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## Multidimensional work-nonwork balance: are balanced employees productive at work and satisfied with life?

Kristin Hildenbrand<sup>a</sup>, Pascale Daher<sup>b</sup>, Anna Topakas<sup>a</sup> and Xiaoyu Gan<sup>a</sup>

<sup>a</sup>Sheffield University Management School, University of Sheffield, Sheffield, UK; <sup>b</sup>University of Liverpool Management School, University of Liverpool, Liverpool, UK

### ABSTRACT

Given ever increasing work and nonwork demands, achieving work-nonwork (WNW) balance is an important priority for many employees. Scholars have only recently settled on a definition of WNW balance as multidimensional and, as such, our understanding of its antecedents and outcomes is limited. Drawing on Conservation of Resources theory, we explore how organizations can support employees to achieve WNW balance and whether 'balanced' employees are more productive at work and satisfied with life. In detail, we hypothesize that the positive effect of supervisor WNW support (FSS) on employees' life satisfaction and job performance is mediated by multidimensional WNW balance. We find, across two studies with two waves each, that only the dimension of WNW balance effectiveness and not the dimension of WNW balance satisfaction mediated the relationships between FSS, life satisfaction (Study 1 and 2) and self-rated job performance (Study 1). The relationship between FSS and supervisor-rated job performance (Study 2) was not mediated by either WNW balance dimension. As such, organizations can facilitate WNW balance through FSS, while 'balanced' employees seem indeed happier with their life and consider themselves to be better performing at work. We discuss the unexpected finding regarding the superior role of WNW balance effectiveness over WNW balance satisfaction for our outcomes in relation to the conceptualization of WNW balance as multidimensional and delineate important theoretical and practical implications.

### KEYWORDS

Work-nonwork balance; FSS; life satisfaction; job performance; conservation of resources theory

**CONTACT** Kristin Hildenbrand  [K.Hildenbrand@sheffield.ac.uk](mailto:K.Hildenbrand@sheffield.ac.uk)  Sheffield University Management School, University of Sheffield, Conduit Road, Room 8, S10 1FL Sheffield, UK.

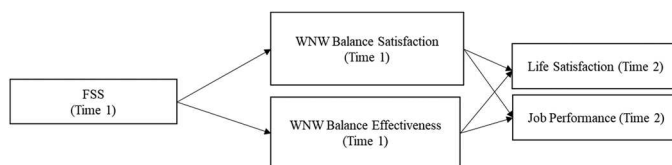
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## Introduction

More so now than ever, employees struggle to find the time and energy to be both effective and happy at work and home (Greenhaus & Kossek, 2014; Powell et al., 2019). It is thus not surprising that employees long for work-life balance (Crawford et al., 2019), with some valuing it even more than pay and other employee benefits (e.g. Hays, 2023). The importance employees place on successfully managing their work-life balance, referred to hereafter as work-nonwork (WNW) balance, is mirrored in the large body of research that has been generated over the past five decades. Initially, scholars focused on work-family conflict, the incompatibility of expectations and demands from work and family (Greenhaus & Beutell, 1985; Kahn et al., 1964). More recently, positive constructs, such as work-family enrichment, encompassing the benefits associated with participation in multiple roles, have also received attention (Greenhaus & Powell, 2006). However, neither of these constructs captures employees' holistic appraisal of their work-life interface that includes both synergies and antagonies (Valcour, 2007).

WNW balance as a unitary and holistic construct (Casper et al., 2018) fills this void. For the most part, scholars have independently researched the two global balance constructs of work-family balance satisfaction (Valcour, 2007) and work-family balance effectiveness (Grzywacz & Carlson, 2007) that emerged at a similar time. Although both research streams have accumulated considerable knowledge (e.g. Choi et al., 2018; Ferguson et al., 2012; Haar et al., 2014), attesting the contribution of global balance to the work-family literature, each only sheds light on part of the construct given that the scholarly community now agrees that balance is *multidimensional* (Casper et al., 2018), and composed of both a satisfaction and an effectiveness component (Greenhaus & Allen, 2011; Hirschi et al., 2019; Wayne et al., 2017). The satisfaction dimension (WNW balance satisfaction) reflects individuals' contentment stemming from their assessment that they have the resources available to meet work and family demands (Valcour, 2007), whereas the effectiveness dimension (WNW balance effectiveness) represents individuals' perception of their own and others' assessment of their accomplishment of negotiated and shared work and family expectations (Grzywacz et al., 2007). In this study we adopt a dual perspective to WNW balance and define balance in line with Greenhaus and Allen (2011) as multidimensional and as individuals' 'overall appraisal of the extent to which their effectiveness and satisfaction in work and family roles are consistent with their life values at a given point in time' (p. 174). In detail, we aim to explore how multidimensional WNW balance can be facilitated through managerial support for employees' WNW interface and the impact it has on employee performance and life satisfaction.

This study draws on and extends research by Wayne and colleagues (Wayne et al., 2017, 2021, 2022) who were the first to research multidimensional WNW balance and establish its significance as a work-family construct. Specifically, they (Wayne et al., 2017) showed that WNW balance mattered more for outcomes (i.e. explained more variance) than work-family conflict and enrichment combined and that, in fact, both WNW balance dimensions mediated the effect of WNW conflict and enrichment on outcomes. Interestingly, they argued along the compatibility principle (Ajzen & Fishbein, 1977) that the two dimensions should be more strongly related to concepts with which they are theoretically matched, signifying that WNW balance satisfaction should be related more strongly to attitudes and WNW balance effectiveness to behaviors. The evidence for this has however not been conclusive (Wayne et al., 2017, 2021) as, for example, WNW balance effectiveness was the strongest predictor of performance but also of family satisfaction. Although Wayne and colleagues (2022) advanced their previous cross-sectional studies through relating the two WNW balance dimensions to outcomes in a cross-lagged design, they examined WNW balance satisfaction only in relation to attitudes and WNW balance effectiveness only in relation to different types of performance. As such, it remains unclear whether either of the two WNW balance dimensions is indeed the strongest predictor of attitudes or behaviors (i.e. compatibility principle; Ajzen & Fishbein, 1977), necessitating further research into the nascent construct of multidimensional WNW balance. This is paramount as knowledge of the relationships of a construct's dimensions with outcomes is essential for its conceptualization (Sumpter et al., 2021). Beyond a strong theoretical explanation regarding the nature of these relationships, WNW balance and its outcomes need to be separated time-wise to prevent the biasing effect of common method variance on the findings (Podsakoff et al., 2003). Furthermore, both dimensions need to be included in the same model to reflect the assumption of multidimensionality and to evaluate whether they do indeed bare different significance for behaviors and attitudes. Consequently, this research aims to explore how both dimensions act in tandem, and as dual pathways, linking supervisory support for employees' WNW interface (FSS; Thomas & Ganster, 1995) to life satisfaction and job performance (see Figure 1). We draw on Conservation



**Figure 1.** Hypothesized model. FSS = supervisor work-nonwork support. WNW = work-nonwork.

of Resources theory (COR; Hobfoll, 1989; Hobfoll et al., 2018) and conceptualize both WNW balance dimensions as resources to explain their impact on life satisfaction and job performance.

We examine FSS as a predictor of WNW balance because it represents a valuable contextual resource (Walumbwa et al., 2022), and as resources stemming from the workplace have been shown to be more relevant for WNW balance (satisfaction) than personal or family resources (Wayne et al., 2020). We argue that FSS is influential of multidimensional WNW balance because flexible work arrangements or task assignment, which are means to support WNW balance, are often at the discretion of supervisors (Aryee et al., 2013; Kossek et al., 2011, 2023). FSS enables employees to conserve resources at work and home (Allen, 2001), which should result in WNW balance satisfaction and WNW balance effectiveness, representing individual resources. Leveraging the concept of gain spirals within COR (Hobfoll, 2002), we contend that individuals with more resources (WNW balance satisfaction and effectiveness) are capable of attaining additional resources, leading to increased life satisfaction and job performance (Hobfoll & Freedy, 1993).

In testing our hypothesised model, this research makes three important contributions. First, we leverage COR (Hobfoll, 1989, 2001) to argue how multidimensional WNW balance comprised of balance satisfaction and effectiveness mediates the relationships between FSS and attitudes (i.e. life satisfaction as an important well-being indicator; Diener, 2009) and behaviours (i.e. self- and supervisor-rated job performance) one month later. The few studies on multidimensional WNW balance (Wayne et al., 2017, 2021, 2022) have relied on, but provided mixed support for, the compatibility principle (Ajzen & Fishbein, 1977), necessitating the adoption of a different theoretical lens to better explain the workings of multidimensional WNW balance. Through a nuanced application of different tenets of COR (Hobfoll, 1989, 2001), including gain spirals (Hobfoll, 2002), we advance WNW research through furthering knowledge of the relationships between the construct's dimensions and outcomes, which is crucial for a construct's theoretical development (Klein & Delery, 2012; Sumpter et al., 2021). We test our model across two complementary studies, on samples that include both full- and part-time workers, and with time-wise separation of mediators and outcomes.

Second, our research contributes to the WNW balance literature through exploring FSS (Thomas & Ganster, 1995) as an antecedent of multidimensional WNW balance. Although prior research has shown that work-family conflict and work-family enrichment contribute to balance (Wayne et al., 2017, 2022), calls for an exploration of the organizational antecedents of multidimensional balance remain unanswered (Wayne et al., 2021). We respond through invoking COR (Hobfoll, 1989,

2001) to conceptualize FSS as an important contextual resource (ten Brummelhuis & Bakker, 2012) that entails emotional and instrumental aspects (Thomas & Ganster, 1995), assisting employees in juggling work and nonwork demands, resulting in multidimensional WNW balance. In doing so, we highlight the role of organizations and supervisors in promoting WNW balance and, in turn, job performance and life satisfaction as its outcomes. Through considering the role of FSS in fostering WNW balance, as opposed to work-family balance, we also extend existing research which has, in the case of WNW balance effectiveness, been limited to the work and family domains, neglecting individuals' engagement in other nonwork domains which might be personally meaningful, such as friendships, religion and hobbies (Powell et al., 2019).

Third, to our knowledge, all research on multidimensional WNW balance, as indeed the majority of the wider work-family research (Casper et al., 2014), has been conducted in the US. The US is a country with a work culture that favors long hours and discourages flexible working uptake (Williams et al., 2013), and which has been slower than other industrialized nations in legislating the rights associated with flexible working (Kossek & Lautsch, 2018). This renders the generalizability of findings to non-US contexts questionable because the cultural and legal context in which employees strive for balance, and the support organizations are required to offer employees to achieve balance, are drastically different. Our study is set in Germany which scores relatively higher on the cultural dimensions of uncertainty avoidance and long-term orientation (Hofstede et al., 2005). This is reflected in work contracts and practices supportive of balance, such as long organizational notice periods for dismissal, legal limits on non-standard working hours and the right to request flexible working (Beham et al., 2012, 2014). As such, our research advances work-family research through highlighting the workings of multidimensional WNW balance in a context culturally different to the US, in which both culture and values render WNW balance a higher priority for employees and employers alike.

## ***Theoretical background and hypotheses***

### ***COR theory***

The notion of resources has played a crucial role in many theoretical perspectives applied in the study of the work-family interface (Hirschi et al., 2019). Specifically, work-family conflict has been attributed to a lack of resources, such as time, energy and attention, to fulfil role demands (Greenhaus & Beutell, 1985). The transfer of resources, such as knowledge and social support, between work and nonwork domains, has been linked to positive WNW spillover (e.g. work-family enrichment;

Greenhaus & Powell, 2006). In line with this research, applying a resource-based perspective to study multidimensional WNW balance seems indicated.

COR (Hobfoll, 1989, 2001), a well-established theory that has been frequently applied to study various HR phenomena (e.g. Chambel et al., 2023; Emre & De Spiegeleare, 2021; Walumbwa et al., 2022), represents a fitting lens to explore multidimensional WNW balance as it helps us to understand how available work resources enable employees to cope with work and nonwork stressors (ten Brummelhuis & Bakker, 2012), affecting outcomes. Resources can be defined as ‘anything perceived by the individual to help them attain his or her goals’ (p. 5; Halbesleben et al., 2014), and can be categorised into contextual, i.e. stemming from the social context, or personal, i.e. stemming from within individuals (Hobfoll, 2002). COR’s main tenet is that resources are crucial for individuals’ well-being because dealing with every-day, as well as extraordinary, stressors and demands at work and home depletes resources. As actual or threatened resource loss is said to cause stress that, if ongoing, leads to well-being and performance impairments (Hobfoll & Freedy, 1993), individuals are motivated to protect their resources or acquire new resources. Consequently, individuals who have a resource surplus typically invest these resources not only in dealing with stress-inducing work and nonwork demands, but also in gaining additional resources (Hobfoll, 2002). This accumulation of resources among individuals with initial resource reservoirs constitutes a *gain spiral* (see e.g. Hakanen et al., 2008), such as when employees, for example, draw on their parenting network to share childcare duties during school holidays to enable them to work.

In building our research model using COR, we argue that FSS constitutes a contextual resource which assists employees in dealing with work and nonwork demands, leading to WNW balance satisfaction and WNW balance effectiveness, representing personal resources. This resource surplus will, in turn, allow balanced employees to invest resources into stress reduction and the creation of new resources at work and home, which will result in increased life satisfaction and job performance. In the following, we elaborate on this to develop our hypotheses.

### ***FSS and multidimensional WNW balance***

The role of organizations in shaping employees’ WNW experiences has been largely explored through organizational family support, comprised of formal (i.e. family-friendly practices such as parental leave) and informal support (FSS and family-supportive organizational perceptions; Allen, 2001). In this study, we focus on FSS, supervisors’ informal support for



employees' WNW interface (Thomas & Ganster, 1995), as supervisors' behavior is more proximal to employees' WNW experiences than organizational policies, with their implementation often at supervisors' discretion (Bourdeau et al., 2019). Following Thomas and Ganster (1995), we regard supervisors' FSS as behaviors that show that supervisors understand and support employees' need for balance between work and non-work responsibilities, which, as such, includes both an emotional and instrumental aspect. Prior research has demonstrated the relevance of FSS for employees' work-family interface through linking it to reduced work-family conflict and increased work-family enrichment (Crain & Stevens, 2018). We propose here that employees who are supervised by a WNW supportive supervisor should also benefit from multidimensional WNW balance as comprised of both satisfaction and effectiveness dimensions.

WNW balance satisfaction (Valcour, 2007) and WNW balance effectiveness (Grzywacz & Carlson, 2007), the two dominant global balance approaches, have been independently and concurrently developed and, for the most part, independently studied. Balance satisfaction is an attitude that entails individuals' judgment of the extent to which they have resources available (e.g. time and energy) to meet work and nonwork expectations and the resultant satisfaction from this resource allocation (Valcour, 2007). WNW balance effectiveness as an interdependent, self-evaluative construct (Wayne et al., 2017) represents individuals' perception of the extent to which they believe they actually fulfill expectations that are negotiated and shared between individuals and role partners (Grzywacz & Carlson, 2007). Although arguments have been put forward in recent years that WNW balance is comprised of multiple dimensions, specifically a satisfaction and an effectiveness one (Casper et al., 2018; Hirschi et al., 2019; Wayne et al., 2017), the majority of research has focused on a single dimension. In line with the definition of balance put forth by Greenhaus and Allen (2011), we explore multidimensional WNW balance as comprised of the dimensions of WNW balance satisfaction and WNW balance effectiveness.

Regarding the antecedents of multidimensional WNW balance, Greenhaus and Allen (2011) proposed that, among others, work and family experiences contribute to WNW balance satisfaction and effectiveness. This is supported by evidence showing that work-family conflict and enrichment predict multidimensional WNW balance (Wayne et al., 2017, 2022). Although we are not aware of research that has examined other predictors of multidimensional WNW balance, work resources, such as informal support and job autonomy, have been linked to various conceptualizations of balance (Vaziri et al., 2022). Separately, WNW balance satisfaction has been linked to support from both coworkers and

supervisors (Choi et al., 2018; Ferguson et al., 2012; Wayne et al., 2020), while evidence concerning their effect on WNW balance effectiveness is absent. Drawing on COR theory (Hobfoll, 1989, 2002), we argue that FSS, a key work resource, also positively affects multidimensional WNW balance.

Specifically, FSS can be classified as a contextual resource (Hobfoll, 1989, 2002; ten Brummelhuis & Bakker, 2012) that enables employees to better juggle work and nonwork demands. Leaders' instrumental support, which might involve accommodating flexible work schedules, assisting employees to prioritize key tasks, clarifying performance expectations or redistributing tasks among team members, should make it easier for employees to fulfill work and nonwork expectations. Equally, their emotional support, which involves offering kind words or advice, should help employees who might feel overwhelmed while, at the same time, signaling that their workplace appreciates their nonwork life and does not require them to sacrifice this part of their lives and its expectations (Hammer et al., 2009). As such, FSS constitutes a valuable contextual resource that protects employees from resource loss associated with the strain and tensions of managing different roles, preserving their energy (see e.g. Walumbwa et al., 2022). Working in such a resource-rich context should engender employees' experience of WNW balance satisfaction and WNW balance effectiveness as resources cultivated in the work domain which can be used in employees' nonwork domain. For example, supervisors who show understanding of employees' efforts to combine work and nonwork roles and readily listen, help, and offer advice when employees face a problem, provide substantial social support. As a result, employees should feel satisfied that they have the resources available to meet work and nonwork expectations and develop a positive attitude towards their WNW interface (WNW balance satisfaction) while, at the same time, being able to actually meet own and others' expectations in and outside of work (WNW balance effectiveness). In sum, the contextual resource FSS will result in the development of the personal resources of WNW balance satisfaction and effectiveness through gain spirals (see e.g. Hakanen et al., 2008; Hobfoll, 2011). We therefore propose:

**Hypothesis 1a:** FSS is positively related to WNW balance satisfaction.

**Hypothesis 1b:** FSS is positively related to WNW balance effectiveness.

### ***Multidimensional WNW balance and life satisfaction***

In the following we argue that balanced employees should experience increased life satisfaction. Individuals spend a large proportion of their

waking hours at work and their positive experience of balancing work and nonwork domains is thus likely to influence their life satisfaction. Life satisfaction can be defined as ‘individuals’ overall assessment of their quality of life according to their chosen criteria’ (Shin & Johnson, 1978; p. 478) and is an important indicator of well-being (Diener, 2009).

The scant research on multidimensional WNW balance has explored several attitudes and well-being indicators as outcomes, yielding interesting findings concerning the differing effects of the two WNW balance dimensions. Specifically, in their cross-sectional study, Wayne and associates (Wayne et al., 2017) reported that when both dimensions were considered at the same time, WNW balance satisfaction was most predictive of job satisfaction, organizational commitment and turnover intent while WNW balance effectiveness was mostly predictive of behaviors, but also of family satisfaction. Subsequent research (Wayne et al., 2021) confirmed these findings for organizational commitment, but not for turnover intent which was equally predicted by both WNW balance dimensions. Concerning well-being, Wayne et al. (2021) observed that WNW balance satisfaction had a stronger impact on vigor and emotional exhaustion and WNW balance effectiveness on health.

The theoretical rationale for the differing relationships the authors provided in both studies was the compatibility principle (Ajzen & Fishbein, 1977), according to which relationships should be the strongest among concepts that are theoretically matched. Accordingly, WNW balance satisfaction as an attitude should be the primary predictor of attitudes, and WNW balance effectiveness, a self-evaluative construct and perception, the primary predictor of behaviors. Based on this reasoning, Wayne et al. (2022), in their cross-lagged study, only tested models that linked WNW balance satisfaction to job and family satisfaction and WNW balance effectiveness to job and family performance. However, in light of the findings by Wayne et al. (2017, 2021), the compatibility principle does not seem to fully explain the differing relevance WNW balance satisfaction and effectiveness have for attitudes and well-being. Life satisfaction seems, from this perspective, an important outcome to explore as it constitutes both an attitude and well-being indicator (Diener, 2009) that encompasses, and goes beyond, domain-specific satisfaction, such as job and family satisfaction, while being sufficiently different from WNW balance (Wayne et al., 2021). In the following, we draw on COR (Hobfoll, 1989, 2001) to put forward arguments that both dimensions represent resources relevant for employees’ life satisfaction.

Employees who are satisfied with their WNW balance and the extent to which their resources are divided between work and nonwork domains can be considered to possess a resource surplus (Hobfoll, 2011; Hobfoll & Freedy, 1993). Not only should they feel that they have the time,

energy and attention available to fend off stressors in either domain as resource-wise they are not thinly stretched, they should also be able to invest these resources to create new resources through a gain spiral. Avoiding resource loss should facilitate their experience of well-being (Halbesleben et al., 2014) while, at the same time, the resource gains that employees who experience WNW balance satisfaction cultivate should result in them assessing their quality of life (i.e. life satisfaction) positively (Diener, 2009; Pavot & Diener, 1993). Specifically, employees who are content with the way in which they manage work and nonwork demands should experience positive emotions in relation to their work and nonwork domains given the spillover/contagious nature of emotions (Heller & Watson, 2005). Furthermore, they are likely to feel satisfied with these domains as they would attribute the feelings of resource sufficiency to them (Shockley & Singla, 2011). This positive frame of mind should afford employees the headspace and energy to engage in recovery activities, particularly the active type, which is beneficial for well-being (e.g. Calderwood et al., 2016). Research that has explored unidimensional balance (WNW balance satisfaction) in relation to life satisfaction provides support for our reasoning (Grawitch et al., 2013; Haar et al., 2014).

Similarly, balanced employees who perceive that they meet own and others' role-related expectations (WNW balance effectiveness) should benefit from increased life satisfaction. On the one hand, knowledge regarding one's ability to meet work and nonwork demands should likely in and of itself be stress-reducing and beneficial for employees' well-being. Specifically, these employees won't be plagued with worry about letting role partners down or any adverse consequences of failing to meet expectations. On the other hand, these employees are also likely to perceive themselves as competent, capable and in control of their lives. This resonates with propositions of self-determination theory whereby satisfying the need for competence significantly affects psychological well-being (Ryan & Deci, 2000). These positive self-views, which have been linked to increased life satisfaction (Azizli et al., 2015; Bowling et al., 2010; Unanue et al., 2017), constitute resources that balanced employees should acquire through gain spiral processes (Hobfoll & Freedy, 1993). Further resource gains involve that employees who perceive themselves to successfully meet work and nonwork expectations should have the capacity (i.e. attention, energy and time) to pursue opportunities inside and outside of work that contribute to their skill development and the formation of social capital, such as through networking or a voluntary role as coach of their child's football team. Our reasoning along COR (Hobfoll, 2001) that WNW balance effectiveness contributes to life satisfaction is in line with a theoretical model of life satisfaction which regards (low) job-related

tension and need satisfaction as predictive of life satisfaction (Erdogan et al., 2012). We therefore propose:

**Hypothesis 2a:** WNW balance satisfaction is positively related to life satisfaction.

**Hypothesis 2b:** WNW balance effectiveness is positively related to life satisfaction.

### ***Multidimensional WNW balance and job performance***

Work by Wayne and colleagues discussed previously (2017, 2021, 2022) also explored a range of behaviors as potential outcomes of multidimensional WNW balance, arguing again along the compatibility principle (Ajzen & Fishbein, 1977). Specifically, they (Wayne et al., 2017) found that when WNW balance satisfaction was considered in conjunction with WNW balance effectiveness, only WNW balance effectiveness predicted same-time, supervisor-rated job performance and spouse-rated family performance. Similarly, only WNW balance effectiveness was related to same-time organizational citizenship behaviors (Wayne et al., 2021). Based on these findings and relying on the compatibility principle, Wayne et al., (2022) specified models for behaviors that only included WNW balance effectiveness and not WNW balance satisfaction, finding that balance effectiveness was indeed predictive of self-rated job and family performance one month later. Given the mixed findings surrounding attitudes and well-being indicators that cannot fully be explained by the compatibility principle, we draw on COR (Hobfoll, 2001; Hobfoll & Freedy, 1993) to argue that both WNW balance satisfaction and WNW balance effectiveness are related to job performance one month later.

Employees who are satisfied with their WNW balance and consider themselves to have sufficient resources available to juggle work and nonwork demands (Valcour, 2007) should show increased job performance. This is because they should experience reduced strain and resource loss that negatively affects performance (Halbesleben & Bowler, 2007) as they have sufficient resources available to deal with stressors from both domains (Hobfoll & Freedy, 1993). Comparatively, employees who need to spend time and energy trying to fit different work and nonwork demands in their schedules and cope with associated stressors should exhibit impaired job performance (Sullivan & Bhagat, 1992; Westman & Eden, 1996) due to the ongoing resource investment to deal with these stressors causing resource loss (Hobfoll, 2001; Hobfoll & Freedy, 1993). Furthermore, the positive emotions/affect that employees who are satisfied with their WNW balance experience represent resources, acquired through a gain spiral, which should also directly

benefit performance as positive mood increases focus and enables effective work (Zelenski et al., 2008). Moreover, they should be able to focus fully on work when at work without having to worry about nonwork expectations not being met, which has been shown to impair the quality of work and job performance (Huo & Jiang, 2023; Li et al., 2017). As such, WNW balance satisfaction should be positively related to job performance due to reduced resource loss and the accumulation of additional resources which increase well-being and, in turn, performance (Hobfoll & Freedy, 1993).

Equally, employees who perceive themselves to successfully meet own and role partners' work and nonwork expectations (WNW balance effectiveness) should experience increased job performance. Again, in line with COR, we assume that employees who are aware that they meet performance requirements at work and home should have less need to invest resources into fending off work and home stressors, enhancing their ability to invest such resources into performing well (Hobfoll, 2001; Hobfoll & Freedy, 1993). Furthermore, balanced employees can commit this resource surplus to the accumulation of additional resources in the form of a gain spiral (Hobfoll, 2002). For one, mastery of tasks at work and home resultant from stress-free and focused engagement with work and nonwork demands will likely result in the acquisition of skills, such as improved time management and decision-making ability. Additionally, employees who excel at work and home should also benefit from a series of privileges (Sieber, 1974), such as support from various sources, financial security, flexibility and autonomy that represent further resources. As these resources should, in turn, contribute to employees' job performance (Hobfoll & Freedy, 1993), we predict that WNW balance effectiveness is positively related to job performance. We therefore propose:

**Hypothesis 3a:** WNW balance satisfaction is positively related to job performance.

**Hypothesis 3b:** WNW balance effectiveness is positively related to life satisfaction.

### ***The mediating role of multidimensional WNW balance between FSS, life satisfaction and job performance***

Integrating our arguments from the sections above, we propose that FSS is related to employees' life satisfaction and job performance through WNW balance satisfaction and effectiveness. Specifically, drawing on COR (Hobfoll, 2001, 2002; Hobfoll & Freedy, 1993), we consider FSS to constitute a contextual resource which enables employees to successfully manage work and nonwork demands, meet own and role partners'

performance expectations (WNW balance effectiveness) and be satisfied with their balance (WNW balance satisfaction). In detail, the instrumental support leaders who express FSS offer (Thomas & Ganster, 1995), such as clarifying performance expectations or providing access to organizational family-friendly practices (e.g. remote working), should make it easier for employees to fulfil work and nonwork demands. The emotional support these leaders exhibit (Thomas & Ganster, 1995), which involves offering advice and expressing understanding for employees' WNW struggles, should assist employees in their efforts to integrate work and nonwork domains. Employees who work under such conditions should be satisfied with their balance (WNW balance satisfaction) and meet work and nonwork expectations (WNW balance effectiveness), both representing important resources employees supervised by a WNW supportive supervisor should acquire through the process of gain spirals (Hobfoll, 2002).

We also propose that these employees should, in turn, benefit from well-being in the form of life satisfaction and improved job performance. Specifically, employees who are balanced should experience a resource surplus as their work and nonwork domains should be characterized by little stress that necessitates the investment of resources. Employees can use these accumulated resources to offset any newly occurring stressors, contributing to their well-being and their performance as it avoids harmful resource loss (Hobfoll, 2001; Hobfoll & Freedy, 1993). Alternatively, employees can invest the resources stemming from FSS and inherent to WNW balance into acquiring a wealth of further resources through gain spirals. For example, balanced employees will experience positive emotions, increased ability to engage in recovery experiences and feelings of competence and autonomy (Kühnel et al., 2012) as well as work and nonwork privileges and a broadened skill set. These resources should contribute to employees' perception of their quality of life, their life satisfaction (Diener, 2009), and facilitate their job performance. We therefore propose:

**Hypothesis 4:** WNW balance satisfaction (a) and effectiveness (b) mediate the positive relationship between FSS and employee life satisfaction.

**Hypothesis 5:** WNW balance satisfaction (a) and effectiveness (b) mediate the positive relationship between FSS and employee job performance.

## Overview of studies

We tested our hypotheses with two complementary studies. Study 1 drew on a crowdsourcing sample of fulltime employees located in Germany to test multidimensional WNW balance as a mediator between FSS and

employees' life satisfaction and self-rated job performance four weeks later. Building on the findings of this first study, we designed Study 2 with the aim of replicating and extending Study 1 to include supervisors' ratings of employees' job performance, using an organizational sample from two German companies that included part- and full-time employees. Replications of findings are critical for external validity and provide a stronger basis for generalization (Cook & Campbell, 1976; Köhler & Cortina, 2021).

## Study 1

### *Method*

#### *Sample and procedure*

We collected data from German working adults *via* the online data collection service workhub.de (now [www.crowdworker.com](http://www.crowdworker.com)) at two time points, four weeks apart. Using a crowdsourcing website enabled us to examine the proposed relationships across a range of industrial contexts, with participants working full-time in various jobs, such as clerical and paralegal. Workhub.de is similar to MTurk insofar that participants are reimbursed for the completion of online surveys. In our case, participants were rewarded with €2 (\$2.47) for the completion of each of the two surveys.

Workhub.de sent an initial email with the link to the Time 1 online survey to 500 potential participants who met the inclusion criteria (in full-time employment and German speaking). Of the 231 collected responses, 19 responses were deleted due to failed Instructional Manipulation Checks (Oppenheimer et al., 2009), resulting in 194 valid surveys (38.8% response rate). The Time 2 survey link was only sent out to those who had responded to the first survey. The matching of surveys resulted in 146 matched surveys (63.2% response rate of Time 1 sample). Independent-samples *t*-tests and  $\chi^2$ -tests showed no significant differences in any demographic variables between the final sample and the Time 2 non-responders. The 146 participants were predominantly male (62.3%), reported an average age of 30 years ( $SD=8.00$ ) and mean organizational tenure of 5 years ( $SD=4.80$ ). Seventy-six percent were in a long-term relationship, and 36.3% had at least one child.

The Time 1 survey asked for demographics, FSS, WNW balance satisfaction and WNW balance effectiveness and the Time 2 survey, which was completed four weeks later, for life satisfaction and job performance.

Please note that Study 1 (as well as Study 2) were part of a larger research project. A paper using different variables to this paper has been



published elsewhere. Please see the data transparency table in the Appendix for further information.

### **Measures**

All scales were originally developed in English. We followed the double-blind back-translation procedure (Brislin, 1980) to translate the original English questions into German when no validated translation was available. To reflect our focus on the WNW interface, we adapted the items of FSS and WNW balance effectiveness in line with Valcour's (2007) satisfaction with work-family balance scale which, despite its conceptualization as encompassing work and family, includes roles and responsibilities of the wider nonwork domain (Grawitch et al., 2013). Specifically, we added 'personal or family' to all items and instructed participants to respond to the questions in regard to their life outside work.

FSS was measured with Thomas and Ganster's (1995) 9-item scale (response format: 1 = *never* to 5 = *very often*). An example item is: 'My supervisor switches schedules (hours, overtime hours, vacation) to accommodate my personal or family responsibilities';  $\alpha = 0.80$ ). WNW balance satisfaction was measured with Valcour's (2007) 5-item scale (1 = *absolutely dissatisfied* to 5 = *absolutely satisfied*). A sample item is: 'How satisfied are you with how well your work life and your personal or family life fit together?'  $\alpha = 0.80$ ). WNW balance effectiveness was measured with Carlson et al.'s (2009) 6-item scale (1 = *strongly disagree* to 5 = *strongly agree*). A sample item is: 'I do a good job of meeting the role expectations of critical people in my work and personal or family life';  $\alpha = 0.80$ ).

Life satisfaction was measured with the German version (Glaesmer et al., 2011) of Diener et al., (1985) 5-item satisfaction with life scale (1 = *strongly disagree* to 5 = *strongly agree*). A sample item is: 'In the last four weeks, in most ways, my life has been close to my ideal' ( $\alpha = 0.90$ ). Job performance was measured with Tsui et al.'s (1997) 11-item scale (1 = *strongly disagree* to 5 = *strongly agree*). To enable self-ratings, the referent was changed from 'this employee' to 'I'. A sample question is: 'In the last four weeks, the quality of my work has been much higher than average' ( $\alpha = 0.88$ ). We controlled for age, gender (0 = *male*, 1 = *female*) and relationship status (0 = *single*, 1 = *in a relationship*) as research suggests that they shape employees' WNW experiences (e.g. Pluut et al., 2018).

### **Confirmatory factor analyses**

Following Wayne et al. (2017), we performed a confirmatory factor analysis (CFA) to establish the distinctiveness of WNW balance satisfaction and

effectiveness. The correlated two-factor model ( $\chi^2(43) = 101.13$ ,  $p < 0.01$ ; comparative fit index (CFI) = 0.90, root mean square error of approximation (RMSEA) = 0.09, standardized root mean square residual (SRMR) = 0.08) was superior to the uncorrelated two-factor model ( $\chi^2(44) = 134.02$ ,  $p < 0.01$ ; CFI = 0.85, RMSEA = 0.12, SRMR = 0.19) and the unidimensional model ( $\chi^2(44) = 211.43$ ,  $p < 0.01$ ; CFI = 0.72, RMSEA = 0.16, SRMR = 0.09). The CFA thus confirms that both constitute separate, but correlated constructs, which is reflective of the multidimensional view of WNW balance.

Additionally, we performed CFA to confirm the fit of the measurement model and the distinctiveness of the variables. The proposed 5-factor model fit the data better than alternative models<sup>1</sup> ( $\chi^2(424) = 664.57$ ,  $p < 0.01$ ; CFI = 0.89, RMSEA = 0.06, SRMR = 0.08), such as a 4-factor model combining both WNW balance dimensions ( $\chi^2(428) = 778.27$ ,  $p < 0.01$ ; CFI = 0.83, RMSEA = 0.08, SRMR = 0.08), a 4-factor model combining both variables measured at Time 2 (life satisfaction and job performance;  $\chi^2(428) = 1034.29$ ,  $p < 0.01$ ; CFI = 0.71, RMSEA = 0.10, SRMR = 0.12) and a 1-factor model ( $\chi^2(434) = 1674.59$ ,  $p < 0.01$ ; CFI = 0.41, RMSEA = 0.14, SRMR = 0.14).

### **Common-method variance (CMV) check**

Because our independent variable and mediators were all measured at Time 1 and all study variables collected from a single source, we added a latent method factor to our 5-factor CFA model (FSS, WNW balance effectiveness, WNW balance satisfaction, life satisfaction, performance) to demonstrate that our results were not affected by CMV (Podsakoff et al., 2003). Although the addition of a latent method factor slightly improved our fit indices ( $\chi^2(395) = 546.66$ ; CFI = 0.93; RMSEA = 0.05; SRMR = 0.13), the variance explained by the latent method factor was 13.8%, which is below the 25% threshold (Williams et al., 1989), assuring us that CMV did not significantly influence our findings. We thus proceeded with the test of the hypotheses.

## **Results**

Table 1 displays the descriptive statistics and bivariate correlations.

The hypotheses were tested using the Process macro (model 4) for SPSS (Hayes, 2017). We ran parallel mediation analyses<sup>2</sup> as this captures the multidimensional view of WNW balance and allows for a comparison of the sizes of the indirect effects through different mediators (Hayes, 2017). The indirect effects were tested using 20,000 bootstrapping samples with 95% confidence intervals (CI). The results are reported in Table 2.

**Table 1.** Descriptive statistics and bivariate correlations for Study 1.

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Age	30.34	8.00							
2. Gender	0.38	0.49	.02						
3. Relationship status	0.74	0.44	.24	.08					
4. FSS	3.41	.67	.03	.08	.13				
5. WNW balance satisfaction	3.57	.68	.12	.03	.14	.37*			
6. WNW balance effectiveness	3.78	.57	-0.04	.14	.06	.39*	.54*		
7. Life satisfaction, Time 2	3.38	.95	.02	.16	.20*	.37*	.32*	.43*	
8. Job performance, Time 2	3.85	.64	.02	.14	.03	.05	.00	.20*	.25*

Note. *N* = 146. FSS = Supervisor work-nonwork support. WNW = Work-nonwork. Gender: 0 = male, 1 = female. Relationship status: 0 = single, 1 = in a relationship. \* $p < 0.05$ .

**Table 2.** Unstandardized regression coefficients with confidence intervals estimating mediation for life satisfaction and job performance for Study 1.

Variables	WNWB satisfaction			WNWB effectiveness			Life satisfaction			Job Performance		
	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>
1. Age	.01	.01	.26	-0.00	.01	.48	-0.00	.01	.82	.00	.01	.60
2. Gender	-0.01	.11	.92	.12	.09	.17	.18	.14	.20	.13	.11	.22
3. Relationship status	.10	.12	.41	.01	.10	.89	.31	.16	.06	.03	.12	.81
4. FSS	.36	.08	.00	.33	.06	.00	.30	.11	.01	-0.02	.08	.84
5. WNW balance satisfaction							.08	.12	.52	-0.14	.09	.13
6. WNW balance effectiveness							.49	.15	.00	.31	.11	.01
			Effect			Boot SE			CI			
<u>Life satisfaction</u>												
1. Indirect effect of WNW balance satisfaction			.03			.05						-0.066;.139
2. Indirect effect of WNW balance effectiveness			.16			.07						.031;.318
<u>Job performance</u>												
1. Indirect effect of WNW balance satisfaction			-0.05			.03						-0.125;.013
2. Indirect effect of WNW balance effectiveness			.10			.05						.023;.202

Note. *N* = 146. FSS = Supervisor work-nonwork support. WNW = Work-nonwork. Gender: 0 = male, 1 = female. Relationship status: 0 = single, 1 = in a relationship. Findings obtained via bootstrapping with 20,000 repetitions, 95% CI. CIs that do not include zero show significant mediation.

In support of hypotheses 1, the parallel mediation analyses revealed that FSS was positively related to WNW balance satisfaction (H1a;  $B = 0.33$ ;  $SE = 0.06$ ;  $p < 0.001$ ) and WNW balance effectiveness (H1b;  $B = 0.36$ ;  $SE = 0.08$ ;  $p < 0.001$ ). Although not proposed, FSS also exhibited a positive significant effect on life satisfaction ( $B = 0.30$ ;  $SE = 0.11$ ;  $p < 0.05$ ), but not on job performance ( $B = -0.02$ ;  $SE = 0.08$ ;  $p = 0.84$ ).

Concerning hypotheses 2, WNW balance satisfaction was not positively related to life satisfaction ( $B = 0.08$ ;  $SE = 0.12$ ;  $p = -0.52$ ), rejecting H2a,

whereas WNW balance effectiveness exhibited the predicted positive effect ( $B = 0.49$ ;  $SE = 0.15$ ;  $p < 0.001$ ), confirming H2b. A similar pattern emerged for hypotheses 3 as WNW balance satisfaction was not predictive of job performance ( $B = -0.14$ ;  $SE = 0.09$ ;  $p = 0.13$ ), rejecting H3a, while WNW balance effectiveness had a direct positive effect ( $B = 0.31$ ;  $SE = 0.11$ ;  $p < 0.05$ ), supporting H3b.

The mediation hypotheses 4 predicted that WNW balance satisfaction (a) and effectiveness (b) mediate the FSS—life satisfaction link. The results showed that the path through WNW balance satisfaction was not significant (*indirect effect* = 0.03,  $SE = 0.05$ ; 95% CI = [-0.066;0.141]), while the path through WNW balance effectiveness was significant (*indirect effect* = 0.16,  $SE = 0.07$ ; 95% CI = [0.037;0.328]). The findings thus support Hypothesis 4b, but not H4a.

H5 predicted that multidimensional WNW balance mediates the FSS—job performance link. Unexpectedly, the path through WNW balance satisfaction was not significant (H5a; *indirect effect* = -0.05,  $SE = 0.03$ ; 95% CI = [-0.125;0.013]). As expected, the path through WNW balance effectiveness (H5b) was significant (*indirect effect* = 0.10,  $SE = 0.05$ ; 95% CI = [0.023;0.202]) highlighting that WNW balance effectiveness transmitted the positive effect of FSS onto job performance. These findings thus support Hypothesis 5b, but not H5a.

## Discussion

Based on COR (Hobfoll, 2001, 2002; Hobfoll & Freedy, 1993), we expected FSS to be positively related to WNW balance satisfaction (Valcour, 2007) and effectiveness (Grzywacz & Carlson, 2007) which should, in turn, be positively related to life satisfaction and job performance, resulting in both WNW dimensions representing mediators of the links between FSS, life satisfaction and job performance. While FSS did indeed predict WNW balance satisfaction and effectiveness, only WNW balance effectiveness had significant effects on the outcomes, resulting in only this dimension constituting a significant mediator. While not being fully aligned with our theoretical rationale, this finding also contradicts prior research (Wayne et al., 2017, 2021, 2022) which argued along, and found mostly support for, the compatibility principle (Ajzen & Fishbein, 1977) which proposes attitudes, such as WNW balance satisfaction and life satisfaction (Valcour, 2007; Wayne et al., 2017), to be stronger related to each other than to behaviors.

## Study 2

### Introduction

Given the unexpected findings of Study 1, its limitations (e.g. single source and self-rated job performance; Heidemeier & Moser, 2009)

and its crowdsourcing sample (Paolacci et al., 2010), we conducted Study 2 to further explore the mediating role of multidimensional WNW balance between FSS, life satisfaction and job performance. Study 2 also advances Study 1 through the use of an organizational sample that is representative of the wider German population because it comprises both full-time and part-time employees (Brenzel et al., 2013) and through collecting external ratings of job performance from supervisors.

## **Methods**

### ***Sample and procedure***

We collected data from employees of two German companies (pharmaceutical and geriatric care sectors) and their supervisors at two time points, four weeks apart. These organizations were chosen as they represent two different industries (i.e. an example of an industry where employees tend to work in traditional working conditions (pharmaceutical company), and an industry where the working conditions are less traditional and more flexible, i.e. geriatric company), allowing us to test the proposed relationships with a diverse sample. Following approval from the respective management and work committees, the links to the online surveys were emailed to all departments that the HR departments had selected for participation (pharmaceutical company). Employees of the geriatric care company did not have sufficient access to computers and one of the researchers thus distributed paper-and-pencil questionnaires to all staff attending a departmental meeting. Participants who completed both surveys were offered vouchers for a local event in addition to entering a raffle for gift cards.

Across both companies, we obtained responses from 142 employees at Time 1 ( $N$  of pharmaceutical company = 102;  $N$  of geriatric company = 40). The Time 1 surveys could be matched with 115 Time 2 employee surveys ( $N$  of pharmaceutical company = 78;  $N$  of geriatric company = 37) and 106 Time 2 supervisor surveys ( $N$  of pharmaceutical company = 69;  $N$  of geriatric company = 37) representing response rates of 81% and 74.6%. Using independent-samples  $t$ -tests and  $\chi^2$ -tests, we found no differences in any demographic variables between the 142 Time 1 employees and the 27 who did not complete the Time 2 survey and were not included in the final sample.

Employees were predominantly female (72%), reported an average age of 43 years ( $SD=9.46$ ) and mean organizational tenure of 10 years ( $SD=8.02$ ). Seventy-seven percent were in a long-term relationship, and 62.7% had at least one child. Employees of the geriatric care company

worked considerably more often part-time (97.5%) than employees in the pharmaceutical company (14%).

### **Measures**

The same measures and controls as in Study 1 were used to measure FSS ( $\alpha = 0.86$ ), WNW balance satisfaction ( $\alpha = 0.92$ ), WNW balance effectiveness ( $\alpha = 0.89$ ) at Time 1 and life satisfaction at Time 2 ( $\alpha = 0.87$ ). As supervisors provided job performance ratings at Time 2, we used Tsui et al.'s (1997) 11-item scale that we had used in Study 1, now in its original form (1 = *strongly disagree* to 5 = *strongly agree*). A sample item is: 'In the last four weeks, the quality of this employee's work has been much higher than average' ( $\alpha = 0.80$ ). We additionally controlled for company as a proxy for industry differences and type of employment (1 = company 1; 2 = company 2) as the majority of employees in the pharmaceutical company worked fulltime (company 1; 86% full-time) and in the geriatric care company part-time (company 2; 97.5% part-time).

### **Confirmatory factor analyses**

As in Study 1 and in line with Wayne et al. (2017), we ran CFA to confirm that WNW balance satisfaction and WNW balance effectiveness constitute separate dimensions. The findings again confirmed the superior fit of the correlated two-factor model ( $\chi^2(43) = 100.37$ ,  $p < 0.001$ ; CFI = 0.95, RMSEA = 0.1097, SRMR = 0.047) over alternative models (uncorrelated two factor:  $\chi^2(44) = 216.14$ ,  $p < 0.001$ ; CFI = 0.85, RMSEA = 0.166, SRMR = 0.336; unidimensional:  $\chi^2(44) = 186.36$ ,  $p < 0.001$ ; CFI = 0.87, RMSEA = 0.151, SRMR = 0.065). The CFA thus support the multidimensional view of WNW balance.

As in Study 1, we performed CFA to confirm the fit of the measurement model and the distinctiveness of the variables. The proposed 5-factor model fit the data better than alternative models ( $\chi^2(424) = 686.78$ ,  $p < 0.01$ ; CFI = 0.89, RMSEA = 0.07, SRMR = 0.08), such as a 4-factor model combining both WNW balance dimensions ( $\chi^2(428) = 776.57$ ,  $p < 0.01$ ; CFI = 0.85, RMSEA = 0.08, SRMR = 0.08), a 4-factor model combining both variables measured at Time 2 (life satisfaction and job performance;  $\chi^2(428) = 871.45$ ,  $p < 0.01$ ; CFI = 0.81, RMSEA = 0.09, SRMR = 0.11) and a 1-factor model ( $\chi^2(434) = 1486.33$ ,  $p < 0.01$ ; CFI = 0.54, RMSEA = 0.13, SRMR = 0.14).

### **Common-method variance (CMV) check**

As in Study 1, we assessed the impact of CMV on our results through adding a latent method factor to a CFA containing the 4 variables rated by employees (FSS, WNW balance effectiveness, WNW balance satisfaction, life satisfaction;  $\chi^2(270) = 445.05$ ; CFI = 0.91; RMSEA = 0.07; SRMR = 0.11).

Results indicated that adding a latent method factor slightly improved fit indices ( $\chi^2(245) = 330.53$ ; CFI = 0.96; RMSEA = 0.05; SRMR = 0.1), but that the variance explained was with 18.4% below the 25% threshold (L. J. Williams et al., 1989), indicating that CMV did not significantly influence our findings. We thus proceeded with the test of the hypotheses.

## Results

Table 3 displays the descriptive statistics and bivariate correlations.

We used parallel mediation analyses as in Study 1<sup>3</sup> and the results are displayed in Table 4. As in Study 1, FSS was positively related to WNW balance satisfaction ( $B = 0.42$ ;  $SE = 0.12$ ;  $p < 0.001$ ) and WNW balance effectiveness ( $B = 0.28$ ;  $SE = 0.08$ ;  $p < 0.001$ ), lending support to both H1a and H1b. Although not proposed and contradictory to Study 1, FSS was not directly related to life satisfaction ( $B = 0.00$ ;  $SE = 0.10$ ;  $p = 0.98$ ), but job performance ( $B = 0.35$ ;  $SE = 0.08$ ;  $p < 0.001$ ).

Concerning hypotheses 2, WNW balance satisfaction was not positively related to life satisfaction ( $B = 0.15$ ;  $SE = 0.11$ ;  $p = 0.15$ ), rejecting H2a, whereas WNW balance effectiveness exhibited a positive effect ( $B = 0.33$ ;  $SE = 0.14$ ;  $p < 0.05$ ), providing support for H2b. In contrast to Study 1, neither WNW balance dimension was related to job performance (WNW balance satisfaction:  $B = 0.02$ ;  $SE = 0.09$ ;  $p = 0.84$ ; WNW balance effectiveness:  $B = -0.22$ ;  $SE = 0.11$ ;  $p = 0.06$ ), rejecting hypotheses 3.

As in Study 1 and contrary to our prediction, the indirect effect of FSS on life satisfaction was significant through WNW balance effectiveness (*indirect effect* = 0.09,  $SE = 0.05$ ; 95% CI = [0.008;0.197]), but not through WNW balance satisfaction (*indirect effect* = 0.06,  $SE = 0.05$ ; 95% CI = [-0.021;0.161]). Thus, H4b was supported but not H4a.

Contrary to Study 1 in which WNW balance effectiveness mediated the relationship between FSS and job performance, the mediation was

**Table 3.** Descriptive statistics and bivariate correlations for Study 2.

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Company	1.28	0.45								
2. Age	42.85	9.45	.25*							
3. Gender	0.72	.45	.28*	.05						
4. Relationship status	0.79	0.41	.04	-0.01	-0.02					
5. FSS	3.67	.71	.38*	.01	.11	.07				
6. WNW balance satisfaction	3.57	.87	.37*	-0.03	.20*	.05	.41*			
7. WNW balance effectiveness	3.54	.70	.34*	.03	.10	.18*	.38*	.75*		
8. Life satisfaction, Time 2	3.82	.72	.23*	-0.02	.06	.16	.24*	.43*	.45*	
9. Job performance, Time 2	3.68	.64	.46*	.22*	.15	.08	.51*	.15	.06	.16

Note. Ns ranged from 103 to 142. FSS=Supervisor work-nonwork support. WNW=Work-nonwork. Company:1=Company 1 (pharmaceutical company), 2=Company 2 (geriatric company). Gender: 0=male, 1 female. Relationship status: 0=single, 1=in a relationship. $p < .05$ .

**Table 4.** Unstandardized regression coefficients with confidence intervals estimating mediation for life satisfaction and job performance for Study 2.

Variables	WNWB satisfaction			WNWB effectiveness			Life satisfaction			Job Performance		
	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>
1. Company	.36	.21	.09	.34	.16	.04	.07	.17	.67	.48	.15	.00
2. Age	−0.01	.01	.42	−0.01	.01	.90	−0.00	.01	.52	.01	.01	.35
3. Gender	.29	.19	.13	.14	.15	.33	.03	.15	.86	.05	.13	.71
4. Relationship status	.07	.19	.69	.25	.15	.10	.17	.16	.31	.14	.14	.28
5. FSS	.42	.12	.00	.28	.09	.00	.00	.10	.98	.35	.08	.00
6. WNW balance satisfaction							.15	.11	.15	.02	.09	.84
7. WNWB balance effectiveness							.33	.14	.02	−0.22	.11	.06
			Effect			Boot SE			CI			
<b>Life satisfaction</b>												
1. Indirect effect of WNW balance satisfaction			.06			.05			−0.021;.162			
2. Indirect effect of WNW balance effectiveness			.09			.05			.008;.197			
<b>Job performance</b>												
1. Indirect effect of WNW balance satisfaction			.01			.04			−0.078;.086			
2. Indirect effect of WNW balance effectiveness			−0.06			.04			−0.156;.006			

Note.  $N=111$  (life satisfaction) and  $N=103$  (job performance). FSS=Supervisor work-nonwork support. WNW=Work-nonwork. Company: 1=Company 1 (pharmaceutical company; fulltime), 2=Company 2 (geriatric company, part-time). Gender: 0=male, 1=female. Relationship status: 0=single, 1=in a relationship. Findings obtained via bootstrapping with 20,000 repetitions, 95% CI. CIs that do not include zero show significant mediation.

neither significant through WNW balance effectiveness (H5b; *indirect effect* =  $-0.06$ ,  $SE = 0.04$ ; 95% CI =  $[-0.156;0.006]$ ) nor WNW balance satisfaction (H5a; *indirect effect* =  $0.01$ ,  $SE = 0.04$ ; 95% CI =  $[-0.078;0.086]$ ). Therefore, both H5a and H5b are rejected.

## Discussion

The findings of Study 2 mirrored those of Study 1 insofar that FSS predicted both WNW balance satisfaction and WNW balance effectiveness, but only the latter mediated the positive FSS—life satisfaction link. However, contrary to Study 1, WNW balance effectiveness did not mediate the link between FSS and job performance, when job performance was rated by employees' supervisors as opposed to by employees themselves (Study 1).



## General discussion

This research explored two important, but largely neglected concerns linked to WNW balance. First, we were interested in establishing how organizations can facilitate multidimensional WNW balance. In line with recent theorizing (Greenhaus & Allen, 2011; Hirschi et al., 2019), we regarded multidimensional balance as being comprised of WNW balance satisfaction, employees' contentment stemming from their assessment that they have resources available to meet work and nonwork demands (Valcour, 2007), and WNW balance effectiveness, employees' perception of their own and others' assessment of their accomplishment of shared work and nonwork expectations (Carlson et al., 2009). To offer a holistic view of the WNW interface, we focused on WNW balance, as opposed to work-family balance, as the latter does not capture individuals' engagement in other nonwork domains, such as hobbies or charity, which might constitute personally meaningful roles (Powell et al., 2019).

Second, we wanted to better understand the consequences of multidimensional WNW balance for employees (i.e. life satisfaction) and organizations (i.e. job performance) and establish whether both WNW balance dimensions meaningfully predict these outcomes. Overall, our test of the hypothesized model across two studies revealed that only WNW balance effectiveness and not, as predicted, WNW balance satisfaction mediated the link between FSS and life satisfaction (Study 1 and 2). The same was true for job performance as an outcome, although WNW balance effectiveness only mediated the link with self-rated job performance (Study 1), but not with supervisor-rated job performance (Study 2). Thus, while FSS constituted an antecedent of both WNW balance satisfaction and WNW balance effectiveness, when both dimensions were jointly considered, only WNW balance effectiveness contributed to employees' life satisfaction and self-rated job performance. Our findings partially contradict and extend existent research. We discuss important theoretical and practical implications next.

## Theoretical implications

Our research makes several contributions to the work-life interface literature through its focus on multidimensional WNW balance. First, we add to the nascent body of research on multidimensional WNW balance through further highlighting the divergent consequences of the two aspects of WNW balance (Wayne et al., 2022) and, more importantly, through providing a theoretical rationale as to 'why' this might be the case. Theorizing based on COR (Hobfoll, 2001), we had expected both aspects of WNW balance (i.e. satisfaction and effectiveness) to contribute

to both outcome types we studied: life satisfaction and performance. Our arguments diverged from previous research by Wayne and colleagues (2017, 2021, 2022), which had followed, and mostly found support for the compatibility principle (Ajzen & Fishbein, 1977). This principle argues that WNW balance satisfaction as an attitude should be most predictive of other attitudes (e.g. life satisfaction) whereas WNW balance effectiveness should be most predictive of other behaviors (e.g. job performance).

Our findings contradict the compatibility principle: notably, only WNW balance effectiveness, but not WNW balance satisfaction, was a significant predictor of life satisfaction (i.e. the attitudinal outcome). Given our time-separated study design in conjunction with Wayne and colleagues (2017, 2021) findings that WNW balance satisfaction is positively related to attitudes measured at the same time point, our results could signify that WNW balance satisfaction predicts attitudes in the short, but not longer-term. Moreover, our findings regarding job performance are only partially aligned with the compatibility principle in that WNW balance effectiveness predicted employee-rated job performance (Study 1), but not supervisor-rated job performance (Study 2). It could well be that WNW balance effectiveness only translates into performance as perceived by supervisors at the same time (Wayne et al., 2017), and not four weeks later (Study 2). Alternatively, the discrepancy between the Study 1 and Study 2 findings might reflect that employees overestimate their performance compared to supervisor ratings (Heidemeier & Moser, 2009) and that individuals' perception of their private and public performance as captured by WNW balance effectiveness (Wayne et al., 2017) does not accurately reflect their performance as observed by supervisors as relevant role partners.

Viewing our findings through the lens of COR (Hobfoll, 2001) allows a more holistic interpretation. On the one hand, WNW balance satisfaction can be regarded as a volatile personal resource capturing employees' general feelings of WNW balance in light of currently available time and energy (Valcour, 2007). As such, WNW balance satisfaction could be elicited by a particular circumstance and could well be regarded as transient in nature and short-lived (ten Brummelhuis & Bakker, 2012), explaining the null effects on job performance and life satisfaction—particularly when measured four weeks apart. On the other hand, WNW balance effectiveness can be regarded as a structural resource that is grounded in one's knowledge of and efficacy concerning the meeting of WNW demands (Grzywacz & Carlson, 2007). This makes WNW balance effectiveness more intentional in nature, rendering it a durable resource that can be invested into generating further resources through gain spirals, leading to valuable outcomes (ten Brummelhuis & Bakker, 2012).

More broadly, our findings contribute to the conceptualization of WNW balance as multidimensional (Casper et al., 2018; Greenhaus & Allen, 2011; Hirschi et al., 2019; Wayne et al., 2022). By exploring WNW balance satisfaction and WNW balance effectiveness jointly in relation to outcomes, our findings suggest that over a time span of weeks, only WNW balance effectiveness was particularly relevant for our outcomes of life satisfaction and self-rated job performance. These findings combined with Wayne et al.'s work (2017, 2021) imply that WNW balance satisfaction, when considered jointly with WNW balance effectiveness, might only predict outcomes at the same time and/or ones that are more transient in nature, such as positive and negative affect, which is in line with COR's categorisation of resources into volatile and structural (ten Brummelhuis & Bakker, 2012).

Second, in answering repeated calls (Casper et al., 2018; Wayne et al., 2021), we contribute to the literature on multidimensional WNW balance through testing and confirming supervisors' support for employees' WNW interface (Thomas & Ganster, 1995) as an important antecedent. In line with COR (Hobfoll, 2001), we consider FSS as a contextual resource that is structural (ten Brummelhuis & Bakker, 2012) and should thus, on a repeated basis, enable employees to meet work and nonwork expectations (WNW balance effectiveness) and be satisfied with their balance (WNW balance satisfaction). Our findings are in line with research on WNW balance satisfaction which showed that work resources, particularly stemming from supervisors, are among the most useful resources for enabling balance (Choi et al., 2018; Vaziri et al., 2022; Wayne et al., 2020). We add to this literature that this is also the case for WNW balance effectiveness and multidimensional WNW balance more broadly, and contribute to the evidence base indicating that organizations and supervisors play an important role in employees' WNW balance.

In extension, we find that FSS had a positive indirect effect on employees' life satisfaction and self-rated job performance<sup>4</sup> through WNW balance effectiveness as a mediator. Consequently, experiencing FSS enables employees to fulfill own and others' work and nonwork expectations and the resultant WNW balance effectiveness, a personal, structural resource, can be used to offset work stressors, leading to positive well-being (i.e. life satisfaction; Hobfoll & Freedy, 1993). Furthermore, WNW balance effectiveness should also be linked to the generation of further resources, such as competence and autonomy which, in turn, can be reinvested and contribute to employees' job performance through the process of a gain spiral (Hobfoll, 2002; Hobfoll & Freedy, 1993). These findings add to our understanding of the mechanisms through which FSS exerts its positive

influence on employees' experiences in and outside of work (Crain & Stevens, 2018).

Third, our research also contributes to the nascent literature on multidimensional WNW balance through exploring it in a different cultural context to the US, the stage of most work-family research (Casper et al., 2014) and all work on multidimensional WNW balance (Wayne et al., 2017, 2021, 2022). Exploring WNW balance beyond the US is paramount as scholars agree that the cultural and legal context shapes employees' WNW experiences (Ollier-Malaterre & Foucreault, 2017). This context varies drastically between Germany and the US, with Germany scoring higher on the cultural dimensions of uncertainty avoidance and long-term orientation (Hofstede et al., 2005). This is reflected in the considerable rights German employees have when it comes to, for example, notice periods, flexible working, compassionate and annual leave and parental pay (see. e.g. Kossek & Lautsch, 2018). On the one hand, these national policies directly influence WNW balance through shaping organizational policies, work demands (e.g. working hours) and work resources (e.g. flexibility; see e.g. Beham et al., 2014), which have been shown to influence employees' WNW interface (Frye & Breugh, 2004). On the other hand, these contextual factors also represent the framework within which organizational cultures form (e.g. family-supportive organizational perceptions; Allen, 2001), while they, jointly with policies, influence supervisors' behaviors through representing signals regarding the organizational and cultural importance of employees' WNW balance (Connelly et al., 2011; Grover & Crooker, 1995).

Concerning FSS, our findings regarding its role as an antecedent of multidimensional WNW balance do not differ from research conducted in the US or Asia which finds that work resources, and particularly informal supervisor support, positively relate to employees' experience of WNW balance satisfaction (e.g. Choi et al., 2018; Wayne et al., 2020). As such, there is reason to assume that supervisors' support for employees' WNW interface represents a factor that positively relates to employees' experience of balance across different cultures (see Vaziri et al., 2022), to some extent independent of, for example, the extent of national family-friendly policies. Regarding multidimensional WNW balance, we have discussed discrepancies in relation to the role of WNW balance satisfaction for employees' life satisfaction in the presence of WNW balance effectiveness and the role of WNW balance effectiveness for supervisor-rated job performance from research conducted in the US (Vaziri et al., 2022; Wayne et al., 2017, 2021). Although we have elaborated on potential reasons (e.g. differing research designs), it is plausible that the cultural context of our study has influenced its findings. For example, it could well be that in the German context characterized by

long-term orientation, uncertainty avoidance and heightened emphasis on formal performance evaluation outcomes (Bacouel-Jentjens & Brandl, 2015), WNW balance satisfaction is not a powerful predictor of Germans' life satisfaction, as explicit knowledge of how well German employees are actually fulfilling WNW roles, as captured more by WNW balance effectiveness, carries more weight for their well-being. In sum, Germany represents a context in which WNW balance is of high priority for employees and employers alike. As such, our findings should have particular implications for countries where this is also the case or which are culturally similar to Germany (i.e. low cultural distance), such as Austria and Switzerland (i.e. similar uncertainty avoidance) or Asia (i.e. similar long-term orientation).

Lastly, the characteristics of the samples of our two studies represent a strength worth noting. Specifically, while the employees of Study 1 worked full-time, those of Study 2 worked both part- and full-time, and we controlled for the impact of this characteristic on our findings (i.e. company as proxy for part-time or full-time work). Working part-time is one of the key strategies employees use in an effort to achieve balance, with part-time employees reporting higher levels of WNW balance satisfaction compared to fulltime employees, even after controlling for varying demands and resources (Beham et al., 2012). Although our hypothesized model was supported for both groups, post-hoc analyses showed that part-time employees did indeed have higher ratings of WNW balance satisfaction and WNW balance effectiveness. However, our sample size ( $N$  of part-time employees = 47;  $N$  of fulltime employees = 68) is not large enough to warrant further investigation and to derive conclusive evidence. As such, exploring the experience of multidimensional WNW balance of different groups of employees is important and we elaborate on this further in the coming sections.

### ***Practical implications***

The predominance of 24/7 work environments in tandem with employees' increased desire to balance work and nonwork domains (Crawford et al., 2019) has made better understanding of WNW balance increasingly important. Our findings contribute to practice in three ways. First, we show that particularly WNW balance effectiveness matters for employees' life satisfaction and self-rated job performance. Given the relevance of WNW balance as a talent management tool to attract and retain staff (Hill et al., 2006), we encourage organizations to make every effort to support their employees in achieving WNW balance effectiveness. Our findings point towards FSS, supervisors' support for employees' WNW interface (Thomas & Ganster, 1995), as a primary avenue. While we find

that FSS not only contributes to WNW balance effectiveness but also WNW balance satisfaction, relevant organizational interventions could involve encouraging supervisors to express WNW supportive behaviors through including an evaluation of such behaviors in their performance appraisal, training supervisors in the provision of FSS (Ode-Dusseau et al., 2016) or selecting supervisors who value employees' WNW interface into key positions. Although we did not examine FSS at the dimensional level (Thomas & Ganster, 1995), in light of the revealed importance of WNW balance effectiveness and our argumentation along COR (Hobfoll, 2001; ten Brummelhuis & Bakker, 2012), which rested on FSS constituting a contextual resource that provides employees with both instrumental (e.g. accommodate flexible work schedules or clarify performance expectations) and emotional support (e.g. kind words or advice), organizations might initially focus their efforts on the provision of instrumental support, as it is content-wise closer aligned with WNW balance effectiveness. Targeted manager training programs specifically focused on coaching skills (e.g. Huang & Hsieh, 2015) geared towards supporting employees in their continuous striving toward WNW balance effectiveness might also be an option. Although not hypothesized, our findings also showed that FSS positively affected supervisor ratings of job performance (Study 2), which are less prone to self-serving bias (Heidemeier & Moser, 2009) than employees' own ratings and, as such, organizations would be well advised to adopt the above suggestions independent of whether employee WNW balance is of organizational interest. Beyond supervisors, organizations can support employees through encouraging them to use available WNW balance policies (e.g. Bourdeau et al., 2019), discouraging work practices, such as working overtime, that negatively affect WNW balance (e.g. Vaziri et al., 2022), or making the compatibility of work and nonwork commitments a discussion point during monthly performance reviews.

Second, it should be noted that WNW balance satisfaction, although not a significant mediator in our study, exhibited a strong correlation with life satisfaction across both studies. Accordingly, organizations and supervisors should regard the construct as an important indicator of employees' overall WNW experience, with important nonwork implications. Ways in which organizations can support employees' contentment with their WNW interface (Valcour, 2007) include supporting employees' non-work commitments, such as affording employees control over how they divide their time between work and nonwork roles, and overall time flexibility (Scholarios & Marks, 2004; Wayne et al., 2020). This could involve setting work deadlines and goals in conjunction with employees and effectively supporting flexible working arrangements. At the organizational level, interventions to shape organizational cultures and values

should encompass elements specifically signaling that employees' WNW balance satisfaction is a concern and a priority for the organization, as reflected in supportive HR policies and practices, and their implementation (Mescher et al., 2010).

Finally, given that our findings indicate that the main benefits of achieving WNW balance are for employees themselves, in the form of positive self-perceptions of performance and overall life satisfaction, we suggest that they should be supported to prioritize their pursuit of balance and empowered to have agency in determining what WNW balance effectiveness means for them and how they can obtain it. Drawing directly from our findings, one way of achieving this is by eliciting support from their managers, in line with recent developments on the role of agentic followership in procuring leadership (e.g. Gajendran et al., 2022). Human resource professionals and organizational functions can support employees' agency through training and developing them to take a proactive role in shaping the managerial support they receive, as well as in seeking work arrangements that support their ability to fulfil both work and nonwork role requirements. Having clear HR policies and accessible information on WNW supportive options and arrangements, organizations can support both managers and their employees in their pursuit of personalized and dynamic work arrangements that promote each employee's WNW balance effectiveness.

### ***Limitations and future research directions***

First, following COR and the notion of gain spirals (Hobfoll, 2002), we focused on supervisors and the informal organizational WNW support they provide (Allen, 2001) as a key contextual resource that lead employees to accumulate further resources, be they volatile or structural (ten Brummelhuis & Bakker, 2012). Although supervisors' behavior constitutes a valuable resource for employees' WNW balance, it needs to be understood within the wider context of the organization and country, which shapes, as previously elaborated on, organizational WNW policies and employees' uptake of these policies, such as flexible work (Butts et al., 2013). Given that our study was conducted in Germany where employees enjoy considerable rights in terms of accessing family-friendly policies and that significant variations exist alone in Western Europe regarding the provision of formal organizational WNW support and levels of WNW balance satisfaction (Beham et al., 2012), our findings are not generalizable to other countries without further research. Additionally, although our sample comprised companies from different industries (i.e. pharmaceutical and geriatric care companies) and full-time and part-time employees, the divisions across these characteristics were not large enough

for comparisons across industries or types of employment, and our findings might be influenced by other factors inherent to the industries in which employees worked. Given the importance of the context in availing of and ensuring access to WNW balance resources (Allen, 2001), and the potential difference between full-time versus part-time employees in experiencing their WNW interface (e.g. Warren, 2004), it would be highly beneficial if future research incorporates these contextual characteristics in the analysis of WNW balance. Such research has the potential to shed significant light on how the wider context and types of employment shape employees' experience of WNW balance.

Second, although we assessed WNW balance and the outcomes of life satisfaction and job performance at different time points and partially with different sources, which reduces threats such as spurious mood effects (Podsakoff et al., 2003), we did not measure them repeatedly to obtain panel data and are hence unable to exclude reverse causality. The directionality of the effects is however aligned with the majority of research which considers WNW constructs (e.g. work-family conflict, work-family enrichment, work-family balance) as antecedents, as opposed to outcomes, of work and nonwork variables. However, given that our findings in favor of WNW balance effectiveness question, at least for our outcome variables, the conceptualization of balance as multidimensional, and in light of new research by Wayne et al. (2022) regarding the directionality of the relationships between the individual WNW balance dimensions and outcomes, we encourage more researchers to adopt cross-lagged designs (Allen & Martin, 2017). Such research is important not only to determine the relative significance of both WNW balance dimensions for well-being, job performance and other outcomes, but also to confirm the temporal order of the constructs. Going one step further and thinking beyond current models of multidimensional WNW balance (Greenhaus & Allen, 2011; Hirschi et al., 2019), future research might explore the extent to which the effect of WNW balance effectiveness on outcomes varies depending on whether employees do or do not experience WNW balance satisfaction at the same time (i.e. looking at interactive effects).

Additionally, we relied on cross-sectional data to test the link between supervisors' FSS and employees' multidimensional WNW balance, making these findings susceptible to common-method bias (Podsakoff et al., 2003). However, the replication of our findings across two studies with diverse samples and the use of common-method variance checks together with previous research that demonstrates a link between supervisors' family support and work-family interface experiences over time (e.g. Kossek et al., 2011; Wayne et al., 2020), provides us with confidence in our findings and the proposed directionality (Spector, 2019).



Finally, and relatedly, Casper and colleagues (2018) have postulated, following a review, that beyond satisfaction and effectiveness, multidimensional WNW balance should also include involvement, referring to employees' engagement in multiple roles, as a third dimension. In line with existent research on multidimensional WNW balance (Wayne et al., 2017, 2022), we did not include involvement as a WNW dimension given that it is not commonly studied and has been discussed as a contributor as opposed to component of WNW balance (Greenhaus & Allen, 2011; Hirschi et al., 2019). Conversely, WNW balance satisfaction and WNW balance effectiveness represent the two dominant, established operationalizations of global balance (Wayne et al., 2017, 2022). To empirically ascertain whether involvement matters for individual and organizational outcomes beyond satisfaction and effectiveness, future research should include a novel measure of multidimensional WNW balance which also comprises an involvement dimension (Wayne et al., 2021). Relatedly, given our finding of the dominance of WNW balance effectiveness, we regard it as important that research further scrutinizes the conceptualization of balance as multidimensional through linking its dimensions with differing outcomes (Klein & Delery, 2012) before settling on its multidimensional nature and adopting a multidimensional measure. These concerns are related to recent discussions on the 'dark side of construct convergence' (Sumpter et al., 2021) and the need to establish whether all three WNW balance dimensions indeed best capture employees' WNW experiences. This is particularly important as employees' WNW interface has drastically changed over the last decade through, for example, the rising use of technology (Kossek & Michel, 2011) and will have been permanently changed through Covid-19 (Kramer & Kramer, 2020). Given that the conceptualization of WNW balance as multidimensional resulted from an examination of research spanning the last three decades (Casper et al., 2018; Greenhaus & Allen, 2011), and in light of our findings, we also consider it a worthwhile endeavor for research to adopt qualitative approaches to studying employees' conceptualization of WNW balance post-Covid-19 to ensure that research keeps up with the changed work context (Suddaby, 2010).

## **Conclusion**

This research focused on exploring the antecedent and consequences of multidimensional WNW balance. Across two studies, we find that FSS predicted employees' WNW balance satisfaction and WNW balance effectiveness. Regarding outcomes, only WNW balance effectiveness and not WNW balance satisfaction was positively related to employees' life satisfaction and self-rated job performance one month later. Our study thus

highlights FSS as an avenue through which organizations can assist employees in achieving WNW balance, while also revealing that employees who experience WNW balance effectiveness are satisfied with their lives and perceive themselves to exhibit high job performance. Theoretically, our findings show that WNW balance satisfaction ceased to matter for important outcomes in the presence of WNW balance effectiveness.

## Notes

1. Although the CFI for the proposed 5-factor model falls slightly below .90, which is likely due to the sample size being below  $N=250$  (Marsh et al., 2004). Because goodness of fit indices and their cut-off values are highly susceptible to the complexity of a given model and the sample size, we followed Marsh et al. (2004) and assessed the adequacy of a model against alternative models.
2. In line with previous research that only examined one of the WNW balance dimensions (e.g., Choi et al., 2018; Ferguson et al., 2012), we also ran single mediation models. The findings revealed that both WNW balance satisfaction (*indirect effect* = .10, *SE* = .05; 95% CI = [.010;.216]) and WNW balance effectiveness (*indirect effect* = .17, *SE* = .07; 95% CI = [.056;.324]) mediated the link between FSS and life satisfaction when considered in isolation while only WNW balance effectiveness (*indirect effect* = .07, *SE* = .04; 95% CI = [.005;.165]) but not WNW balance satisfaction (*indirect effect* = -.01, *SE* = .03; 95% CI = [-.067;.055]) mediated the link between FSS and job performance.
3. As in Study 1, we also ran single mediation models. The findings resembled Study 1 for life satisfaction (WNW balance satisfaction: *indirect effect* = .13, *SE* = .05; 95% CI = [.051;.237]; WNW balance effectiveness: *indirect effect* = .13, *SE* = .05; 95% CI = [.042;.244]), but not for job performance as an outcome (WNW balance satisfaction: *indirect effect* = -.05, *SE* = .03; 95% CI = [-.122;.001]; WNW balance effectiveness: *indirect effect* = -.06, *SE* = .03; 95% CI = [-.128;-.008]).
4. As noted by one of the reviewers, life satisfaction and self-rated job performance were significantly correlated in Study 1 ( $r = .25$ ,  $p < .05$ ), providing further empirical evidence for the link between well-being and productivity (e.g., Oswald et al., 2015).
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## Disclosure statement

The authors declare that there are no relevant financial or non-financial competing interests to report.

## Ethical approval and informed consent

Approval was obtained from the ethics committee of Aston University, UK. The procedures used in this study adhere to the tenets of the Declaration of Helsinki. Informed consent to participate and for the research findings to be published was obtained from all individual participants included in the study.

## Author contributions

Kristin Hildenbrand contributed to the study conception and design, material preparation and data collection. Xiaoyu Gan contributed to the literature review. Analysis were performed by Kristin Hildenbrand and Pascale Daher. The first draft of the manuscript was written by Kristin Hildenbrand. Subsequent versions were written by Kristin Hildenbrand and Pascale Daher with guiding comments obtained from Anna Topakas. All authors commented on previous versions of the manuscript and read and approved the final manuscript.

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## Data availability statement

The data that support the findings of this study are openly available in figshare at <https://doi.org/10.15131/shef.data.20626719>. The embargo that has been placed on the data will be lifted upon publication of the article using this data.

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## Appendix

### Data transparency table

Study variables	Measure	Present study	Published paper
FSS	9 items; Thomas & Ganster (1995)	x	
WNW balance effectiveness	6 items; Carlson et al. (2009)	x	
WNW balance satisfaction	5 items; Valcour (2007)	x	
Life satisfaction	5 items; Diener et al. (1985)	x	
Job performance	11 items; Tsui et al. (1997)	x	
Authentic leadership	16 items; Walumbwa et al. (2008) <sup>5</sup>		x
PCoA	7 items; Grandey et al. (2013) <sup>6</sup>		x
Health	12 items; Ware et al. (1996) <sup>7</sup>		x
Neuroticism	3 items; Judge et al. (2003) <sup>8</sup>		x
Control variables			
Company type	Pharmaceutical company, geriatric company	x	x
Follower gender	Male, female	x	x
Follower age	In years	x	x
Relationship status	Single, in a relationship	x	
Positive and negative affect	10 items; Thompson (2007) <sup>9</sup>		x

Note. FSS=Supervisor Work-nonwork support. WNW=Work-nonwork. PCoA=Perceptions of climate of authenticity.