

**Development of a Work-Life Balance Scale:
Perceived Effectiveness and Satisfaction across Roles**

by

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Abstract

The present study aims to summarize existing literature on work-life balance before providing a newly developed scale to measure this construct. Work-life balance has held many definitions since it was first proposed, but the most recent definition lacks a systematically developed self-report measure. Effectiveness and satisfaction have been put forth as components that account for perceived work-life balance (Greenhaus & Allen, 2011). However, there is not a scale that accounts for such facets. In the proposed study, items from the work-family literature were selected, as well as self-developed items, and consolidated into a complete scale that may be used to assess perceptions of work-life balance. Participants were used from Amazon's MTurk to further explore the selected items that were then assessed via exploratory and confirmatory factor analysis. This study aims to combine existing literature and extant items, as well as modified and self-developed items, into a scale that may better measure work-life balance and examine the fit of effectiveness and satisfaction facets as components of this construct.

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Table of Contents

Abstract	ii
Acknowledgments.....	iii
List of Tables	vi
List of Figures	vii
Introduction.....	1
Theoretical Background.....	4
Historical Definitions of Work-Life Balance	7
Conflict as Work-Life Balance	8
Enrichment as Work-Life Balance.....	12
Conflict and Enrichment as Work-Life Balance.....	15
Global Work-Life Balance.....	18
Work-Life Balance Described Qualitatively	20
Current Definition of Work-Life Balance.....	22
Existing Measures	23
Effectiveness in Work and Life	24
Hypothesis 1.....	26
Satisfaction in Work and Life	26
Hypothesis 2.....	29
Hypothesis 3.....	30

Method	30
Participants and Procedure.....	33
Analyses	38
Results.....	40
Study 1: Exploratory Factor Analysis.....	40
Study 2: Confirmatory Factor Analysis	44
Discussion.....	45
Strengths	47
Practical and Theoretical Implications.....	48
Limitations and Future Directions	49
Conclusion	50
References.....	51

List of Tables

Table 1: Comparison of WLB Effectiveness Items and Final WLB Effectiveness Items.....	67
Table 2: Comparison of WLB Satisfaction Items and Final WLB Satisfaction Items	69
Table 3: Factor Loadings for WLB EFA Items and Item Statistics.....	71
Table 4: Model Fit Indices of WLB EFA	72
Table 5: Model Fit Comparison for EFA.....	72
Table 6: WLB CFA Model Fit Indices	72
Table 7: Final Items	73

List of Figures

Figure 1: WLB CFA One-Factor Model.....	73
Figure 2: WLB CFA Two-Factor Model	74

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Literature within the work-life domain of research seeks to understand the dynamic forces shared between these two vital roles with which all working individuals are familiar and are united under the banner of work-life balance. The increasing prevalence of working individuals attempting to balance these two aspects of their lives is of particular importance in understanding how researchers may best conceptualize and understand perceived balance between these two spheres of influence. Recent literature has emphasized the importance of understanding the complexities that weave these concepts of work-life balance together (Michel, Mitchelson, Kotrba, LeBreton, & Baltes, 2009). Given that the work-life interface is of particular concern due to rising numbers of dual-earner couples and non-traditional gender roles within the workforce, defining balance and the relationship between these two roles is of particular importance (Greenhaus & Allen, 2011). However, despite this particular need within the literature for a clear definition of balance, the majority of literature has focused upon the mutual reliance of work and personal life on one another and has not provided a clear conceptualization of the term balance (Greenhaus & Allen, 2011). Work-life balance has, therefore, undergone many iterations and attempted explanations to provide clarity on the interdependence between work and life roles (Grzywacz & Carlson, 2007; Guest, 2002; Kalliath & Brough, 2008). It is agreed upon that balance is distinct from conflict and enrichment since it does not specify how experiences in one area may affect another, despite the influence of roles, and it is not a linking mechanism between the two domains like the other constructs (Allen & Kiburz, 2012; Greenhaus, Collins, & Shaw, 2003). Yet, the definition and true nature of how researchers subsequently understand balance has become somewhat muddled in following years

due to continual dissent and confusion over what work-life balance truly is and how researchers may measure it (Greenhaus & Allen, 2011).

Work-family balance has become a blanket term under which these interdependent responsibilities of work and life roles have come to be understood, and many researchers agree that organizations and individuals should strive to provide and to have balance for employees (Grzywacz & Carlson, 2007; Kanwar, Singh, & Kodwani, 2010). Research has indicated both an influential and powerful effect of balance upon perceived satisfaction with job roles and upon psychological and physical outcomes for working individuals (Gao & Jin, 2015; Greenhaus et al., 2003), and work-family balance is touted to be an incredibly influential force within everyday life (Greenhaus & Allen, 2011). While friends and family urge an individual to strive for work-life balance, employers and organizations seek to assure their employees of their continued ability to balance workload and familial demands (Greenhaus & Allen, 2011; Greenhaus et al., 2003).

Given the numerous definitions available for work-family balance, there have also been measures and scales developed for most early conceptualizations (Bloom, Kretschmer, & Van Reenen, 2009; Brough, Timms, O'Driscoll, Kalliath, Siu, Sit, & Lo, 2014; Clark, 2000; Fleetwood, 2007; Frone, 2003; Greenhaus et al., 2003; Gröpel, 2006; Grzywacz & Bass, 2003; Haar, 2013; Kirchmeyer, 2000; Prowse & Prowse, 2015; Waumsley, Houston, & Marks, 2010). However, these scales and measures generally do not capture the current definition of work-life balance. Furthermore, given that work-life balance is conceptualized as a combination of effectiveness and satisfaction in work and nonwork roles (Greenhaus & Allen, 2011), a scale created to fit with this proposed definition would be beneficial. Additionally, given the need for an expansion of the field and a clear definition of what "balance" is, the current scale utilizes the

broad term of ‘work-life balance’ rather than ‘work-family balance’ given that not all individuals may possess the stereotypical family unit and as suggested by the field (Greenhaus & Allen, 2011; Guest, 2002; Pitt-Catsouphes & Christensen, 2004). Therefore, a new scale of work-life balance may better fit with this definition of the construct and provide much-needed clarification for the field. Through the use of this new scale, researchers may better be able to ascertain a more conceptually accurate approach to measuring balance in effectiveness and satisfaction. Subsequently, researchers and practitioners may come to better understand modern work-life balance and test perceptions of balance in the literature and future studies.

The goal of this research is to further explore the construct of work-family balance and contribute to the field through the development of a new measure that fits the idea that work-family balance is best conceptualized as a combination of effectiveness and satisfaction, as put forth by Greenhaus and Allen (2011). Given the newest definition and the lack of clarity that surrounds this construct, this new scale seeks to measure whether an individual is able to fully accomplish expectations within various roles (Grzywacz & Carlson, 2007) and achieve individual satisfaction across roles (Greenhaus & Allen, 2011). For example, an employee may experience high effectiveness at work and be quite competent in managing expectations set down by their organization, but they may suffer from lack of balance across their other life roles because of their time commitment or inability to disengage from work behaviors. On the contrary, an individual may be highly satisfied with the separation between their work life and their nonwork life, but they may fail to accomplish specific goals in both realms.

This paper contributes to the existing literature by providing a new measure of work-life balance through the evaluation of effectiveness and satisfaction with life and work roles. Previous measures have not fully delved into both effectiveness and satisfaction as criteria for

work-life balance. Thus, by filling this gap, various questions that may be held within the field could reach some form of resolution and further our advance as a mature science (Chan & Arvey, 2012).

Theoretical Framework

One of the key theories that emphasizes a clear understanding of the work-nonwork interface is that of role theory, which figures prominently into the current understanding of work-life balance. Within these domains of work and nonwork, individuals are expected to both balance their responsibilities between these two dichotomous roles and to construct boundaries between their various tasks (Allen, Cho, & Meier, 2014). We expect working individuals to have a variety of responsibilities, and we expect for them to manage and move between these roles so as not to negatively impact another. Indeed, workers must transition from one role to another to engage in both the organizational aspects of life and the more social ones (Ashforth, Kreiner, & Fugate, 2000; Rantanen, Kinnunen, Mauno, & Tillemann, 2011). Roles are thought to be recurrent activities with a set of expectations, norms, and behaviors that play a prominent part in an individual's life (Allen et al., 2014). Individuals may often turn to constructing boundaries between their roles to mitigate this process and to limit the space and time of a particular role (Ashforth et al. 2000). If these roles are not balanced and individuals experience stress in a particular role, this can result in many of the same outcomes that are associated with a lack of balance (e.g., increased negative feelings, stress, overload, etc.; Virick, Lilly, & Casper, 2007). Additionally, a better understanding of role theory may point to potential clues and a fuller comprehension of work-life balance (Frone, 2003). However, within the broad umbrella of role theory, boundary theory and border theory are thought to underlie many understandings of

boundary management and, by consequence, how individuals manage their work-life balance (Allen et al., 2014), meaning that we should turn to these for further examination.

Boundary theory, as the name suggests, refers to how people may create and maintain boundaries between two or more dichotomous roles, usually as a means to simplify their environment (Ashforth et al., 2000). Inspired by the work of Nippert-Eng (1996), this theory draws from the idea that individuals attempt to social classify their responsibilities and focuses upon the outcomes that individuals achieve in ordering these roles (Allen et al., 2014). These boundaries are the behavioral, emotional, physical, or cognitive lines that individuals draw between differing domains to make them distinct and separate (Allen et al., 2014; Ashforth et al., 2000; Nippert-Eng, 1996). Boundary theory hones in on role transitions (Allen et al., 2014). Individuals create separate domains of life and must then transition between them, which can often result in complicated crossings given how these are individually constructed (Ashforth et al., 2000). This often results in cognitive leaps between different roles (Zerubavel, 1991). If these roles are more porous, individuals may find that transitions between them are easier, but may result in more conflict and opportunities for spillover between domains (Ashforth et al., 2000). In many cases, boundary theory depends upon the individual's role in the creation of their own domains, the maintenance therein, and the leaps between different responsibilities.

By comparison, border theory seeks to both improve our understanding of the relationship between work and life roles and to explain work-life balance (Allen et al., 2014; Clark, 2000). Much like boundary theory, border theory emphasizes that both work and personal life are two different spheres (Allen et al., 2014). Both theories share many of the same tenets (Allen et al., 2014). However, border theory necessitates an understanding of how these different domains may influence one another, stating that this theory specifically concerns work-

life balance and the multiple ways by which it can be obtained due to the influence of each domain on the other (Chen, Lai, Lin, & Cheng, 2005; Clark, 2000). Individuals must constantly cross their borders as they navigate between the various domains of their life (Guest, 2002). As specified by this theory, there is a sense of reciprocity in that individuals who define where the borders are between domains and what falls within each domain, or border keepers, interact with the individuals navigating between roles (Allen et al., 2014). These border keepers may be a spouse, a boss, or a domain member. These individuals may hold differing views from the border-crosser and can affect the permeability and flexibility of a particular role (Allen et al., 2014). In many ways, border theory lends itself to balance in that it is based upon subjective assessments but has far-reaching effects that exceed the individual and relies upon meeting others' expectations. Border theory, therefore, seeks to explain how individuals interact with their work and nonwork lives as they move between domains and to provide a framework for ways to attain balance (Clark, 2000).

Furthermore, under these two headings of boundary and border theory, the assumption of role permeability is incredibly important. Role permeability refers to how pervious domain boundaries are between one another, which can lead to spillover between roles in psychological and behavioral engagement (Michel, Bosch, & Rexroth, 2014). This can be done in two ways: integration and segmentation. Given that individuals may create these boundaries between work and life to achieve work-life balance, these boundaries differ for each individual and range upon a continuum of integration and segmentation (Allen et al., 2014; Michel et al., 2014). Individuals integrate when work and nonwork domains interact and draws these roles together, resulting in more permeable role boundaries (Bulger, Matthews, & Hoffman, 2007; Michel et al., 2014). Work and life are not kept as separate towards this end of the spectrum with less

distinction as what are work and nonwork roles and less behavioral and cognitive differences between differing domains (Allen et al., 2014; Ashforth et al., 2000). Segmentation, on the other hand, separates the two domains (Michel et al., 2014). These boundaries are often inflexible, impermeable, and are clearly defined as work and nonwork, never to meet (Allen et al., 2014). Previous literature suggests that more permeable boundaries may result in negative work-life balance and increased conflicts between these two domains due to the strain of always exhibiting the behavior and allocating the resources for multiple domains (Olson-Buchanan & Boswell, 2006). Therefore, people who integrate may find that work-life balance is often harder to achieve. However, mindfulness of the various needs and attention that is required by work and nonwork roles is associated with facilitated allocation of personal resources and dissolving the problems of boundary management (Allen & Kiburz, 2012; Marks & MacDermid, 1996). Essentially, if individuals are aware of the requirements and responsibilities associated with roles, they are much more likely to experience easier transitions between work and life, which could have important bearings upon their perception of their work-life balance. Consequently, an individual who integrates but is aware of the requirements of their various roles may experience a higher perceived balance compared to an individual who is not as mindful. Given the importance of roles in negotiating resources and shaping our perceptions of work and nonwork domains, we must acknowledge the importance of these theories in work-life balance as we move forward as a field (Guest, 2002).

Historical Definitions of Work-Life Balance

Throughout its tenure within the literature, work-life balance has come to hold many different understandings and conceptualizations since its primary introduction into the literature (Kalliath & Brough, 2008). As a relatively unexplored construct (Allen & Kiburz, 2012), little is

known of the various predictors and outcomes of balance. With this initial introduction, the term was thought to be self-evident and did not require an explicit definition (Wayne, Butts, Casper, & Allen, 2016). One of the first precise definitions given to work-life balance revolved around the idea of balance as a lack of conflict (Greenhaus & Beutell, 1985). This definition then shifted to explore work-life balance as the presence of enrichment between work and life roles (Greenhaus & Powell, 2006). More recent definitions revolve around the idea that work-life balance is rooted in the presence of work-life enrichment and an absence of work-life conflict (Frone, 2003). Additionally, work-life balance has also been conceptualized as a more global construct with social overtones that affect both the individual engaging in both roles and those coworkers and family members around them. Previous literature has also simply defined and measured balance qualitatively through interviews and self-report measures. It is only recently that we have had to look to our past definitions of balance to flesh out this important construct and give it its own definition (Greenhaus & Allen, 2011; Wayne et al., 2016).

Conflict as Work-Life Balance

Work-family conflict – or the more inclusive work-life conflict – is a theory that has a vast amount of backing to it within the literature given the accessibility and ease with which researchers may measure this construct. Many working individuals report an incompatibility between their work and life roles due to their responsibilities in both domains (Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011; Schieman, Glavin, & Milkie, 2009), which can have a variety of negative outcomes for the individual. Working men and women who experience high levels of conflict may also show high levels of turnover, burnout, exhaustion, or decreased levels of overall satisfaction (Frone, 2003; Hennessy & Lent, 2008), all of which are negative outcomes that are associated with balance, or a lack thereof (Kossek & Ozeki, 1999; Marks & MacDermid,

1996). Classically defined by Greenhaus and Beutell (1985), work-life conflict is seen as an incompatibility between demands of work and nonwork roles that lead to decreased role performance. For example, if a man is unable to complete a financial spreadsheet for his manager due to a lack of sleep from helping his daughter complete a school project the night before, it might be said that these two roles conflict with one another, which would “unbalance” this individual.

This definition of work-life conflict from Greenhaus and Beutell (1985) further emphasizes the bidirectionality of this relationship between work demands and personal life responsibilities. Work may interfere with one’s personal life just as much as nonwork responsibilities can interfere with one’s job, leading to difficulties in either domain based upon the direction of the conflict (e.g. work-to-family; family-to-work; Greenhaus & Powell, 2006). Furthermore, conflict can take many different forms. In their seminal article, Greenhaus and Beutell (1985) defined three forms of conflict: time, behavior, and strain. Time-based conflict occurs when time and attention focuses upon one role and causes problems in another domain (Greenhaus & Beutell, 1985). Behavior-based conflict is seen when behaviors, such as behavioral habits or strategies, are used in multiple roles when not appropriate (Greenhaus & Beutell, 1985). Finally, strain-based conflict occurs when an individual experiences stresses and pressures in one domain that hinder their ability to perform in another (Michel et al., 2011). In the case of work-life conflict, demands made in work and life domains and role conflict experienced by an individual influence how one understands their work-life balance due to conflict’s association with a variety of negative outcomes (Bourhis & Mekkaoui, 2010; Michel et al., 2009). Subsequently, for many years, conflict came to represent balance within the literature when no better definition of balance was forthcoming (Chang, McDonald, & Burton, 2010). It

can be argued that work-life balance and work-life conflict are so diametrically opposed that neither is possible when the other is present (Jang & Zippay, 2011). Therefore, in attempting to measure balance, it is quite simple to measure conflict as a proxy; then, an estimate of balance can be assumed from accumulated responses (Jang & Zippay, 2011). For many years, work-life balance was, thus, conceptualized as a lack of conflict between work and nonwork roles (Frone, 2003).

Work-life conflict makes up the negative side of the work-life interface (Greenhaus & Allen, 2011), and, given the definition and bidirectionality of work-life conflict, what happens in one domain in life can negatively impact what occurs in another (Frone, 2003). This conceptualization of work-life conflict as balance relates to key causal models upon which the majority of the literature on the negative side of the work-life interface depends. Work can be thought of as draining of resources for the individual, as suggested by Greenhaus and Beutell (1985) and the resource drain model of work-life conflict (Frone, 2003). Within this causal model, resources (e.g., cognitive resources, time, attention, etc.) are finite and, when used in one domain, like at work, are unable to be used in another domain, like at home (Frone, 2003). Another such causal model is that of the compensation model, which suggests that dissatisfaction in one role can lead to decreased involvement in that role and increased involvement in another role to compensate for lacking fulfillment (Edwards & Rothbard, 2000; Frone, 2003), which can cause conflict and imbalance between the two domains. The appeal of work-life conflict as balance resides in the ease with which we may define demands in both domains, which allows for a quantifiable and well-understood construct that is measured appropriately (Greenhaus & Beutell, 1985). Work is often thought to interfere to some degree with personal life, and vice versa, especially given the ever-important need for our population to work longer hours and

produce high-quality work (Michel et al., 2011). The culture around workers now emphasizes the importance of work and nonwork roles, while placing increasing pressure on the individual to perform well and exceed expectations in both, which furthers the impact of conflict (Bailyn, 1993; Williams, 2000).

This leap between work-life conflict and work-life balance is further facilitated by the influence of the boundary and border aspects of role theory. Conflict arises from various factors in work and life roles (e.g., time spent at work, stress from home, etc.) and can lead individuals to seek out ways to manage these borders between work and life (Clark, 2000). As put forth by Ashforth et al. (2000) and their conceptualization of role boundary permeability, roles which display high levels of conflict can be put on a continuum of segmentation and integration, which plays a large role in how we balance these dichotomous domains (Allen et al., 2014). If an individual experiences high conflict between work demands and leisure, this individual may choose to segment their job from their personal life in an attempt to mitigate the conflict caused by these two domains. By comparison, an individual may attempt to integrate their work and nonwork lives to reduce perceived conflict in switching between work and life. Subsequently, we must further consider the importance of roles in our understanding and future definition of balance given its relation and importance in work-life conflict.

However, work-life conflict, its definition, and its scales could be said to not accurately measure balance itself, as it relies upon the mere presence of conflict to imply lack of balance (Greenhaus & Allen, 2011; Grzywacz & Carlson, 2007). Much of the literature that makes up work-life conflict as balance draws its basis from post hoc models that sought to find the mechanism that linked work and nonwork domains and does not account for the integrative aspects of the work-life interface (Frone, 2003). Additionally, work-life conflict is its own

construct, with its own outcomes (Frone, 2003), and to use conflict to measure balance would further muddy the waters around what balance is and provide no insight into how we experience balance (Chang et al., 2010). Work-life conflict, though widely accepted, is not necessarily the means by which we should seek to measure balance, and we must consider alternate explanations for what creates work-life balance by turning to the literature once more.

Enrichment as Work-Life Balance

Work-life balance is also understood through the lens of facilitation, enrichment, or positive spillover between work and life roles. As it is understood within the literature, work-life enrichment occurs when an individual experiences increased quality and performance in one role due to the participation within another role (Carlson, Kacmar, Wayne, & Grzywacz, 2006; Greenhaus & Powell, 2006). This enrichment is generally seen in improvements of performance or in higher levels of affect (Greenhaus & Powell, 2006). Work-nonwork enrichment is associated with a vast number of positive outcomes, such as increased satisfaction, positive moods, employee retention, or overall feelings of success (Grzywacz & Marks, 2000; Kirchmeyer, 1992), which relates back to perceived feelings of balance. For example, this could be seen when a woman receives a promotion due to high productivity and is subsequently more positive when she returns to her home and family that night. Much like work-life conflict, enrichment is characterized by the bidirectionality between work and nonwork roles (Greenhaus & Powell, 2006). A pay raise at work can enrich nonwork life just as much as a family vacation can improve individual perceptions of ability and facilitate work. Often used in conjunction with work-life conflict, enrichment is often taken to be a sign that one experiences balance between these two roles (Kalliath & Brough, 2008). Academics within the field, instead of focusing upon the negative effects between work and life, choose to look at the value shared between work

responsibilities and life roles (Gatrell, Burnett, Cooper, & Sparrow, 2013). Work-life balance is, thus, seen as a result of positive influences between these two disparate roles held by individuals (Carlson, Grzywacz, & Zivnuska, 2009; Greenhaus & Powell, 2006). Much like perceived balance, work-life enrichment has a beneficial influence in how work and life roles affect one another (Greenhaus & Powell, 2006). Therefore, it has been suggested that balance results from this positive enrichment across roles. In the same way that balance cannot exist when conflict is present (Chang et al., 2010), balance can thrive when enrichment takes place between different domains.

Counter to work-life conflict, work-life enrichment makes up the positive side of the work-life interface (Greenhaus & Allen, 2011). Arising on the heels of conflict, literature pointed towards the influence of positive experiences in shaping how an individual feels about their roles and responsibilities (Frone, 2003), which provided the groundwork upon which work-life enrichment was born (Greenhaus & Powell, 2006). Previous literature has found that nonwork roles often favorably affect the work domain (Kirchmeyer, 1992), which leads to this work-life enrichment that then generalizes to balance. Enrichment as balance depends on the allocation and provision of additional resources such that an individual feels able to both accomplish expectations held in both roles and succeed (which generally results in positive experiences, like promotion, lowered levels of stress, etc.; Carlson et al., 2006). These favorable factors of the influence of enrichment lend themselves to these overall perceptions of work-life balance, which results from the fact that multiple roles can aid one another and can help the individual to succeed and experience these positive emotions about their ability to handle their roles (Carlson et al., 2006).

As with conflict, work-nonwork enrichment is further explained by role theory (Marks, 1977). Enrichment is dependent upon the positive experiences in one domain affecting another, which comes down to where an individual may draw boundaries between differing roles (Jain & Nair, 2013; Marks, 1977). Numerous roles are often associated with positive life outcomes, and this role accumulation is often the key that underlies how enrichment is made easier by the domains in which an individual engages (Greenhaus & Powell, 2006; Marks, 1977; Voydanoff, 2001). If an individual accumulates more roles, they often experience more benefits (Voydanoff, 2001). Both work and nonwork incidents can have positive effects on individuals and can add to general well-being (Greenhaus & Powell, 2006; Kirchmeyer, 1992). Additionally, participation in a variety of roles can act to buffer distress in one role that an individual may experience due to the fact that there are more areas of life in which a person may feel enriched (Barnett, 1996; Greenhaus & Powell, 2006). Finally, these positive moments in one role can lead to positive outcomes in another due to the fact that an individual may incorporate these moments into their whole perception of self (Greenhaus & Powell, 2006). If a man is promoted at his job due to his hard work and receives a pay increase, he may be able to provide his family with a spontaneous vacation, which can lead to an increased sense of renewal, which he can then take back to work if the boundaries between these two roles are somewhat flexible. Furthermore, skills learned in various domains can be translated to others to advance this perceived enrichment between differing domains (Kirchmeyer, 1992); these skills are dependent upon flexible boundaries that they may cross. Therefore, integration is far more likely to show the effects of enrichment given this reliance upon permeable boundaries between roles. Subsequently, this role theory and accumulation has important notes that underlie the enrichment conceptualization of work-life balance.

However, in much the same way that measuring work-life conflict as a proxy for balance is flawed, the measurement of work-life enrichment as a proxy for balance is similarly problematic. Enrichment is fundamentally distinct from work-life balance, meaning that to generalize would create the faulty science that we seek to avoid (Carlson et al., 2009; Grzywacz & Carlson, 2007; Wayne et al., 2016). While many researchers used the presence of enrichment to indicate balance, there is no attempt to define what balance is as there is merely a supposition that balance is dependent upon another construct (Frone, 2003; Greenhaus & Powell, 2006). This furthers potential issues of causality and clarification that we need to guide our future research and understanding (Greenhaus & Allen, 2011), meaning that enrichment scales and definitions should not be included under the heading of balance. Furthermore, Carlson et al. (2006) argue that these scales are adequately developed and validated, meaning that these scales should not be used to assume balance. Additionally, Grzywacz and Carlson (2007) found relatively low correlations between enrichment and work-life balance, which furthers the point that we, as researchers, may not measure what we seek to understand, meaning that the whole of our construct is never accessed.

Conflict and Enrichment as Work-Life Balance

Given the popularity of both enrichment and conflict as important definitions of work-life balance, the literature showed a gradual shift towards a combination of the two as the true example of this construct. One of the best known understandings of the construct, work-life balance has, for many years, been conceptualized as low conflict between work and nonwork and high enrichment (Brough et al., 2014). Frone (2003) argued that work-life balance, rather than being merely conflict or merely enrichment, should be understood as a combination of both positive and negative experiences between roles, and it is this definition to which many

individuals turn for enlightenment and clarification (Brough et al., 2014). Conflict and enrichment make up the respective negative and positive pathways which interact with one another to produce balance (Frone, 2003; Greenhaus & Allen, 2011; Grzywacz & Bass, 2003). As with previous understandings, low conflict and high enrichment is bidirectional with work and nonwork domains affecting each other equally (Frone, 2003). Yet this understanding of balance is further made up of conflict and enrichment converging on a sole outcome, which further underlies this idea that balance is represented in an integrative fashion (Frone, 2003). Therefore, in accordance with the previously stated assumptions, work-family conflict, family-work conflict, work-family enrichment, and family-work enrichment all form the total experience of balance felt by an individual (Rantanen, Kinnunen, Mauno, & Tement, 2013); this can also then be generalized to personal life. Perhaps the greatest strength of this particular definition of work-life balance is that it hypothesizes that an individual may experience both conflict and enrichment in equal levels of intensity, which was an understanding that was relatively explored within previous definitions (Rantanen et al., 2013). Such a definition of work-life balance through conflict and enrichment allows for the individual experience to shine through when measuring for a perceived feeling to indicate balance.

While the presence of enrichment and a lack of conflict is stated to be work-life balance (Frone, 2003), enrichment and conflict rely upon the perceptions of the individual when measured. In many ways, the argument that balance is the result of high enrichment and low conflict is encapsulated by the idea that there must be a fit between an individual and their work and nonwork roles (Grzywacz & Bass, 2003). Both work and nonwork roles can provide benefits and strains for an individual, requiring them to navigate between differing role demands (Grzywacz & Bass, 2003). These benefits and strains then contribute to the perceived fit felt by

an individual between work and nonwork domains. Fit has been understood to be the absence of work-life conflict, and literature indicates that enrichment contributes to perceived feelings of fit (Frone, 2003; Grzywacz & Bass, 2003). These low levels of conflict and high levels of enrichment that are associated with fit result in individual positive experiences (Grzywacz & Bass, 2003). However, further consideration must be given towards the importance of role theory that is at play here.

Given previous literature that supports the utilization of role theory in conflict and enrichment as balance in their own senses, many of the same arguments can be applied for the combination of these two constructs if fit is taken into consideration. Integration and segmentation play an especially important role here in defining why low conflict and high enrichment make up balance (Frone, 2003). These two aspects of boundary theory are heavily influenced by the perceived fit of one's life. If individuals experience a high level of fit between their work lives and their personal lives, then these individuals may be more likely to integrate the two domains, allowing for flexible boundaries that permit high enrichment (Frone, 2003; Grzywacz & Marks, 2003). In this particular instance, this individual would experience a high level of balance in this definitional sense due to the high levels of enrichment and low levels of conflict. On the other hand, if the fit between one's work life and nonwork life is poor, then an individual may experience high levels of conflict and have balance that suffers accordingly based upon their preference to segment or integrate (Allen et al., 2014; Clark, 2000). Antecedents of conflict and enrichment come down to demands and resources (Jain & Nair, 2013). A person must feel able to both meet the demands of balancing their work and nonwork domains of life without conflict and have the availability of resources at their disposal to find enrichment between these areas. A person's preference towards segmentation or integration only helps an

individual to attempt to reduce conflict and provide fertile ground for enrichment to take place between differing life domains, coming down to individual preference (Allen et al., 2014; Clark, 2000). Nevertheless, this same argument used with work-life fit and role boundary management can be applied to other definitions of balance.

Orthogonal views of conflict and enrichment argue that the two are distinct entities, which primary and meta-analytic research has further supported (Grzywacz & Marks, 2000; Michel, Clark, & Jaramillo, 2011), meaning that conflict and enrichment should not be considered as together like Frone (2003) asserted. Additionally, as previously stated, both conflict and enrichment are distinct constructs, and we must once more consider what makes up work-life balance. Work-life balance is not merely a product of conflict and enrichment (Greenhaus & Allen, 2011); therefore, to use conflict and enrichment scales in conjunction does not accurately capture the balance between work and nonwork roles that workers experience. There remains a need in the literature to have a definition that transcends conflict and enrichment and truly measures work-life balance as its own sole construct (Carlson et al., 2009).

Global Work-Life Balance

In comparison to the more individual-oriented nature of conflict or enrichment, work-life balance is also understood to be a more global construct (Grzywacz & Carlson, 2007; Voydanoff, 2005). Grzywacz and Carlson (2007) stated that work-life balance was a social construct that was dependent upon expectations within roles that relied upon the individual but transcended the singular person to affect the others that surround them within both work and nonwork domains. Therefore, though it may be one person who experiences work and life roles in a particular situation, work-life balance affects those around the individual, and they should be considered when measuring balance (e.g., family or co-workers; Grzywacz & Carlson, 2007).

This understanding would provide a heavily influential construct that does speak to that widespread usage of the term “balance” that is seen within our culture. This type of balance might be used when discussing family-friendly policies and balance support programs that employers may seek to utilize with their staff (Bourhis & Mekkaoui, 2010; Gornick & Blair, 2005; Grzywacz & Carlson, 2007). When friends and families urge an individual to spend more time engaging in social events or managers ask their employees to focus on the job, this global type of balance is being called into question.

Additionally, work-life balance is also understood through the more global concept of balance as dependent upon demands and resources of individuals (Voydanoff, 2005). In these terms as stated by Voydanoff (2005), balance is seen as stemming from a sufficient number of required resources to meet the demands of expectations in life and work roles. In this way, the fit of one’s life and one’s work is especially important to help achieve balance between these two roles. This approach to global work-life balance is dependent upon person-environment fit (Grzywacz & Carlson, 2007). Many of the negative outcomes associated with a lack of balance, or with conflict between work and life roles, are due to misfit between different domains, resulting in the high turnover and increased stress that plagues working individuals (Voydanoff, 2005). Though this model may emphasize the role of the individual in their personal fit, the theory behind the model brings in coworkers and friends as an evaluative measure by which balance can be ascertained (Voydanoff, 2005). Within global balance, while the individual is important, balance has far-reaching effects that can shape family, coworkers, and friends. While such a global construct that focuses upon fit does have some bearing upon the literature and its influence on how individuals understand boundaries between work and family life (Allen et al., 2014), the fit of resources and demands in these work and life roles does not account fully for

how an individual may perceive their balance between these two areas of life (Greenhaus & Allen, 2011).

A global construct may not provide a clear enough definition that is rooted within sample experience and acute understanding of the phenomenon of balance in work and life roles (Greenhaus et al., 2003). While a global construct may not be specific enough, the more detailed conflict and enrichment may not fully encompass the whole of the balance construct, causing researchers to find alternate definitions and measures that may help them attempt to pinpoint where the balance lies (Carlson et al., 2009). Therefore, a new definition that answers this call may be essential to build this construct up once more and push conflict and enrichment into their roles as linking mechanisms of balance once more (Carlson et al., 2009). Yet it remains that we do need a definitive definition that focuses upon the individual upon which we can attempt to explore the balance construct once more without confusion with conflict, enrichment, or as a combination thereof.

Work-life Balance Described Qualitatively

Given the vast and varied nature of the work-life balance definition, many researchers have attempted to explore the construct through the conceptualization that work-life balance must be defined qualitatively and through inductive research. In some circles, qualitative research is characterized by a lack of numbers and inductive usage of theory wherein observations precede theory generation (Eby, Hurst, & Butts, 2009). In this, many authors of work-life balance have found the largest strength for using qualitative data (Stock, Bauer, & Bieling, 2014). Given that balance has been understood to be vague and fluid (Frone, 2003), this inductive research allows for intensely rich description of ambiguous definitions that can be mined later for linking phenomena and individual accounts of work-life balance.

A number of studies that have been conducted have asked their samples for their allocation of resources, the description of their own perceived balance, and their overall feeling about this construct (Emslie & Hunt, 2009; Grant, Wallace, & Spurgeon, 2013; Haar, 2013; Stock et al., 2014). Qualitative studies of work-life balance do not so much provide an overall definition of what balance is defined as but provide more of an open-ended platform upon which employees may offer details and speak to their own balance (Emslie & Hunt, 2009). Qualitative data generally involves semi-structured interviews that allow for generic probing into points brought up and a formatted guide through the construct that is being explored (Eby et al., 2009). This qualitative approach to work-life balance allows for vast amounts of data that speaks to the individual and subjective needs of a sample, which is an important aspect of work-life balance (Grant et al., 2013; Greenhaus & Allen, 2011; Haar, 2013), and previous studies have found links between qualitative approaches and employee emphasis on satisfaction, work and life involvement, and accomplishment in achieving goals in work and nonwork (Stock et al., 2014).

In comparison to qualitative interviews, quantitative research is often thought to be more empirically sound than its qualitative counterpart (Eby et al., 2009). Its utilization of clear hypotheses relies upon a strong theoretical background to further support their claims (Hayes, 2000). Therefore, in exploring work-life balance qualitatively, researchers may not show the true generalizability and perception of work-life balance as a construct (Eby et al., 2009). Additionally, this method of studying work-life balance, while beneficial in its provision of rich data, falls short in furthering the meaning behind this construct and allowing for proper validation (Eby et al., 2009). Therefore, we assert that qualitative data should be used when most appropriate (e.g., when attempting to take the environment and situational factors into consideration or to prompt further study on a well-established construct; Eby et al., 2009; Locke,

2002). However, given the previous lack of consensus over what comprised balance, we understand the usage of qualitative data to access this construct in the population and to allow for further studies. It is due to this qualitative data that we see the links between both effectiveness and satisfaction as important predictors of balance (Grant et al., 2013; Haar, 2013); therefore, we do point towards its place in the literature and acknowledge its usage to allow for us to create our new scale.

Current Definition of Work-Life Balance

The most recent definition of work-life balance comes from Greenhaus and Allen (2011). As put forth in their publication, balance is understood to be a combination of both effectiveness and satisfaction across work and life roles when compared to individual values at a certain point in time (Greenhaus & Allen, 2011). Through this definition, individual differences and general fit across roles are thus able to be explored with more depth and are taken into account in a way that they may not be through other conceptualizations of work-life balance (Allen et al., 2014). Additionally, this understanding of the underlying facets of work-life balance provides a clear definition that is not another construct, meaning that this definition allows for us to move forward with better research. Similar to previous thought, balance is indeed influenced by both conflict and enrichment; however, the process is far more complex than originally stated (Greenhaus & Allen, 2011; Kalliath & Brough, 2008). Individuals must assess their own effectiveness and satisfaction with their roles within their life, causing individuals to reflect upon both their values and their actual experiences (Greenhaus & Allen, 2011), which can lead to a well-understood construct, upon which we base a majority of our literature and our future understanding of other concepts.

Such a definition allows both for more variability and specificity for individuals within the workforce with which they can identify. For example, an individual may work long hours at their job and spend little time outside of their organization. While certain understandings of work-life balance may argue that this is not work-life balance, Greenhaus and Allen (2011) argue that, for this individual, their life and work roles are indeed balanced if these expectations are congruent to their values at that time. Balance, therefore, should be influenced by both conflict and facilitation, but the definition is more tailored to actual balance perceptions.

However, this definition by Greenhaus and Allen (2011) is subject to criticism, much like the other meanings that have been put forth to understand work-life balance and have received skepticism. One particular criticism of this definition focuses upon the idea that, by including effectiveness and satisfaction, a researcher may too readily invite a focus upon the individual and their perception of satisfaction, subsequently lacking the punch and power of a more global construct (Grzywacz & Carlson, 2007). But, given the importance of both effectiveness and satisfaction in the completion of tasks within each role (Grant et al., 2013; Grawitch, Maloney, Barber, & Mooshegian, 2013; Greenhaus & Allen, 2011), we propose that such a scale both fills a whole within the literature and can add benefits to the field of work-life overall.

Existing Measures

Balance has held many different definitions and been the construct of interest of various scales within the literature (e.g., Bloom et al., 2009; Carlson et al., 2009; Clark, 2000; Fleetwood, 2007; Frone, 2003; Greenhaus et al., 2003; Gröpel, 2006; Grzywacz & Bass, 2003; Haar, 2013; Kirchmeyer, 2000; Matthews, Kath, & Barnes-Farrell, 2010; Prowse & Prowse, 2015; Waumsley et al., 2010). While these various measures and scales have been validated and

tested on individuals within the workforce, there has not been a published scale put forth that best captures both measures of effectiveness and satisfaction to achieve work-life balance.

In previous publications, measures have focused upon work-life conflict and work-life enrichment (Brough et al., 2014), which are generally thought to be less complex to conceptualize (Greenhaus & Allen, 2011). However, previous scales have designed measures that fail to account for the individuality of personal experiences; this failure to include perceived balance demonstrates that we fail to measure this construct through effectiveness and satisfaction. Previous reviews of the literature point towards distinct gap that must be answered so that we may proceed as a field and continually expand into a more mature science (Brough et al., 2014; Carlson et al., 2009; Frone, 2003; Greenhaus & Allen, 2011; Kalliath & Brough, 2008; Wayne et al., 2016). In many jobs, one's effectiveness at completing job tasks is correlated with perceived satisfaction (Carlson et al., 2009; Grant et al., 2013), and both satisfaction and effectiveness have important consequences on how individuals interpret their roles and feel about their lives (Greenhaus & Allen, 2011). Therefore, the literature of scales that exists does not take into consideration the effects that these two characteristics have upon our perceptions of balance. In failing to measure this construct through these processes of thought, we may miss important information or misrepresent the true nature of modern work-life balance.

Effectiveness in Work and Life

Perceived effectiveness felt in work and life roles has been linked to employee's work-life balance, and many organizations attempt to ensure that their personnel will continually be able to balance the demands of work with those that come from external sources (Grzywacz & Carlson, 2007). Effectiveness has been linked with increased productivity, satisfaction, and a higher level of commitment to various roles in which an individual engages (Grant et al., 2013;

Wayne et al., 2016). Within work and life roles, effectiveness refers to the idea of meeting and excelling at responsibilities associated with each role (Carlson et al., 2009). More specifically, work-life balance effectiveness is thought to be “the accomplishment of role-related expectations” that are shared between work and nonwork roles experienced by the individual (Grzywacz & Carlson, 2007, p.458). When an individual meets certain expectations held within a role, or displays effectiveness, this effectiveness can then influence their attitudes, or their satisfaction, that they take from their role (Wayne et al., 2016), which could then contribute to overall feelings of balance between two distinct roles. Previous research indicates that individuals who are more aware of the requirements and goals of their work and life domains are better able to meet the demands associated with each role, to feel more effective in both domains, and to feel content with their overall performance (Annink & den Dulk, 2012). These individuals, subsequently, experience higher perceived balance between these two dichotomous roles.

Similar to the global views of work-life balance, balance effectiveness is inextricably linked to the social component, reliant upon the expectations of others to serve as a means by which the individual may evaluate their own performance. Some degree of work-life balance is dependent upon the ability of the individual to pay attention to both work and nonwork responsibilities, or to focus on their roles, and this role salience has been linked to increased levels of work-life conflict in the past (Chandra, 2012; Greenhaus & Beutell, 1985). Work-life balance effectiveness is bidirectional with both work and life role balance affecting one another (Carlson et al., 2009). Nevertheless, it still remains that individuals may avoid the strain experienced between roles by engaging and expanding their role identities (Carlson et al., 2009). However, this role salience has not been studied in balance effectiveness, which is incredibly

important in how we meet expectations, meaning that additional studies should be conducted. The emphasis on roles and on effectiveness also needs to account for the views of others involved with the individual (e.g., coworkers, friends, family members, etc.; Voydanoff, 2005). Such an approach may account for the influence that transcends the individual to provide a holistic overview of how we may meet expectations while exploring the finer constructs that make up the work-life interface (e.g., time, ability, strain, etc.; Carlson et al., 2009; Voydanoff, 2005).

However, while effectiveness has been analyzed and measured, there is a lack of scales and literature that reflect the relationship shared between individual effectiveness and work-life balance (Greenhaus & Allen, 2011; Carlson et al., 2009). Very few studies have looked at balance effectiveness, despite results that this construct is linked to positive attitudes at work and nonwork, reduced stress, and overall satisfaction (Wayne et al., 2016). While one such scale exists that measures balance effectiveness (e.g., Carlson et al., 2009), there is a gap within the literature that examines this relationship further. Therefore, our understanding of balance requires a more satisfactory answer to the thought that:

Hypothesis 1: Effectiveness is a separate facet of work-life balance.

Satisfaction in Work and Life

Satisfaction felt in job and life roles is noted within the literature as being correlated with increased organizational commitment and work quality (Beham & Drobnic, 2010; Jang & Zippay, 2011). As such, this concept figures prominently into our understanding of balance with both a cognitive and affective component (Valcour, 2007). Conceptually, satisfaction is easily understood to feature prominently in how an employee views the importance of their work contribution and the takeaway that they receive from completing their tasks (Marks &

MacDermid, 1996; Rantanen et al., 2011). Work-life balance satisfaction focuses upon the perception of how one allocates resources between different roles held by the individual (Grawitch et al., 2013), marking it as distinct from work-life conflict or work-life enrichment as balance (Beham & Drobic, 2010; Grawitch et al., 2013). Satisfaction with work-life balance has also been defined as the degree of contentment that results from an assessment of one's success at meeting family and work role demands (Valcour, 2007). Essentially, work-life balance satisfaction concerns itself with how well an individual perceives the job that they do and how content they are with their overall balance.

Previous studies have indicated that work-life balance contributes to the positive energy felt by individuals, which leads to overall harmony experienced by employees (Russo, Shteigman, & Carmeli, 2016). Additionally, flexible schedules are often linked to higher levels of overall balance satisfaction (Hancke, Igl, Toth, Buhren, Ditsch, & Kreienberg, 2014), which could allow for individuals to take part in more roles. This could then allow for a perpetual positive feedback loop of increased role involvement leading to more satisfaction and increased well-being (Danes, 1998). Work-life balance satisfaction does not rely upon directionality like previous definitions of balance purport (Valcour, 2007). Additionally, balance has been conceptualized as satisfaction in previous studies where balance occurs after achieving satisfaction in work and nonwork domains through personal resources that are spread across all roles, further pointing towards the importance of this construct in work-life balance (Kirchmeyer, 2000). Since satisfaction is a subjective assessment of feelings, it is far more general than previous constructs and has not been found to have a multitude of facets (e.g., time, strain, behavior; Valcour, 2007). Balance satisfaction is not the same as conflict or enrichment, different in its emphasis upon a general state of being and feeling about work and nonwork

(Greenhaus & Allen, 2011). Nevertheless, balance satisfaction allows for a wholly demonstrable construct that is quantifiable, testable, and offers distinction from previous definitions of balance.

Given that satisfaction is distinct from other assumptions of balance yet is key to its presence in employee happiness with work and life responsibilities, the measure of balance satisfaction remains of incredible importance. While a small number of studies have looked at balance satisfaction, many have not looked at the influence of roles on individual perceptions of performance and rarely do they pull from the effectiveness literature together (Wayne et al., 2016). Work can function as a source of fulfillment and happiness for people, meaning that some individuals may experience contentment even when their work and nonwork lives are not traditionally balanced in regards to time and how their attention is allocated (Greenhaus & Allen, 2011; Raiden & Raisanen, 2013). As a field, this is the type of relationship that we wish to emphasize with this definition of work-life balance satisfaction that has previously gone unexplored (Greenhaus & Allen, 2011). Since balance promotes positive attitudes and other benefits in role theory (Marks & MacDermid, 1996), further studies should look at the influence of this dimension (Wayne et al., 2016). Satisfaction in work-life balance could be thought of as the perception that one role does not drain more resources from another role and can benefit performance in both roles (Grawitch et al., 2013). Job satisfaction is heavily dependent upon job demands (Gao & Jin, 2015), and the same relationship can be said to be shared between satisfaction and family responsibilities (Greenhaus & Allen, 2011), meaning that satisfaction is often dependent upon the resources that an individual can allocate to each role. In assessing the overall satisfaction of an individual with their work-life balance, we may further understand the importance and significance of work and family roles and their impact on one another (Abendroth & den Dulk, 2011).

While satisfaction has been measured a number of ways (Beham & Drobic, 2010), work-life balance satisfaction has only been looked at in a small handful of studies (Grawitch et al., 2013; Greenhaus & Allen, 2011). Additionally, despite criticism that states that satisfaction should not be a factor in work-life balance (Gryzwacz & Carlson, 2007), we argue that satisfaction relies upon a self-evaluative component, which is consistent with more recent conceptions of work-life balance (e.g., Greenhaus & Allen, 2011; Wayne et al., 2016). Whereas balance effectiveness is linked to the social aspect of work-life balance, satisfaction is linked to individual perceptions and evaluations of one's own experiences (Wayne et al., 2016). Therefore, our understanding of balance through effectiveness and satisfaction depends upon the idea that:

Hypothesis 2: Satisfaction is a separate facet of work-life balance.

Previous literature points towards this gap in the literature (Brough et al., 2014; Frone, 2003; Greenhaus & Allen, 2011; Kalliath & Brough, 2008; Voydanoff, 2005; Wayne et al., 2016). Despite numerous reviews of what comprises work-life balance, many authors point towards effectiveness and satisfaction without a proper metric that contains both in equal measure. Work-life balance is dependent upon a holistic approach that encompasses all aspects an individual's life, requiring both effectiveness for the social component and satisfaction for the subjective (Russo et al., 2016). Therefore, to advance with this construct and to clarify what balance is given its ever-important nature, we have reviewed the literature and sought to develop a new measurement tool. While scales do exist that seek to measure work-life balance effectiveness and satisfaction (e.g. Carlson et al., 2009; Valcour, 2007), both scales contain items that blur together satisfaction and effectiveness. For example, these scales contain items that, while seeking to explain satisfaction, ask about the abilities of individuals to perform tasks well,

which speaks more towards effectiveness. Given that both satisfaction and effectiveness are hypothesized to be important facets of work-life balance, we put forth that a new measure is a necessary addition to the literature and that:

Hypothesis 3: A two-factor model of work-life balance (work-life balance effectiveness and work-life balance satisfaction) fits the data better than a one-factor model.

Method

In Study 1, I conducted exploratory factor analysis (EFA) to examine the correlations – or covariances – that are represented within the item level data. Factor analysis provides a way by which we may better understand our constructs and models through valid statistical tests and analyses. Given the reasons stated previously (e.g., overlap seen between scales that currently exist to measure work-life balance and confusion around the overall definition; Carlson et al., 2009; Valcour, 2007), it was necessary for us to understand this construct and how it may be influenced or affected by underlying relationships (Fabrigar, Wegener, MacCallum, & Strahan, 1999). Originally developed to explore mental abilities (Spearman, 1904), exploratory factor analysis has now become one of the most widely used statistical procedures (Fabrigar et al., 1999). EFA comes from the common factor model, which states that each measured variable (or manifest variable) is made up of one or more common factors and a unique factor (Thurstone, 1947). Common factors are latent variables that influence more than one manifest variable, while unique factors account for only one measured variable (Fabrigar et al., 1999). Given that the common factor accounts for correlations among variables, our goal when conducting an EFA is to explain these covariances among measured variables by estimating our factor loading pattern, which shows us the relationship between common factors and these manifest variables (Fabrigar et al., 1999).

As suggested by previous literature, EFA requires a number of decisions on the part of the researcher (Costello & Osborne, 2005; Fabrigar et al., 1999). Of utmost consideration, a researcher must decide if EFA is the most appropriate statistical procedure to fit a model to the data. EFA tests the number of common factors and the relationships between these common factors to our manifest variables (DeCoster, 1998). Additionally, our factor loadings were rotated to further simplify and provide clarification of the data (Fabrigar et al., 1999). Rotation allows for a more parsimonious and easily interpretable model (Fabrigar et al., 1999). Researchers must also consider the number of items to ensure that the common factors are both well-represented and not subject to low reliability or validity (Fabrigar et al., 1999; Hinkin, 1998). The size of the sample should be considered for EFA. Sample sizes are often disputed, and many researchers have arrived at differing numbers (e.g., Gorsuch, 1983; Kline, 1979; MacCallum, Widaman, Zhang, & Hong, 1999). One specific guideline that shapes how many participants we may seek is that the stronger the data is the fewer participants are needed, as represented by uniformly high communalities without cross loadings and several variables that load strongly on each factor (Costello & Osborne, 2005). Finally, there is also some debate over the use of principle components analysis (PCA) or exploratory factor analysis with specific uses for both. Generally, EFA should be used to identify latent constructs that underlie our manifest variables and to generate factor scores in our constructs through the identification of the most important features in our items (DeCoster, 1998; Fabrigar et al., 1999; McDonald, 1985). In light of the nature of the constructs, the support from the literature, and the need for initial exploration into work-life balance as effectiveness and satisfaction, EFA is an appropriate tool to fit our model to the data.

Exploratory factor analysis was thus employed to reduce the scale into a more parsimonious version with fewer items with strong factor loadings to be administered (Hinkin, 1998). Items on both effectiveness and satisfaction were loaded into the factor analysis to be examined for interitem correlations and validity (Hinkin, 1998). I aimed to have a total of eight to 12 items on my scale (evenly split between effectiveness and satisfaction), a number that is supported by the literature as accurately representing the construct in question and in preventing boredom and attrition (Fabrigar et al., 1999; Meade & Craig, 2012; Pedhazur & Schmelkin, 1991). EFA can thus be used to help identify this construct of work-life balance and to demonstrate what items are the most important through the use of these factor scores that make up balance (DeCoster, 1998). Both effectiveness and satisfaction have been linked to attitudes and perceptions of work-life balance, furthering the need for study of these two constructs through the use of survey items (Wayne et al., 2016). The final number of items depended on the psychometric properties of the resultant scale. Specifically, items were selected based upon high reliability numbers and through the use of internal consistency measures, such as Cronbach's alpha (Cortina, 1993). Responses from participants to the items were recorded through a Likert scale of 1 (strongly disagree) to 5 (strongly agree).

Once the refined items had passed through the first study, these items then moved into the second stage of analysis. In Study 2, a confirmatory factor analysis (CFA) allowed us to further assess the model fit and factor structure of our scale (DeCoster, 1998; Hinkin, 1998). CFA is often used to test hypotheses and a measurement model through inferential techniques to assess the goodness of fit of individual items and common factors (Hinkin, 1998; Williams, Ford, Nguyen, 2002). When coupled with the EFA, we ensured that we truly were measuring the construct in question (i.e., work-life balance) through the fit of our model of effectiveness and

satisfaction. Whereas, exploratory factor analysis provided an introduction into assuring that our items reliably load onto our factor analysis, our CFA allowed for us to step further into asserting the accuracy of the measurement model of the scale. In comparison to EFA, CFA depends heavily upon the theoretical background that leads researchers to construct specific hypotheses (Brown, 2006; Fabrigar et al., 1999). With CFA, the researcher is responsible for the specification of the number of factors and their pattern of loadings (Brown, 2006). We thus evaluated the fit of our items of work-life balance effectiveness and satisfaction on how it recreated our covariance matrix of our manifest variables. Given our previous EFA, we expected for the constraints and our factor loadings imposed upon our model to allow for us to find support for our hypotheses of work-life balance effectiveness and satisfaction. EFA and CFA are best used in conjunction as a way to refine a scale and available literature and then to test our hypotheses and model (Hinkin, 1998).

Participants and Procedure

A thorough search of the literature was conducted, and all items that are said to measure work-life balance and exist in current scales were pulled. However, given that work-life balance has been conceptualized in a multitude of ways with different items for each definition, further review was needed to further parse down the items. We selected items from the literature on effectiveness and satisfaction as the foundation for the scale. By using items found within the literature on perceived balance, we pulled from the theoretical background of work-life balance in generating the items for our scale (Hinkin, 1998). A total of 34 items were pulled from the literature of balance effectiveness and satisfaction from existing scales with 18 items for work-life balance effectiveness and with 16 items for work-life balance satisfaction (e.g., Allen, Greenhaus, & Edwards, 2010; Allen & Kiburz, 2012; Carlson et al., 2009; Eddleston & Powell,

2012; Grawitch et al., 2013; Greenhaus, Ziegert, & Allen, 2012; MacDermid & Marks, 1996; Valcour, 2007). Additionally, given the necessity to fully capture the construct space of work-life balance effectiveness and satisfaction, additional items were generated by the author and the thesis chair to further reflect the construct as backed by the literature (6 items for WLB effectiveness and 7 items for WLB satisfaction).

The survey was created with the above items, demographic items, and insufficient effort response items. Demographic items ensured that we had a broad and generalized population considering this research is investigating perceptions of work-life balance. In accordance with suggestions from the literature, insufficient effort response (IER) items can help to identify and eliminate incorrect observations and ensure careful answers that would result in models of inappropriate fit (Huang, Curran, Keeney, Poposki, & DeShon, 2012). Insufficient effort response items seek to resolve the issue of careless responding, which is classified as responding to survey questions with little regard or attention to the question that is being asked (Meade & Craig, 2012). Careless responding can serve as a threat to psychometric properties of a survey by skewing data and reducing reliability estimates when developing a scale (Meade & Craig, 2012). To combat this and as suggested by Meade and Craig (2012), four IERs were scattered throughout the survey in the form of instructed response items (e.g., “Please select neither agree nor disagree for this item”). These items can help to indicate if respondents are failing to read the item stem and are simply responding at random (Meade & Craig, 2012).

Participants were paid \$0.25 for taking the survey. This compensation was allotted to all participants through their Amazon accounts. Once the target sample size was gathered for each sample ($n = 800$), the survey on MTurk closed. A posting on MTurk of the study contained a brief introduction to the study, the estimation of how much time the survey should take

(approximately 5 minutes), and asked the participants to proceed with the study if they consented. Turkers, or participants using MTurk, took pre-screening items (e.g., age, employment above 20 hours, residence in the United States) based on our inclusion criteria, and Turkers were then free to choose to participate in our survey. These individuals then rated their perceived balance effectiveness and satisfaction on a 5-point Likert scale that ranged from Strongly Disagree (1) to Strongly Agree (5).

Two independent samples were recruited through the use of Amazon's MTurk, and both had to be employed at least 20 hours, had to be at least 18 years old, and had to reside in the United States. Such justifications reflect the population of interest: individuals who work 20 hours a week are considered to be employed part-time (Feldman, 1990), and thus must balance work and nonwork roles; 18 is the legal age to be considered an adult; and U.S. residency is important in this preliminary study in an attempt to reflect the culture around work in the United States. These participants ranked their perceived work-life balance through their effectiveness and satisfaction with work and life roles as described by the items selected from the literature. While the use of MTurk data has been disputed (e.g., Landers & Behrend, 2015), previous literature indicates that the population on MTurk is generally a means by which more naturalistic settings and an experimental control can be combined to serve as a potential resource for researchers (Aguinis & Edwards, 2014; Aguinis & Lawal, 2012). Turkers generally are more educated, come from a variety of backgrounds, hold a variety of professions, and are less likely to live alone, which makes them a good population to use to further understand nonwork roles and how they balance nonwork with work (Behrend et al., 2011; Brawley & Pury, 2015; Landers & Behrend, 2015).

For Sample 1, we collected data from 896 Turkers with a fairly diverse population, as is seen with other MTurk surveys (Behrend, Sharek, Meade, & Wiebe, 2011). Two participants did not reside in the United States, two individuals were not 18 years or older, and 62 individuals were not employed at least 20 hours, and these individuals were dropped from further consideration for a failure to meet the screening criteria. A total of 806 participants completed the survey and a total of 744 participants were included in our analyses based upon passing the screening criteria (i.e., age of 18 or older, working 20 or more hours, and United States residence), completing the survey, and missing none of the IERs. Our sample displayed a relatively even amount of males and females from a variety of backgrounds in accordance with the previous studies that look at the demographic makeup of the MTurk population (Behrend et al., 2011). Participants had a mean age of 34.79 years ($SD = 10.89$ years) and were employed an average of 37.91 hours ($SD = 8.55$ hours). Additionally, the majority of the sample was female (61.9%), identified their ethnicity as not Hispanic or Latino (91.8%), indicated that they were Caucasian (81.4%), and indicated that they were married (47.0%). The majority of participants also indicated that they had a Bachelor's degree (39.6%), but the education level of many of the participants was fairly varied (grammar school: .1%; high school or equivalent: 20.6%; vocational or technical school: 18.0%; Master's degree: 14.4%; professional degree: 4.1%; doctoral degree: 1.7%; other: 1.5%). Finally, the majority of the sample indicated that they did not have children (56.2%).

For Sample 2, participants were again recruited through Amazon's MTurk. A total of 890 Turkers began the survey for Sample 2. Two individuals did not reside in the United States, three dropped after viewing the consent form, and 59 individuals did not work at least 20 hours; these individuals were dropped from further consideration for a failure to meet the screening

criteria For the CFA, those items that measured work-life balance effectiveness and satisfaction were then used on a new sample. All items were measured on a 5-point Likert scale from Strongly Disagree (1) to Strongly Agree (5). Additionally, demographic items were asked to ensure that our sample came from a broad and generalized sample. A total of 803 individuals completed the survey. A total of 742 participants were included in our analyses based upon passing the screening criteria (i.e., age of 18 or older, working 20 or more hours, and United States residence), completing the survey, and missing none of the IERs. Similar to Study 1, the average age of the Turkers was 35.71 years ($SD = 11.41$) and worked 37.49 hours ($SD = 8.45$). The majority of respondents were female (53.1%), did not identify as Hispanic or Latino (91.5%), and were Caucasian (75.3%). The sample was fairly split in having never married (45.0%) or in being married/living as married (45.2%). Additionally, the majority of the sample did not have children (57.0%). Again, the education level varied in the sample, though a majority of individuals had completed a Bachelor's degree (46.2%; grammar school: .2%; high school/equivalent: 21.3%; vocational/technical school: 16.6%; Master's degree: 10.6%; professional degree: 2.6%; PhD: 1.2%; other: 1.2%). Finally, insufficient effort responding items were included within the measure, much like in Study 1. Similarly, for the second study, participants were gathered through the use of Amazon's MTurk, much like the first study. However, participants who took part in the first study were not allowed to participate in the second study, as confirmatory factor analysis should be computed through an independent sample (Hinkin, 1998). To ensure that these participants did not slip into the sample, we used their Turker identification numbers, which are a random code (e.g., A71G5HRIEV), to prohibit their inclusion in the study. The CFA study sought to gather a sample of 800 Turkers who met

the same qualifications of the first study (i.e., resided in the U.S., employed at least 20 hours, and over the age of 18).

The survey was administered on MTurk containing the retained items from Study 1. The same posting from Study 1 was listed, and participants took a brief pre-screening measure (e.g., age, employment, residence) and read a brief introduction to the study. Participants ranked their perceived work-life balance effectiveness and satisfaction on the items, and a CFA was then conducted on the items retained from Study 1 and loaded on the hypothesized factor loading pattern. These participants then helped to ensure that the construct validity of the measure was sound. Participants were paid \$0.25 for the survey (lasting approximately 5 minutes), which was allotted to them through their Amazon account.

Analyses

The items from within the literature were analyzed through exploratory factor analysis for Study 1. Factor loadings had to meet a criterion level of 0.40 to be considered meaningful, as suggested by the literature (Ford, MacCallum, & Tait, 1986), but these items were still allowed to cross-load. Additionally, I used the maximum likelihood extraction method, allowing for calculations of goodness of fit indices and statistical significance testing of our factor loadings and inter-item correlations (Fabrigar et al., 1999). I also used an oblique rotation due to its generation of factor correlations that will allow for us to analyze the inter-item correlations of each item within our scale (Ford et al., 1986). Orthogonal rotations lead to factors that are uncorrelated with one another yet remain popular due to their simpler results (Costello & Osborne, 2005). While oblique rotations are often more statistically complex than orthogonal rotations, there is the added benefit of additional information that may not otherwise be provided in these interrelationships and results (Ford et al., 1986). Given that an oblique rotation produces

correlations between factors, I expected a better view of how the variables related to one another (Costello & Osborne, 2005). Factor loadings were analyzed and had to have a loading of greater than 0.50 to be considered strong factors (Costello & Osborne, 2005). I then used Kaiser and scree criteria to ensure that the factors were distinct and separate (Hinkin, 1998). Finally, I retained those items with the largest factor loadings to ensure that the scale was both parsimonious and specific. The goal was to create a scale that was coherent, complete, and prudent with approximately eight to 12 items (evenly split on the two factors of work-life balance effectiveness and work-life balance satisfaction) that could be used in both practical applications and research settings.

To run the CFA, I used the item variance-covariance matrix that was collected from the participants of the second study, as suggested by Hinkin (1998). This allowed for one to analyze correlations and to assess the goodness of fit of both individual items and the measurement model (Hinkin, 1998). Additionally, after the EFA and based on the extensive literature search, I loaded the factors into the specified pattern loading and the specified number of factors of the measured variables (Fabrigar et al., 1999). In loading the factors into the factor analysis, I sought to ensure that the factors must then have a reasonably high correlation to the constructs that they were measuring, and we expected, then, to see a relatively low chi-square (Hinkin, 1998). I also looked at the goodness-of-fit indices as a way to check the model fit, like a Comparative Fit Index (CFI) or Tucker-Lewis index (TLI; Hinkin, 1998). A good fit of the model would be demonstrated with a CFI or TLI of 0.90; however, a model with a CFI or TLI of 0.95 would indicate better fit (Hinkin, 1998). Additionally, other fit indices were considered. I generated the standardized root mean square residual (SRMR) and the root mean square error of approximation (RMSEA) as the final fit indices. A good fit of the model would be indicated by

0.08 for both indices while a value of 0.05 would indicate better fit. Finally, the Akaike Information Criterion (AIC) provided a means of model selection for our CFA. A good fit of the model for the AIC was demonstrated by a lower AIC when compared to the other model. The goal of the CFA was to confirm the model and factor structure that was found in the EFA, and allowed for hypothesis testing on the separate and distinct work-life balance effectiveness and satisfaction factors (Hinkin, 1998).

Results

Study 1: Exploratory Factor Analysis

Items were drawn from the literature on work-family balance or came from scales that stated they measured the construct of work-life balance. Initially, a total of 403 items were pulled from the literature; however, upon further review, many of the items measured work-life conflict or enrichment. Given the vast and varied nature of the balance construct and the many definitions that the construct has held throughout its tenure in the work-family lexicon (Kalliath & Brough, 2008), these findings were not surprising. These items were ruled out from further consideration as they did not appropriately capture the construct of work-life balance (Greenhaus & Allen, 2011). Subsequently, the number of items was reduced to 81 items that measured work-life balance satisfaction or effectiveness. These items were considered to be the items that would be included or revised to create the new scale for work-life balance satisfaction and effectiveness. The author and the thesis chair then reviewed these items further and eliminated items that did not adequately capture the balance construct as described by Greenhaus and Allen (2011). Using the definitions of work-life balance effectiveness and satisfaction as defined by previous studies (Carlson et al., 2009; Greenhaus & Allen, 2011; Valcour, 2007), the author and thesis chair then revised the items into a comprehensive list of 34 items (18 items for WLB

effectiveness and 16 items for WLB satisfaction). These items were reviewed to ensure that the balance construct was appropriately captured and well-defined, and the author generated additional items to ensure that both of the factors of work-life balance were adequately assessed and that they more generally captured the construct of work-life balance versus work-family balance (6 items for WLB effectiveness and 7 items for WLB satisfaction). Using the definition provided by Carlson et al. (2009), these new items sought to capture an individual's ability to balance both work and nonwork roles and to meet demands in both domains. Additionally, Greenhaus and Allen (2011) emphasize the importance of life-role priority in the construct of work-life balance to explain why individual perceptions of balance may change over time. Items were thus created to reflect that individual ability to balance differing domains. Furthermore, new items were created by the author using the definition of work-life balance satisfaction provided by Valcour (2007). These items also reflected individual perceptions of happiness in one's life-role priority and in how satisfied individuals were in devoting time and attention to one's work and one's personal life. The final items in their edited forms as they appeared in the Qualtrics survey are found in Tables 1 and 2; the comparison between the original work-family items and the edited items are also found in Tables 1 and 2. Additionally, where the items originally came from is located in Tables 1 and 2.

The responses from Sample 1 were analyzed using MPlus Version 7.2 (Muthén & Muthén, 2007). We ran an EFA on all 47 items for one- and two-factor solutions. For the one-factor model, the chi-square test of goodness-of-fit was statistically significant; $X^2(1, N = 744) = 6943.904, p < 0.001$. The comparative fit index, or CFI, has been reported to be the best fit index with small sampling variability (Bentler, 1990). Additionally, the Tucker Lewis Index, or TLI, is reported, which compares the model at hand to a model with zero factors (or the worst-

case scenario) and a model that would fit perfectly (or a best-case scenario), thus allowing for a determination of how close the model is to a perfect model. Previous literature has indicated that both the CFI and the TLI should be close to or higher than 0.90 for adequate model fit (Hinkin, 1998). For a one-factor solution, the CFI was 0.847, and the TLI was 0.840, indicating poor model fit. Additionally, the root mean square error of approximation (RMSEA) was also assessed. The RMSEA tells us how well the model fits with the data with the optimal number of parameter estimates (Hooper, Coughlan, & Mullen, 2008). The RMSEA lends itself to parsimony, and a lower RMSEA is reflective of a model with a lower number of parameters. The RMSEA should be below 0.08 for adequate model fit. For the one-factor solution, an RMSEA of 0.088 was found with a 90% confidence interval of 0.086 to 0.090. Finally, the SRMR, or the square root mean residual, was assessed to find the square root of the difference between the residuals of the current model and a perfect model. Byrne (1998) stated that an SRMR should be less than 0.05; however, for a one-factor solution, an SRMR of 0.051 was found. By comparison, the two-factor solution provided a better model fit. A chi-square test of goodness of fit found a much smaller chi-square value; $X^2(2, N = 744) = 4296.479, p < 0.001$. A comparative fit index of 0.914 was found with a TLI of 0.906. The two-factor solution found an RMSEA of 0.067 with a 90% confidence interval of 0.065 to 0.069, which is reflective of a much more parsimonious and better-fitting model. Finally, an SRMR of 0.028 was found for a two-factor model. These goodness-of-fit indices supported the notion that work-life balance is comprised of two-factors and lead to a much better model fit.

The author and the thesis chair then made decisions about which items should be retained based on the information provided by the two-factor EFA. We set out to create a scale that contained eight to 12 items with an even split of items for work-life balance effectiveness and

work-life balance satisfaction. Previous literature has emphasized the need for at least five or more strongly loading items (.50 or better) to indicate a solid factor (Osborne & Costello, 2009). The choices on these items were made by evaluating which items performed best in our EFA (i.e., had the highest factor loadings) for each factor. Given that factor loadings do not indicate if an item is a statistical outlier in regard to participant endorsement, we calculated the means and standard deviations for each item and then converted those means and standard deviations into z-scores to ensure that no outliers were selected to be a part of our scale. This further helped to ensure that everything in the creation of our scale was copacetic. Anything that had a z-score below -1.96 or above 1.96, which were our cut-off values, was considered to be an outlier. In the items of work-life balance effectiveness, only one item had a standard deviation that was an outlier and was not included in the final items. However, two of the highest loading items in work-life balance satisfaction both had mean scores that were outliers and thus were not included in our items.

For work-life balance effectiveness, the items that loaded the highest were items 6, 13, 7, 18, and 1. Item 6 had the highest factor loading of 0.904. Item 13 had the next highest loading with 0.796. Items 7, 18, and 1 all had respective loadings of 0.792, 0.772, and 0.772. All of these factor loadings are above 0.70, which further indicates that these are strong loadings. Previous literature has indicated that 0.32 should be considered to be the minimum loading of an item (Tabachnick & Fidell, 2001), but adequate and strong loadings (.50 or better) are preferred. The factor loadings for these are displayed in Table 3. As previously stated, for work-life balance satisfaction, two items with the highest loadings captured the concept of optimal satisfaction (e.g., “In most ways, my work-life balance is close to my ideal”) rather than actual satisfaction. These items also had low means that were outliers and thus were not included in

our final items. Subsequently, the items that were retained were WLBSat_12, WLBSat_8, WLBSat_19, WLBSat_17, and WLBSat_2 with respective factor loadings of 0.981, 0.947, 0.943, 0.899, and 0.897. Again, all of these items loaded above 0.70 and were considered to be very strong items.

Therefore, from our exploratory factor analysis and Study 1, we retained 5 work-life balance effectiveness items (WLBEff_1, WLBEff_6, WLBEff_7, WLBEff_13, WLBEff_18) and 5 work-life balance satisfaction items (WLBSat_2, WLBSat_8, WLBSat_12, WLBSat_17, WLBSat_19). The goodness-of-fit indices of the exploratory factor analysis may be found in Table 4, and the model fit comparison for the one-factor and two-factor EFA models can be found in Table 5. These 10 items were then further analyzed in Study 2 with a new independent sample of participants through confirmatory factor analysis.

Study 2: Confirmatory Factor Analysis

The responses of the second sample were also analyzed using MPlus Version 7.2 (Muthén & Muthén, 2007). Two CFAs were then run on the sample; the structure of these models is presented in Figures 1-2.

The first model was a one-factor CFA for the 10 WLB items. This CFA used one factor of WLB to specify where the items should load. This model entailed that all 10 of the items loaded onto a single factor of WLB (Figure 1). However, this model demonstrated fit that was merely adequate. Results found a significant chi-square goodness-of-fit statistic; $X^2(1, N = 742) = 681.580, p < 0.001$. Additionally, the CFI of 0.900 and TLI of 0.871 were not poor but were not quite above the cut-off values. Nevertheless, the RMSEA is still quite high at 0.158 with a 90% confidence interval of 0.148 to 0.168. Finally, the SRMR is 0.062, which is also on the upper end of acceptability.

The second model was a two-factor CFA in which all ten effectiveness and satisfaction items were specified to load onto the latent factors of effectiveness or satisfaction (Figure 2). The chi-square test was statistically significant; $X^2(2, N = 742) = 154.000, p < 0.001$. Both the CFI and the TLI improved between the two models with a CFI of 0.981 and a TLI of 0.975. The RMSEA also improved from the first model to 0.069 with a 90% confidence interval of 0.058 to 0.080, which indicates good model fit. The SRMR and the alpha coefficients were calculated with an SRMR of 0.024 and acceptable alpha coefficients ($\alpha_{\text{WLBEffectiveness}} = 0.891$; $\alpha_{\text{WLBsatisfaction}} = 0.944$). Finally, the Akaike Identification Criterion (AIC) was also evaluated with a lower AIC indicating stronger model fit. In comparison to the first model, which had an AIC of 14822.099, the second model had a lower AIC of 14296.52, which further supported a stronger model fit for the second model. All of the goodness-of-fit indices may be found in Table 6. These indices indicate that the model with the best fit was the second model (Figure 2), meaning that five items for both effectiveness and satisfaction capture the concept of work-life balance.

Discussion

The two studies that were conducted here highlight both the importance of the work-life balance construct and the validity of both effectiveness and satisfaction as factors within balance. Subsequently, all of the hypotheses receive support. Hypothesis 1 was fully supported in that work-life balance effectiveness was a separate facet of the balance construct. Hypothesis 2 also received support as satisfaction was another separate facet of the work-life balance construct. Finally, Hypothesis 3 was fully supported given that a two-factor model did fit the data better than a one-factor model.

The preceding studies and resultant model and scale provide a novel contribution to the literature as they offer both clarity on this construct and a comprehensive test that effectiveness

and satisfaction make up unique aspects of work-life balance. Study 1 identified items that represented effectiveness and satisfaction from the work-family literature and generated new items that were then tested to see what items accurately captured the concept of work-life balance. Exploratory factor analysis identified ten items for work-life balance effectiveness and satisfaction (5 for each factor). Finally, these models were then tested in Study 2 to show that effectiveness and satisfaction made up separate facets of the WLB construct. Study 2 also demonstrated that a two-factor model of work-life balance had very good model fit indicating accurate measurement of this construct.

While this relationship has been hypothesized and proposed to exist (Greenhaus & Allen, 2011; Wayne et al., 2016), there was no definitive scale that assessed both factors of effectiveness and satisfaction in work-life balance together. Additionally, we had to further test that balance was indeed comprised of effectiveness and satisfaction rather than a one-factor solution. These studies indicate that work-life balance is comprised of these two factors, allowing for us to understand how individuals experience and perceive their abilities in work and nonwork domains. Individuals are called to perform well in both their work role and personal life, furthering the need to understand how effective these individuals perceive themselves to be in accomplishing these responsibilities. Furthermore, the balance construct depends upon one's own evaluation of their performance and their perceived happiness with how they devote time and attention in these two roles. Therefore, given that previous literature has emphasized the need for a holistic approach to understanding balance (Russo et al., 2016), these studies further the evidence that effectiveness and satisfaction are independent of one another and distinct factors that account for the whole of the construct. Of note, in the interest of parsimony, the model that provided the best model fit is comprised of 10 items (five items for WLB

effectiveness and five items for WLB satisfaction). The final scale is given in Table 7. This scale could also be useful when employed in organizational and academic contexts as it provides a clear and direct way in which balance may be assessed.

None of the items that were selected and put into the model assessed conflict or enrichment. Additionally, given the importance of assessing individual perceptions of one's ability to balance work and their overall levels of satisfaction with their balance, items that touched upon optimal satisfaction or effectiveness were not included in the model. Optimal satisfaction and effectiveness do not accurately capture the construct in questions, which relies upon an individual's perception of their actuality. Therefore, we believed that this could have some influence on biasing individual perceptions of balance or leading to inaccurate results due to a lack of more objective criteria (John & Robins, 1994). Therefore, it is important to note that this scale did draw some of its items from the literature. While previous scales that assess work-life balance do exist, there are only two scales that are found within the literature that assess work-life balance in its definition of effectiveness and satisfaction (e.g., Carlson et al., 2009; Valcour, 2007). However, it is our hope that this scale performs better than the current scales for work-life balance effectiveness and satisfaction, and the author will test this scale in future studies.

Strengths

This study has several notable strengths. For the scale development, the literature was thoroughly reviewed, and items were pulled from previous scales. However, the EFA and CFA found and identified the items that best capture the construct of work-life balance through effectiveness and satisfaction. In accordance with the literature on factor analysis (Hinkin, 1998), two distinct samples and studies were used in an effort to rigorously develop a scale that

assessed work-life balance. Additionally, this scale was developed using a wide array of employed individuals who came from a variety of jobs given the use of MTurk as a sampling tool. Lastly, the resultant scale provides researchers and practitioners with a scale that combines both work-life balance effectiveness and satisfaction into one cohesive scale and provides support for a two-factor model, which was previously asserted in the literature but untested (Greenhaus & Allen, 2011). The scale is also made up of 10 items that provides a good view of individuals' perceptions of their work-life balance in a parsimonious but comprehensive scale.

Practical and Theoretical Implications

There are several important implications that can be taken away from these findings. While work-life balance effectiveness and work-life balance satisfaction have previously been thought of as distinct measures of this over-arching concept of work-life balance, this measure contributes to the theoretical nature of balance by definitively providing support that it is made up of two components. If we simply measure this construct as either effectiveness or satisfaction, then we may not fully be capturing employee perceptions of work-life balance. This would create organizational policies and programs that only address part of how employees navigate between these two domains. By evaluating work-life balance as both effectiveness and satisfaction, practitioners and researchers may be better able to understand this construct and may create policies that can improve employee perceptions of work-life balance. Furthermore, this scale of work-life balance may provide a sufficient instrument that measures balance more comprehensively. This scale allows for individuals to relay their perceptions of how effective and satisfied they feel in both work and nonwork domains in a way that has been missed by previous measures of balance that have relied on simply one dimension of balance. By assessing balance as both effectiveness and satisfaction, this scale allows for both more individualized and

social aspects of this construct to shine through and further relates to how we keep and maintain our boundaries between roles.

Limitations and Future Directions

While this model provides direction as to how this scale should proceed in measuring balance, there are some limitations that must be noted. Primarily, there is not current convergent or discriminant validity evidence for this new scale of work-life balance effectiveness and satisfaction. Further study is needed to examine how unique this scale of balance effectiveness and balance satisfaction is from current scales (Carlson et al., 2009; Valcour, 2007). Subsequently, future studies should seek to attain convergent and discriminant validities to ensure that this scale, while predicting work-life balance, does offer a novel and notable contribution to the field.

Furthermore, there remains a lack of evidence for criterion-related validity within the two studies that created this scale. Criterion-related validity is used in scale development projects to demonstrate that a measure can predict related outcomes that are associated with the construct that is being assessed. Both of these limitations could be addressed by additional studies in which individuals are asked other items that have been drawn from the literature in conjunction with potential outcomes that have previously been linked to work-life balance (e.g., turnover intentions, job satisfaction, etc.). Additionally, multi-wave or longitudinal data may also help to determine stronger inferences of causality and temporal precedence between predictor (i.e., work-life balance) and outcome variables.

Finally, it should be acknowledged that participants for this study were recruited through Amazon's Mechanical Turk. Amazon's MTurk is a large crowdsourcing platform that is found online and, thus, could raise questions about the validity and generalizability of this population.

Nevertheless, a number of studies have found that individuals who use MTurk display high levels of data quality and accuracy (Buhrmester, Kwang, & Gosling, 2011). Turkers also come from demographically diverse backgrounds of varying education levels and professions (Behrend et al., 2011); therefore, this should not cause concern.

Future research should also look at how conflict and enrichment differ and may influence this measure of work-life balance. Conflict and enrichment are thought to make up both the positive and the negative sides of the work-life interface (Frone, 2002; Greenhaus & Allen, 2011); however, both could influence perceptions of balance effectiveness and satisfaction. Future studies should look at all three constructs to evaluate their relationship with one another in an attempt to better understand these constructs in the work-personal life domain.

Conclusion

To summarize, this project provides evidence for a two-factor model of work-life balance and a scale that may be used to further measure this construct. Effectiveness and satisfaction are two valid components of the balance construct and further the understanding of how effective and satisfied individuals may perceive themselves to be in work and nonwork domains. Future research should proceed with providing additional validation of this scale, thus allowing researchers to better assess work-life balance in a variety of populations of workers.

References

- Abendroth, A. K., & Den Dulk, L. (2011). Support for the work-life balance in Europe: The impact of state, workplace and family support on work-life balance satisfaction. *Work, Employment & Society, 25*(2), 234-256. doi:10.1177/0950017011398892
- Aguinis, H., & Edwards, J. R. (2014). Methodological wishes for the next decade and how to make wishes come true. *Journal of Management Studies, 51*(1), 143–174.
doi:10.1111/joms.12058
- Aguinis, H., & Lawal, S. O. (2012). Conducting field experiments using eLancing's natural environment. *Journal of Business Venturing, 27*(4), 493–505.
- Allen, T. D., Cho, E., & Meier, L. L. (2014). Work – family boundary dynamics. *Annual Review of Organizational Psychology and Organizational Behavior, 1*, 99-121.
doi:10.1146/annurev-orgpsych-031413-091330
- Allen, T. D., Greenhaus, J. H., & Edwards, J. R. (2010). The meaning of work–family balance: An empirical investigation. In *Symposium presented at the annual meeting of Academy of Management, Montreal, CN*.
- Allen, T. D., & Kiburz, K. M. (2012). Trait mindfulness and work–family balance among working parents: The mediating effects of vitality and sleep quality. *Journal of Vocational Behavior, 80*(2), 372-379. doi:10.1016/j.jvb.2011.09.002
- Annink, A., & den Dulk, L. (2012). Autonomy: The panacea for self-employed women's work-life balance?. *Community, Work & Family, 15*(4), 383-402.
doi:10.1080/13668803.2012.723901
- Ashforth, B. E., Kreiner, G. E., & Fugate, M. (2000). All in a day's work: Boundaries and micro

- role transitions. *Academy of Management Review*, 25, 472-491. doi:10.2307/259305
- Bailyn, L. (1993). *Breaking the mold: Women, men, and time in the new corporate world*. New York, NY: Free Press, Macmillan Inc.
- Beham, B., & Drobnic, S. (2010). Satisfaction with work-family balance among German office workers. *Journal of Managerial Psychology*, 25(6), 669–689.
doi:10.1108/02683941011056987
- Behrend, T. S., Sharek, D. J., Meade, A. W., Wiebe, E. N. (2011). The viability of crowdsourcing for survey research. *Behavior Research Methods*, 43(3), 800-813.
doi:10.3758/s13428-011-0081-0
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107(2), 238-255.
- Bloom, N., Kretschmer, T., & Van Reenan, J. (2009). Work-life balance, management practices and productivity. In *International differences in the business practices and productivity of firms* (pp. 15-54). University of Chicago Press.
- Bourhis, A., & Mekkaoui, R. (2010). Beyond work-family balance: Are family-friendly organizations more attractive. *Relations Industrielles*, 65, 98–117.
- Brawley, A. M., & Pury, C. L. (2016). Work experiences on MTurk: Job satisfaction, turnover, and information sharing. *Computers in Human Behavior*, 54, 531-546.
doi:10.1016/j.chb.2015.08.031
- Brough, P., Timms, C., O'Driscoll, M. P., Kalliath, T., Siu, O., Sit, C., Lo, D. (2014). Work-life balance: A longitudinal evaluation of a new measure across Australia and New Zealand

- workers. *The International Journal of Human Resource Management*, 25(19), 2724-2744.
doi:10.1080/09585192.2014.899262
- Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. New York: Guilford.
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk a new source of inexpensive, yet high-quality, data?. *Perspectives on Psychological Science*, 6(1), 3-5.
doi:10.1177/1745691610393980
- Bulger, C. A., Matthews, R. A., & Hoffman, M. E. (2007). Work and personal life boundary management: boundary strength, work/personal life balance, and the segmentation-integration continuum. *Journal of Occupational Health Psychology*, 12(4), 365-375.
doi:10.1037/1076-8998.12.4.365
- Byrne, B.M. (1998). *Structural equation modeling with LISREL, PRELIS and SIMPLIS: Basic concepts, applications and programming*. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Cammann, C., Fichman, M., Jenkins, D., & Klesh, J. (1979). The Michigan organizational assessment questionnaire. Unpublished manuscript, University of Michigan, Ann Arbor.
- Carlson, D. S., Grzywacz, J. G., & Zivnuska, S. (2009). Is work-family balance more than conflict and enrichment?. *Human Relations*, 62(10), 1459-1486.
doi:10.1177/00187267093336500
- Carlson, D. S., Kacmar, K. M., Wayne, J. H., & Grzywacz, J. G. (2006). Measuring the positive side of the work-family interface: Development and validation of a work-family enrichment scale. *Journal of Vocational Behavior*, 68(1), 131-164.
doi:10.1016/j.jvb.2005.02.002

- Chan, M. E., & Arvey, R. D. (2012). Meta-analysis and the development of knowledge. *Perspectives on Psychological Science*, 7(1), 79-92. doi:10.1177/1745691611429355
- Chandra, V. (2012). Work–life balance: Eastern and western perspectives. *The International Journal of Human Resource Management*, 23(5), 1040-1056.
doi:10.1080/09585192.2012.651339
- Chang, A., McDonald, P., & Burton, P. (2010). Methodological choices in work-life balance research 1987 to 2006: A critical review. *The International Journal of Human Resource Management*, 21(13), 2381-2413. doi:10.1080/09585192.2010.516592
- Chen, I. H., Lai, I. C., Lin, Y. T., & Cheng, Y. Y. (2005). Blurring boundaries: The working-at-home employees' job involvement, sex division of labor, work-family boundary management, and work-to-family conflict. *Proceeding of EURAM Conference, Germany, 2005*.
- Clark, S. C. (2000). Work/family border theory: A new theory of work/family balance. *Human Relations*, 53(6), 747-770. doi:10.1177/0018726700536001
- Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78(1), 98-104. doi:10.1037/0021-9010.78.1.98
- Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation*, 10(7), 1-9.
- Danes, S. M. (1998). Multiple roles, balance between work and leisure, and satisfaction with level of living. *Family and Consumer Sciences Research Journal*, 26(4), 401-424.
doi:10.1177/1077727X980264002

- DeCoster, J. (1998). Overview of factor analysis. Retrieved March 5, 2013, from <http://www.stathelp.com/notes.html>
- Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49*(1), 71-75. doi:10.1207/s15327752jpa4901_13
- Eby, L. T., McCleese, C. S., & Butts, M. M. (2009). Qualitative research: The red-headed stepchild in organizational and social science research? In C. E. Lance & B. Vandenberg (Eds.), *Statistical and methodological myths and urban legends: Received doctrine, verity, and fable in the organizational and social sciences*. (pp. 219-242). Mahwah, NJ: Lawrence Erlbaum
- Eddleston, K. A., & Powell, G. N. (2012). Nurturing entrepreneurs' work–family balance: A gendered perspective. *Entrepreneurship Theory and Practice*, *36*, 513-541.
- Edwards, J. R., & Rothbard, N. P. (2000). Mechanisms linking work and family: Clarifying the relationship between work and family constructs. *Academy of Management Review*, *25*(1), 178-199. doi:10.2307/259269
- Emslie, C., & Hunt, K. (2009). ‘Live to Work’ or ‘Work to Live’? A qualitative study of gender and work–life balance among men and women in mid-life. *Gender, Work & Organization*, *16*(1), 151-172. doi:10.1111/j.1468-0432.2008.00434.x
- Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, *4*, 272-299. doi:10.1037/1082-989X.4.3.272
- Farivar, F., Cameron, R., & Yaghoubi, M. (2016). Work-family balance and cultural dimensions: from a developing nation perspective. *Personnel Review*, *45*, 315-333. doi:10.1108/PR-09-

2014-0196

- Feldman, D. C. (1990). Reconceptualizing the nature and consequences of part-time work. *Academy of Management Review*, *15*, 103-112. doi:10.2307/258108
- Fleetwood, S. (2007). Why work-life balance now? *The International Journal of Human Resource Management*, *18*(3), 387-400. doi:10.1080/09585190601167441
- Ford, J. K., MacCallum, R. C., & Tait, M. (1986). The application of exploratory factor analysis in applied psychology: A critical review and analysis. *Personnel Psychology*, *39*, 291-314. doi:10.1111/j.1744-6570.1986.tb00583.x
- Frone, M. R. (2003). Work-family balance. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of Occupational Health Psychology*. (pp. 143-162). Washington, DC: APA.
- Gao, L., & Jin, W. (2015). Work-family conflict mediates the association between job demands and life and job satisfaction in Chinese middle-level managers. *Current Psychology*, *34*(2), 311–320. doi:10.1007/s12144-014-9259-9
- Gatrell, C. J., Burnett, S. B., Cooper, C. L., & Sparrow, P. (2013). Work–life balance and parenthood: A comparative review of definitions, equity and enrichment. *International Journal of Management Reviews*, *15*(3), 300-316. doi:10.1111/j.1468-2370.2012.00341.x
- Gorsuch, R. (1983). *Factor analysis*. Hillsdale, NJ: L. Erlbaum Associates.
- Grant, C. A., Wallace, L. M., & Spurgeon, P. C. (2013). An exploration of the psychological factors affecting remote e-worker's job effectiveness , well-being and work-life balance. *Employee Relations*, *35*(5), 527–546. doi:10.1108/ER-08-2012-0059
- Grawitch, M. J., Maloney, P. W., Barber, L. K., & Mooshegian, S. E. (2013). Examining the

- nomological network of satisfaction with work-life balance. *Journal of Occupational Health Psychology*, 18(3), 276–284. doi:10.1037/a0032754
- Greenhaus, J. H., & Allen, T. (2011). Work-family balance: A review and extension of the literature. In L. Tetrick & J. C. Quick (Eds.), *Handbook of Occupational Health Psychology* (2nd ed.) (pp. 165-183). Washington, DC: American Psychological Association.
- Greenhaus, J. H., Allen, T. D., & Foley, S. (2004). Does a balanced life promote workfamily enrichment. In Contribution to the Symposium “The positive side of the workfamily interface: Its meaning and measurement” Annual Meeting of the Academy of Management, New Orleans, LA.
- Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review*, 10(1), 76-88. doi:10.2307/258214
- Greenhaus, J. H., Collins, K. M., & Shaw, J. D. (2003). The relation between work–family balance and quality of life. *Journal of Vocational Behavior*, 63(3), 510–531.
doi:10.1016/S0001-8791(02)00042-8
- Greenhaus, J. H., & Powell, G. N. (2006). When work and family are allies: A theory of work-family enrichment. *Academy of Management Review*, 31(1), 77–92. doi:10.2307/20159186
- Greenhaus, J. H., Ziegert, J. C., & Allen, T. D. (2012). When family-supportive supervision matters: Relations between multiple sources of support and work–family balance. *Journal of Vocational Behavior*, 80(2), 266-275. doi:10.1016/j.jvb.2011.10.008
- Gröpel, P., & Kuhl, J. (2006). Having time for life activities: Life balance and self-regulation. *Zeitschrift für Gesundheitspsychologie*, 14, 54-63.

- Grzywacz, J. G., & Bass, B. L. (2003). Work, family, and mental health: Testing different models of work family fit. *Journal of Marriage and Family*, 65(1), 248–261.
doi:10.1111/j.1741-3737.2003.00248.x
- Grzywacz, J. G., & Carlson, D. S. (2007). Conceptualizing work family balance: Implications for practice and research. *Advances in Developing Human Resources*, 9(4), 455–471.
doi:10.1177/1523422307305487
- Grzywacz, J. G., & Marks, N. F. (2000). Reconceptualizing the work–family interface: An ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psychology*, 5(1), 111-126. doi:10.1037/1076-8998.5.1.111
- Guest, D. E. (2002). Perspectives on the study of work-life balance. *Social Science Information*, 41, 255-279.
- Haar, J. M. (2013). Testing a new measure of work–life balance: a study of parent and non-parent employees from New Zealand. *The International Journal of Human Resource Management*, 24(17), 3305–3324. doi:10.1080/09585192.2013.775175
- Hancke, K., Igl, W., Toth, B., Bühren, A., Ditsch, N., & Kreienberg, R. (2014). Work–life balance of German gynecologists: a web-based survey on satisfaction with work and private life. *Archives of Gynecology and Obstetrics*, 289, 123-129.
- Hayes, N. (2000). *Doing psychological research*. Surrey: Open University Press.
- Hennessy, K. D., & Lent, R. W. (2008). Self-efficacy for managing work–family conflict: Validating the English language version of a Hebrew scale. *Journal of Career Assessment*, 16, 370–383. doi:10.1177/1069072708317383

- Hill, E. J., Hawkins, A. J., Ferris, M., & Weitzman, M. (2001). Finding an extra day a week: The positive influence of perceived job flexibility on work and family life balance. *Family Relations, 50*, 49-58.
- Hinkin, T. R. (1998). A brief tutorial on the development of measures for use in survey questionnaires. *Organizational Research Methods, 1*, 104-121.
- Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural equation modelling: Guidelines for determining model fit. *The Electronic Journal of Business Research Methods, 6*(1), 53-60.
- Huang, J. L., Curran, P. G., Keeney, J., Poposki, E. M., & DeShon, R. P. (2012). Detecting and deterring insufficient effort responding to surveys. *Journal of Business and Psychology, 27*(1), 99-114. doi:10.1007/s10869-011-9231-8
- Jain, S., & Nair, S. K. (2013). Research on work-family balance: A review. *Business Perspectives and Research, 2*, 43-58.
- Jang, S. J., & Zippay, A. (2011). The juggling act: Managing work-life conflict and work-life balance. *Families in Society: The Journal of Contemporary Social Services, 92*, 84-90. doi:10.1606/1044-3894.4061
- John, O. P., & Robins, R. W. (1994). Accuracy and bias in self-perception: individual differences in self-enhancement and the role of narcissism. *Journal of Personality and Social Psychology, 66*(1), 206-219. doi:10.1037/0022-3514.66.1.206
- Judge, T. A., Locke, E. A., Durham, C. C., & Kluger, A. N. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology, 83*, 17-34. doi:10.1037/0021-9010.83.1.17

- Kalliath, T., & Brough, P. (2008). Work - life balance: A review of the meaning of the balance construct. *Journal of Management & Organization*, *14*, 323–327.
doi:10.5172/jmo.837.14.3.323
- Kanwar, Y. P. S., Singh, A. K., & Kodwani, A. D. (2009). Work—life balance and burnout as predictors of job satisfaction in the IT-ITES industry. *Vision: The Journal of Business Perspective*, *13*, 1-12.
- Kirchmeyer, C. (1992). Perceptions of nonwork-to-work spillover: Challenging the common view of conflict-ridden domain relationships. *Basic and Applied Social Psychology*, *13*(2), 231-249. doi:10.1207/s15324834basp1302_7
- Kirchmeyer, C. (2000). Work-life initiatives: Greed or benevolence regarding workers' time?. In C. L. Cooper & D. M. Rousseau (Eds.), *Trends in organizational behavior, Vol. 7: Time in organizational behavior* (pp. 79-93). New York, NY: John Wiley & Sons Ltd.
- Kline, P. (1979). *Psychometrics and psychology*. London: Academic Press.
- Kossek, E. E., & Ozeki, C. (1999). Bridging the work-family policy and productivity gap: A literature review. *Community, Work & Family*, *2*, 7-32. doi:10.1080/13668809908414247
- Landers, R. N., & Behrend, T. S. (2015). An inconvenient truth: Arbitrary distinctions between organizational, Mechanical Turk, and other convenience samples. *Industrial and Organizational Psychology*, *8*(2), 142-164. doi:10.1017/iop.2015.13
- Locke, K. (2002). The grounded theory approach to qualitative research. In F. Drasgow & N. Schmitt (Eds.), *Measuring and analyzing behavior in organizations: Advances in measurement and data analysis* (pp. 17-43). San Francisco, CA: Jossey-Bass Inc.

- MacCallum, R. C., Widaman, K. F., Zhang, S., & Hong, S. (1999). Sample size in factor analysis. *Psychological Methods, 4*, 84-99. doi:10.1037/1082-989X.4.1.84
- Marks, S. R. (1977). Multiple roles and role strain: Some notes on human energy, time and commitment. *American Sociological Review, 39*, 921-936.
- Marks, S. R., & MacDermid, S. M. (1996). Multiple roles and the self: A theory of role balance. *Journal of Marriage and the Family, 58*(2), 417-432. doi:10.2307/353506
- Matthews, R. A., Kath, L. M., & Barnes-Farrell, J. L. (2010). A short, valid, predictive measure of work-family conflict: Item selection and scale validation. *Journal of Occupational Health Psychology, 15*, 75–90. doi:10.1037/a0017443
- McDonald, R. (1985). *Factor Analysis and Related Techniques*. Hillsdale, NJ: Lawrence Erlbaum.
- Meade, A. W., & Craig, S. B. (2012). Identifying careless responses in survey data. *Psychological Methods, 17*, 437-455. doi:10.1037/a0028085
- Michel, A., Bosch, C., & Rexroth, M. (2014). Mindfulness as a cognitive–emotional segmentation strategy: An intervention promoting work–life balance. *Journal of Occupational and Organizational Psychology, 87*(4), 733-754. doi:10.1111/joop.12072
- Michel, J. S., Clark, M. A., & Jaramillo, D. (2011). The role of the Five Factor Model of personality in the perceptions of negative and positive forms of work-nonwork spillover: A meta-analytic review. *Journal of Vocational Behavior, 79*(1), 191-203.
doi:10.1016/j.jvb.2010.12.010
- Michel, J. S., Mitchelson, J. K., Kotrba, L. M., Lebreton, J. M., & Baltes, B. B. (2009). A comparative test of work-family conflict models and critical examination of work-family

- linkages. *Journal of Vocational Behavior*, 74, 199–218. doi:10.1016/j.jvb.2008.12.005
- Michel, J. S., Kotrba, L. M., Mitchelson, J. K., Clark, M. A., & Baltes, B. B. (2011). Antecedents of work–family conflict: A meta-analytic review. *Journal of Organizational Behavior*, 32(5), 689-725. doi:10.1002/job.695
- Muthén, L. K., & Muthén, B. O. (2007). *Mplus User's Guide (Sixth Edition)*. Los Angeles, CA: Muthén & Muthén.
- Nippert-Eng, C. E. (1996). *Home and work: Negotiating boundaries through everyday life*. Chicago: University of Chicago Press.
- Olson-Buchanan, J. B., & Boswell, W. R. (2006). Blurring boundaries: Correlates of integration and segmentation between work and nonwork. *Journal of Vocational Behavior*, 68(3), 432-445. doi:10.1016/j.jvb.2005.10.006
- Osborne, J. W., & Costello, A. B. (2009). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Pan-Pacific Management Review*, 12(2), 131-146.
- Padma, S., & Reddy, M. S. (2014). Work-life balance and job satisfaction among school teachers: A study. *IUP Journal of Organizational Behavior*, 13, 51-60.
- Pedhazur, E. J., & Schmelkin, L. P. (1991). Reliability. *Measurement, design, and analysis: An integrated approach* (pp. 81-117). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Pitt-Catsouphes, M., & Christensen, K. (2004). Unmasking the taken for granted. *Community, Word & Family*, 7(2), 123-142. doi:10.1080/1366880042000245434

- Prowse, J., & Prowse, P. (2015). Flexible working and work-life balance: Midwives' experiences and views. *Work, Employment and Society, 29*(5), 757-774.
doi:10.1177/0950017015570724
- Raiden, A. B., & Räsänen, C. (2013). Striving to achieve it all: Men and work-family-life balance in Sweden and the UK. *Construction Management and Economics, 31*, 899-913.
- Rantanen, J., Kinnunen, U., Mauno, S., & Tillemann, K. (2011). Introducing theoretical approaches to work-life balance and testing a new typology among professionals. In *Creating Balance?* (pp. 27-46). Springer Berlin Heidelberg.
- Rantanen, J., Kinnunen, U., Mauno, S., & Tement, S. (2013). Patterns of conflict and enrichment in work-family balance: A three-dimensional typology. *Work & Stress, 27*(2), 141-163.
doi:10.1080/02678373.2013.791074
- Rice, R. W., Frone, M. R., & McFarlin, D. B. (1992). Work—nonwork conflict and the perceived quality of life. *Journal of Organizational Behavior, 13*, 155-168.
- Russo, M., Shteigman, A., & Carmeli, A. (2016). Workplace and family support and work-life balance: Implications for individual psychological availability and energy at work. *The Journal of Positive Psychology, 11*(2), 173-188. doi:10.1080/17439760.2015.1025424
- Saltzstein, A. L., Ting, Y., & Saltzstein, G. H. (2001). Work-family balance and job satisfaction: The impact of family-friendly policies on attitudes of federal government employees. *Public Administration Review, 61*, 452-467.
- Schieman, S., Milkie, M. A., & Glavin, P. (2009). When work interferes with life: Work-nonwork interference and the influence of work-related demands and resources. *American Sociological Review, 74*, 966-988.

- Spearman, C. (1904). " General Intelligence," objectively determined and measured. *The American Journal of Psychology*, 15, 201-292.
- Stock, R. M., Bauer, E. M., & Bieling, G. I. (2014). How do top executives handle their work and family life? A taxonomy of top executives' work–family balance. *The International Journal of Human Resource Management*, 25, 1815-1840.
- Stroebe, K., & Missler, M. (2015). A resource pathway to action against discrimination: How burnout and work–family balance form obstacles to action. *Journal of Community & Applied Social Psychology*, 1-14.
- Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics*. Boston: Allyn and Bacon.
- Thompson, E. R., & Phua, F. T. (2012). A brief index of affective job satisfaction. *Group & Organization Management*, 37, 275-307.
- Thurstone, L.L. (1947). *Multiple-factor analysis*. Chicago: University of Chicago Press.
- Tremblay, D. G. (2012). Work–Family Balance: Is the Social Economy Sector More Supportive... and is this because of its More Democratic Management?. *Review of Social Economy*, 70, 200-232.
- Uusiautti, S., & Määttä, K. (2012). The successful combination of work and family in Finland: the ability to compromise as a key factor. *Journal of Comparative Family Studies*, 43, 151-163.
- Valcour, M. (2007). Work-based resources as moderators of the relationship between work hours and satisfaction with work-family balance. *Journal of Applied Psychology*, 92, 1512-1523.
- Virick, M., Lilly, J. D., & Casper, W. J. (2007). Doing more with less: An analysis of work life

- balance among layoff survivors. *Career Development International*, 12, 463-480.
- Voydanoff, P. (2001). Incorporating community into work and family research: A review of basic relationships. *Human Relations*, 54, 1609-1637.
- Voydanoff, P. (2005). Toward a conceptualization of perceived work-family fit and balance: A demands and resources approach. *Journal of Marriage and Family*, 67(4), 822–836.
doi:10.1111/j.1741-3737.2005.00178.x
- Waumsley, J. A., Houston, D. M., & Marks, G. (2010). What about us? Measuring the work-life balance of people who do not have children. *Review of European Studies*, 2(2), 3–17.
- Wayne, J. H., Butts, M. M., Casper, W. J., & Allen, T. D. (2016). In search of balance: A conceptual and empirical integration of multiple meanings of work-family balance. *Personnel Psychology*, 70, 167-210. doi:10.1111/peps.12132.
- Wepfer, A. G., Brauchli, R., Jenny, G. J., Hämmig, O., & Bauer, G. F. (2015). The experience of work-life balance across family-life stages in Switzerland: A cross-sectional questionnaire-based study. *BMC Public Health*, 15, 1-11.
- Williams, J. C. (2000). *Unbending gender: Why family and work conflict and what to do about it*. Oxford University Press; New York: 2000.
- Williams, L. J., & Boyle, E. H. O. (2015). Ideal, nonideal, and no-marker variables : The confirmatory factor analysis (CFA) marker technique works when it matters. *Journal of Applied Psychology*, 100, 1579–1602.
- Williams, L., Ford, L., & Nguyen, N. (2002). Basic and advanced measurement models for confirmatory factor analysis. In S. Rogelberg (Ed.), *Handbook of research methods in industrial and organizational psychology* (pp. 366–389). Malden, MA: Blackwell.

Wu, L., Rusyidi, B., Claiborne, N., & McCarthy, M. L. (2013). Relationships between work–life balance and job-related factors among child welfare workers. *Children and Youth Services Review, 35*, 1447-1454.

Zerubavel, E. (1991). *The fine line: Boundaries and distinctions in everyday life*. New York, NY: Free Press.

Table 1 Comparison of WLB Effectiveness Items and Final WLB Effectiveness Items

Work-Family Items	Adapted Work-Life Items	Item Origin	Variable Names
I am able to negotiate and accomplish what is expected of me at work and in my family.	I am able to accomplish what is expected of me at work and in my personal life.	Carlson, Grzywacz, and Zivunska (2009)	WLBEff_1
I do a good job of meeting the role expectations of critical people in my work and family life.	I do a good job of meeting the role expectations of critical people in my work and personal life.	Carlson, Grzywacz, and Zivunska (2009)	WLBEff_2
People who are close to me would say that I do a good job of balancing work and family.	People who are close to me would say that I do a good job balancing work and personal life.	Carlson, Grzywacz, and Zivunska (2009)	WLBEff_3
I am able to accomplish the expectations that my supervisors and my family have for me.	I am able to accomplish the expectations that my supervisors and my family/friends have for me.	Carlson, Grzywacz, and Zivunska (2009)	WLBEff_4
My co-workers and members of my family would say that I am meeting their expectations.	My co-workers and my family/friends would say that I am meeting their expectations.	Carlson, Grzywacz, and Zivunska (2009)	WLBEff_5
It is clear to me, based on feedback from co-workers and family members, that I am accomplishing both my work and family responsibilities.	Based on feedback from co-workers and family/friends, I effectively accomplish both my work and personal responsibilities.	Carlson, Grzywacz, and Zivunska (2009)	WLBEff_6
I feel confident in being able to balance the demands of my work and personal life.	I am able to balance the demands of my work and personal life.	Hill, Hawkins, Ferris, and Weitzman (2001)	WLBEff_7
I can maintain adequate work and personal life balance due to my abilities to assign time and resources to each.	I maintain work and personal life balance by assigning time and resources to each role.	Hill, Hawkins, Ferris, and Weitzman (2001)	WLBEff_8
Due to my efforts, I am confident I can achieve a balance between work and nonwork responsibilities.	I achieve balance between work and personal responsibilities.	Stroebe and Missler (2015)	WLBEff_9

I am confident that I could fulfill my job responsibilities without letting it interfere with my family responsibilities.	I fulfill my job and personal responsibilities equally well.	Hennessy and Lent (2008)	WLBEff_10
NEW ITEM	I effectively devote time to both my work and personal life.		WLBEff_11
NEW ITEM	I have the power to balance my work and personal life.		WLBEff_12
NEW ITEM	I am able to devote attention to both my work and personal life.		WLBEff_13
I experience a high level of effectiveness in the way that I balance my work and personal life.	I am effective in achieving work-life balance.	Allen, Greenhaus, and Edwards (2010)	WLBEff_14
I feel successful in balancing my work and personal life.	I feel successful in balancing my work and personal life.	Greenhaus, Ziegert, and Allen (2012)	WLBEff_15
I am pretty good at keeping the different parts of my life in balance.	I keep the different parts of my life in balance.	MacDermid and Marks (1996)	WLBEff_16
I generally don't let things "slide" in my work and personal life.	I generally don't let things "slide" in my work and personal life.	MacDermid and Marks (1996)	WLBEff_17
I can easily manage demands between my personal life and work life.	I manage demands between my work life and personal life.	Tremblay (2012)	WLBEff_18
Due to my efforts, I effectively balance my work and life responsibilities well.	I effectively balance my work and personal responsibilities well.	Padma and Reddy (2014)	WLBEff_19
I balance my work and family responsibilities so that one does not upset the other.	I balance my work and personal responsibilities so that one does not upset the other.	Allen and Kiburz (2012)	WLBEff_20
The relationship between my work and my non-work life is acceptable due to my abilities to balance both.	The relationship between my work and my personal life is acceptable due to my abilities to balance both.	Wepfer, Brauchli, Jenny, Hammig, and Bauer (2015)	WLBEff_21
NEW ITEM	How I prioritize work and personal responsibilities		WLBEff_22

	works for me.		
NEW ITEM	At this point in my life, I am effective at balancing work and personal life.		WLBEff_23
NEW ITEM	I am able to devote energy to both my work and personal life.		WLBEff_24

Table 2 Comparison of WLB Satisfaction Items and Final WLB Satisfaction Items

Work-Family Items	Work-Life Items	Item Origin	Variable Names
I am satisfied with the way I divide my time between work and personal or family life.	I am satisfied with the way I divide my time between work and personal life.	Valcour (2007)	WLBSat_1
I am happy with the way I divide my attention between work and home.	I am happy with the way I divide my attention between work and personal life.	Valcour (2007)	WLBSat_2
I am satisfied with how well my work life and my personal life fit together.	I am satisfied with how well my work life and my personal life fit together.	Valcour (2007)	WLBSat_3
I am satisfied with my ability to balance the needs of my job with those of my personal life.	I am satisfied with my ability to balance the needs of my job with those of my personal life.	Valcour (2007)	WLBSat_4
I am satisfied with the opportunity I have to perform my job well and yet be able to perform home-related duties adequately.	I am satisfied with how I perform my job and my home-related duties.	Valcour (2007)	WLBSat_5
All in all, I am satisfied with the balance between my job and personal life.	I am satisfied with the balance between my job and personal life.	Farivar, Cameron, and Yaghoubi (2016)	WLBSat_6
I am happy with how achieve I work-life balance.	I am happy with how achieve work-life balance.	Eddleston & Powell (2012)	WLBSat_7

NEW ITEM	I am satisfied with how much time I spend in both my work and personal life.		WLBSat_8
NEW ITEM	I am happy with how much attention I give to my work and personal life.		WLBSat_9
I am satisfied with my work-life balance, enjoying both roles.	I am satisfied with how my work-life balance allows me to enjoy both my work and personal life.	Haar (2013)	WLBSat_10
I experience satisfaction in my balance between my work and life roles.	I am satisfied with how I balance my work and personal life roles.	Uusiautti & Maatta (2012)	WLBSat_11
I am happy with my work-life balance.	I am happy with my work-life balance.	Rice, Frone, and McFarlin (1992)	WLBSat_12
If I could live my life over, I would change almost nothing about the balance between my work and personal life.	I would change little about the balance between my work and personal life.	Grawitch, Maloney, Barber, and Mooshegian (2013)	WLBSat_13
In most ways, my work-life balance is close to my ideal.	In most ways, my work-life balance is close to my ideal.	Diener, Emmons, Larsen, and Griffen (1985)	WLBSat_14
I feel happy with my work and personal life balance a majority of the time.	Most of the time, I feel happy with my work and personal life balance.	Thompson and Phua (2012)	WLBSat_15
I enjoy both my work and my personal life equally.	I enjoy how I balance my work and personal life.	Haar (2013)	WLBSat_16
NEW ITEM	I am happy with how I prioritize my work and personal life.		WLBSat_17
How I balance my work and personal life aligns with how I value both roles.	How I balance my work and personal life aligns with how I value both roles.	Stock, Bauer, and Bieling (2014)	WLBSat_18
I am happy with the fit between my personal life and work life.	I am happy with the fit between my personal life and work life.	Wu, Rusyidi, Claiborne, and McCarthy (2013)	WLBSat_19
NEW ITEM	I am satisfied with how I accomplish what is		WLBSat_20

	expected of me at work and in my personal life.		
NEW ITEM	I am happy with how I meet expectations in my work and personal life.		WLBSat_21
NEW ITEM	I am satisfied with how I accomplish both my work and personal responsibilities.		WLBSat_22
NEW ITEM	I am happy with how I distribute resources in my work and personal life.		WLBSat_23

Table 3 Factor Loadings for WLB EFA Items (loadings < 0.32 suppressed) and Item Statistics

Variable Name	Mean	Standard Deviation	Factor 1	Factor 2
WLBEff_1	3.99	0.79	0.772	
WLBEff_2	4.03	0.76	0.713	
WLBEff_3	3.91	0.89	0.706	
WLBEff_4	4.07	0.71**	0.771	
WLBEff_5	4.05	0.76	0.764	
WLBEff_6	4.01	0.78	0.904	
WLBEff_7	3.87	0.88	0.792	
WLBEff_8	3.85	0.89	0.694	
WLBEff_9	3.87	0.89	0.706	
WLBEff_10	3.76	0.96	0.557	
WLBEff_11	3.83	0.95	0.614	
WLBEff_12	3.97	0.90	0.728	
WLBEff_13	3.99	0.83	0.796	
WLBEff_14	3.79	0.92	0.672	
WLBEff_15	3.74	0.99	0.457	0.438
WLBEff_16	3.77	0.91	0.583	
WLBEff_17	3.55**	1.03	0.365	
WLBEff_18	3.91	0.80	0.772	
WLBEff_19	3.79	0.94	0.573	
WLBEff_20	3.75	0.91	0.533	
WLBEff_21	3.80	0.89	0.624	
WLBEff_22	3.85	0.93	0.465	0.355
WLBEff_23	3.79	0.95	0.534	0.375
WLBEff_24	3.94	0.83	0.57	
WLBSat_1	3.55	1.06		0.857
WLBSat_2	3.54	1.08		0.897
WLBSat_3	3.60	1.06		0.803

WLB Sat_4	3.68	1.01		0.724
WLB Sat_5	3.69	0.93		0.545
WLB Sat_6	3.62	1.04		0.833
WLB Sat_7	3.60	1.01		0.822
WLB Sat_8	3.48	1.05		0.947
WLB Sat_9	3.59	1.01		0.839
WLB Sat_10	3.61	1.06		0.867
WLB Sat_11	3.64	1.00		0.827
WLB Sat_12	3.56	1.07		0.981
WLB Sat_13	3.23**	1.22		0.894
WLB Sat_14	3.27**	1.15		0.984
WLB Sat_15	3.62	1.06		0.87
WLB Sat_16	3.53	1.04		0.871
WLB Sat_17	3.59	1.03		0.899
WLB Sat_18	3.53	1.04		0.778
WLB Sat_19	3.56	1.01		0.943
WLB Sat_20	3.73	0.93		0.665
WLB Sat_21	3.69	0.97		0.698
WLB Sat_22	3.74	0.95		0.712
WLB Sat_23	3.66	1.00		0.747

Note Asterisks signify number is an outlier.

Table 4 Model fit indices of WLB EFA

	Eigenvalue	CFI	TLI	RMSEA	SRMR	χ^2	df	p-value	AIC
1-Factor Model	29.569	0.847	0.840	0.088	0.051	6943.904	1034	< 0.001	62701.326
2-Factor Model	2.413	0.914	0.906	0.067	0.028	4296.479	988	< 0.001	60145.901

Table 5 Model fit comparison for EFA

Models Compared	Chi-Square	df	p-value
1-factor against 2-factor	2647.425	46	< 0.001

Table 6 WLB CFA Model fit indices

Model	CFI	TLI	RMSEA	RMSEA CI	SRMR	χ^2	df	AIC
1-Factor Model	0.900	0.871	0.158	[0.148, 0.168]	0.062	681.580	35	14822.099
2-Factor Model	0.981	0.975	0.069	[0.058, 0.080]	0.024	154.000	34	14296.520

Table 7 Final Items

Work-Life Balance Effectiveness	
WLBEff_6	Based on feedback from co-workers and family/friends, I effectively accomplish both my work and personal responsibilities.
WLBEff_13	I am able to devote attention to both my work and personal life.
WLBEff_7	I am able to balance the demands of my work and personal life.
WLBEff_18	I manage demands between my work life and personal life.
WLBEff_1	I am able to accomplish what is expected of me at work and in my personal life.
Work-Life Balance Satisfaction	
WLBSat_12	I am happy with my work-life balance.
WLBSat_8	I am satisfied with how much time I spend in both my work and personal life.
WLBSat_19	I am happy with the fit between my personal life and work life.
WLBSat_17	I am happy with how I prioritize my work and personal life.
WLBSat_2	I am happy with the way I divide my attention between work and personal life.

Figure 1 WLB CFA one-factor model

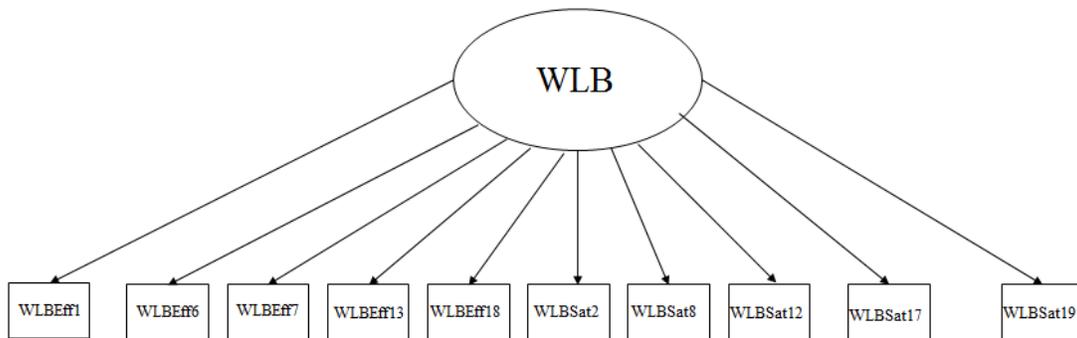


Figure 2 WLB CFA two-factor model

