsibilities as well as work policies and systems to achieve those responsibilities. Organizational support (e.g., greater job training, supervisor support, job resources, organizational rewards) is an important resource for task achievement and developing positive workplace attitudes (Kurtessis et al. 2017). Finally, because role stressor-organizational commitment relationships are influenced by occupational type and culture, large and multinational organizations should consider the need to differentiate organizational support mechanisms, policies, and work systems to meet the needs of workers in different occupations and cultures.

Conflict of Interest Statement

On behalf of all authors, the corresponding author states that there is no conflict of interest.

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Table 1.

Results for the relationships between role stressors and organizational commitment components

Variable	*k*	*ρ*	95% CI	*Q* statistic	I^2	τ^2	95% PI
Overall role stress	105	-.31***	-.36 to -.25	3380.49***	96.92	.09	-.72 to .27
Affective commitment	105	-.33***	-.38 to -.28	3409.84***	96.95	.09	-.74 to .25
Continuance commitment	21	-.02	-.12 to .09	371.87***	94.62	.06	-.49 to .47
Role ambiguity							
Affective commitment	85	-.40***	-.45 to -.34	3230.14***	97.40	.11	-.79 to .23
Continuance commitment	19	.00	-.11 to .11	342.88***	94.75	.06	-.48 to .48
Role conflict							
Affective commitment	83	-.33***	-.39 to -.27	2622.75***	96.87	.10	-.75 to .28
Continuance commitment	18	-.04	-.17 to .09	409.28***	95.85	.08	-.56 to .50
Role overload							
Affective commitment	43	-.21***	-.26 to -.15	465.60***	90.98	.03	-.51 to .14
Continuance commitment	5	.10	-.11 to .30	77.62***	94.85	.05	-.61 to .72

Note. *k* = number of effect sizes; ρ = weighted mean corrected correlation for measurement error; CI = confidence interval around the weighted corrected correlation; *Q* statistic = heterogeneity statistic; I^2 = proportion of total variance due to random effects; τ^2=random-effects variance component; PI = prediction interval.

*p < .05; **p < .01; ***p < .001

Table 2.

Moderator analyses for the relationships between role stressors and affective commitment

Variable	*k*	*ρ*	95% CI	*Q* statistic	I^2	τ^2	95% Pl
Overall Role Stress				8.91**			
Transformational	32	-.33***	-.40 to -.26		92.17	.03	-.62 to .04
Transactional	22	-.48***	-.55 to -.41		94.89	.06	-.78 to -.02
Role Ambiguity				4.15*			
Transformational	30	-.40***	-.47 to -.33		88.64	.02	-.63 to -.11
Transactional	21	-.51***	-.57 to -.43		96.45	.08	-.82 to .05
Role Conflict				3.40†			
Transformational	31	-.32***	-.40 to -.24		96.31	.07	-.71 to .23
Transactional	17	-.45***	-.54 to -.34		90.60	.04	-.73 to -.04
Role Overload				0.62			
Transformational	18	-.19***	-.28 to -.10		89.55	.03	-.49 to .16
Transactional	5	-.26**	-.41 to -.10		95.13	.07	-.87 to .65

Note. *k* = number of effect sizes; ρ = weighted mean corrected correlation for measurement error; CI = confidence interval around the weighted corrected correlation; *Q* statistic = heterogeneity statistic; I^2 = proportion of total variance due to random effects; τ^2 = random-effects variance component; PI = prediction interval.

*p < .05; **p < .01; ***p < .001; † < .10

Table 3.

Moderator analyses of the relationships between role stressors and affective commitment

Variable	*k*	*ρ*	95% CI	*Q* statistic	I^2	τ^2	95% Pl
Overall Role Stress				10.72**			
Non-Western	26	-.16**	-.26 to -.04		97.34	.12	-.71 to .51
Western	60	-.37***	-.43 to -.30		95.43	.07	-.72 to .14
Role Ambiguity				16.39***			
Non-Western	21	-.16***	-.29 to -.03		98.16	.17	-.78 to -.62
Western	48	-.46***	-.52 to -.38		94.78	.06	-.76 to .01
Role Conflict				10.10**			
Non-Western	22	-.14*	-.27 to -.01		97.90	.16	-.76 to .61
Western	47	-.38***	-.46 to -.30		95.48	.07	-.74 to .13
Role Overload				0.86			
Non-Western	12	-.17***	-.27 to -.06		91.00	.04	-.56 to .29
Western	27	-.23***	-.30 to -.16		91.45	.03	-.54 to .14

Note. *k* = number of effect sizes; ρ = weighted mean corrected correlation for measurement error; CI = confidence interval around the weighted corrected correlation; *Q* statistic = heterogeneity statistic; I^2 = proportion of total variance due to random effects; τ^2 = random-effects variance component; PI = prediction interval.

* $p < .05$; **p < .01; ***p < .001; † < .10

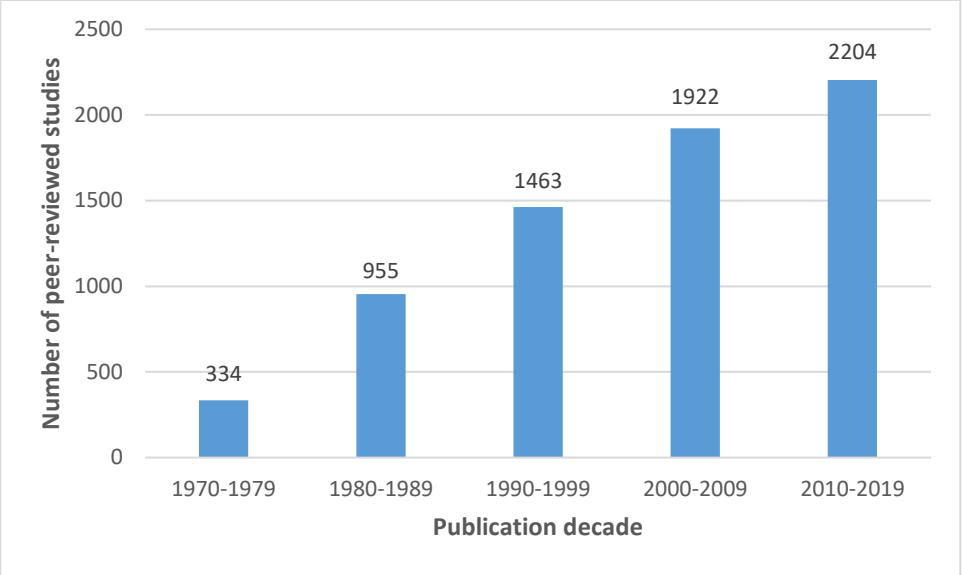


Fig 1 Number of peer-reviewed publications in the extant literature examining the relationship between *role stress*, *role demands*, *role ambiguity*, *role conflict* or *role overload* and *organizational commitment* as indicated through a search of the PsycINFO database

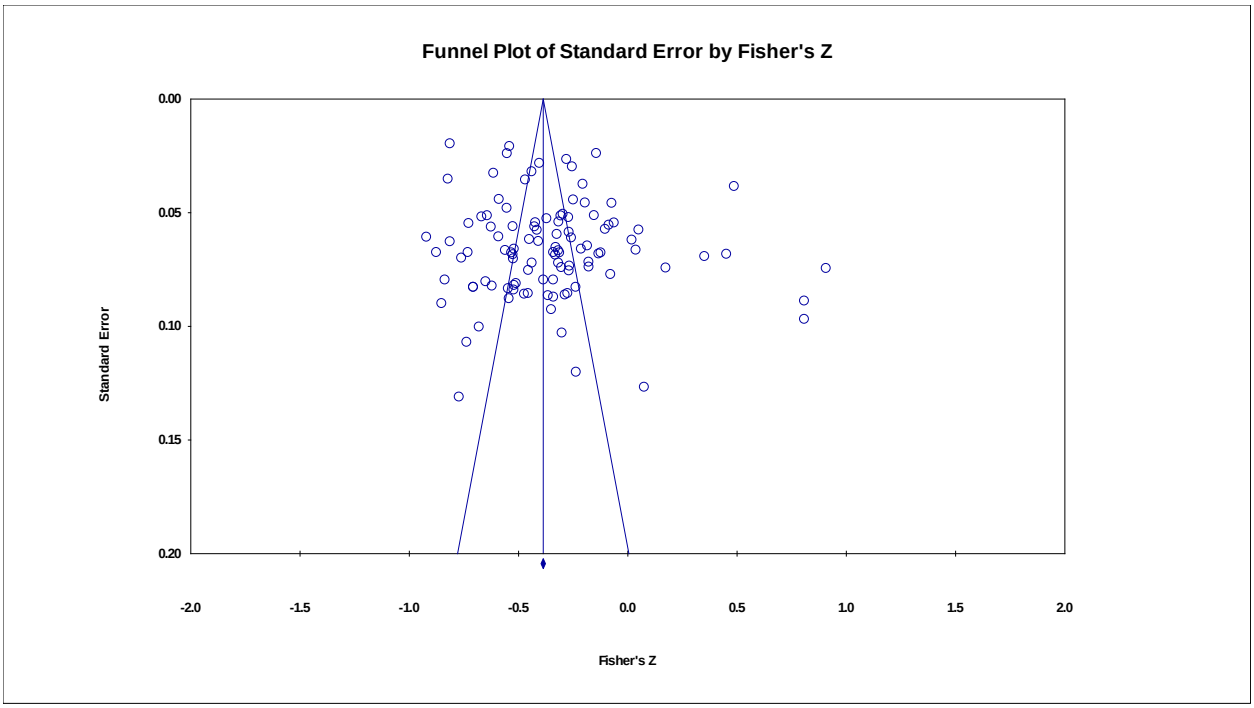


Fig 2 Funnel plot for the relationship between overall role stress and affective commitment.

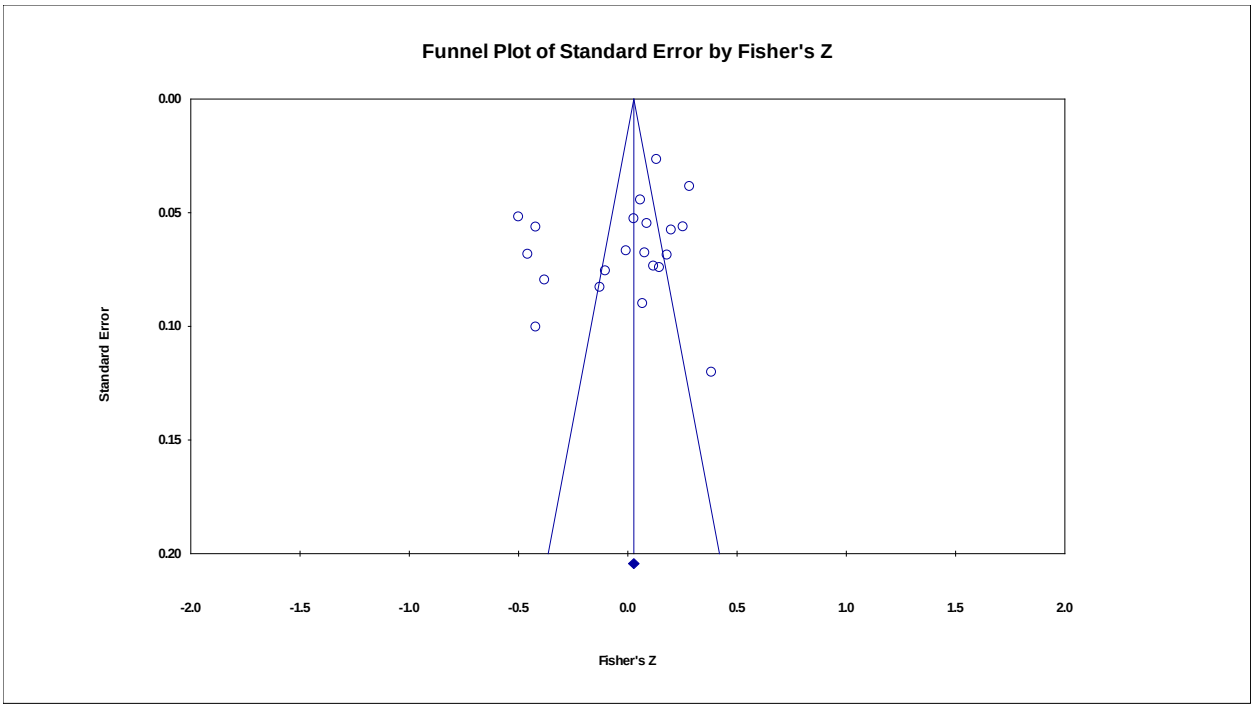


Fig 3 Funnel plot for the relationship between overall role stress and continuance commitment.