HHS Public Access

Author manuscript

Psychol Bull. Author manuscript; available in PMC 2019 March 01.

Published in final edited form as:

Psychol Bull. 2018 March ; 144(3): 284–314. doi:10.1037/bul0000120.

A Meta-Analysis of Work-Family Conflict and Social Support

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Abstract

The relationship between social support and work-family conflict is well-established, but the notion that different forms, sources, and types of social support as well as contextual factors can alter this relationship has been relatively neglected. To address this limitation, the current study provides the most comprehensive and in-depth examination of the relationship between social support and work-family conflict to date. We conduct a meta-analysis based on 1021 effect sizes and 46 countries to dissect the social support and work-family conflict relationship. Using social support theory as a theoretical framework, we challenge the assumption that social support measures are interchangeable by comparing work/family support relationships with work-family conflict across different support forms (behavior, perceptions), sources (e.g., supervisor, coworker, spouse), types (instrumental, emotional), and national contexts (cultural values, economic factors). National context hypotheses use a strong inferences paradigm in which utility and value congruence theoretical perspectives are pitted against one another. Significant results concerning support source are in line with social support theory, indicating that broad sources of support are more strongly related to work-family conflict than are specific sources of support. In line with utility perspective from social support theory, culture and economic national context significantly moderate some of the relationships between work/family support and work interference with family, indicating that social support is most beneficial in contexts in which it is needed or perceived as useful. The results suggest that organizational support may be the most important source of support overall.

Social support is one of the most popular constructs in psychological scholarship. In 2016 alone, over 2,500 articles in PsychINFO list “social support” as a key subject. Social support’s popularity stems from its integral theoretical role as a means for reducing strain and improving health and well-being (Cohen & Wills, 1985; House, Umberson, & Landis,

1988). One such strain is work-family conflict, which occurs when the demands of work or family make it difficult to fulfill demands in the alternative role (Greenhaus & Beutell, 1985). Given recent societal trends such as increased use of technology, cross-national work, and dual-earner couple households, work-family conflict is recognized as a prominent societal concern and is studied by researchers around the world who span multiple disciplines (Aycan & Eskin, 2005; Duxbury, Higgins, & Lee, 1994; French & Johnson, 2016; Mortazavi, Pedhiwala, Shafiro, & Hammer, 2009; Shockley, Douek, Yu, Dumani, & French, 2017).

In recent years, hundreds of studies focusing on social support within the work-family interface have been published in academic journals and presented at professional conferences. Overall, this research shows informal social support at home or at work negatively relates to work-family conflict (Kossek, Pichler, Bodner, & Hammer, 2011) and positively relates to beneficial well-being outcomes such as work and family satisfaction (Ford, Heinen, & Langkamer, 2007), mental health (Lee, Sudom, & Zamorski, 2013), cardiovascular health (Uchino, Cacioppo, & Kiecolt-Glaser, 1996), and sleep quality and quantity (Crain, Hammer, Bodner, Kossek, Moen, Lilienthal, & Buxton, 2014).

Although the importance and overall benefits of social support are clear, social support is a complex construct. For example, social support has been defined in diverse ways (Cohen & Wills, 1985; House et al., 1988) and as such it can be categorized into different forms (e.g., behaviors, perceptions; Barrera, 1986) and types (e.g., instrumental, appraisal, emotional support; Cohen & McKay, 1984). Social support also can come from a variety of sources (e.g., co-worker, supervisor, organization, family, spouse) (Ford et al., 2007). In addition, research suggests that the use and effectiveness of social support depends on culturally shared norms and expectations (Taylor, Sherman, Kim, Jarcho, Takagi, & Dunagan, 2004; Taylor, Welch, Kim, & Sherman, 2007).

As research on social support and work-family conflict has evolved, the complexity of social support has taken on greater relevance, setting the stage for our comprehensive and integrative review of how variations in social support alter the strength of the relationships between social support and work-family conflict. Moreover, the time is now ripe to examine how the broader societal context in which these relationships occur impacts the strengths of associations. With this in mind, the current study represents the most comprehensive and indepth examination of the relationship between social support and work-family conflict to date. Using meta-analysis, we investigate the relationship between work-family conflict and social support emanating from both the work and the family domains. We further differentiate support by specific form (i.e., behaviors and perceptions), source (e.g., spouse, organization, coworker), and type (i.e., emotional and instrumental). Moreover, we examine national-level cultural and economic context as moderators of these relationships. Figure 1 displays the relationships examined in the current study.

Our synthesis of the work-family conflict and social support literature makes several key contributions. First, we provide a comprehensive and integrative quantitative review of the vast literature that connects social support from both the work and the family domains with work-family conflict. Previous meta-analyses have helped to paint parts of the overall

picture that depicts social support and work-family conflict (see Table 1). Early meta-analyses focused on aggregated measures of general work and/or family support (Byron, 2005; Mesmer-Magnus & Viswesvaran, 2005; Michel, Mitchelson, Kotrba, LeBreton, & Baltes, 2009). More recent meta-analyses examined different sources of support within the work domain (Mesmer-Magnus & Viswesvaran, 2006; Ford et al., 2007; Kossek et al., 2011) and within the family domain (Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011). With empirical expansion of the primary study database, meta-analyses have begun to invoke theoretical rationale for why examining different aspects of social support matters. For example, two previous meta-analyses provide an empirical test of the domain specificity hypothesis, which contends that support from a given domain should most closely relate to directional conflict that also originates in that domain (e.g., work support versus family support more closely relates to conflict in the work-to-family direction) (Byron, 2005; Mesmer-Magnus & Viswesvaran, 2006). Most recently, Kossek and colleagues (2011) were the first to theorize how the relationship between social support and work-family conflict may vary in strength according to support source (organizational perceptions vs. supervisor support). Despite these advancements, many theoretical complexities associated with work and family social support remain under-recognized and empirically under-explored.

Our quantitative review updates and expands our understanding of the relationship between social support and work-family conflict both empirically and theoretically. We challenge the notion that social support measures are interchangeable by examining three theoretically distinct aspects of social support: form, source, and type. In doing so, we test foundational theory in the social support literature regarding the distinction and relative contribution of support forms (behaviors vs. perceptions), sources (broad vs. specific), and types (instrumental vs. emotional). For each distinction, social support is purported to function in unique theoretical ways (e.g., Cohen & Wills, 1985; Cohen & McKay, 1984; House et al., 1988). Yet, to our knowledge, there has not been a large-scale, parsimonious test of these distinctions. Our analysis is conducted with an updated and considerably larger number of studies compared to previous meta-analyses, which allows for more current and precise effect size estimates.

To create this holistic picture and expand existing meta-analytic work, we investigate the distinction between measures of support behavior and support perceptions. Scholars have long debated how and why supportive perceptions and behaviors differ in their relationships with strain outcomes (Barrera, 1986; Lakey & Cohen, 2000). Our review brings this important consideration to the fore and contributes to a long-standing discussion in the social support literature. As such, we are the first to empirically test whether supportive perceptions and behaviors are similarly related to work-family conflict (Table 1). This question has implications for both the theoretical rationale that connects social support and work-family conflict, as well as the evaluation and implementation of social support initiatives designed to reduce work-family conflict.

Similarly, we distinguish between emotional and instrumental support. Previous meta-analyses have yet to tease apart emotional and instrumental support (Table 1). This effort is critical given the long history of theoretical distinction (e.g., Cohen & McKay, 1984; House et al., 1988). Further, empirical evidence suggests emotional and instrumental support

differentially relate to work-family conflict (Lapierre & Allen, 2006; Shockley & Allen, 2015). Understanding the distinction is important for advancing our theoretical understanding of factors that influence the magnitude of the support-work-family conflict relationship and for developing support interventions that can be used by organizations and family therapists to alleviate work-family conflict.

We also reconcile previously mixed findings regarding the domain specificity hypothesis. The domain specificity hypothesis has been primarily applied to work-family conflict but has implications for cross-domain interactions beyond conflict (e.g., spillover, enrichment) and beyond the work and family domains (e.g., leisure, friend relationships). Previous research has often assumed the domain specificity hypothesis holds, although strong support has yet to be found. Our meta-analysis is equipped with sufficient power to detect differences that may have been previously masked, and examines nuances in social support which may explain discrepant findings.

We further make a unique contribution to the literature by examining the context within which work and family support occurs. National context is difficult to meaningfully take into account in primary work-family studies, despite theoretical significance (Ollier-Malaterre & Foucrealt, 2016; Ollier-Malaterre, Valcour, Den Dulk, & Kossek, 2013; Powell, Francesco, & Ling, 2009). However, context is important as recent meta-analytic findings shed light on systematic differences in levels of work-family conflict across cultures (Allen, French, Dumani, & Shockley, 2015). We make a novel contribution to this literature by systematically investigating how national context shapes relationships between work-family conflict and correlates. National context is especially critical for social support, given that support is a relational, socially enacted construct shaped by societal norms (Kim, Sherman, & Taylor, 2008). Our meta-analysis examines two distinct mechanisms of contextual influence, cultural values and economic context, providing empirical evidence where little-to-none exists (Ollier-Malaterre, 2016). Further, we examine context moderation by testing alternative competing hypotheses derived from two plausible theoretical perspectives: the utility perspective (Cohen & Wills, 1985) and the values perspective (Oishi, Diener, Lucas, & Suh, 1999; Oishi, Diener, Suh, & Lucas, 1999b). By employing this strong inferences paradigm (Platt, 1964), we provide systematic, overarching theoretical insight and guidance to the cross-national literature.

Work-Family Conflict and Social Support

Work-family conflict occurs when demands from work and family domains are incompatible, impeding domain performance (Greenhaus & Beutell, 1985). Conflict can occur in two directions: work can interfere with the ability to meet family demands (WIF) or family can interfere with the ability to meet work demands (FIW; Frone et al., 1997b). Previous meta-analytic research confirms WIF and FIW are moderately correlated, but distinct (e.g., Michel et al., 2009; Shockley & Singla, 2011). Throughout the paper, we use the umbrella term work-family conflict when we refer to conflict in general and we employ WIF/FIW when we refer to specific directional conflict.

Social support is one of the most widely studied contextual antecedents of work-family conflict. Although the definition and operationalization of social support has historically suffered from a lack of clarity and consensus (e,g., Cohen & Wills, 1985), two commonalities exist among definitions. First, social support is derived from social relationships. Second, social support protects an individual's well-being under adverse circumstances (Cobb, 1976; House et al., 1988). We define social support in the current study as psychological or material resources provided through social relationships that can mitigate strains. Furthermore, support can come from either the work or the family domain. The terms "work support" and "family support" are used throughout the paper to refer to support that originates in the work and family domains, respectively.

Cohen (1992a) delineated three core components of social support: social networks (existence, quantity, and types of social relationships), perceived support (perception that social relationships have provided resources), and supportive behaviors (the receipt of behaviors that help individuals manage strains). These components can be sorted into two measurement groups: structural (social networks) versus functional (perceived support and support behaviors). Structural measures describe the existence of social relationships in an individual's social network (e.g., marital status). Functional measures describe the functions provided by these relationships (e.g., provision of emotional resources). Functional support measures directly assess social support as they capture the transfer of support resources and/or quality of support (Cohen & Wills, 1985; House et al., 1988). In contrast, structural support measures indirectly assess social support, as they capture availability of supportive connections (Cohen & Wills, 1985; House et al., 1988). In the current study, we are interested in the transfer and quality of social support resources. As such, we focus on functional operationalizations of social support, including support perceptions and supportive behaviors.

Researchers have identified three theoretical roles social support may play in the stress process (LaRocco, House, & French, 1980). Social support may have a direct mitigating effect on stressors, or social support may directly mitigate strains (main effect hypothesis; Cohen & Wills, 1985; LaRocco et al., 1980). Social support may alternatively serve as a buffer between stressors and strains (buffer hypothesis; LaRocco et al., 1980). This buffering may occur either during the appraisal process, mitigating perceptions of stressors, or after appraisal has taken place by providing solutions, facilitating healthy coping strategies, or decreasing problem importance (Cohen & McKay, 1984; Cohen & Wills, 1985).

Tests comparing the direct versus moderating roles of support find social support is most appropriately modeled as an antecedent to strains, such as work-family conflict (Carlson & Perrewe, 1999; Seiger & Wiese, 2009). This direct relationship is most consistent with the main effect hypothesis (Cohen & Wills, 1985). The direct antecedent role is buttressed by resource-based stress theories that conceptualize support as a resource that can be used to meet demands (e.g., conservation of resources, Hobfoll, 1989; job-demands resources model, Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) and therefore avert work-family conflict (van Daalen, Willemsen, & Sanders, 2006). Consistent with these theoretical perspectives, meta-analyses confirm work and family support have direct, negative

relationships with WIF and with FIW (Ford et al., 2007; Kossek et al., 2011; Mesmer-Magnus & Viswesvaran, 2006; Michel et al., 2009).

Although meta-analyses indicate WIF and FIW share common correlates, the strength of these relationships differ (e.g., Amstad, Meier, Fasel, Elfering, & Semmer, 2011). Patterns tend to follow the domain specificity hypothesis (Frone et al., 1992; Frone et al., 1997b). The domain specificity hypothesis proposes that WIF most strongly relates to work domain antecedents because WIF originates in the work domain, whereas FIW most strongly relates to family domain antecedents because FIW originates in the family domain. Although numerous primary studies and virtually all previous meta-analyses on social support and work-family conflict have invoked this theory when developing hypotheses, meta-analytic empirical support is surprisingly sparse. Four meta-analyses have empirically tested the domain specificity hypothesis. Of these, two meta-analyses failed to find support for domain specificity (Mesmer-Magnus & Viswesvaran, 2006; Michel et al., 2011). Two meta-analyses found partial support for domain specificity, in that work support was more strongly associated with WIF than family support (Byron, 2005; Mesmer-Magnus & Viswesvaran, 2005), but work and family support were similarly related to FIW (Byron, 2005). Given the relatively small number of primary studies in these meta-analyses (*k*s ranged from 2 to 31), it is unclear if lack of support reflects a true null finding or a lack of power (Byron, 2005; Mesmer-Magnus & Visewesvaran, 2005; 2006). Despite the lack of statistical significance, effect sizes appear to align with the domain specificity hypothesis (e.g., Mesmer-Magnus & Viswesvaran, 2005; Michel et al., 2011).

Based on theoretical and empirical evidence for a direct relationship between social support and work-family conflict, we examine work and family social support as correlates of WIF and FIW. Consistent with the domain specificity hypothesis, WIF is expected to most strongly relate to work support, whereas FIW is expected to most strongly relate to family support.

Hypothesis 1: WIF more strongly relates to work support than to family support.

Hypothesis 2: FIW more strongly relates to family support than to work support.

Teasing Apart the Complexities of Work and Family Social Support

Previous research has advanced our understanding of work-family conflict and the broad domains of work and family support. However, there is potentially meaningful variation in social support. Specifically, social support can be distinguished within work and family domains by form, source, and type. We discuss each in the following sections, using social support theory as a framework to develop hypotheses.

Social Support Form

As previously discussed, functional measures of support focus on support behaviors and/or support perceptions. Measures of support behaviors (also referred to as received or enacted support) assess specific supportive actions (e.g., “my supervisor asks for suggestions to make it easier for employees to balance work and nonwork demands;” Hammer, Kossek, Yragui, Bodner, & Hanson, 2009). Measures of support perception assess qualitative beliefs

about the degree to which an individual feels supported (e.g., “my organization really cares about my well-being;” Eisenberger, Huntington, Hutchison, & Sowa, 1986).

Researchers have long speculated how support behaviors, perceptions, and strains are theoretically related. Some have suggested support perceptions are a reflection of supportive behaviors (Barrera, 1986; House et al., 1988). Support behaviors are therefore a distal predictor of strains, mediated by the more proximal predictor of support perceptions. However, ample research shows support behaviors and perceptions have a weak-to-moderate association (Barrera, 1986; Harber, Cohen, Lucas, & Baltes, 2007; Lakey & Cassady, 1990), and some studies show positive associations between support behaviors and strains (Barrera, 1986). Alternatively, researchers have suggested that support behaviors and perceptions influence strains via distinct mechanisms (Cohen & Wills, 1985; Cutrona & Russell, 1990; Lakey & Cohen, 2000). Specifically, support behaviors provide resources that should reduce strain when those behaviors match associated demands (Lakey & Cohen, 2000). For example, a worker who must leave her scheduled shift in order to care for a sick child would benefit most from a supervisor that allows work schedule adjustments. Providing sympathy or understanding in such a situation may be a relatively less effective support action. In contrast, support perceptions are a theoretically broad resource. Supportive perceptions are considered to reduce negative perceptions of strain (Cohen & McKay, 1984; Lakey & Cohen, 2000) and positively color the broad array of day-to-day experiences and decisions (Cohen et al., 2000; House et al., 1988; Lakey & Cassady, 1990; Lakey & Cohen, 2000). Thus, those who perceive high levels of social support are less likely to perceive and experience work-family conflict compared to those who perceive lower levels of social support.

Because social support perception is a theoretically broad, proximal resource, social support theory suggests support perceptions have a stronger relationship with work-family conflict compared to support behaviors (Cohen & Wills, 1985). In line with theory, previous empirical research shows perceptions of social support tend to have stronger relationships with strain compared to social support behaviors (Cohen & Wills, 1985; Helgeson, 1993; Finch, Okun, Pool, & Ruehlman, 1999; Thoits, 1995).

> Hypothesis 3: The relationship between support perceptions and (a) WIF/(b) FIW is stronger than is the relationship between support behavior and (a) WIF/(b) FIW.

Social Support Source

Work and family support can come from several different sources. Within the work domain, researchers have traditionally distinguished organization-level support, such as supportive organizational perceptions, from support received from specific individuals in the work context, such as supervisors and coworkers. Within the family domain, researchers have similarly focused on overall family support as well as support received from an individual’s spouse or partner. Research shows different sources of support tend to be moderately related, but distinct (e.g., Allen & Lapierre, 2006; Kurtessis, Eisenberger, Ford, Buffardi, Stewart, & Adis, 2016; Van Daalen et al., 2006). Specific source of support is theoretically and practically important to consider because within-domain sources may have differential relationships with work-family conflict.

Social support theory (Cohen & Wills, 1985) suggests broad measures of social support are stronger direct predictors of strain outcomes compared to specific measures of social support. This is because broad measures tap into an individual's pool of support resources, including a variety of types and sources. Specific measures of support have comparatively weaker direct relationships because they are not comprehensive and instead may only help individuals to mitigate specific strains (Cohen & Wills, 1985). Broad measures of support also capture aspects of support that cannot be attributed to one specific form, source, or type. For example, work-family friendly culture operates at the broad organizational-level and, by definition, cannot be enacted by a single source or through one specific type of support (Thompson, Beauvis, & Lyness, 1999). In addition, the bandwidth-fidelity principle suggests constructs at similarly broad levels will most strongly relate to one another (Cronbach, 1960; Ones & Viswesvaran, 1996).

Studies that measure and compare multiple sources of support within work and/or family domains are rare (van Daalen et al., 2006). Meta-analytic evidence shows mixed support for the idea that broad domain sources of support more strongly relate to work-family conflict than to individual sources of support. For example, one comparison indicates specific sources of support more strongly relate to work-family conflict than to broad sources of support (managerial versus organizational support and WIF, Ford et al., 2007). Two other meta-analytic comparisons indicate broad sources of support are stronger predictors of work-family conflict than are specific sources (organizational support versus supervisor support and WIF, Kossek et al., 2011; family versus spouse support and WIF; Michel et al., 2011). However, most comparisons indicate no significant difference in the magnitude of support-work-family conflict relationship across sources (Ford et al., 2007; Kossek et al., 2011; Michel et al., 2011; Mesmer-Magnus & Viswesvaran, 2006). Overall, previous meta-analytic studies yielded inconsistent findings regarding to the focal source of social support. Inconclusive findings across these meta-analyses may be due to limited power (*k*s range from 1–31). In addition, previous meta-analyses draw upon specific sets of sources, most typically work support sources in relation to WIF. Thus, previous investigations provide an incomplete test of broad versus specific sources across both work and family domains in relation to WIF and FIW.

In the current study we investigate the difference in magnitude between different sources of support and work-family conflict. Although empirical evidence is mixed, social support theory suggests broad sources of support should be more strongly associated with WIF and FIW, compared to more specific sources of support.

Hypothesis 4: The relationship between organizational support and (a) WIF/(b) FIW is stronger than is the relationship between supervisor support and (a) WIF/(b) FIW.

Hypothesis 5: The relationship between organizational support and (a) WIF/(b) FIW is stronger than is the relationship between coworker support and (a) WIF/(b) FIW.

Hypothesis 6: The relationship between family support and (a) WIF/(b) FIW is stronger than is the relationship between spouse support and (a) WIF/(b) FIW.

Social Support Type

In addition to source of support, social support can be categorized into four types: emotional, appraisal, informational, or instrumental (Cohen & McKay, 1984; House, 1981). Emotional support is the provision of resources such as love, care, and trust that target the support receiver's feelings and self-evaluations (Cohen & McKay, 1984; House, 1981). Appraisal support alters strain assessment, targeting the support receiver's strain appraisal (Cohen & McKay, 1984). Instrumental support provides tangible resources such as time or money, which can be used to directly manage the strain (Cohen & McKay, 1984; House, 1981). Informational support is the provision of information or advice aimed to help the support recipient avert the strain (House, 1981). Research indicates instrumental and emotional support are differentially associated outcomes, although they tend to be moderately-to-strongly associated (e.g., Lapierre & Allen, 2006; King, Mattimore, & King, 1995; Shockley & Allen, 2015). In the current study, we focus on emotional and instrumental support for two primary reasons. First, emotional and instrumental social support are the most empirically well-established types of support in terms of construct definition, operationalization, and nomological network, particularly in the organizational sciences literature (King, Mattimore, King, & Adams, 1995). Second, these two forms of social support are the most commonly studied within the work-family literature.

Both emotional and instrumental support are expected to mitigate strain; however, each type of support provides unique resources (House, 1981; Cohen & McKay, 1984; Lapierre & Allen, 2006). Resources provided through emotional support alleviate strain due to the provision of psychological resources (e.g., listening empathetically when a spouse had a difficult day at work). In contrast, instrumental support provides tangible resources and assistance that directly alleviate strains (e.g., a supervisor providing time off so an employee can care for a sick child). Because each type of social support operates differently, we expect both types to independently predict work-family conflict. However, it is not yet clear whether one type of social support is more critical for mitigating work-family conflict compared to the other.

Few studies that assess bivariate relationships between both types of social support generally find WIF and FIW both relate to instrumental and emotional social support (Adams, King, & King, 1996; Lapierre & Allen, 2006; Shockley & Allen, 2015). However, Lapierre and Allen (2006) found instrumental support relates to FIW above and beyond emotional support, providing some evidence that instrumental support may be more helpful for mitigating FIW. Similarly, Shockley and Allen (2015) found work and family instrumental support were stronger predictors of FIW and WIF episodes (respectively) compared to work and family emotional support. Due to limited empirical and theoretical guidance for the relationships between WIF, FIW, emotional, and instrumental support, we investigate type of social support as a research question.

> Research Question: Do instrumental support (a) and emotional support (b) from work and family domains differentially relate to WIF/FIW?

The Moderating Role of National Context

Although both theory (e.g., Powell et al., 2009) and empirical data (e.g., Yang, Chen, Choi, & Zhou, 2000) suggest work-family conflict experiences differ as a function of national context, studies focused on the influence of national context are relatively uncommon. Cross-national work-family research is stymied in part because large-scale cross-national studies are challenging in terms of financial, time, and energy resources. Meta-analysis provides the opportunity to compare hundreds of data points from multiple countries using multiple lenses through which to consider national context with relatively little cost by imputing national context variables based on the country from which the sample was drawn. We focus on cultural and economic context, as these are relevant and influential categories of national context to consider when conducting cross-national work-family research (Ollier-Malaterre, 2016). Furthermore, these two contextual variables provide unique information, as they tap into distinct mechanisms, namely cultural norms and values, and economically rational behavior. Empirical research shows moderate associations among most culture and economic national context variables (House, Hanges, Javidan, Dorman, & Gupta, 2004; Ollier-Malaterre & Foucrealt, 2016; Parboteeah, Bronson, & Cullen, 2005), with the exception of a strong negative association between in-group collectivism and economic prosperity (House et al., 2004).

Extant cross-national work-family literature is relatively nascent. Consequently, there is little overarching empirical or theoretical guidance to inform how national context moderates the relationship between support and work-family conflict. Our study resolves this issue by examining several aspects of national context in order to identify overarching trends. In framing our national context hypotheses, we use two competing perspectives: the utility perspective (derived from social support theory; Cohen, Gottlieb, & Underwood, 2000) and the values perspective (derived from the values-as-moderators hypothesis; Oishi et al., 1999a).

First, we generate hypotheses from a *utility perspective*. That is, we consider how each national context factor may alter the extent that social support is perceived as needed or useful for reducing work-family conflict. The social support literature shows perceived support tends to be most helpful *when it is needed* (Cohen & Wills, 1985; Cohen et al., 2000). Consistent with this idea, social support may be most strongly associated with reduced work-family conflict for national contexts in which support is perceived as useful or those that demonstrate a need for support. Alternatively, the *values perspective* considers the ways each national context factor may alter the value of social support. This perspective is used in research that examines the influence of culture on well-being (values-as-moderator model, Oishi et al., 1999a). The basic tenet of the values perspective is that individuals weigh *value-congruent* factors more heavily than value-incongruent factors when making judgments about subjective well-being. This model has been shown to explain the moderating effect of culture and economic factors on the relationship between domain satisfaction and indicators of well-being (e.g., Oishi et al., 1999a; 1999b). Extended to the current study, support may be weighed more heavily as a resource for mitigating work-family conflict for national contexts that value social support, compared to national contexts

that place less value on social support. In the next sections, we discuss the specific cultural and economic factors in the current study.

Cultural Context

To operationalize culture, we use House and colleagues' cultural dimensions derived from the GLOBE study, specifically in-group collectivism, humane orientation, and assertiveness (House et al., 2004). The GLOBE framework is commonly used for discussing the influence of culture within organizational psychology and the work-family field (e.g., Powell et al., 2009; Tsui, Nifadkar, & Ou, 2007). Additionally, GLOBE provides the most recent information on cultural dimensions across a wide array of countries. Although the GLOBE framework identifies nine culture dimensions, in-group collectivism, humane orientation, and assertiveness dimensions were chosen for the current study because they have clear implications for support and social relationships within the work-family interface. Further, these dimensions have been identified as theoretically important in previous work-family and/or support research (e.g., Kim et al., 2008; Powell et al., 2009).

In-Group Collectivism

In-group collectivism and institutional collectivism represent two types of collectivism that have been identified under the GLOBE framework (House et al., 2004). In-group collectivism reflects the extent that a cultural group views individuals as autonomous and independent versus interdependent within a larger group (Triandis, 2001). Institutional collectivist societies value and encourage the collective distribution of resources and collective action. We focus on in-group collectivism as it taps into perceptions of group membership (such as family membership and work membership), which are more directly relevant to work-family conflict and social support than government resource allocation.

Individuals within collectivistic societies tend to perceive social support as less helpful than their individualistic counterparts (Kim et al., 2008; Kim, Sherman, Ko, & Taylor, 2006). This difference is attributed to in-group collectivist interdependence and harmony values. Within collectivist societies, social support is viewed as an onerous obligation for the support provider, and consequently asking for or using social support disrupts social harmony (Kim et al., 2006; Taylor et al., 2004). Thus, social support is perceived to have burdensome, rather than helpful, consequences. In contrast, individualistic societies view support and an independent volition (Kim et al., 2006). Instead of burdening relationships, social support is more likely viewed as an act of caring or kindness of one's own accord (e.g., Feeney & Collins, 2015). Thus, social support is perceived as a helpful resource, rather than as a burden that offsets social harmony. Thus, from a utility perspective, the negative relationship between social support and work-family conflict is likely attenuated in collectivistic cultures.

> Hypothesis 7: In-group collectivism moderates the relationship between work support and (a) WIF/(b) FIW such that the relationship is weaker within cultures higher on in-group collectivism relative to cultures lower on in-group collectivism.

At the same time, in-group collectivism creates a strong context in which social support is both expected and valued. Within in-group collectivist societies, families and organizations

are obligated to ensure each member's welfare (House et al., 2004). In the event that support is not received, the consequences may be especially detrimental due to the fact that support is a culturally valued norm. Thus, absence of support within a collectivist society would be associated with an accentuated increase in work-family conflict. In line with the value-congruence perspective rationale, we hypothesize that the negative relationship between social support and work-family conflict is stronger in collectivist cultures compared to individualist cultures because work and family support is expected in such cultures.

> Hypothesis 8: In-group collectivism moderates the relationship between work support and (a) WIF/(b) FIW such that the relationship is stronger within cultures higher on in-group collectivism relative to cultures lower on in-group collectivism.

Humane Orientation

Humane orientation refers to the extent a society encourages and rewards individuals for being altruistic, generous, caring, and kind to one another (House et al., 2004). By definition, support is a norm for cultures higher in humane orientation, as individuals tend to be encouraging and concerned about the well-being of others. In contrast, low humane orientation cultures tend to focus on the self and individuals are relatively less willing to lend support (Powell et al., 2009). In addition, societies low in humane orientation tend to lack formal welfare institutions relative to societies that are higher in humane orientation (House et al., 2004). From a utility perspective, social support may be an especially potent resource within lower humane orientation cultures because it is not regularly met through expected societal policies and norms. Therefore, we predict that the negative relationship between social support and work-family conflict is likely to be stronger for lower humane orientation cultures than for higher humane orientation cultures.

> Hypothesis 9: Humane orientation moderates the relationship between work support and (a) WIF/(b) FIW such that the relationship is stronger for cultures lower on humane orientation relative to cultures higher on humane orientation.

At the same time, humane oriented cultures value altruism and generosity, and individuals within higher humane orientation cultures tend to provide help to others because it is an expected societal norm. In contrast, cultures lower in humane orientation view support of others as a boundary infraction and a threat to the status quo (House et al., 2004). Due to the great value placed on social support as a cultural norm within higher humane orientation cultures, the absence of support is likely to be detrimental, resulting in a pronounced negative relationship with work-family conflict. In contrast, the absence of social support is less likely to be detrimental within lower humane orientation cultures because social support is not viewed as a valued or expected resource.

> Hypothesis 10: Humane orientation moderates the relationship between work support and (a) WIF/(b) FIW in that the relationship is weaker for cultures lower on humane orientation relative to cultures higher on humane orientation.

Assertiveness

Assertive cultures typically champion achievement and materialism (House et al., 2004). Work-family conflict is detrimental to these values, as it is negatively associated with career

progress and objective career success (Hoobler, Hu, & Wilson, 2010), as well as family performance (Amstad et al., 2011). Such success outcomes are more important within highly assertive cultures compared to less assertive cultures. Social support is a resource that helps to reduce barriers to success, such as work-family conflict (e.g., Hammer et al., 2009). Thus, from a utility perspective, the role of social support for reducing work-family conflict is likely to be strong for cultures high in assertiveness, as support is an important resource for achieving valued success in both work and family. The association between social support and work-family conflict is likely to be attenuated in cultures low in assertiveness because in these cultures, success and achievement outcomes associated with work-family conflict are not as strongly valued.

> Hypothesis 11: Assertiveness moderates the relationship between work support and (a) WIF/(b) FIW in that the relationship is stronger for cultures higher on assertiveness relative to cultures lower on assertiveness.

Individuals from highly assertive cultures tend to promote progress, maintain control over their environment, and be aggressive and confrontational in their relationships with others, whereas individuals from less assertiveness cultures value loyalty, cooperation, and harmony (House et al., 2004). Social support opposes assertive values of independence and competition, rendering social support as a less valued resource for mitigating work-family conflict. Therefore, we expect that the negative relationship between social support and work-family conflict to be stronger in lower assertive cultures compared to higher assertive cultures.

> Hypothesis 12: Assertiveness moderates the relationship between work support and (a) WIF/(b) FIW such that the relationship is stronger for cultures lower on assertiveness relative to cultures higher on assertiveness.

Economic Context

National economic factors can also influence the work-family interface (Ollier-Malaterre et al., 2013; den Dulk et al., 2013). Relevant economic factors include economic country development and wealth stratification as well as unemployment rate. We focus on gross domestic product (GDP) per capita and country-level unemployment rate (Ollier-Malaterre, 2016). Not only are these metrics conceptually appropriate, but they are widely available, comparable cross-nationally, and commonly used metrics of national economic prosperity.

Economic context may alter perceptions and benefits of social support. When economic conditions are strained, individuals may need to work additional hours in order to meet family obligations. In addition, precarious employment may threaten financial and psychological well-being and increase work-family conflict (Ollier-Malaterre, 2016). Because there is a greater need to mitigate work-family conflict in poorer economic contexts compared to prosperous contexts, social support may be both more useful and more valued as a work-family resource for countries with poor economic indicators, compared to those with prosperous economic indicators.

Hypothesis 13: National GDP moderates the relationship between work support and (a) WIF/(b) FIW such that the negative relationship is stronger for countries with lower GDP relative to countries with higher GDP.

Hypothesis 14: National unemployment rate moderates the relationship between work support and (a) WIF/(b) FIW such that the negative relationship is stronger for countries with higher unemployment rates relative to countries with lower unemployment rates.

Method

Search Strategy

A keyword search was conducted on PsychINFO and ProQuest Dissertation databases for relevant studies published prior to August 2014. Keywords included "work-family conflict," "work-family balance," "work-family interference," "work-family spillover," and "support." We also searched using the terms work-nonwork and work-life conflict, interference, balance, and spillover to identify work-family conflict measures that were alternatively labeled. In addition to the articles found in the database search, we searched the reference sections of 13 published work-family meta-analyses (e.g., Allen, Herst, Bruck, & Sutton, 2000; Byron, 2005) and a cross-cultural work-family review paper to ensure the inclusion of non-U.S. studies (Shockley, Douek, & Marira, 2012). Efforts were also made to collect unpublished research by reviewing relevant conference programs from the past five years (*Academy of Management; Society for Industrial and Organizational Psychology; Work-Family Researchers Network; Work, Stress, and Health*). We also contacted known work-family scholars who conduct cross-national research to request unpublished data.

Eligibility Screening

The database keyword search yielded 1,713 articles and dissertations published through August 2014. An additional 490 articles were screened from the reference section of a cross-cultural work-family review paper (Shockley et al., 2012); 196 studies overlapped between the two sources. Reference lists from existing meta-analyses contributed an additional 201 articles. The unpublished data collected through emailing conference presenters and personal contacts yielded 216 potentially relevant studies, 30 of which were already identified in the published article searches. Our search yielded 2,390 total studies. Studies were determined eligible if they a) reported an effect size convertible to r, b) included a measure of directional work-family conflict, c) included a form of work or family support (i.e., organizational, supervisor, coworker, family, or spouse support), d) were written in the English language, and f) reported effect sizes separately for each country in the study. Studies were omitted from moderator analyses if country data was unavailable (e.g., Taiwan has no corresponding GLOBE scores).

Country was coded based on information in the study abstract or methods sections. If the country was not explicitly stated and all authors had the same country affiliation, authors' affiliation country was used as a proxy (19 studies, 64 effect sizes). If authors were from multiple countries or the country was unclear, the study authors were contacted for clarification. Measures of *WIF* and *FIW* were only included if the items specified

directionality and were operationalized consistent with Greenhaus and Beutell's (1985) definition; measures predominantly consisting of work-nonwork conflict and measures of bidirectional work-family conflict were excluded.

Support measures were included if they fit the study definition of support. Support was coded as work support if the support originated in the work domain and as family support if the support originated in the family domain.

To operationalize work support, all measures that assessed a source or type of work support were aggregated within studies, creating *combined work support.* Work support was coded into three forms: work support behaviors, work support perceptions, mixed work support behavior/perceptions. *Work support behaviors* measures assessed supportive actions (e.g., family supportive supervisor behaviors; Hammer et al., 2009). Examples of supportive behaviors include listening to problems, arranging schedules to accommodate work and family, providing advice, taking care of children, or helping with household tasks (e.g., Hammer et al., 2009; King et al., 2005; Shinn et al., 1989). *Work support perception* measures assessed perceptions of support quality or availability (e.g., perceived organizational support; Eisenberger et al., 1986). Items that referred to helping were considered perceptions unless tied to an action. For example, "my supervisor helped me balance work-family" is a perception item, but "my supervisor helped me to solve a problem" is a behavior item. *Work mixed support behavior/perception* measures included a combination of behavior and perception items. Work support was also coded into four sources: organizational, supervisor, coworker, and mixed supervisor/coworker support. *Organizational support* measures assessed support that was attributed to the organization or organizational climate (e.g., family supportive organizational perceptions; Allen, 2001). *Supervisor support* measures isolated support from managers or supervisors (e.g., family supportive supervision; Hammer et al., 2009), and *coworker support* measures assessed support from coworkers or colleagues (e.g., Hammer, Saksvik, Nytrø, Torvatn, & Bayazit, 2004). *Mixed supervisor/coworker support* measures assessed support from a combination of supervisors and coworkers. Finally, work support was coded into three types of support: instrumental, emotional, and mixed instrumental/emotional support. Consistent with previous definitions, *work instrumental support* was coded for measures that assessed the provision of tangible resources such as time or money from the work domain; the provision of information from the work domain was also considered work instrumental support (e.g., "I can depend on my supervisor to help me with scheduling conflicts if needed," Hammer et al., 2009). *Work emotional support* included measures that assessed the provision of social or emotional support from the work domain (e.g., "my supervisor listens to my problems," Hammer et al., 2009). We also coded for *work mixed instrumental/emotional support*, in which both instrumental and emotional support were assessed.

Similarly, *combined family support* consisted of all sources or types of family support aggregated within studies. Family support was coded into three different forms: *family support behaviors, family support perceptions, and family mixed support behaviors/ perceptions*. Each form was defined the same as form of work support, except that support originated from the family domain instead of the work domain. Family support was coded into two different sources: general family and spouse support. *General family support*

measures referred to family or multiple family members who provided support, and *spouse support* measures referred specifically to support provided by partners or spouses. Finally, family support was coded into three types of support: *family instrumental support, family emotional support, and family mixed instrumental/emotional support.* Definitions for type of support were identical to those for the work support type, with the exception that support emanated from the family domain.

Satisfaction with support, friend support, provided support, and support measures that were not clearly from either the work or family domains were excluded from all analyses because they did not fit the construct definitions. Measures that were not identifiable as a specific form, source, or type could not be coded and were therefore excluded from the relevant categorical moderator analyses. All WIF, FIW, and support measures were screened to ensure at least 75% of the items fit the definitions and inclusion criteria. For example, the work-family conflict scale by Kopelman, Greenhaus, and Connolly (1983) is based on eight items. Six of these items specifically acknowledged work and family domains whereas two items referred to general nonwork rather than family. Based on the 75% rule, we retained this measure for the current study.

Studies that reported effect sizes for individuals who traveled cross-country for work, or those focused on specific cultures within countries (e.g., Hispanics in the U.S.) were included in the categorical moderation analyses, but not the national context analyses. In the case of within-person designs (experience sampling, daily diary), only between-persons effect sizes were analyzed. Similarly, group-level effect sizes were not included. Correlations using other-report variables (e.g., spouse-reported family support) were not included. Crossover effect sizes in which one individual's WIF/FIW was correlated with another individual's self-reported support were not included. Studies were also removed if data were redundant with other eligible studies. In each of these cases, the study with the most information (i.e., largest N and/or greatest number of relevant effect sizes) was retained for the analysis.

A total of 177 studies (135 published, 34 dissertations/theses, 7 conference presentations, 1 unpublished data set, 233 independent samples, 1021 effect sizes) were analyzed. A total of 46 countries were represented in these samples, including: U.S. (107 studies), Canada (13 studies), New Zealand (7 studies), China (6 studies), India, Turkey, Finland, Israel, (5 studies each), Taiwan, Netherlands, Japan, U.K., Spain, Sweden, (4 studies each), Hong Kong, Australia, Italy, Iran, Singapore, Greece, South Korea (3 studies each), Norway, Malaysia, Belgium, Germany, Slovenia, Peru, and Brazil (2 studies each), and Albania, Lebanon, Ireland, Switzerland, Jordan, Austria, Denmark, France, Portugal, Argentina, Bolivia, Bulgaria, Chile, Estonia, Poland, Puerto Rico, Romania, and Ukraine (1 study each), helping to ensure cultural variance. Three samples focused on overseas workers or on Hispanics within the U.S.; these samples were not included in the national context moderation analyses.

Coding

All studies were independently reviewed by two of the authors. A total of 4,371 unique data points were extracted, including direction of work-family conflict, form of support

(behavior, perception, or mixed behavior/perception), source of support (organization, supervisor, coworker, mixed supervisor/coworker, general family, or spouse), type of support (instrumental, emotional, or mixed instrumental/emotional), sample size, effect size, reliabilities for work-family conflict and support measures, and sample country. Kappas and ICC(3)s indicated good agreement (0.87 to 0.99; Table 2). Discrepancies were resolved by reviewing the primary study and through discussion.

Moderator values were imputed for each country. All imputed values were entered by a research assistant and independently checked for accuracy by the first author. To assess *cultural factors*, values for in-group collectivism, humane orientation, and assertiveness were imputed for each effect size based on corresponding practiced country values derived from the GLOBE study (House, et al., 2004). GLOBE scores are set on a seven-point scale with higher values indicating more of the cultural value. To assess *economic factors*, real (adjusted for inflation) GDP per capita based on the purchasing power parity exchange rate and percent of labor force unemployed from The World Bank for the year of data collection were imputed. When a range of data collection years was reported, median year values were imputed. For example, if data were collected from 2006–2008, economic values for 2007 were imputed. If data were collected over two years (e.g., 2006–2007), economic values were imputed from the first year (e.g., 2006). If the study did not report the time in which data was collected, we imputed data that corresponded to two years prior to the publication date. For example, if a study was published in 2006, economic values from 2004 were imputed. This method has been used in other meta-analytic studies (e.g., North & Fiske, 2015).

Analysis

We followed Hunter and Schmidt (2015) procedures for random effects meta-analysis using sample size weighted correlations. Formulas delineated in Schmidt and Hunter (2015) were computed in Microsoft Excel and in R using the 'psychometric' package (Fletcher, 2010). If multiple subfacets of a variable (e.g., forms of WIF/FIW such as time, strain) or multiple time points were reported, we aggregated effect sizes by using formulas provided by Schmidt and Hunter (2015) that account for the intercorrelations among variables. Reliability composites were also computed in accordance with Schmidt and Hunter (2015) formulas; single item reliabilities were coded as missing data to be estimated using the artifact distribution method. Sub-samples reported within studies (e.g., men and women) were treated as separate studies as recommended (Borenstein, Hedges, Higgins, & Rothstein, 2009; Schmidt & Hunter, 2015).

For all main effect and moderator analyses, sample size (N), number of countries (k_c), number of studies (k_s), number of effect sizes (k_e), and percentage of effect sizes from the U.S. (%k_e U.S.) are reported. We first computed the meta-analytic correlation, corrected only for sampling error (i.e., bare bones meta-analytic correlation) and its associated 95% confidence interval. We then computed the meta-analytic correlation corrected for sampling error, measurement error in support, and measurement error in WIF/FIW (ρ) and its 95% confidence interval. The confidence interval for ρ is computed using the standard error, as recommended by Schmidt and Hunter (2014, p. 230). Specifically, we used the following

formula for the standard error of ρ, recommended for use in meta-analyses employing artifact distributions: $SE\overline{\rho}=[(\overline{\rho}/\overline{r}) \times SD\overline{r}]/\sqrt{k}$. Both the uncorrected and corrected meta-analytic correlations are presented to aid interpretation and provide the reader with a greater understanding of the construct-level relationship between social support and WIF/FIW. For significance testing, we interpret the corrected meta-analytic correlation and its confidence interval. A confidence interval that excludes zero indicates a statistically significant different from zero relationship. For reliability corrections, all reliability estimates were internal consistency reliabilities (Cronbach's alpha). Notably, corrections for Cronbach's alpha may underestimate reliability corrections and therefore our corrected coefficients may be slightly greater in magnitude in the population (Schmidt, Le, & Ilies, 2003). Corrections were made using artifact distributions, as 24 studies did not present reliability information for at least one measure of work-family conflict and/or social support (Schmidt & Hunter, 2015). Descriptive information for reliability distributions can be found in Appendix C. We examine variability of effect sizes based on the *Q* statistic (corrected for sampling and measurement error), the standard deviation of the meta-analytic correlation coefficient (SD_{rc}), the standard deviation of the corrected meta-analytic correlation coefficient (SD_{ρ}), and the 80% credibility interval. A statistically significant *Q* statistic indicates there is heterogeneity in study effect sizes that is attributable to true population differences. The SD_{rc} and $SD\rho$ values indicate the magnitude of variability in effect sizes. Specifically, each indicates the amount of variability in the effect size due to random effects in raw units (*r*); SD_{rc} indicates variability after accounting for sampling error, and *SDp* indicates variability after accounting for sampling and measurement error. To examine the dispersion of population effect sizes about the mean, we report the 80% credibility interval, which indicates the range in which 95% of true population effect sizes are expected to fall.

To test Hypotheses 3–6 and the Research Question, we divided support into distinct categories. First, we compared combined work support (all work support measures aggregated) and combined family support (all family support measures aggregated). Next, to test hypotheses regarding form of support, we identified six form of support categories: work or family support behavior, support perceptions, or mixed behavior/perceptions. For source of support analyses, we identified six sources of support: organizational support (e.g., supportive organizational perceptions), supervisor support, coworker support, mixed supervisor/coworker support, general family support, and spouse support. For type analyses we identified six types of support: work or family emotional support, instrumental support, and mixed support. Categorical moderator analyses were conducted by comparing the confidence intervals around each corrected meta-analytic effect size. Non-overlapping confidence intervals indicated significant moderation of the relationship between WIF or FIW and support (Schmidt & Hunter, 2015).

National context moderator analyses (culture and economic country values, Hypotheses 7–11) were tested using mixed effects meta-analytic regression using the metafor package in R (Viechtbauer, 2010). For each analysis, the country moderator was entered as a predictor of the study effect sizes. Country moderators were tested one at a time to allow for clear interpretation and to ensure moderating effects were not masked or suppressed due to collinearity among national context predictors. Because reliability information for all studies

was not available, we regressed each country moderator onto the uncorrected sample effect size. To interpret statistical significance of continuous moderation results, we focus on the unstandardized beta weight for the moderator and its associated z score and 95% confidence interval. A significant z score ($p < .05$) indicates a statistically significant moderator effect. We also interpreted the magnitude of the moderator effect by examining the proportion of total variability in effect sizes explained by the moderator (R^2).

Results

Main Effects

Meta-analytic main effect results are displayed in Table 3. Combined work support and combined family support significantly related to WIF ($\rho = -.33$, 95% CI = [−.36, −.30]; $\rho = -.15$, 95% CI = [−.18, −.12], respectively). Similarly, work support $\rho = -.19$, 95% CI = [−.21, −.17]) and family support ($\rho = -.22$, 95% CI = [−.26, −.18]) negatively related to FIW. Of the 36 corrected meta-analytic correlations between each specific operationalization of support and WIF/FIW, 33 were statistically significant ($p < .05$). Thus, the negative relationship between support and WIF/FIW is robust across different support forms, sources, and types. The only exceptions were the relationship between work instrumental support and WIF ($\rho = -.18$, 95% CI = [−.36, .00]), the relationship between family instrumental support and WIF ($\rho = -.03$, 95% CI = [−.14, .08]), and the relationship between work instrumental support and FIW ($\rho = -0.01$, 95% CI = [−.16, .15]).

All Q statistics are significant both before and after correcting for attenuation due to measurement error in the predictor and the criterion ($p < .05$), indicating all relationships had significant between-study variance. Further, there was substantial random effects variance ($SD_{rc} > .06$ for all analyses, average $SD_{rc} = .13$; $SD_{\rho} > .05$ for all analyses, average $SD_{\rho} = .15$) after accounting for sampling error. These results suggest substantial variability in true population effect sizes across studies and indicate moderators are likely present.

Support Form, Source, Type Moderators

Work vs. Family Support—We tested the categorical moderator hypotheses that involve different sources and types of support by comparing confidence intervals from the main effects analyses (Table 3). Hypothesis 1 predicted WIF more strongly relates to work support than to family support, and Hypothesis 2 predicted FIW more strongly relates to family support than to work support. Hypothesis 1 was supported. WIF more strongly related to work support than to family support, as indicated by non-overlapping confidence intervals around combined work support (95% CI = [−.36,−.30]) and combined family support (95% CI = [−.18,−.12]). Hypothesis 2 was not supported as the confidence intervals involving FIW overlapped (combined family support 95% CI = [−.26, −.18]; combined work support 95% CI = [−.21, −.17]).

Form of Support—We predicted WIF (Hypothesis 3a) and FIW (Hypothesis 3b) more strongly relate to support perceptions compared to support behavior. For WIF, the confidence intervals for work support behavior overlapped with work support perceptions (95% CI = [−.34, − .24] and 95% CI = [−.39, −.31], respectively), and the confidence

intervals for family support behavior overlapped with family support perceptions (95% CI = [−.16, −.06] and 95% CI = [−.29, −.07], respectively). Similarly, for FIW, the confidence intervals for work supportive behavior overlapped with work support perceptions (95% CI = [−.18, −.10] and 95% CI = [−.21, −.15], respectively), and the confidence intervals for family support behavior overlapped with family support perceptions (95% CI = [−.27, −.15] and 95% CI = [−.24, −.02], respectively). Thus, Hypotheses 3 a and 3b were not supported.

Source of Support—Hypotheses 4a and 4b predicted WIF and FIW more strongly relate to organizational support than to supervisor support, and Hypotheses 5a and 5b predicted WIF and FIW more strongly relate to organizational support than to coworker support. Consistent with social support theory, the confidence intervals for organizational support-WIF (ρ = −.38, 95% CI = [−.44, −.34]) did not overlap with supervisor support-WIF (ρ = −.26, 95% CI = [−.29,−.23]) nor with coworker support-WIF (ρ = −.18, 95% CI = [−.21, −.15]). Thus, Hypotheses 4a and 5a were supported. Although a similar trend in effect sizes was observed for FIW, only Hypothesis 4b was statistically supported (organizational support-FIW ρ = −.24, 95% CI = [−.27,−.21]; supervisor support-FIW ρ = −.13, 95% CI = [−. 15,−. 11]). Hypothesis 5b was not statistically supported (coworker support-FIW ρ = −.19, 95% CI = [−.23,−.15]).

Hypothesis 6a and 6b predicted WIF and FIW more strongly relate to family support than to spouse support. None of these hypotheses were supported for WIF (general family support ρ = −.15, 95% CI = [−.21, −.09]: spouse support ρ = −.14, 95% CI = [−.19, −.09]) or for FIW (general family support ρ = −.19, 95% CI = [−.26,−.12], spouse support ρ = −.23, 95% CI = [−.26,−.20]).

Type of Support—The research question focused on whether the relationships between WIF/FIW vary by type of support (instrumental or emotional). Confidence intervals for the relationships between WIF and work instrumental support (ρ = −.18, 95% CI = [−.36, .00]) and work emotional support (ρ = −.26, 95% CI = [−.34,−.18]) overlapped. Similarly, the confidence intervals for the relationships between WIF and family instrumental support (ρ = −.03, 95% CI = [−.14 .08]) and family emotional support (ρ = −.14, 95% CI = [−.21,−.07]) overlapped. Thus, there was no difference in the relationships between WIF and instrumental and emotional support. Results indicated FIW was not differentially related to instrumental and emotional support. The confidence intervals associated with work support overlapped (work instrumental support ρ = −.01, 95% CI = [−.16, .15]; work emotional support ρ = −.12, 95% CI = [−.21,−.03]) as did those associated with family support (family instrumental support ρ = −.16, 95% CI = [−.28, −.04]; family emotional support ρ = −.18, 95% CI = [−.29,−.07]).

National Context Moderators

Results for the hypothesized national context moderator analyses are displayed in Table 5. A summary of the moderator hypotheses and findings is presented in Table 6. Based on the utility perspective, we proposed that the relationship between WIF/FIW and work/family support is weakest in cultures high in in-group collectivism (Hypotheses 7a/7b), low in humane orientation (Hypotheses 9a/9b), and high in assertiveness (Hypotheses 11a/11b).

Based on the values perspective, Hypotheses 8a, 8b, 10a, 10b, 12a, and 12b proposed the respective opposing moderation trends. None of the hypothesized moderation relationships were significant ($p > .05$). Thus, Hypotheses 7a–12b were not supported.

Based on both the utility and the values perspectives, we proposed GDP (Hypotheses 13a and 13b) and unemployment (Hypotheses 14a and 14b) moderates the relationships between work/family support and WIF/FIW such that the relationships are stronger for countries with lower GDP and higher unemployment compared to countries with higher GDP and lower unemployment. In support of Hypothesis 14a, unemployment moderated the relationship between WIF and work support, such that the relationship is weaker for countries higher in unemployment compared to countries lower in unemployment ($b = -.02$, $p = .02$, $R^2 = .08$). None of the remaining hypothesized moderations were significant ($p < .05$).

Supplementary Analyses

Moderation of Cross-Domain Relationships—We limited our hypothesized national context moderation tests (Hypotheses 7a–14b) to work support-WIF and family support-FIW relationships, because they are theoretically stronger compared to cross-domain family support-WIF and work support-FIW relationships (Ford et al., 2007). However, the work-family interface is reciprocal, and cross-domain relationships (family support-WIF and work support-FIW) have been supported (e.g., Michel et al., 2011). Further, our results suggest cross-domain support relationships are comparable in magnitude to originating-domain support relationships for FIW. Cross-domain support relationships are also significant for WIF in our results. Due to theoretical and empirical support for the importance of cross-domain support relationships, we tested the cultural and economic values as potential moderators of the cross-domain relationships between WIF and combined family support and between FIW and combined work support. Out of the ten cross-domain moderator effects tested, none reached statistical significance ($p > .05$)[1].

Incremental Variance Analyses—The hypothesized categorical moderations (Hypothesis 3 - Hypothesis 6) tested whether support relationships differed by form, source, or type. Given that we found relatively few differences, one might assume diverse measures of social support are interchangeable. However, it may be that each measure has a similar bivariate relationship with WIF/FIW, but explains a unique portion of variance. Incremental variance would theoretically indicate that various aspects of social support are not redundant, but in fact are additive. Practically, incremental variance would show that multi-faceted interventions that target multiple components, sources, or types of support may be more efficacious for reducing WIF/FIW than a single target approach. On the other hand, a lack of incremental variance would indicate different aspects of support can substitute for one another and that support nuances are trivial both theoretically and practically, at least when examining relationships with WIF/FIW.

To investigate incremental variance, we entered meta-analytic correlations among social support variables, WIF, and FIW into a multiple regression (see Table 3 for WIF meta-

[1]We thank an anonymous reviewer for this suggestion.

analytic correlations, Table 4 for FIW meta-analytic correlations, and Table 7 for correlations among support variables)[1]. We used the R package 'psych,' which computes multiple regression analyses from a given correlation matrix (Revelle, 2016). We used the harmonic mean within each set of multiple regression correlations to compute sample size (Viswesvaran & Ones, 1995). Multiple regressions were computed separately for work and family support and for WIF and FIW, as there is strong theoretical and empirical evidence to suggest support from work and family domains are differentially associated with WIF and FIW (e.g., Frone et al., 1997).

Support form multiple regressions (see Table 8) showed work support behavior and perceptions each explained unique variance in WIF and in FIW. However, only family support perceptions explained unique variance in WIF, and only family support behavior explained unique variance in FIW. Nearly all sources of support (see Table 9) incremented one another, with the exception of coworker support predicting WIF ($p > .05$). With regard to support type (see Table 10), with one exception (work instrumental support did not increment work emotional support) instrumental and emotional support both explained incremental variance in WIF/FIW. As noted in Table 7, work instrumental and emotional support were highly correlated ($r = .73$).

Publication Bias and Outliers—To investigate the possibility of publication bias, we 1) examined the correlation between correlation coefficients and their associated sample size, 2) examined forest plots by sample size and publication status, 3) examined funnel plots, and 4) conducted trim-and-fill analyses. We used multiple methods in order to triangulate findings, allowing for stronger conclusions (Schmidt & Hunter, 2015). First, we calculated the Pearson correlation coefficient between all 1021 effect sizes and their corresponding sample sizes ($r = .01$, Schmidt & Hunter, 2015; Begg & Mazumdar, 1994). Because the correlation was near zero, we concluded there was no evidence of publication bias. Forest plots similarly showed little indication of publication bias, as effects were distributed about the mean effect size with greater variability for smaller sample size studies (Sutton, 2009). Forest plots for published and unpublished studies followed the same pattern.

Next, funnel plots showed no indication of publication bias, as the effect sizes were shaped roughly like a funnel, with more dispersion of effect size in studies with smaller sample sizes. Finally, trim-and-fill analyses were conducted as a sensitivity analysis to estimate the meta-analytic effect sizes if funnel plots were symmetrical (i.e., there is no evidence of publication bias; Duval & Tweedie, 2000; Sutton, 2009). All confidence intervals of the trim-and-fill estimates overlapped with the corresponding meta-analytic confidence intervals reported in the results, and estimated changes in meta-analytic effect sizes were generally small in magnitude (average change in meta-analytic $r = 0.01$, maximum absolute meta-analytic r change = .09; see Table 6). Thus, effect sizes estimated from the trim-and-fill were statistically equivalent to those reported in our results. However, seven effect sizes became statistically non-significant. Most of these were weak effect sizes with a small number of samples ($k < 33$ for six of the seven). In combination with our thorough search strategy, we conclude that the majority of our findings are robust to publication bias. Some caution should be taken when interpreting the meta-analyses with a small number of samples.

Finally, we examined the distribution of effect sizes and sample sizes to detect outliers using stem-and-leaf plots and descriptive statistics. Effect size distributions were leptokurtic but otherwise normal for both WIF (r = −.20, SD = .18, Minimum = −.86, Maximum = .49, Skewness = .18, Kurtosis = 1.52) and FIW (r = −.13, SD = .14, Minimum = −.61, Maximum = .50, Skewness = .66, Kurtosis = 2.86) with no discontinuous effect size outliers.

We also examined sample size distributions to identify large studies that may have had a substantial influence on the results. Sample size outliers may be especially influential in our moderation analyses, for which some countries are represented by only one or two samples. We identified two sample size outliers (Gan, Gan, Chen, & Zhang, 2014, N = 11,419, Chinese sample; Liberman, 2013, N = 8,646, U.S. sample). All analyses were re-calculated without the effect sizes from these two studies[2]. Most main effects conclusions and categorical moderator comparison conclusions remained the same. One categorical moderation result became non-significant; specifically, the confidence interval for WIF-organizational support and WIF-supervisor support overlapped (95% CI = [−.35, −.27] and 95% CI = [−.27, −.23], respectively). Removing sample size outliers resulted in several changes to the moderation analyses. Specifically, in-group collectivism (b = .05, p = .04, R^2 = .02), assertiveness (b = −.11, p = .03, R^2 = .05), GDP (b = −.00, p = .02, R^2 = .04), and unemployment (b = −.01, p = .01, R^2 = .05) each moderated the relationship between combined work support and WIF, and in-group collectivism moderated the relationship between work support and FIW (b = .05, p = .02, R^2 = .05). In all cases except GDP, the nature of the moderation aligned with the utility perspective (see Table 6). The relationship between work support and WIF was weaker in countries higher in in-group collectivism, and stronger in countries higher in unemployment, assertiveness, and GDP compared to countries on the opposite end of each value. Similarly, in line with the utility perspective, the association between work support and FIW was weaker in countries higher in in-group collectivism than in countries lower in in-group collectivism.

Discussion

The current meta-analysis provides the most comprehensive and in-depth examination of the relationship between support and work-family conflict to date. The current results provide greater clarity with regard to the relationship between support and work-family conflict by investigating the conditions under which support is more or less strongly related to work-family conflict. Social support varies by form, source, and type and occurs within various contexts, and yet researchers have not systematically investigated the impact of this variation for the work-family interface. Our study provides theoretical and empirical guidance as to what degree and under what contexts these factors are important to consider in research and practice efforts.

Key Support Form, Source, and Type Conclusions

Our results show that social support matters for work-family conflict, and that the relationships between support and work-family conflict are in many cases stronger than

[2]Full results can be obtained from the first author upon request.

previous meta-analytic estimates (Table 1), particularly when correcting for sampling and measurement error. Based on Cohen's (1992) criteria (i.e., an absolute value of .10 is considered as small, .30 as medium, and .50 as large), most of our observed effect sizes range from small to medium in magnitude, while most corrected effect sizes are medium in magnitude. Our findings overall highlight the important role that support from the workplace plays in helping individuals manage work-family conflict. In support of the domain specificity hypothesis, work support was more strongly associated with WIF than family support. Further, the effect size strongest in magnitude was that between organizational support and WIF ($r = -.31$, $\rho = -.38$). In contrast to the domain specificity hypothesis (Frone et al., 1992) and further underscoring the important role of the workplace, we found no significant difference in the confidence intervals associated with combined work support versus combined family support in relation to FIW. Thus, workplace and family support are comparably associated with FIW. This pattern of results aligns with those found in Byron's (2005) meta-analysis. Previous meta-analyses that have failed to find support for the domain specificity hypothesis (Mesmer-Magnus & Viswesvaran, 2006; Michel et al., 2011) had considerably fewer studies compared to the current meta-analysis.

No significant differences emerged when comparing correlations between WIF/FIW and support behaviors and perceptions. In the multiple regression analyses, work support perceptions were generally a stronger unique predictor of both WIF and FIW, although both work support perceptions and behaviors explained unique variance. Family support behaviors did not explain variance in WIF above and beyond family support perceptions, and family support perceptions did not explain variance in FIW above and beyond family support behavior. This pattern of results aligns with suggestions that support perceptions are not merely reflections of behaviors, but instead have distinct theoretical mechanisms that explain relationships with strains (Lakey & Cohen, 2000). In addition, though not significant, patterns across all findings tend to reflect social support theory (Cohen & Wills, 1985), which suggests broad support measures (perceptions) are more strongly associated with strain than are specific support measures (behaviors).

With regard to comparing broad versus specific sources of support, significant findings buttress social support theory. The relationship between organizational support and WIF was significantly stronger than the relationship between supervisor support and WIF than the relationship between coworker support and WIF. Similarly, the relationship between organizational support and FIW was significantly stronger than the relationship between supervisor support and FIW. These patterns held when examining both uncorrected and corrected coefficients, demonstrating that differences are not due to measurement error. Organizational support may play a stronger role because it is theoretically broader than individual sources of support. Individual sources may act as facets, or indicators, of broader organizational support perceptions. In support, a recent meta-analysis suggests supervisor and coworker support share substantial variance with perceived organizational support (corrected meta-analytic $r = .60$ and .47, respectively; Kurtessis et al., 2016).

While the significant differences that emerged were in line with social support theory, the pattern of results overall suggest that there are few differences across specific sources within each domain (work/family). Consistent with the social support and bandwidth-fidelity

perspectives (Cohen & Wills, 1985; Ones & Viswesvaran, 1996), differences may emerge if examining work-family conflict on an episodic basis rather than on levels-basis as was done in the primary studies that make up this meta-analysis. For example, in the event that a shift worker must miss a shift to meet family needs, coworkers are often critical sources of support (Lambert, Haley-Lock, & Henly 2012). An organization would need a shift worker to fulfill his/her shift regardless of the organization's support toward family needs, but a supportive coworker could pick up the shift, providing instrumental support that is needed to alleviate work demands and meet family demands. Lack of differences across sources may also be due to overlap between sources. For example, a worker who is a parent in a nuclear family may primarily think about support provided by his/her spouse when answering items about "family support." This may be particularly likely, given common criteria used for work-family studies (i.e., married with dependent children). Similarly, support provided by supervisors may most readily come to mind when answering questions about supportive organizations. However, we note that when combined into a multiple regression, most sources of support explained significant variability above and beyond one another. Thus, we conclude that although some support sources have similar relationships with work-family conflict, many sources of support have unique, significant effect above and beyond other within-domain sources.

When examining type of support, we found relatively small effects associated with emotional and instrumental support, even after correcting for measurement error. More emotional support from both the work domain and the family domain consistently related to less WIF and to less FIW. However, three of the four instrumental support relationships with WIF/FIW were non-significant. Despite this difference in significance, emotional and instrumental support relationships with WIF/FIW were not significantly different. This is perhaps due to the fact that instrumental and emotional support are empirically redundant constructs. Our data indicated both work and family emotional and instrumental support were strongly associated. It might be the case that emotional support and instrumental support occur simultaneously; that is, sources who provide emotional assistance more likely provide instrumental assistance which makes it harder to find differential effects and unique contributions of each type of support. It may also be that individuals are unable to distinguish between instrumental and emotional support when responding to items, despite their conceptual clarity. Again, differences might more readily emerge when examining more discrete forms of work-family conflict using a daily or episodic approach. The daily and episodic approaches reduce the amount of cognitive burden when reflecting on a single day or episode of conflict (Maertz & Boyar, 2011). By focusing on a single day or episode, individuals may more readily remember and conceptually disentangle types of support that were used to mitigate work-family conflict. In addition, such an approach allows us to investigate if the efficacy of support type differs based on the type of work-family conflict experienced. For example, because emotional support is targeted at emotions, it may be most effective for reducing strain-based conflict. In contrast, because instrumental support involves providing tangible resources to reduce conflict, it may be most effective for reducing time-based conflict. Given that there were not enough studies for us to investigate these possibilities, we encourage future research to incorporate different types of conflict

and use experience sampling to understand the full spectrum of how emotional and instrumental support may operate.

Key National Context Conclusions

After removing sample size outliers, four cultural moderators emerged as significant. Specifically, in-group collectivism, assertiveness, GDP, and unemployment moderated combined work support-WIF relationships. In-group collectivism also moderated the relationship between combined work support and FIW after removing sample size outliers. Interestingly, none of the remaining contextual variables moderated relationships between support and FIW. Further, national context moderators explained an average of 1% variance in the relationships between support and FIW across all analyses, despite substantial true population variability in these effect sizes. In contrast, national context moderators explained an average of 5% variance in relationships between support and WIF. Overall, our results suggest support-WIF relationships may be more susceptible to cultural and economic influences than support-FIW relationships. Theoretically, this may indicate support resources are universally transferable, with an equivalent, moderate relationship to FIW, regardless of national context. The results also highlight the need to investigate other potential sources of contextual variation. For example, perhaps organizational level policies such as the availability of paid sick leave act in concert with social support to help individuals better manage FIW.

Although culture did not uniformly emerge as a significant moderator for the relationship between support and work-family conflict, in the cases in which it was significant, the pattern of the moderation showed support for the utility perspective. Derived from the social support literature, the utility perspective posits that social support is most strongly beneficial in circumstances in which it is needed or perceived as useful (Cohen & Wills, 1985). Within in-group collectivist societies, the concept of social support is viewed as a burden to social relationships and harmony, consequently decreasing its perceived utility as a resource (Kim et al., 2008). Consistent with this perspective, social support from work was more weakly related to WIF within higher in-group collectivism countries relative to lower in-group collectivism countries. Highly assertive countries tended to have stronger relationships between support and work-family conflict. In line with the utility perspective, the stronger family support-WIF relationship may occur because social support is useful for attaining culturally valued achievement at work and/or in the home.

With regard to economic contextual variables, the moderation effects were less consistent. We found countries with higher rates of unemployment had stronger work support-WIF relationships compared to countries lower in unemployment. The unemployment findings align with the utility and value congruence perspective. Countries that are high in unemployment are characterized by job insecurity and high workload expectations (Olliere-Malaterre & Foucrealt, 2016). In these conditions, social support may be most valued, needed or helpful for mitigating work-family conflict. Contrary to our hypotheses, GDP results indicated that countries higher in GDP had stronger work support-WIF relationships compared to countries lower in GDP. It may be that GDP results reflect priorities that are associated with income. Scholars have suggested that work-family conflict is a privileged

phenomenon applicable primarily to middle-to-upper class workers (Agars & French, 2016). For low GDP societies, individuals may be concerned with meeting basic survival needs (food, shelter) as opposed to higher-level needs (meeting work and family obligations). Consequently, social support may not be perceived as a helpful or valued resource in low GDP societies.

Theoretical Implications

Our research has several theoretical implications for the social support and work-family literatures. We developed hypotheses across support form, source, type, and national context based on one parsimonious theoretical perspective: social support theory. This holistic and thorough investigation of multiple forms, sources, and types of support brings the literature closer to an overarching theoretical framework that can be used to guide primary research and intervention efforts. This is especially important, given limited theoretical consideration given to the nuanced nature of social support in the current literature (for an exception, see Kossek et al., 2011). We find social support theory – which implies broad sources of support are more efficacious than specific sources of support – is a fruitful theoretical perspective on which to base research and intervention efforts. Indeed, organizational support had the strongest relationship with WIF over all other forms of specific support from the work or from the family domains and was no different in magnitude than the family support variables in relation to FIW.

Our meta-analysis also provides a rigorous and thorough test of the domain specificity theory, which proposes work support is most strongly related to WIF, whereas family support is most strongly related to FIW. Although this theory guides much of the work on work-family conflict and correlates, previous meta-analyses have provided only partial or under-powered tests (e.g., Byron, 2005; Michel et al., 2011). Our meta-analysis indicates the domain specificity hypothesis holds for WIF, while work and family support demonstrated equivalent relationships with FIW. This shows that work support is not only a potent resource for *both* directions of conflict, but also highlights an important boundary condition for the domain specificity hypothesis.

We also advance theory by systematically examining type of support as a moderator of the support-work-family relationship. Our results underscore that the instrumental versus emotional distinction warrants more theoretical development. The non-significant differences may be due to the lack of conceptual precision associated with assessing average levels of work-family conflict over a non-specific period of time, which has been the dominant approach in the work-family literature (Maertz & Boyar, 2011). In contrast, we suggest the episodic approach to work-family conflict may be useful to developing our understanding with regard to the specific types of support needed as conflicts occur. For example, in contrast to the current findings, based on investigation of specific episodes of work-family conflict, Shockley and Allen (2015) found that instrumental support was a more dominant predictor of work-family conflict decisions than was emotional support. As Shockley and Allen (2015) note, emotional support may be less meaningful for a single episode of conflict but becomes more important as work-family conflict accumulates across time. The results of the current study help highlight the need for more research that contrasts

average versus episodic work-family conflict in order to advance our theoretical understanding of which sources of social support are most beneficial under which conditions.

Our study speaks to whether supportive perceptions and behaviors have comparable and incremental relationships with work-family conflict. Theoretical relationships between support behaviors, perceptions, and strains have been examined for decades (e.g., Barrera, 1986; Harber et al., 2007; Thoits, 1995). Two competing perspectives have emerged. One suggests support behaviors lead to the cultivation of supportive perceptions, which in turn reduce strain (e.g., Barrera, 1989; House et al., 1988). A second suggests support behaviors and perceptions operate by different mechanisms, such that behaviors are particularly effective in reducing strain when they provide the necessary resources while perceptions positively color every day experiences, reducing the occurrence and perceptions of strain (e.g., Lakey & Cohen, 2000). Our results support the latter perspective. Support behavior remained a significant correlate of work-family conflict after controlling for support perceptions in three out of four multiple regressions, suggesting the relationship between support behaviors is not fully explained by support perceptions (Baron & Kenny, 1986). These findings instead lend support to the idea that supportive behaviors and perceptions influence strain outcomes through distinct mechanisms (e.g., Lakey & Cohen, 2000). Consistent with this theory, support behaviors may be most strongly associated with work-family conflict when those behaviors provide the resources necessary to reduce a particularly troublesome form of conflict. For example, supervisors who allow for flexible scheduling may be most helpful to employees who encounter frequent time-based conflicts. In this same instance, supportive perceptions would not necessarily be helpful in and of themselves. This is an important theoretical contribution to understanding why and when different forms of social support may shape the work-family interface. Specific episodes or types of conflict may be most strongly associated with supportive behaviors, while more general perceptions of work-family conflict may be most strongly associated with supportive perceptions.

Although no significant differences were found, trends across our analyses suggest that supportive perceptions might be more important for the experience of work-family conflict than support behaviors. Theoretically, support behaviors are thought to shape support perceptions (Barrera, 1986; Kurtessis et al., 2016). Support perceptions are therefore a more proximal predictor of strain, such as work-family conflict, relative to support behaviors. In line with this perspective, our study found relatively strong correlations between support perceptions and supportive behaviors. Support perceptions may demonstrate stronger relationships with work-family conflict than support behaviors, because support perceptions are more broadly applicable across a wide variety of work-family conflicts. In contrast, supportive behaviors may only be helpful for specific work-family conflict events. Finally, it may be that supportive behaviors only capture one piece of the support puzzle, omitting the extent that behaviors are perceived as high quality, or helpful (Rini, Dunkel, Schetter, Hobel, Glynn, & Sandman, 2006). For example, Hammer and colleagues (2011) found evidence of employee backlash for a family supportive supervision intervention, and Kelly et al. (2014) showed evidence that the same intervention was perceived as most beneficial for those with high levels of work-family conflict pre-intervention. Given the incremental variance patterns

found in the current data, this latter explanation seems likely. Future studies teasing out these alternative explanations would be especially helpful for advancing both the work-family and social support literature, as well as informing social support intervention strategies.

In an effort to build a cohesive theoretical understanding of national context, we developed hypotheses based on a strong inferences paradigm in which different theoretical perspectives were pitted against one another (the utility perspective, Cohen et al., 2000; the values perspective, Oishi et al., 1999ba; 1999b). By testing competing theoretical perspectives, we advance theoretical insights with regard to why and to what degree national context matters for social support and the work-family interface. This strong theoretical paradigm, paired with a holistic and thorough inclusion of multiple national context moderators brings the literature closer to an overarching theoretical framework that can be used to guide primary research and intervention efforts. Although some caveats were identified (e.g., GDP per capita), significant findings for WIF tended to support the utility perspective, which posits social support is most strongly related to work-family conflict in national contexts that perceive social support as beneficial or useful (Cohen & Wills, 1985). Moving forward, the utility perspective can be used to frame primary cross-national studies and to inform cross-national theory development within the support and work-family literatures. In contrast, limited support was found for the values perspective, which has been used to explain national context moderation within well-being research (Oishi et al., 1999). Given that most results primarily did not align with the values perspective, we conclude that this perspective may be limited to well-being relationships and has limited use for predicting national context moderation for work-family conflict relationships.

Practical Implications

Our results indicate the relationship between social support and WIF/FIW is 26.5% stronger, on average, than previous meta-analytic estimates. Similarly, relationships corrected for sampling and measurement error are 39.0% larger than previous estimates. This finding highlights and strengthens the practical importance of social support as a resource for mitigating work-family conflict. More specifically, our results show support is most strongly associated with work-family conflict when it originates in the workplace and is broad in scope. Practice efforts aimed at increasing support as a means for reducing work-family conflict should therefore focus on developing broad perceptions of workplace support. For example, interventions could target work-family friendly norms and attitudes in an effort to develop family supportive organizational perceptions (Allen, 2001). Workplaces can also train supervisors or coworkers to be supportive of one another’s family needs, although focusing on these specific sources of support may yield relatively smaller effects. Indeed, research shows that family-friendly supervisor training interventions improve perceptions of control and support, although direct effects on work-family conflict are small in magnitude (Kelly et al., 2014). Sample supportive behaviors might include helping workers to re-arrange their schedules to accommodate work and family (Hammer et al., 2009; Thompson et al., 1999), providing advice, or providing a sympathetic listening ear when family issues arise (Hammer et al., 2006; Shinn et al., 1989).

Although there were no statistically significant differences among forms or types of support, trends across the analyses suggest fostering supportive perceptions and either emotional support or a combination of emotional and instrumental support are most strongly associated with reduced work-family conflict. Previous research suggests supportive perceptions and emotional support are closely tied to relationship quality (Kaul & Lakey, 2003; Sullivan, Pasch, Johnson, & Bradbury, 2010). Policies and practices designed to enhance relationship quality in the workplace (e.g., teambuilding, social gatherings) may therefore also potentially alleviate work-family conflict.

Supportive intervention efforts to reduce WIF may be especially effective in the national contexts empirically identified in our study, namely national contexts that are low in in-group collectivism, high in assertiveness, or have a high unemployment or GDP. Moreover, our results suggest contexts in which support is needed or perceived as useful, such as highly competitive or interdependent occupations, may be especially likely to benefit from support interventions. On the other hand, support resources in relation to FIW are less variable across national contexts, suggesting such interventions might be equally effective, regardless of cultural values or national economic status.

Limitations and Recommendations for Future Research

Our study brings to light several limitations with the primary literature base that merit future research attention. First, we imputed values for national context, using country as a proxy. Research has found considerable heterogeneity of cultural values within countries (Fiske, 2002), and certainly economic prosperity is no different. The use of self-reports would likely yield stronger relationships than those found in the present study. Work-family research that directly assesses cultural values is rare, and directly measured economic factors are typically incomparable across studies. Despite this limitation, our imputed values approach allowed us to examine national context in a way that maximized both inclusivity and comparability. Future research based on direct measures is needed to supplement the findings of the current study.

As in all meta-analytic investigations, our analyses assume concepts are psychometrically comparable across all samples. The variables included in the current study are perceptual in nature; psychometric properties may therefore vary across national context. Primary studies of cross-national work-family research do not consistently test for measurement invariance (Shockley et al., 2017). Measurement invariance demonstrates statistically whether items on a measurement instrument display similar psychometric properties to their latent variables across different samples (Little, 1997). We highly recommend moving forward that researchers test measurement invariance assumptions when using primary studies to investigate national context as a moderating factor for the work-family interface.

The effect sizes included in our study are primarily cross-sectional. Consequently, we were unable to run meta-analyses to examine temporal precedence. Theoretically, it is typically assumed that social support predicts work-family conflict (e.g., Kossek et al., 2011). However, it may also be that levels of work-family conflict act as a signal, increasing perceptions of support from work and family (Spence, 1973). It may also be that individuals are more likely to elicit support when they are experiencing increased levels of work-family

conflict (Barrera, 1986). Given that our meta-analytic correlations were all negative, it is theoretically unlikely that increased work-family conflict elicits increases in supportive behaviors. In addition, the two studies that examined lagged relationships in which WIF/FIW predicted support found primarily small, non-significant associations (Westman, Etzion, & Gattenio, 2008; Thompson, Jahn, Kopelman, & Prottas, 2004). Based on this data it would seem that the assumed directionality of social support predicting work-family conflict is most likely. However, given the limited number of lagged studies examining both directions, we believe additional research is imperative to fully address this question.

Our study was also limited in that we examined emotional and instrumental support, but not informational and appraisal support. Informational and appraisal support are distinct types of support (e.g., Cohen & Wills, 1985; Barrera, Sandler, & Ramsay, 1981) that have clear relevance for the work-family interface. For example, informational support regarding local child care options or a coworker's reappraisal of a demanding work task may each help to reduce work-family conflict. Only two studies in the current meta-analysis examined informational support (Gaitley, 1996; Stoner, 2008) and none examined appraisal support. Indeed, the small number of studies that separate emotional and instrumental support suggests a reliance on generic support measures that fail to recognize conceptually distinct facets of support. Moving forward, we encourage researchers to think clearly about the specific types of support that are relevant for their research question, and to use precise measures in order to make clear theoretical inferences regarding which types of support predict work-family conflict. In addition, we suggest researchers examine both informational and appraisal support, as it is not clear to what extent these types of support may decrease work-family conflict.

Theoretical frameworks used to guide national context moderation hypotheses proposed that the strength of the support-work conflict relationship differed due to either need/perceived benefits or value of support. However, the studies included did not measure these explanatory mechanisms, and therefore we were unable to directly test them. Primary studies can expand on our work by directly testing the needs and/or values perspective by measuring individuals' perceived importance, or salience, of support across cultures and implications of this salience for work and family outcomes. Future research might also examine cross-cultural differences in supportive behaviors enacted by individuals such as supervisors and spouses using daily diary or qualitative designs. Relatedly, national context characteristics are often correlated, making it difficult to interpret why differences emerge across countries. For example, the GLOBE study finds in-group collectivism and economic indicators such as GDP per capita are strongly and negatively correlated (House et al., 2004). Given their empirical overlap, it is unclear which national context characteristic might be driving differences. Research that includes proposed mechanisms as we elaborated upon here would help to disentangle confounded explanations. In addition, research that purposefully samples countries to juxtapose national context characteristics would be helpful for teasing apart confounded explanations. As argued in other recent reviews (Shockley, et al., 2017), this is a much-needed area for future research within the work-family field in order to fully understand why and when national context differences may emerge.

Our meta-regression moderation analyses also have important limitations. Some countries were represented by only one or two samples (e.g., Lebanon, Chile, Albania) and some moderation analyses had a relatively small number of samples (50–59). Consequently, these analyses are underpowered, susceptible to outliers, and may yield Type I errors and inflated estimates of variance explained by the national context moderators (Schmidt & Hunter, 2015). To mitigate these concerns, we presented results with and without outliers. Because our analyses are underpowered and results differed across these analyses, we encourage researchers to interpret the results with caution. This limitation is due to small numbers of non-U.S. samples in the existing literature. We suggest continued research that spans a variety of non-U.S. countries, so that future meta-analyses may rigorously test cross-national moderation.

Finally, our meta-analysis presented effect sizes corrected for sampling and measurement error. However, other potential sources of error variance were not accounted for, such as range variation (Schmidt & Hunter, 2015). Although we did not theoretically expect any systematic direct or indirect range variation, it is plausible that some samples may have truncated or enhanced variability in work-family conflict. For example, work-family conflict is associated with organizational norms and policies (Butts, Casper, & Yang, 2013), and individuals within an organization tend to be homogeneous in terms of disposition and values (Schneider, Goldstein, & Smith, 1995). Therefore, a sample across organizations may have more heterogeneity in work-family conflict than a sample from within a single organization. We are unaware of empirical evidence to suggest variability of work-family conflict systematically differs by population or sample. However, given that many initiatives to reduce work-family conflict are blanket organizational or national policies and practices (e.g., organization-wide supervisor support training; Hammer et al., 2011), the question is worthy of future investigation.

Conclusion

Decades of research show a relationship between social support and work-family conflict (e.g., Ford et al., 2007). Using meta-analysis, we found that more social support emanating from the work domain consistently relates to less WIF and to less FIW. Moreover, we find that the magnitude of relationships between social support and work-family conflict vary as a function of social support domain, form, source, type, and national context.

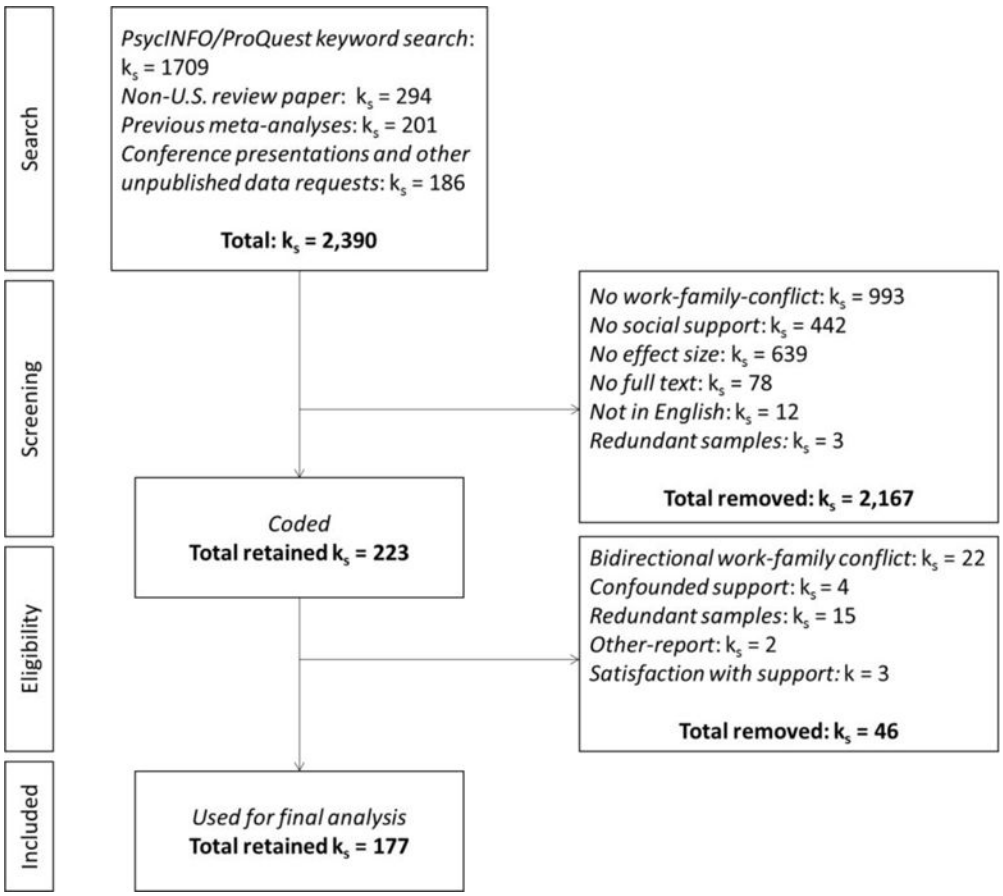
Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

The authors would like to thank our research assistants Lavonsky Hawthorne, Jenna Lyn Roman, Christina Barnett, Dylan Reeves, and Pamela Smith for their assistance in gathering data and creating materials for this meta-analysis. This research was supported in part by the Sunshine Education and Research Center at the University of South Florida. The Center is supported by Training Grant No. T42-OH008438 from the Centers for Disease Control and Prevention/National Institute for Occupational Safety and Health (NIOSH).

Appendix A



PRISMA Diagram of the Meta-Analysis Screening Process

Note. k_s = number of studies. Confounded support = support included friend/peer support or included both work and family support in one measure.

Appendix B Studies Included in the Meta-Analysis

Studies Included in the Meta-Analysis

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Appendix C

Reliability Distribution Descriptive Statistics

	R_{xx}			R_{yy}		
Meta-Analytic Relationship	***N***	***M***	***SD***	***N***	***M***	***SD***
WIF and Support						
Combined Work Support	178	.82	.12	191	.71	.21
Organizational Support	62	.85	.07	62	.78	.15
Supervisor Support	97	.84	.10	98	.87	.07
Coworker Support	54	.80	.16	43	.84	.11
Mixed Supervisor/Coworker Support	16	.79	.09	17	.82	.13
Instrumental Support	10	.85	.06	10	.80	.11
Emotional Support	21	.86	.08	21	.80	.18
Mixed Instrumental/Emotional Support	146	.82	.12	134	.75	.16
Support Behaviors	39	.83	.11	41	.80	.14
Support Perceptions	110	.82	.14	96	.78	.15
Mixed Support Behavior/Perception	36	.85	.10	38	.83	.09
Combined Family Support	72	.81	.12	71	.80	.16
General Family Support	40	.83	.10	40	.82	.09
Spouse Support	36	.78	.13	34	.82	.17
Instrumental Support	22	.78	.15	20	.84	.13
Emotional Support	24	.83	.09	22	.86	.13
Mixed Instrumental/Emotional Support	38	.82	.11	38	.85	.08
Support Behaviors	21	.86	.06	21	.85	.11
Support Perceptions	22	.78	.10	19	.80	.14
Mixed Support Behavior/Perception	26	.81	.15	26	.80	.10
FIW and Support						
Combined Work Support	110	.80	.10	140	.71	.21
Organizational Support	44	.80	.09	45	.80	.14
Supervisor Support	68	.78	.11	71	.87	.08
Coworker Support	27	.79	.11	28	.82	.11
Mixed Supervisor/Coworker Support	16	.79	.09	17	.82	.13
Instrumental Support	8	.84	.04	8	.80	.11
Emotional Support	14	.77	18	14	.85	.09
Mixed Instrumental/Emotional Support	89	.79	.09	93	.77	.15
Support Behaviors	28	.78	.10	29	.77	.14
Support Perceptions	63	80	.09	66	.79	.14
Mixed Support Behavior/Perception	27	.77	.13	29	.83	.09
Combined Family Support	58	.78	.11	58	.80	.16
General Family Support	35	.79	.12	35	.83	.07
Spouse Support	26	.77	.08	25	.82	.19
Instrumental Support	15	.76	.15	13	.86	.08
Emotional Support	17	.79	.14	17	.89	.06
Mixed Instrumental/Emotional Support	34	.77	.10	34	.85	.09

	R_{xx}			R_{yy}		
Meta-Analytic Relationship	***N***	***M***	***SD***	***N***	***M***	***SD***
Support Behaviors	16	.77	.08	16	.84	.12
Support Perceptions	18	.76	.08	16	.83	.10
Mixed Support Behavior/Perception	21	.79	.15	21	.80	.10

Note. R_{XX} = Coefficient alpha for WIF/FIW. R_{yy} = Coefficient alpha for support. *N* = Number of reliability coefficients reported. *M* = Mean. *SD* = Standard deviation.

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Public Significance Statement

This study shows social support is associated with less conflict between work and family (work-family conflict). The results suggest support from work may be more helpful for reducing work-family conflict than family support, particularly employee perceptions that their organization is supportive. Support may be most important for reducing work-to-family conflict in collectivist or assertive cultures, or countries that have high unemployment rates; however, support may be universally helpful for reducing family-to-work conflict.

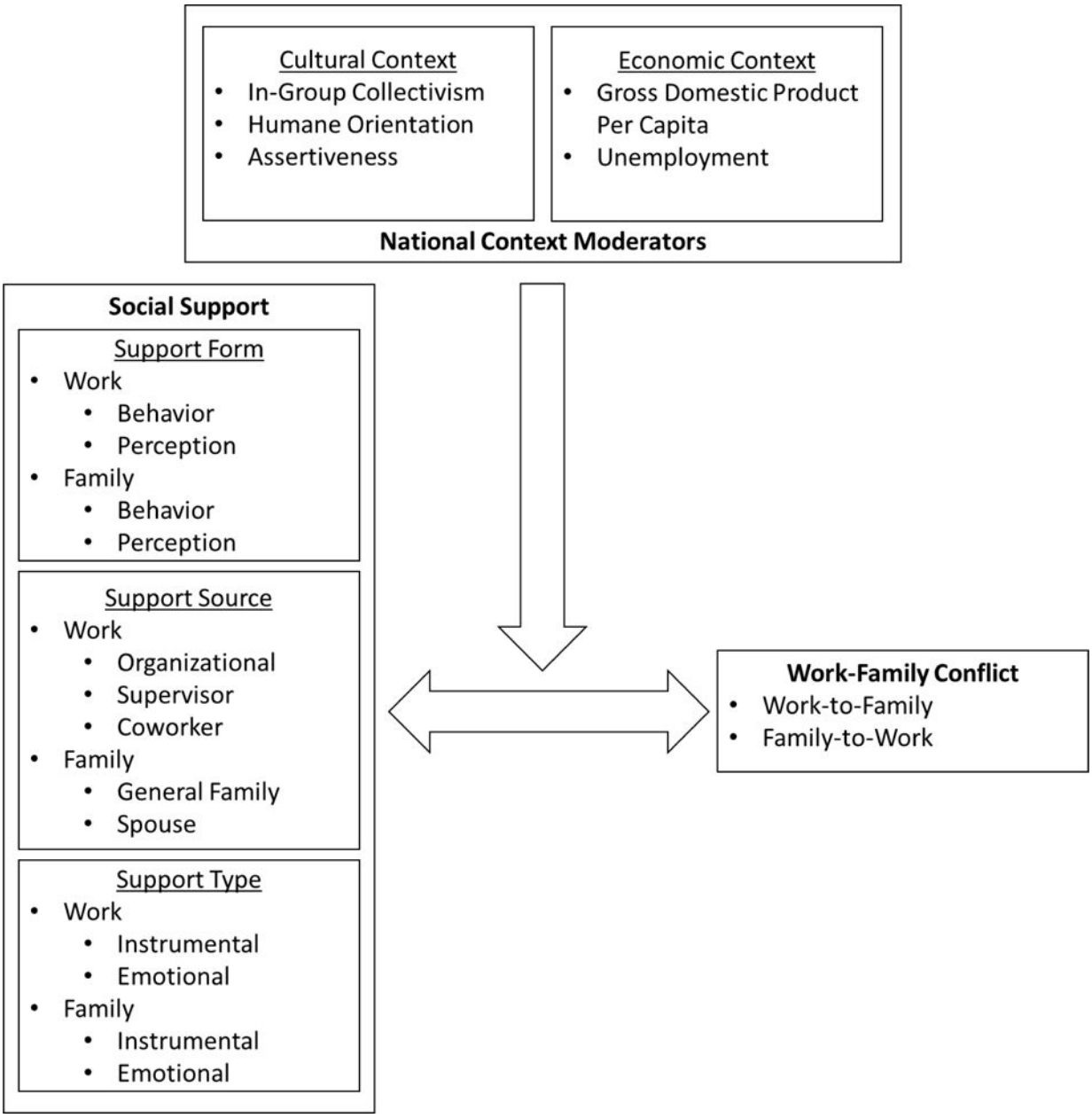

Figure 1.
Model displaying study hypotheses

Table 1

Previous Meta-Analyses of Support and Work-Family Conflict

	Mesmer-Magnus & Viswesvaran, 2005			Byron, 2005			Michel et al., 2009			Kossek et al., 2011			Ford et al., 2007			Mesmer-Magnus & Viswesvaran, 2006			Michel et al., 2011			Current Study		
Variables	**r**	**ρ**	**k**	**r**	**ρ**	**k**	**r**	**ρ**	**k**	**r**	**ρ**	**k**	**r**	**ρ**	**k**	**r**	**ρ**	**k**	**r**	**ρ**	**k**	**r**	**ρ**	**k**
Support with WIF																								
Combined Work	−.14	−.16	5	NR	−.19	17	−.23	NR	55				−. 23	−.27	48							−.25	−.33	215
Organizational										−.22	NR		−.21	−.26	11	−.19	−.24	5	−.25	−.30	11	−.31	−.38	92
Supervisor										−.15	NR		−.23	−.26	16	−.17	−.19	7	−.19	−.22	31	−.23	−.27	127
Coworker													−. 22	−.28	1	−.10	−.11	2	−.21	−.25	15	−.14	−.18	55
Work Instrumental																						−.14	−.18	10
Work Emotional																						−.21	−.26	22
Work Behavior																						−.23	−.29	68
Work Perception																						−.28	−.35	139
Combined Family				NR	−.11	14	−.13	NR	38										−.15	−.17	19	−.12	−.15	74
General Family																						−.12	−.15	42
Spouse																.06	.07	4	−.08	−.10	15	−.11	−.14	36
Family Instrumental																						−.02	−.03	22
Family Emotional																						−.12	−.14	24
Family Behavior																						−.09	−.11	23
Family Perception																						−.14	−.18	21
Support with FIW																								
Combined Work	−.02	−.02	5	NR	−.12	17	−.09	NR	37													−.14	−.19	148
Organizational																−.08	−.10	4	−.11	−.14	9	−.18	−.23	72
Supervisor																−.07	−.08	6	−.09	−.11	25	−.11	−.14	98
Coworker																.00	.00	2	−.11	−.14	13	−.15	−.19	28
Work Instrumental																						−.00	−.01	8
Work Emotional																						−.10	−.12	14
Work Behavior																						−.11	−.14	56
Work Perception																						−.14	−.18	93

	Mesmer-Magnus & Viswesvaran, 2005			Byron, 2005			Michel et al., 2009			Kossek et al., 2011			Ford et al., 2007			Mesmer-Magnus & Viswesvaran, 2006			Michel et al., 2011			Current Study		
Variables	**r**	**ρ**	**k**	**r**	**ρ**	**k**	**r**	**ρ**	**k**	**r**	**ρ**	**k**	**r**	**ρ**	**k**	**r**	**ρ**	**k**	**r**	**ρ**	**k**	**r**	**ρ**	**k**
Combined Family				NR	−.17	14	−.17	NR	29				−. 17	−.21	23				−.09	−.11	21	−.17	−.22	53
General Family																						−.15	−.19	35
Spouse																−.14	−.17	2	−.14	−.16	15	−.18	−.23	21
Family Instrumental																						−.13	−.16	15
Family Emotional																						−.15	−.18	17
Family Behavior																						−.16	−.20	29
Family Perception																						−.10	−.13	17
End Date Data Collection	2003*			2002			2005*			April 2010			2005*			2003*			2005*			August 2014		

Note. Number of effect sizes associated with each effect is presented in parentheses.

*End date data collection was not explicitly stated. We inferred end date based on the studies included in the meta-analysis. Combined SC = Combined supervisor/coworker support. NR = Not reported.

Table 2

Inter-Rater Agreement Statistics

Number of Data Points	Data Point Type	Kappa	ICC(3)
326	Sample size		0.97
1021	Effect size		0.88
473	Support form	0.87	
473	Support source	0.94	
473	Support type	0.87	
473	Support reliability	0.95	
456	WFC direction	0.97	
456	WFC reliability	0.98	
220	Country	0.99	
4371	Total data points extracted		

Table 3

Hypothesized Main Effects Results for WIF and Support

						Central Tendency Indicators					Random Effects Variability Indicators			
	N	k_e	k_s	k_c	% k_e U.S.	*r*	*SE*	95% CI_r	ρ	95% CI_ρ	80% CrI	SD_{rc}	SD_ρ	*Q*
Combined Work Support	104171	214	162	45	44.65%	**−.25**	.01	[−.27, −.23]	**−.33**	[−.36, −.30]	[−.58, −.09]	.16	.19	3031*
Organizational Support	36726	90	64	31	51.11%	**−.31**	.02	[−.35, −.27]	**−.38**	[−.44, −.34]	[−.69, −.08]	.20	.24	1847*
Supervisor Support	66703	128	95	36	46.09%	**−.22**	.01	[−.25, −.20]	**−.26**	[−.29, −.23]	[−.45, −.08]	.13	.15	1301*
Coworker Support	33799	55	40	24	34.54%	**−.14**	.01	[−17, −.12]	**−.18**	[−.21, −.15]	[−.31, −.04]	.10	.10	320*
Mixed Supervisor/Coworker Support	16873	33	26	14	33.33%	**−.26**	.03	[−.32, −.19]	**−.32**	[−.40, −.24]	[−.60,−.03]	.19	.22	670*
Instrumental Support	3233	10	10	3	80.00%	**−.14**	.07	[−.29, −.01]	**−.18**	[−.36, .00]	[−.52, .16]	.23	.27	173*
Emotional Support	10163	22	21	10	47.48%	**−.21**	.03	[−.28, −.15]	**−.26**	[−.34, −.18]	[−.49, −.04]	.15	.18	266*
Mixed Instrumental/Emotional Support	86506	182	133	45	43.72%	**−.25**	.01	[−.27, −.23]	**−.32**	[−.35, −.29]	[−.57, −.08]	.16	.25	2552*
Support Behaviors	23609	67	40	31	40.30%	**−.23**	.02	[−.27, −.20]	**−.29**	[−.34, −.24]	[−.51, −.07]	.15	.17	589*
Support Perceptions	55239	139	98	44	47.48%	**−.28**	.01	[−.31, −.25]	**−.35**	[−.39, −.31]	[−.60, −.10]	.17	.20	1858*
Mixed Support Behavior/Perception	31358	43	38	17	41.86%	**−.19**	.02	[−22, −.14]	**−.22**	[−.27, −.17]	[−.45, −.00]	.15	.17	760*
Combined Family Support	38688	74	66	20	52.70%	**−.12**	.01	[−.15, −.09]	**−.15**	[−.18, −.12]	[−.33, .02]	.12	.14	549*
General Family Support	14459	42	40	12	54.76%	**−.12**	.02	[−.17, −.08]	**−.15**	[−.21, −.09]	[−.36, .07]	.15	.17	332*
Spouse Support	26500	36	30	15	50.00%	**−.11**	.02	[−.15, −.07]	**−.14**	[−.19, −.09]	[−.32, .04]	.12	.14	368*
Instrumental Support	8478	22	18	12	40.91%	−.02	.04	[−.09, .05]	−.03	[−.14, .08]	[−.29, .23]	.17	.20	249*
Emotional Support	8375	24	21	10	50.00%	**−.12**	.03	[−.19, −.06]	**−.14**	[−.21, −.07]	[−.38, .09]	.16	.18	222*
Mixed Instrumental/Emotional Support	23136	40	38	15	52.50%	**−.14**	.01	[−.16, −.12]	**−.17**	[−.20, −.14]	[−.24, −.09]	.07	.06	104*
Support Behaviors	20708	22	19	9	59.09%	**−.10**	.02	[−.14, −.05]	**−.11**	[−.16, −.06]	[−.27, .05]	.11	.13	273*
Support Perceptions	8559	22	22	9	59.09%	**−.14**	.04	[−.22, −.06]	**−.18**	[−.29, −.07]	[−.49, .13]	.20	.24	347*
Mixed Support Behavior/Perception	8929	27	23	14	44.44%	**−.15**	.02	[−.18, −.11]	**−.19**	[−.23, −.15]	[−.30, −.07]	.09	.09	79*

Note. Bolded coefficients indicate statistical significance at $p < .05$. N = Total sample size. k_C = Number of countries. k_S = Number of studies. k_e = Number of effect sizes. % k_e U. S. = Percentage of effect sizes from the United States. *r* = uncorrected meta-analytic correlation. SE = Standard error of r. 95% CI_r = 95% confidence interval of r. ρ = meta-analytic correlation corrected for sampling error and measurement error. 95% CI_ρ = 95% confidence interval of ρ. 80% CrI = 80% credibility interval. SD_{rc} = Standard deviation of r corrected for sampling error. Higher values indicate more random effects variance. SD_ρ = Standard deviation of ρ. Higher values indicate more random effects variance. Q = Q statistic; a significant value indicates significant heterogeneity in the true effect size.

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* Random effects significant at $p < .05$.

Table 4

Hypothesized Main Effects Results for FIW and Support

						Central Tendency Indicators					Random Effects Variability Indicators			
	N	k_e	k_s	k_C	% k_e U.S.	*r*	*SE*	95% CI_r	ρ	95% CI_ρ	80% CrI	SD_{rc}	SD_ρ	*Q*
Combined Work Support	82218	148	111	39	45.95%	**−.14**	.01	[−16,−12]	**−.19**	[−21,−17]	[−.35, −.03]	.10	.12	930*
Organizational Support	25233	71	45	31	45.07%	**−.19**	.01	[−22, −.17]	**−.24**	[−27, −.21]	[−.25, −.02]	.11	.11	275*
Supervisor Support	61771	99	70	34	47.47%	**−.11**	.01	[−.12, −.09]	**−.13**	[−.15, −.11]	[−.29, −.08]	.08	.09	448*
Coworker Support	23955	28	26	10	50.00%	**−.15**	.01	[−.18, −.12]	**−.19**	[−.23, −.15]	[−.35, −.03]	.08	.08	141*
Mixed Supervisor/Coworker Support	11789	23	17	11	30.43%	**−.11**	.02	[−.16, −.07]	**−.14**	[−.20, −.08]	[−.30, .02]	.11	.12	144*
Instrumental Support	2829	8	8	3	75.00%	−.00	.06	[−.13, .12]	−.01	[−.16, .15]	[−.27, .26]	.18	.21	90*
Emotional Support	7256	14	14	8	42.86%	**−.10**	.04	[−.17, −.02]	**−.12**	[−.21, −.03]	[−.33, .09]	.14	.16	142*
Mixed Instrumental/Emotional Support	70631	127	92	39	44.88%	**−.14**	.01	[−.15, −.12]	**−.18**	[−.20, −.16]	[−.31, −.05]	.09	.10	618*
Support Behaviors	18499	55	28	30	38.18%	**−.11**	.02	[−.14, −.08]	**−.14**	[−.18, −.10]	[−.32, .04]	.12	.14	277*
Support Perceptions	42647	94	66	35	46.81%	**−.14**	.01	[−.16, −.12]	**−.18**	[−.21, −.15]	[−.34, −.02]	.11	.13	544*
Mixed Support Behavior/Perception	27726	34	30	14	41.18%	**−.14**	.02	[−.17, −.11]	**−.17**	[−.21, −.13]	[−.31, −.04]	.09	.11	249*
Combined Family Support	33017	60	53	16	55.00%	**−.17**	.01	[−.20, −.14]	**−.22**	[−.26, −.18]	[−.39, −.06]	.11	.13	462*
General Family Support	12260	37	35	10	54.05%	**−.15**	.03	[−.21, −.10]	**−.19**	[−.26, −.12]	[−.45, .07]	.17	.20	373*
Spouse Support	21626	26	21	11	53.84%	**−.18**	.01	[−.20, −.15]	**−.23**	[−.26, −.20]	[−29, −.17]	.06	.05	94*
Instrumental Support	6727	15	12	8	40.00%	**−.13**	.05	[−.22, −.03]	**−.16**	[−.28, −.15]	[−.46, .14]	.19	.23	258*
Emotional Support	4718	17	14	7	52.94%	**−.15**	.05	[−.25, −.06]	**−.18**	[−.29, −.02]	[−.48, .11]	.20	.23	196*
Mixed Instrumental/Emotional Support	22094	36	34	13	55.56%	**−.19**	.01	[−.21, −.16]	**−.23**	[−.26, −.21]	[−.34, −.12]	.08	.08	150*
Support Behaviors	18882	17	14	7	64.71%	**−.17**	.03	[−22, −.11]	**−.21**	[−27, −.19]	[−.37, −.04]	.11	.13	229*
Support Perceptions	5374	18	18	8	61.11%	**−.10**	.05	[−.19, −.01]	**−.13**	[−.24, −.10]	[−.43, .17]	.19	.23	204*
Mixed Support Behavior/Perception	7170	22	19	11	45.45%	**−.21**	.03	[−.26, −.17]	**−.27**	[−.33, −.05]	[−.44, −.10]	.12	.13	111*

Note. Bolded coefficients indicate statistical significance at $p < .05$. N = Total sample size. k_C = Number of countries. k_S = Number of studies. k_e = Number of effect sizes. % k_e U. S. = Percentage of effect sizes from the United States. *r* = uncorrected meta-analytic correlation. SE = Standard error of r. 95% CI_r = 95% confidence interval of r. ρ = meta-analytic correlation corrected for sampling error and measurement error. 95% CI_ρ = 95% confidence interval of ρ. 80% CrI = 80% credibility interval. SD_{rc} = Standard deviation of r corrected for sampling error. Higher values indicate more random effects variance. SD_ρ = Standard deviation of ρ. Higher values indicate more random effects variance. Q = Q statistic; a significant value indicates significant heterogeneity in the true effect size.

* Random effects significant at $p < .05$.

Table 5

Hypothesized Moderator Results

								95% CI			
Variable	***N***	k_e	k_s	k_c	**% k_e U.S.**	***b***	***SE***	***LL***	***UL***	***z***	***p***	R^2
WIF and Combined Work Support												
In-group Collectivism	92623	197	156	34	48.22%	0.07[a]	0.05	−0.03	0.17	1.40	0.16	0.09
Humane Orientation	92623	197	156	34	48.22%	0.11	0.08	−0.06	0.27	1.29	0.20	0.03
Assertiveness	92623	197	156	34	48.22%	−0.14[a]	0.07	−0.29	0.00	−1.92	0.05	0.11
GDP Per Capita	97655	206	157	43	46.12%	−0.00[a]	0.00	−0.00	0.00	−1.56	0.12	0.11
Unemployment	97541	206	156	44	45.63%	−0.02*[a]	0.01	−0.03	−0.00	−2.36	0.02	0.08
FIW and Combined Family Support												
In-group Collectivism	31852	59	52	16	55.93%	−0.01	0.05	−0.11	0.09	−0.19	0.85	0.01
Humane Orientation	31852	59	52	16	55.93%	0.00	0.17	−0.33	0.34	0.03	0.98	0.00
Assertiveness	31852	59	52	16	55.93%	0.02	0.09	−0.16	0.20	0.22	0.83	0.01
GDP Per Capita	31443	58	51	15	56.90%	0.00	0.00	−0.00	0.00	0.26	0.79	0.01
Unemployment	30881	57	50	15	56.14%	−0.00	0.01	−0.03	0.02	−0.25	0.80	0.00

N = Total sample size, k_C = Number of countries, k_S = Number of studies, k_e = Number of effect sizes, % k_e U. S. = Percentage of effect sizes from the United States, b = Meta-analytic unstandardized beta weight, SE = Standard error of b, 95% CI LL = Lower limit of the 95% confidence interval of b, 95% CI UL = Upper limit of the 95% confidence interval of b, z = Z score corresponding to b, p = p value associated with the z score, R^2 = variance explained in WIF or FIW by the national context moderator,

*Random effects significant at $p < .05$.

[a]Beta weight is significant after removing sample size outliers.

Table 6

Summary of National Context Moderation Results

	Hypothesized Perspectives		WIF		FIW	
Moderators	**Utility**	**Values**	**CWS**	**CFS**	**CWS**	**CFS**
In-group Collectivism	˅	˄	˅*	–	˅*	–
Humane Orientation	˅	˄	–	–	–	–
Assertiveness	˄	˅	˄*	–	–	–
GDP Per Capita	˅		˄*	–	–	–
Unemployment	˄		˄	–	–	–

Note. ˄ Indicates the relationship between WIF/FIW and support is strengthened as the national context moderator increases. ˅ Indicates the relationship between WIF/FIW and support is weakened as the national context moderator increases. – Indicates no significant moderation effect.

*Only significant after removing sample size outliers. CWS = Combined Work Support. CFS = Combined Family Support.

Table 7

Correlations Among Support Variables

Support Relationship	r	ρ	k	N
Organizational - Supervisor	0.48*	0.58*	29	15976
Organizational – Coworker	0.33*	0.41*	9	4074
Supervisor – Coworker	0.46*	0.55*	56	29659
Work Instrumental - Work Emotional	0.73*	1.00*	4	1426
Work Behavior - Work Perceptions	0.41*	0.43*	44	15263
General Family – Spouse	0.25*	0.33*	4	2271
Family Instrumental - Family Emotional	0.58*	0.66*	14	3534
Family Behavior - Family Perceptions	0.57*	0.69*	4	1991

Note.

*$p < .05$. r = uncorrected meta-analytic correlation (corrected only for sampling error). ρ = meta-analytic correlation corrected for sampling error and measurement error in the predictor and criterion. k = Number of effect sizes. N = Total sample size.

Table 8

Multiple Regression Results for Social Support Form

	WIF	FIW
Support Form	***Std. Beta (r)***	***Std. Beta (r)***
Work Support Behavior	−0.14*	−0.06*
Work Support Perceptions	−0.22*	−0.11*
F	1241.64*	246.05*
df	2, 23835.84	3, 20972.62
R^2	0.09	0.02
Family Support Behavior	−0.03	−0.17*
Family Support Perceptions	−0.12*	0.00
F	46.32*	60.20*
df	2, 4492.15	2, 4043.94
R^2	0.02	0.03

Note.

*$p < .05$. Std. Beta = Standardized beta weight, r = uncorrected meta-analytic correlation (corrected only for sampling error), df= degrees of freedom.

Table 9

Multiple Regression Results for Social Support Source

	WIF	FIW
Support Source	***Std. Beta (r)***	***Std. Beta (r)***
Organizational Support	−0.26 *	−0.16 *
Supervisor Support	−0.10 *	0.02
Coworker Support	−0.01	−0.10 *
F	554.40 *	213.58 *
df	3, 14514.09	3, 13653.04
R^2	0.10	0.03
General Family Support	−0.10 *	−0.11 *
Spouse Support	−0.09 *	−0.15 *
F	59.41 *	121.91 *
df	2, 5479.14	2, 5277.38
R^2	0.20	0.04

Note.

* $p < .05$. Std. Beta = Standardized beta weight, r = uncorrected meta-analytic correlation (corrected only for sampling error), df = degrees of freedom.

Table 10

Multiple Regression Results for Social Support Type

	WIF	FIW
Support Type	***Std. Beta (r)***	***Std. Beta (r)***
Work Instrumental Support	0.03	0.15*
Work Emotional Support	−0.23*	−0.21*
F	71.85*	30.46*
df	2, 3087.07	3, 2955.65
R^2	0.04	0.02
Family Instrumental Support	0.07*	−0.06*
Family Emotional Support	−0.16*	−0.11*
F	53.14*	60.43*
df	2, 5762.67	2, 4658.47
R^2	0.02	0.03

Note.

*p < .05. Std. Beta = Standardized beta weight. r = uncorrected metaanalytic correlation (corrected only for sampling error). df = degrees of freedom.

Table 11

Trim and Fill Results

	r_{TF}	95% CI LB	95% CI UB	k_{TF}	Δr	Δk
WIF						
Combined Work Support	**−.20**	−.25	−.16	258	0.05	44
Organizational Support	**−.25**	−.31	−.19	117	0.06	25
Mixed Supervisor/Coworker Support	**−.17**	−.28	−.06	46	0.09	13
Supervisor Support	**−.16**	−.21	−.10	168	0.06	40
Coworker Support	**−.11**	−.18	−.04	67	0.03	12
Instrumental Support	−.05	−.20	.10	14	0.09	4
Emotional Support	**−.21**	−.30	−.13	22	0.00	0
Mixed Instrumental/Emotional Support	**−.20**	−.25	−.14	224	0.05	42
Supportive Behavior	**−.23**	−.28	−.19	67	0.00	0
Support Perceptions	**−.28**	−.32	−.24	139	0.00	0
Mixed Support Behavior/Perception	−.13*	−.25	.00	62	0.06	19
Combined Family Support	**−.12**	−.19	−.05	74	0.00	0
General Family Support	**−.12**	−.18	−.06	42	0.00	0
Spouse Support	**−.11**	−.21	−.01	36	0.00	0
Instrumental Support	.03	−.09	.15	29	0.05	7
Emotional Support	−.05*	−.14	.04	33	0.07	9
Mixed Instrumental/Emotional Support	**−.14**	−.20	−.08	43	0.00	3
Supportive Behavior	−.11*	−.25	.04	24	−0.01	2
Support Perceptions	**−.19**	−.32	−.07	28	−0.05	6
Mixed Support Behavior/Perception	**−.13**	−.17	−.09	32	0.02	5
FIW						
Combined Work Support	**−.13**	−.17	−.09	161	0.01	13
Organizational Support	**−.18**	−.21	−.14	79	0.01	8
Mixed Supervisor/Coworker Support	**−.09**	−.18	.00	27	0.02	4
Supervisor Support	**−.10**	−.14	−.06	106	0.01	7
Coworker Support	**−.17**	−.24	−.09	37	−0.02	9
Instrumental Support	.04	−.09	.18	10	0.04	2

	r_{TF}	95% CI LB	95% CI UB	k_{TF}	Δr	Δk
Emotional Support	**−.14**	−.25	−.03	17	−0.04	3
Mixed Instrumental/Emotional Support	**−.12**	−.16	−.08	145	0.02	18
Supportive Behavior	**−.09**	−.13	−.05	64	0.02	9
Support Perceptions	**−.12**	−.17	−.07	113	0.02	19
Mixed Support Behavior/Perception	**−.13**	−.21	−.05	36	0.01	2
Combined Family Support	**−.17**	−.25	−.08	66	0.00	6
General Family Support	**−.14**	−.21	−.07	42	0.01	5
Spouse Support	**−.17**	−.24	−.11	28	0.01	2
Instrumental Support	−.11	−.27	.06	18	0.02	3
Emotional Support	**−.11**	−.2	−.01	23	0.04	6
Mixed Instrumental/Emotional Support	**−.19**	−.26	−.11	36	0.00	0
Supportive Behavior	**−.17**	−.29	−.03	17	0.00	0
Support Perceptions	−.09 *	−.21	.03	20	0.01	2
Mixed Support Behavior/Perception	**−.18**	−.25	−.12	28	0.03	6

Note. WIF = Work-to-family conflict. FIW = Family-to-work conflict. r_{TF} = uncorrected meta-analytic coefficient estimated by the trim-and-fill analysis. 95% CI LB = Lower bound of the 95% confidence interval around r_{TF}. 95% CI UB = Upper bound of the 95% confidence interval around r_{TF}. k_{TF} = number of studies estimated in the trim and fill analysis. Δr = Change in estimated uncorrected meta-analytic effect size; a positive value indicates an increase in the effect (towards zero). Δk = Number of studies added to the trim and fill analysis. Bolded coefficients indicate a significant effect size.

* Effect size changed from significant to non-significant when conducting the trim-and-fill analysis.