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Jo, HY, Aryee, S, Hsiung, H-H et al. (1 more author) (2020) Fostering mutual gains: Explaining the influence of high-performance work systems and leadership on psychological health and service performance. Human Resource Management Journal, 30 (2). pp. 198-225. ISSN 0954-5395

https://doi.org/10.1111/1748-8583.12256

Fostering Mutual Gains: Explaining the Influence of High-Performance Work Systems and Leadership on Psychological Health and Service Performance

ABSTRACT

Despite the growing importance of sustainable management of human resources, human resource management and leadership research on mutuality in the employment relationship has proceeded in a parallel fashion. Drawing on self-determination theory, this study proposes an integrative model of human growth by addressing two interrelated questions: (i) how and why experienced service-oriented high performance work systems (HPWS) and unit service leadership relate to psychological health and service performance, and (ii) whether thriving at work and psychological health serially mediate the relationships between the two contextual antecedents and service performance. Our findings revealed that experienced service-oriented HPWS and unit service leadership related to service performance but indirectly through thriving at work. However, experienced service-oriented HPWS but not unit service leadership related to psychological health through thriving at work. Furthermore, thriving at work and psychological health serially mediated the relationship between experienced service-oriented HPWS (but not unit service leadership) and service performance.

Key words: High Performance Work Systems; Leadership; Thriving at Work; Psychological Health; Service Performance

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INTRODUCTION

Although much is now known about the processes through which the contextual antecedents of human resource (HR) and leadership practices relate to employee performance, recent interest in sustainable human resources has put a spotlight on the preoccupation with performance at the expense of employee well-being (Donaldson-Feidler, Munir, & Lewis, 2013; Godard, 2004; Guest, 2017). For example, research has shown that implementation of high-performance work systems (HPWS) leads to work intensification and ultimately, impairs employee physical and psychological health (Kroon, Van De Voorde, & Van Veldhoven, 2009; Loon, Otaye-Ebede, & Stewart, 2019; Ogbonnaya, Daniels, Connolly, & Van Veldhoven, 2017; Van De Voorde, Paauwe, & Van Veldhoven, 2012). Similarly, leadership behaviours such as abusive supervision has been shown to impair employee well-being (Liang, Hanig, Evans, Brown, & Lian, 2017) precipitating a growing focus on well-being in the wider leadership literature (Donaldson-Feilder et al., 2013; Inceoglu, Thomas, Chu, Plans & Gerbasi, 2018; Jimenez, Winkler, & Dunkl, 2017; Kelloway & Barling, 2010; Kelloway, Turner, Barling, & Loughlin, 2012; Kelloway, Weigand, McKee, & Das, 2013; Montano, Reeske, Franke, & Huffmeier, 2017).

Although there is much to be gained from the emergent focus on sustainable management of human resources (Pfeffer, 2010), our understanding of how and why HR and leadership practices promote individual and organizational outcomes is limited by the dearth of research that simultaneously investigates these two streams of research. Leroy, Segers, Van Dierendonck, and Den Hartog (2018) observed that despite their overlapping focus on effective management of people, research in these two areas have proceeded separately. Furthermore, while both HPWS

and leadership research have examined motivational pathways through which they influence employee well-being and/or performance, there is a paucity of research that has examined pathways that draw their conceptual inspiration from mutual gains perspective. A mutual gains perspective highlights the importance of human resource and/or leadership practices that promote not only employee and therefore organizational performance but also, the well-being of employees which, in turn, accounts for performance (Van De Voorde et al., 2012). As shown in Table 1, research that examined the influence of HPWS on employee performance and well-being tended to focus on work-related attitudes such as job satisfaction and organizational commitment, or work-related attributes such as job demands. Although explicating the HPWS-employee performance relationship is important, with the exception of job satisfaction, these pathways are more likely to impact on performance relative to employee well-being.

Insert Table 1 about here

One such motivational pathway which reflects the mutual gains perspective and increasingly examined in leadership research is thriving at work. Although a growing number of studies have examined this construct as a pathway through which different types of leadership style (*e.g.* transformational, servant, and leader-member exchange) influence their outcomes, as shown in Table 1, these studies focused on performance and not employee well-being. As a positive psychological state, thriving at work connotes personal growth or optimal human functioning which, in contrast to withering, captures the essence of sustainable management of human resources (Spreitzer, Sutcliffe, Dutton, Grant, & Sonenshein, 2005). Boxall, Guthrie, and Paauwe (2016, p. 14) observed that as "employee-related variables are key mediators in HRM (*and leadership*), studies of mediation give us the opportunity to connect to questions of mutuality in

employment relations….” Drawing on self-determination theory (SDT), we sought to address two interrelated questions in this study: First, do the contextual antecedents of perceived HPWS and service leadership jointly or separately relate to thriving at work and indirectly, to employee well-being and performance? Second, do thriving at work and employee well-being serially mediate the influence of these contextual antecedents on service performance?

By addressing these interrelated questions, this study makes two contributions to the literature. First, as the two antecedents are critical to shaping employees’ experience of work (Leroy et al., 2018), research that seeks to illuminate our understanding of how to sustainably manage human resources for long-term organizational viability (Kowalski & Loretto, 2017) must include HPWS and leadership as well as employee and organizationally-relevant outcomes (Guest, 2017; Kowalski & Loretto, 2017; Van De Voorde et al., 2012; Wood & Ogbonnaya, 2018). Indeed, our study addresses Kowalski and Lorreto’s (2017, p. 2238) observation of a dearth of research that has explored “the triadic relationship between HRM (*leadership*), well-being and performance.” Furthermore, and in contrast to prior research that examined generic versions of these contextual antecedents, our focus on both strategically-oriented HPWS and leadership signals the organizational priority attached to service quality and the inherent normative expectations that ultimately, shape frontline employees’ experience of work (Hong, Liao, Hu, & Jiang, 2013). We therefore provide a context-driven understanding of mutuality in the employment relationship and ultimately, sustainable management of human resources.

Second and despite the importance of workplace mutuality to sustainable management of human resources, HPWS research has not been grounded in a theory that captures the essence of mutuality (Boxall et al., 2016, p. 104). Prior research has, for example, employed the ability, motivation, and opportunity (AMO) framework (Ogbonnaya & Messersmith, 2018) to account for

the influence of HPWS on employee well-being. However, Boxall and colleagues (2016, p.104) observed that "…the AMO framework…is focused on serving the goal of organizational performance rather than well-being." Similarly, leadership research has not always examined mutuality-oriented outcomes nor been grounded in a framework that reflects the mutual gains perspective (Donaldson-Feilder et al., 2013, p. 155). Thus, the question of how organizations can implement HR and leadership practices that enhance motivation and performance without undermining employee well-being has not been adequately addressed (cf. Van De Voorde et al., 2012, p. 402). Our integrative model of human growth captures the essence of mutuality by examining thriving at work as a pathway through which the two contextual antecedents influence our two focal outcomes. This is because thriving at work connotes optimal human functioning which may be manifested in psychological health leading to performance (Kline, Rudolph, & Zacher, 2019; Paterson, Luthans, & Jeung, 2014; Spreitzer, Porath, & Gibson, 2012).

THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

SDT is a general theory of human motivation, psychological needs, and human personality concerned with human development as well as the degree to which human behaviour is self-determined (Deci & Ryan, 2012; Deci, Olafsen, & Ryan, 2017). SDT posits that social environments and their interactions with individuals can affect the quality of an individual's motivation, subsequent behaviour, and psychological well-being. Thus, SDT suggests that environments can optimally regulate motivation, behaviour, and well-being through supporting three innate, fundamental, and universal psychological needs of autonomy, competence, and relatedness (Ryan & Deci, 2000). Autonomy explains a need to perceive oneself as the initiator and regulator of behavior, competence refers to a need to have the feeling of being effective and

capable in one's environment, and relatedness is a need to develop close mutual relationships and feel connected with others (Deci & Ryan, 2000). SDT does not only conceive of needs as innate but crucially, these needs promote psychological growth and well-being. Drawing on SDT, Spreitzer and Porath (2014) proposed an integrative model of human growth which identifies the satisfaction of these three needs or nutriments as enablers of thriving at work thereby, highlighting the socially embedded nature of self-determination and thriving at work.

Inspired by their integrative model of human growth (Spreitzer & Porath, 2014), we first posit experienced service-oriented HPWS and unit service leadership as contextual antecedents because they provide the nutriments to satisfy frontline employees' psychological needs leading to thriving at work (Porath, Spreitzer, Gibson, & Garnett, 2012). We then posit thriving at work as a psychological pathway through which these two contextual antecedents influence employee psychological health and service performance. As psychological health reflects a high level of psychological functioning, it should be manifested in high levels of service performance. Consequently, we also posit thriving at work and psychological health as serial pathways through which experienced service-oriented HPWS and unit service leadership influence service performance. We finally posit the interaction of the two contextual antecedents to foster need satisfaction leading to thriving at work and ultimately, the outcomes of psychological health and service performance.

Antecedents of Thriving at work

Thriving at work is defined as the "psychological state in which individuals experience both a sense of vitality and learning at work" (Spreitzer et al., 2005, p. 538). While vitality (the affective component) refers to a feeling of energy and aliveness, learning (the cognitive component) implies a sense of acquiring skills and knowledge to build confidence and capability (Paterson et al., 2014;

Spreitzer et al., 2005). Together, these two components inherent in thriving at work serve an adaptive function because they provide an internal cue that helps employees assess their psychological growth that is not captured by either vitality or learning alone (Spreitzer et al., 2005). Service-oriented HPWS includes practices of extensive service training, information sharing, self-managed service teams and participation, performance appraisal and compensation contingent on excellent service performance, job design for quality work, and service discretion (Chuang & Liao, 2010; Jiang, Chuang, & Chiao, 2015). Although service-oriented HPWS has been conceptualized as a unit-level construct to describe actual or management's reported use of this HR system (Aryee, Walumbwa, Seidu, & Otaye, 2012; Liao, Toya, Lepak, & Hong, 2009), we conceptualized it in this study as an experienced or perceived HPWS. This is because in addition to experienced HPWS being more proximal to employee motivational state and behaviors (Jiang, Takeuchi, & Lepak, 2013; Wright & Nishii, 2013), it aligns with much of the extant research that has examined the well-being implications of the construct (see Table 1).

Following SDT, we expect experienced service-oriented HPWS to relate to thriving at work. This is because consistent with SDT, extensive training and development programs may increase employees' competence in service delivery and contribute to their belief that they are capable of accomplishing work tasks or activities. Also, increased empowerment and delegation of decision-making authority may stimulate employees' willingness to take responsibility, which is likely to foster feelings of self-determination or autonomy. The opportunities to experience discretion, information sharing, and developmental opportunities will engender a sense of belonging thereby satisfying employees' relational needs. In effect, experienced service-oriented HPWS provides the nutriments that satisfy psychological needs leading to thriving at work (Martinaityte, Sacramento, & Aryee, 2019). Although prior research has not examined the experienced service-oriented

HPWS-thriving at work relationship, several studies have demonstrated the positive influence of contextual factors, such as decision-making discretion (Porath et al., 2012), information sharing (Spreitzer et al., 2012), and perceived organizational support (Kline et al., 2019) on thriving at work. Therefore, we propose that:

Hypothesis 1a: Experienced service-oriented HPWS positively relates to thriving at work.

Service leadership is defined as a leader's behaviours focusing on "recognizing and appreciating high-quality service, removing obstacles to service delivery, setting clear standards for service quality, and so forth" (Schneider, Ehrhart, Mayer, Saltz, & Niles-Jolly, 2005, p. 1019). We focused in this study on unit service leadership rather than a generic leadership style because such a strategically-oriented leadership style signals the priority attached to service and therefore, shapes the work experience of frontline employees. Unit service leadership behaviours entail acting as coaches or mentors which promotes learning and thereby, enhances the competence of employees leading to thriving at work. By removing obstacles to service delivery, unit service leadership provides frontline employees the autonomy to learn about the needs and expectations of customers which may also enhance their vitality. Jiang and colleagues (2015) also argued that to meet performance standards set by a service leader, their followers have to broaden their knowledge of customers requiring them to not only learn but also exhibit vitality in order to be customer-engaged. Furthermore, by creating a work environment in which employees effectively communicate and interact with their leaders, employees are more likely to receive feedback on their job performance, improve their skills and knowledge, and ultimately experience thriving at work. The priority that service leaders attach to service quality will motivate them to develop high quality relationships with customer contact employees by paying attention to their needs thereby fostering a sense of belonging (Jiang et al., 2015). From an SDT perspective, these attributes of

unit service leadership provide the nutriments that satisfy psychological needs leading to thriving at work (Chiniara & Bentein, 2016). Prior research reported supervisor support climate which is akin to positive leadership behaviours (Kline et al., 2019; Paterson et al., 2014) and servant leadership (Walumbwa, Muchiri, Misati, Wu, & Meiliani, 2018) to relate to thriving at work.

Hypothesis1b: Unit service leadership positively relates to thriving at work.

Mediating Influence of Thriving at work

Following Danna and Griffin's (1999) suggestion that the term 'health' should be applied to organizational settings when focus is on specific physiological or psychological indicators, this study focuses on psychological health to reflect one's affective experiences and evaluations of the quality of emotional and social functioning on the job (Ford, Cerasoli, Higgins, & Decesare, 2011; Kelloway et al., 2012). Employees with a sense of vitality and aliveness are less likely to feel anxious, worried, and depressed, and are more likely to be physically and mentally healthy (Keyes, 2002). This is because "positive experiences such as vitality enable individuals to be more physiologically resilient to stressful situations" (Porath et al., 2012, p. 260). In addition, when employees experience learning, they are more likely to report that work positively influenced their physical and mental health (Alfredsson, Spetz, & Theorell, 1985). As a positive work experience, thriving at work reflects the satisfaction of SDT's basic psychological needs leading to psychological health (Spreitzer & Porath, 2014). Optimal psychological functioning as posited in SDT reflects mastery, a purposeful life, and positive self-regard which should collectively contribute to psychological health (Ryff & Singer, 1998).

We also expect thriving at work to relate to service performance. The autonomous regulation inherent in thriving at work enables employees to engage in service performance that fulfils prescribed performance requirements during the service delivery process. This is because thriving

at work helps "individuals to understand what and how they are doing and whether it is increasing their functioning and adaptability at work" (Spreitzer & Porath, 2014, p. 247). Thriving at work may foster a positive mood which, engenders the expansive cognitive thinking and creative problem solving critical to understanding and customizing the service delivery to meet the diverse needs of customers leading to improved service performance. Additionally, inherent in thriving at work is learning which, enables frontline employees to not only undertake the requisite search behaviours to understand the needs and expectations of customers but also, acquire the knowledge to address them (cf. Carmeli & Spreitzer, 2009). Previous research reported thriving at work to relate to employee job performance (Kline et al., 2019; Paterson et al., 2014; Porath et al., 2012; Wallace, Butts, Johnson, Stevens, & Smith, 2016). The preceding discussion that (1) experienced service-oriented HPWS relates to thriving at work and (2) thriving at work promotes employee work outcomes suggests the following hypotheses.

Hypothesis 2a: Thriving at work positively relates to psychological health and mediates the experienced service-oriented HPWS-psychological health relationship.

Hypothesis 2b: Thriving at work positively relates to service performance and mediates the experienced service-oriented HPWS-service performance relationship.

Based on Spreitzer and Porath's (2014) integrative model of human growth, we posit unit service leadership to relate to psychological health and service performance but indirectly, through thriving at work (Deci et al., 2017; Gagne & Deci, 2005). As leaders' interpersonal style supports subordinates' self-determination (Deci & Ryan, 1985), service leaders tend to express confidence in their subordinates' abilities by removing obstacles to service delivery, delegate authority to employees, foster high quality relationships, and provide feedback to enable their subordinates to handle different customers and situations (Jiang et al., 2015; Schneider et al., 2005). Additionally,

as unit service leadership connotes a positive leadership style, service leaders provide the nutriments that not only enhance followers' thriving at work but also, their optimal psychological functioning. Specifically, by fostering opportunities to exercise self-determination, followers of service leaders should attain a sense of mastery, positive self-regard, and a purposeful life which should enhance their psychological health. Based on the preceding assertions that (1) unit service leadership relates to thriving at work and (2) thriving at work fosters both psychological health and service performance, we propose that:

Hypothesis 2c: Thriving at work mediates the unit service leadership-psychological health relationship.

Hypothesis 2d: Thriving at work mediates the unit service leadership-service performance relationship.

In addition, research that draws on the mutual gains perspective not only highlights the joint-optimization of employee and organizational outcomes but also, suggests that employee outcomes are positively related to performance (Gubler, Larkin, & Pierce, 2017; Peccei, Van de Voorde, & Van Veldhoven, 2013; Wood & Ogbonnaya, 2018). Thus, we posit that psychological health relates to service performance and mediates the relationship between thriving at work and service performance. Psychological health influences work motivation including a sense of agency or autonomy which encourages frontline employees to satisfy customer needs and expectations. Also, positive indicators of psychological health such as positive mood tend to be positively associated with higher firm profits and performance (George & Brief, 1996; Piening, Baluch, & Salge, 2013; Tsai, Chen, & Liu, 2007). Based on the above theoretical arguments, we propose that:

Hypothesis 2e: Psychological health positively relates to service performance and mediates the thriving at work-service performance relationship.

Serial Mediation

In the preceding sections, we posit the contextual antecedents of experienced service-oriented HPWS and unit service leadership to provide the nutriments that satisfy SDT's three psychological needs leading to thriving at work which, in turn, transmits their effects to psychological health and service performance. However, as psychological health reflects a sense of mastery, positive self-regard, and quality interpersonal relationships (Ryff & Singer, 1998) that may be manifested in thriving at work (Porath, et al., 2012), it will constitute a more proximal antecedent of service performance relative to thriving at work. Prior research that has shown thriving at work to relate to both health and performance also reported health to correlate to performance (Kline et al., 2019). Indeed, well-being has also been reported to relate to both prescribed (Wright & Cropanzano, 2000) and discretionary (Podsakoff, MacKenzie, Paine, & Bachrach, 2000) performance. Accordingly, we posit thriving at work and psychological health as serial mediating mechanisms through which our two contextual antecedents influence service performance.

Hypothesis 3a: Experienced service-oriented HPWS positively relates to service performance through the serial mediating mechanisms of thriving at work and psychological health.

Hypothesis 3b: Unit Service leadership positively relates to service performance through the serial mediating mechanisms of thriving at work and psychological health.

Moderated Mediation

Recent research has drawn attention to the interrelationship between HPWS and leadership in promoting performance. For example, Han, Liao, Taylor, and Kim (2017) documented how a strategically-oriented HPWS affects team performance through a strategically-appropriate leadership style. In a slightly different vein, Weller, SuB, Evanschitzky, and Von Wangenheim (2019) reported HPWS consensus and the well-being indicator of job satisfaction as pathways

transmitting the effects of transformational leadership onto customer satisfaction. Although these studies did not examine the nature of the interrelationship between leadership and HPWS in fostering their focal outcomes, it is intuitively plausible that they do not in reality operate independent of each other. Thus, in addition to their separate effects on thriving at work, we also posit the interaction of experienced service-oriented HPWS and unit service leadership to influence thriving at work. This is because as contextual antecedents, they both provide nutriments that define employees' experience of work as reflected in thriving at work. Specifically, as both antecedents emphasise a commitment to service quality, they facilitate the provision of resources such as opportunities to learn and acquire relevant knowledge and skills, and the autonomy to undertake the requisite search process in order to customize the service delivery to the needs of customers. Additionally, the provision of support and the ensuing high-quality relationship provide nutriments that satisfy frontline employees' belonging needs. Service leaders who create a shared perception of the priority attached to service should foster an ambient work context that enhances a sense of autonomy, competence, and relationship building leading to thriving at work. However, in light of the idiosyncratic nature of experienced service-oriented HPWS, we posit that its effect on thriving at work will be conditional upon the collectively shared experience of the nutriments provided by unit service leadership. Thus, we expect the experienced service-oriented HPWS-thriving at work relationship to be moderated by unit service leadership such that this relationship is stronger when unit service leadership is high rather than low. This is consistent with Leroy and colleagues (2018) supplemental fit option of how leadership and HR systems operate to influence work attitudes and behaviors. In their view, a misalignment of leaders and HR system values or priorities undermines the effect of one on the other. Taken together, the preceding arguments suggest moderated mediation relationships (Edwards & Lambert, 2007).

Hypothesis 4: The interaction of unit service leadership and experienced service-oriented HPWS influences (a) psychological health and (b) service performance through the mediation of thriving at work.

Hypothesis 5: The interaction of unit service leadership and experienced service-oriented HPWS influences service performance through the serial mediation of thriving at work and psychological health.

METHODS

Procedure and Sample

Data for this study were based on a project that examined human resource sustainability and employees' experience of work in South Korea's hospitality sector. We gathered data from customer-contact employees and their supervisors in 53 departments of 15 three- to five-star hotels. Survey packets were hand-delivered to supervisors and their subordinates in each department. In order to alleviate concerns about potential common method bias, we collected data from multiple sources and over three time points with a time lag of four weeks spread over a 5-month period. A total of 720 questionnaires were distributed to respondents from 72 departments across 15 hotels at Time 1. The questionnaires asked respondents to provide information about their demographic characteristics and to rate their experienced service-oriented HPWS, service leadership of their immediate supervisor, and customer orientation. Of the 720 questionnaires distributed, completed and usable questionnaires were received from 650 respondents. Four weeks later (Time 2), 650 questionnaires were distributed to the same customer-contact employees. Respondents provided data on thriving at work and other variables not germane to our purposes in this study. Of the 650 questionnaires distributed, 570 completed questionnaires were returned.

Time 3 data were collected four weeks after Time 2. Questionnaires were distributed to the 570 respondents and their supervisors. Respondents rated their psychological health while supervisors rated the service performance of each of their 10 subordinates who participated in the survey.

Of the 570 questionnaires distributed, only 530 completed surveys were correctly matched to supervisor questionnaires and constituted the data for this study. Pertaining to the demographic composition of our respondents, 49.4% were female, reported an average age of 33.44 years (*SD* = 6.67), an average organizational tenure of 6.31 years (*SD* = 4.82), an average subordinate-supervisor tenure of 3.50 years (*SD* = 2.71), and working an average of 50.23 hours per week (*SD* = 6.19). Majority of respondents held a postgraduate degree (46.8%) or undergraduate degree (28.5%). The supervisors averaged 42.47 years of age (*SD* = 4.67) were predominantly male (81.1%) and had 9.49 years of average organizational tenure (*SD* = 4.27) and 5.02 years held a supervisory position (*SD* = 2.72). They also supervised 17.94 subordinates (*SD* = 5.42) on average and 77.4% held a master's degree.

Measures

The original English language questionnaire was translated into Korean following Brislin's (1986) translation/back translation procedures. Unless otherwise indicated, response options ranged from (1) "strongly disagree" to (5) "strongly agree."

Experienced service-oriented HPWS. A 35-item scale developed by Chuang and Liao (2010) was used to measure respondents' experienced service-oriented HPWS at Time 1. The scale comprises 6 dimensions or bundles of human resource practices, such as staffing (5 items), training (5 items), involvement/participation (7 items), performance appraisals (6 items), compensation/rewards (7 items), and caring (5 items). Some minor adjustments were also made to the original item wording to render them suitable for the hospitality industry by replacing 'the

store' with 'the department'. Sample items are "Recruitment emphasizes traits and abilities required for providing high quality of customer service," "High quality of customer service is emphasized in training," "Employees have discretion in handling customers' additional requests," and "Meeting customers' needs is emphasized in performance appraisals." Following prior SHRM research (Liao et al., 2009), we summed the dimensions to form a unitary measure of HPWS. The scale's alpha reliability in this study is .94.

Unit service Leadership. Customer-contact employees rated the service leadership of their supervisors at Time 1 using a 4-item scale developed by Schneider et al. (2005). An example item is "My supervisor recognizes and appreciates high quality work and service." The scale's alpha reliability in this study is .80. As service leadership is a unit-level variable in the current study, we calculated its within-group agreement ($r_{wg(j)}$), intraclass correlation (ICC1), and reliability of the mean (ICC2). The average $r_{wg(j)}$ was .89, the median $r_{wg(j)}$ was .90, the ICC1 was .20, and the ICC2 was .71. Taken together, these statistics supported the plausibility of aggregating individual perceptions of service leadership to the unit level.

Thriving at work. A 10-item scale developed by Porath et al. (2012) was used to measure customer-contact employees' thriving at work at Time 2. An example item is "At work, I find myself learning often." Response options range from (1) "strongly disagree" to (7) "strongly agree". The scale's alpha reliability is .93 in this study.

Psychological health. We used Goldberg's (1978) GHQ-12 to measure employees' psychological health at Time 3. The GHQ-12 has two dimensions—social dysfunction and psychological distress (cf. Doi & Minowa, 2003; Montazeri, Harirchi, Shariati, Garmaroudi, Ebadi, & Fateh, 2003). Respondents were asked to rate the frequency with which they have experienced each statement in the past four weeks. Example items are "…been able to concentrate on whatever

you are doing?" (social dysfunction-5 items) and "…lost much sleep over worry?" (psychological distress-7 items). We deleted the first item from the psychological distress dimension ('been feeling reasonably happy all things considered') because of low factor loading. We then reversed the negatively worded items and summed all of the remaining 11 items to measure the construct. The 11-item scale's alpha reliability is .80.

Service performance. Supervisors rated the service performance of each of their direct reports who participated in the study at Time 3 using a 7-item scale developed by Liao and Chuang (2004). Sample item is "helping customers when needed." Response options range from (1) "highly unsatisfactory" to (7) "highly satisfactory". The scale's alpha reliability is .89 in this study.

Controls. We controlled for the demographics of gender (Female = 1 and Male = 0), education (measured as a categorical variable: 1 = high school to 5 = PhD), and organizational tenure (measured in years) because these variables may affect employee outcome variables (Kidder, 2002). We also controlled for customer orientation because it has been shown to relate to performance in service contexts (Grizzle, Zablah, Brown, Mowen, & Lee, 2009). Additionally, customer orientation may impact thriving at work through its prosocial impact and the inherent demands may affect psychological health. We used a 5-item scale reported by Susskind, Kacmar, and Borchgrevink (2003) to measure customer orientation. A sample item is "When performing my job, the customer is most important to me." The scale's alpha reliability in this study is .85. Lastly, we controlled for customer demandingness in predicting thriving at work because it has been shown to relate to learning (Wang & Netemeyer, 2002). We used a 4-item scale reported by Wang and Netemeyer (2002) to measure customer demandingness. A sample item is "My customers have high expectations for service and support." The scale's alpha reliability is .84. In

light of our cross-level model, we controlled for department size as it may affect experience of work and therefore, our work outcomes. Data on the controls were obtained at Time 1.

Analytical Strategy

The significant between-group variances coupled with our nested data meant the traditional multilevel modelling approach cannot fully separate between-group and within-group effects without introducing bias (Preacher, Zyphur, & Zhang, 2010, p. 210). We therefore adopted the MSEM approach suggested by Preacher and his colleagues to address potential biasing effects (Preacher et al., 2010; Preacher, Zhang, & Zyphur, 2011). Specifically, we estimated both unit and individual-level effects for every relationship even when a relationship was hypothesized only at the individual level.[1] In this MSEM approach, any mediation of the effect of a level-2 antecedent variable on a level-1 outcome variable must occur at the between-group level (Preacher et al., 2010, p. 210). Therefore, we adopted the level-2 effects to test Hypotheses 2c, 2d, and 3b because the antecedent variable of these hypotheses was a unit-level variable (i.e., unit service leadership). In contrast, we used level-1 effects to test our individual-level hypotheses.

To execute the MSEM analyses, we employed Mplus 8 software (Muthén & Muthén, 1998-2017). As our theoretical model contains a cross-level interaction between experienced service-oriented HPWS and unit service leadership, we adopted the intercept-and-slope-as-outcome model and selected the analytical type of "twolevel random" with maximum likelihood estimation. In the MSEM analyses, experienced service-oriented HPWS was group-mean centred and unit service leadership was grand-mean centred. Furthermore, all control variables were grand-mean centred

[1] In our sample, the 53 departments were nested in 15 hotels. We conducted a three-level null model analysis to check the ICC(1) at department level and at hotel level for main research variables and 4 control variables (gender and department size were excluded). The average ICC(1) at department level was .200, indicating high department heterogeneity; the average ICC(1) at hotel level was .059 (the exact value was .0586), indicating low hotel heterogeneity (Cohen, 1988; James, 1982). Therefore, we adopted two-level instead of three-level MSEM to test hypotheses.

(Enders & Tofighi, 2007; Raudenbush & Bryk, 2002; Venkataramani, Zhou, Wang, Liao, & Shi, 2016). To test the mediation and moderated mediation relationships, we first used the "model constraint" command in Mplus to calculate the strength of these relationships and then, used the Monte Carlo simulation method suggested by Preacher and Selig (2012) to derive the 90% confidence intervals (CIs).[2] We executed the Monte Carlo method using R software (version 3.4.1) with 20,000 simulations.

RESULTS

Confirmatory Factor Analyses

We conducted a confirmatory factor analysis (CFA) to test our hypothesised five-factor measurement model and compared this model with a number of alternative models. First, in support of convergent validity, the results show that all items significantly loaded onto their respective dimensions or constructs (all $p < .001$). Second and to ascertain discriminant validity, we formed item parcels for each measure in order to maintain an adequate indicator-to-factor ratio (Landis, Beal, & Tesluk, 2000; Little, Cunningham, Shahar, & Widaman, 2002). For experienced service-oriented HPWS and psychological health, we formed 6 parcels and 2 parcels respectively, based on their presumed theoretical dimensions. For each of the remaining 3 measures (i.e. unit service leadership, thriving at work, and service performance), we parcelled the two items with the highest and lowest loadings, and the two items with the second highest and lowest loadings, and so on.

The CFA results showed that the hypothesised five-factor measurement model fit the data well ($\chi^2 = 578.74$, df = 125, $p < .001$, CFI = .92, TLI = .90, RMSEA = .08, SRMR = .05) and showed

[2] Preacher et al. (2010, p. 217) indicated that 90% confidence intervals are often justified in mediation research, because 90% confidence intervals correspond to one-tailed, $\alpha = .05$ tests.

a better fit relative to the alternative factor models, including a four-factor model A (experienced service-oriented HPWS and unit service leadership combined into one factor), a four-factor model B (psychological health and service performance combined into one factor), a four-factor model C (thriving at work and psychological health combined into one factor), a three-factor model (thriving at work, psychological health, and service performance combined into one factor), a two-factor model (all self-reports combined into one factor), and a one-factor model (all constructs combined into one factor) (all $\Delta\chi^2$ achieved a significance level of $p < .001$). These results support the discriminant validity of our measures.

Hypothesis Tests

Table 2 shows the descriptive statistics, reliabilities, and correlations among the study variables. Table 3 and Figure 1 present the results of unstandardized coefficients estimated from the MSEM analysis. When conducting the MSEM analysis, we controlled for employees' gender, educational attainment, organizational tenure, and customer orientation, and department size in every path. In predicting employees' thriving at work, we also controlled for customer demandingness.

Insert Table 2 about here

Insert Table 3 and Figure 1 about here

As shown in Table 3, individual-level experienced service-oriented HPWS ($\gamma = .55$, $p < .001$) and unit service leadership ($\gamma = .34$, $p < .01$) both positively related to thriving at work. Thus, Hypotheses 1a and 1b were supported. Additionally, individual-level thriving at work had a significant and positive relationship with both psychological health ($\gamma = .09$, $p < .001$) and service

performance ($\gamma = .10$, $p < .01$) thereby providing initial support for Hypotheses 2a and 2b. Table 4 presents the mediating effects estimated from the Monte Carlo simulations. As shown in that table, the indirect effects of individual-level experienced service-oriented HPWS on psychological health and service performance were both significant through the mediation of thriving at work (for psychological health, estimate = .050, 90% CI [.029, .075]; for service performance, estimate = .057, 90% CI [.023, .094]). These results supported Hypotheses 2a and 2b.

Table 4 reveals that the unit-level indirect effect of service leadership on psychological health through the mediation of thriving at work was not significant (estimate = -.025, 90% CI [-.093, .029]), but the unit-level indirect effect of service leadership on service performance through the mediation of thriving at work was significant (estimate = .191, 90% CI [.014, .440]). These results did not support Hypothesis 2c but supported Hypothesis 2d.

Hypothesis 2e predicted that psychological health relates to service performance and mediates the relationship between thriving at work and service performance. The results revealed that psychological health had a significant positive relationship with service performance ($\gamma = .36$, $p < .001$). The indirect effect of thriving at work on service performance through the mediation of psychological health was also significant (estimate = .033, 90% CI [.017, .051]). These results supported Hypothesis 2e.

Insert Table 4 about here

Table 4 shows that the individual-level indirect effect of experienced service-oriented HPWS on service performance through the serial mediation of thriving at work and psychological health was significant (estimate = .018, 90% CI [.009, .030]). However, the unit-level indirect effect of service leadership on service performance through the serial mediation of thriving at work and

psychological health was not significant (estimate = -.043, 90% CI [-.170, .048]). These results supported Hypothesis 3a but not Hypothesis 3b.

As shown in Table 4, the indirect effects of individual-level experienced service-oriented HPWS on psychological health and service performance did not evidence significant differences between high and low levels of unit-level service leadership (for psychological health: estimate = .013, 90% CI [-.014, .042]; for service performance: estimate = .015, 90% CI [-.016, .051]). Therefore, Hypotheses 4a and 4b were not supported. Furthermore, and as shown in Table 3, there was no significant interaction effect between individual-level experienced service-oriented HPWS and unit-level service leadership on thriving at work ($\gamma = .20$, *n.s.*). Given that the interaction was non-significant, the moderated mediation was also non-significant (difference of the indirect effect = .005, 90% CI was [-.005, .016]). Therefore, Hypothesis 5 was not supported.

Supplementary Analysis

In addition to the mediated relationships, we also examined the direct effects of individual-level experienced service-oriented HPWS and unit-level service leadership on the outcomes of psychological health and service performance. We used Wald tests to check whether adding these paths resulted in significant model differences (Muthén & Muthén, 1998-2017, p. 772). First, we examined a competing model in which individual-level experienced service-oriented HPWS was directly linked to the two outcome variables. Results of the Wald test showed a significant difference between this competing model and our proposed model (value = 12.95, $p < .01$). The MSEM analysis revealed that individual-level experienced service-oriented HPWS had a significant direct effect on psychological health ($\gamma = .15$, $p < .001$), but not on service performance ($\gamma = -.01$, $p > .05$). It is worth noting that adding these direct paths to our model did not alter the main results. Thriving at work still transmitted the individual-level effects of experienced service-

oriented HPWS to the outcome variables. Second, we examined a competing model in which unit-level service leadership was directly linked to the two outcome variables. Results of the Wald test showed that this competing model did not evidence a significant difference with our proposed model (value = 5.67, $p > .05$).

As the interaction of individual-level experienced service-oriented HPWS and unit-level service leadership may affect the significance level of the effects of our two antecedent variables (i.e., experienced service-oriented HPWS and unit service leadership) on the mediator (i.e., thriving at work) and the outcome variables (i.e., psychological health and service performance), we conducted a sensitivity analysis by excluding the interaction term from the multilevel model. We found that including or excluding this interaction did not influence the significance level of any of the direct and indirect effects. Taken together, these supplementary analyses validate the findings of our proposed model.

Although we did not propose unit-level hypotheses for the effects of experienced service-oriented HPWS on the mediator and outcome variables, we found that experienced service-oriented HPWS had a significant unit-level direct effect on thriving at work ($\gamma = .85$, $p < .001$, see Table 3) and a significant unit-level indirect effect on service performance (estimate = .475, 90% CI [.110, .898], see Table 4). Furthermore, and although we treated service leadership as a unit-level antecedent in our theoretical model, we also tested its individual-level effects on the mediator and the outcome variables. We found that perceived service leadership had a significant individual-level direct effect on thriving at work ($\gamma = .16$, $p < .05$) and a significant individual-level indirect effect on psychological health and service performance (for psychological health: estimate = .015, 90% CI [.004, .027]; for service performance: estimate = .017, 90% CI [.004, .033]). We also found that perceived service leadership had a significant individual-level indirect effect on service

performance through the serial mediation of thriving at work and psychological health (estimate = .005, 90% CI [.001, .010]). The theoretical implications of these two-level findings are discussed in the next section.

DISCUSSION

Drawing on SDT and grounded in mutual gains perspective, we proposed and tested an integrative model of the pathways through which experienced service-oriented HPWS and unit service leadership separately and interactively, influence psychological health and service performance. The results of the MSEM analysis revealed three key findings. First, while both experienced service-oriented HPWS and unit service leadership indirectly related to service performance, only experienced service-oriented HPWS indirectly related to psychological health through thriving at work. Second, thriving at work and psychological health serially mediated the influence of experienced service-oriented HPWS but not unit service leadership, on service performance. However, the results of the supplemental analysis revealed that at the within-level, perceived service leadership related to both outcomes through the serial mediating pathways of thriving at work and psychological health. The supplemental analysis further revealed that experienced service-oriented HPWS had a between-level effect on service performance (but not psychological health) through thriving at work. Lastly and contrary to our prediction, the interaction of experienced service-oriented HPWS and unit service leadership did not relate to thriving at work and therefore, our moderated mediation hypotheses were not supported.

Theoretical Implications

The positive indirect effects of experienced service-oriented HPWS on the two outcomes through thriving at work as well as the serial mediation of thriving at work and psychological

health on the experienced service-oriented HPWS-service performance relationship, reinforces the notion of mutuality in the employment relationship. Furthermore, the serial mediation which shows psychological health to be more proximal to service performance relative to thriving at work, accounts for the documented influence of thriving at work on performance (Kline et al., 2019; Porath et al., 2012). Contrary to our prediction, unit service leadership only indirectly influenced service performance but not psychological health through thriving at work. However, the supplemental analysis revealed that at the within-level, employee perceived service leadership related to service performance through the serial mediation of thriving at work and psychological health. Although mixed, these findings generally underscore the potential of the two contextual antecedents to promote mutuality at work. This responds to the growing interest in promoting sustainable management of human resources such that enhanced levels of performance are not achieved at the expense of employee well-being (Van De Voorde et al., 2012). By promoting psychological health and ultimately service performance through fostering thriving at work, experienced service-oriented HPWS and service leadership enable organizations to capitalize on their human capital (Ilies, Aw, & Pluut, 2015). The influence of psychological health on service performance (Gubler, et al., 2017; Montano et al., 2017) particularly, highlights the mutual gains perspective suggesting that organizations have much to gain by promoting employee well-being. This is because employees who are emotionally exhausted or have health-related problems cannot constitute the competitive resource that is increasingly critical to the long-term viability of organizations.

Second and contrary to our prediction, the interaction of unit service leadership and experienced service-oriented HPWS did not reveal a significant effect on thriving at work at both the within-group and between-group levels. Although prior research reported service-oriented

HPWS and unit service leadership to substitute for each other in terms of their effect on collective customer knowledge (Jiang et al., 2015), our findings suggest that the nutriments provided by these two contextual antecedents operate separately in enhancing thriving at work and ultimately, psychological health and service performance. As Jiang and colleagues' (2015) documented interaction effect was observed at the unit level, it may well be that the interaction effects operate differently across levels. This interpretation gains some traction from our supplemental findings that revealed perceived service leadership to indirectly influence service performance through the serial mediation of thriving at work and psychological health at the within-level. Coupled with the preceding interpretation, it is intuitively plausible that as strategically-oriented HPWS shapes the context in which leadership is exercised, it may exert its influence on employee reactions through a corresponding strategically-focused leadership such as service leadership. Indeed, Han and colleagues (2017) reported an organizational-level transformational leadership-oriented HPWS to relate to team performance through transformational leadership. This line of research dovetails with the growing interest in line managers' involvement in the implementation of HPWS (Sikora, Ferris, & Van Iddekinge, 2015) but must be refocused to examine not only how line managers' enactment of HPWS leads to performance but also, promotes human resource sustainability and ultimately, performance.

Lastly, the mediating influence of thriving at work that we uncovered underscores the utility of SDT as an integrative theoretical framework in accounting for the influence of experienced service-oriented HPWS and service leadership on psychological health and service performance. Although much HPWS research employs the AMO framework, as Boxall and colleagues (2016) observed, it is focused on organizational performance rather than employee well-being. They, however, suggested the employee-related variables that have been shown to mediate the HPWS-

performance relationship as providing an opportunity to explore mutuality in the employment relationship. A similar observation can be made in the leadership literature as the performance implications of leadership have been explicated in terms of employee-related variables (Nielsen & Munir, 2009) and increasingly, in terms of well-being (Gubler et al., 2017; Montano et al., 2017). Donaldson-Feildler and colleagues' (2013, p. 168) call for research to "create a much clearer understanding of the complexity of the relationship that exist between leadership, employee well-being, and performance" underscores the need for a unifying framework. Our findings provide initial evidence pertaining to the utility of SDT as a potential framework for integrating the two streams of research to provide a more complete understanding of mutual gains perspective.

Practical Implications

The finding that both experienced service-oriented HPWS and service leadership not only indirectly related to psychological health and service performance, but psychological health also related to service performance, has implications for promoting the mutual gains enterprise. For human resource sustainability, organisations need to adopt HPWS as a strategy to promote the joint-optimization of health and performance rather than as a trade-off strategy (Shantz, Arevshatian, Alfes, & Bailey, 2016). Indeed, in his analytic framework of the HRM-employee well-being relationship, Guest (2017) suggested a well-being-oriented HR system comprising investing in employees, engaging work, a positive social and physical environment, voice, and organizational support. Additionally, the recent conceptualization of health-promoting leadership (entailing health awareness, fairness, low workload, control, reward, community and values) suggests a need to invest in leadership practices that foster workplace mutuality (Jimenez et al., 2017). This dovetails with Kelloway and Barling's (2010, p. 260) suggestion that "leadership development should be a main target for research on interventions in occupational health

psychology." By investing in these contextual antecedents, organizations can create an environment that provides the nutriments to foster thriving at work and ultimately, the sustainable management of human resources.

Limitations and Future Directions

As with all research, this study has a number of limitations that point to areas for future research. First, although data were collected from two different sources and over three time points, data on psychological health and service performance were obtained at the same time point. While it is unlikely that service performance will temporally influence psychological health, the cross-sectional nature of the data may preclude any inference of causality. Thus, future research using a multi-wave design with a longer time lag may be better suited to ascertaining the causal status of these relationships. Second, the defining attributes of a service context such as customer co-production and intangibility of the service may constrain the generalisability of our findings to non-service contexts. Research in non-service contexts will help to ascertain the generalizability of the findings we uncovered. Third, although we draw on need satisfaction, a core construct in Spreitzer and Porath's (2014) integrative model of human growth, to account for the influence of the contextual antecedents on thriving at work, it was an unmeasured construct in our study. Given the SDT underpinnings of Spreitzer and Porath's (2014) model, future research that tests their model in the context of promoting mutuality in the employment relationship should obtain data on need satisfaction (Martinaityte et al., 2019). Lastly, the nonsignificant interactions of unit service leadership with experienced service-oriented HPWS raise the question of whether and which type of leadership style will complement the latter to influence thriving at work. Although empowering (Ahearne, Mathieu, & Rapp, 2005) and transformational (Liao & Chuang, 2007) leadership styles have been examined in service contexts, they both focus on developing and motivating employees

to implement organization goals and may therefore, not complement experienced service-oriented HPWS to influence thriving at work. Rather, we expect servant leadership (Eva, Robin, Sendjaya, van Dierendonck, & Liden, 2019) with its concern to promote the welfare of multiple stakeholders (and in this context, employees) to complement the nutriments provided by experienced service-oriented HPWS to foster thriving at work. As Leroy and colleagues (2018) observed, the multi-faceted nature of managing people in organizations calls for integration of HR and leadership practices that promote workplace mutuality and ultimately, sustainable management of human resources. In this task, future research should abandon the continued focus on comparing the conflict and mutual gains perspective in HPWS research (Ogbonnaya & Messersmith, 2018; Veld & Alfes, 2017). Instead, grounded in SDT, this research should draw on conceptual work that proposed well-being-oriented HPWS (Guest, 2017) and leadership (Jimenez et al., 2017) or servant leadership to examine how the latter is shaped by the former as well as the processes through which they influence well-being (variously operationalized) and ultimately, employee performance.

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Table 1

Selective Overview of HR/Leadership Studies on Well-being and/or Performance

Research on HPWS	Conceptualization of HPWS	Mediator	Moderator	Outcomes	
				Performance	Well-being
Alfes, Shantz, and Truss (2012)*	· Perceived HRM practices		· Trust in the employer	· Task performance · Organizational citizenship behaviour · Turnover intentions	· Employee well-being (GHQ-5-item scale)
Boxall, Hutchison, and Wassenaar (2015)	· Perceived high involvement work processes (HIWPs)	· Skill utilisation · Intrinsic motivation			· Intrinsic job satisfaction · Affective commitment · Stress
Boxall and Macky (2014)	· Perceived HIWPs (4 involvement scales) and work intensity				· Global job satisfaction · Job-related stress · Fatigue · Work-life balance
Brockerman, Bryson, and Illmakunnas (2012)	· Perceived high involvement management practices				· Subjective well-being indicators 1) Sickness absence 2) Job satisfaction, working capacity, and the state of self-assessed health (from QWLS) 3) Pain felt at work
Fan, Cui, Zhang, Zhu, Hartel, and Nyland (2014)	· Perceived HPWS (Second-order construct reflecting the AMO dimensions)		· OBSE (organisational based self-esteem) · physician-nurse relationship		· Subjective well-being · Burnout
Hefferman and Dundon (2016)	· HPWS (manager-rated)	· Distributive justice			· Job satisfaction · Affective commitment · Work pressure

		• Procedural justice • Interactional justice			
Jensen, Patel, and Messersmith (2013)	• HPWS utilization (manager-rated)	• Perceived HPWS	• Job control	• Turnover intentions	• Anxiety • Role overload
Kroon, Van de Voorde, and van Veldhoven (2009)	• HPWS (manager-rated)	• Procedural justice • Job demands			• Emotional exhaustion
Kilroy, Flood, Bosak, and Chenevert (2017)	• High involvement work practices (HIWP) (second-order construct)	• P-O fit (person-organization fit)			• Emotional exhaustion • Depersonalization
Ogbonnaya, Daniels, Connolly, and van Veldhoven (2017)	• High performance work practices (HPWP) (manager-rated)	• Work intensification			• Job satisfaction • Commitment • Trust in management • Job-related contentment
Ogbonnaya and Messersmith (2018)*	• Perceived HRM practices	• Affective commitment • Job demands		• Employees' innovative behaviours	• Stress
Shantz, Arevshatian, Alfes, and Bailey (2016)	• HRM practices 1) Performance attributions 2) Cost attributions	• Job involvement • Work overload			• Emotional exhaustion
Van de Voorde, Veld, and Van Veldhoven (2016)	• Empowerment-focused HRM (manager-rated) • Labour productivity	• Task-related resources (Job variety and job autonomy) • Job demands			• Work engagement (Vigour and dedication)
Valizade, Ogbonnaya, Tresgaskis, and Forde (2016)	• Employees' attributions for direct and indirect participation	• Employment relations climate			• Job satisfaction • Organizational commitment

Veld and Alfes (2017)	· Perceived HRM practices	· Climate for well-being · Climate for efficiency			· Ward commitment · Need for recovery
Wood and Ogbonnaya (2018)*	· High involvement management practices 1) Role involvement management 2) Organizational-involvement management	· Job satisfaction · Well-being		· Economic performance (composite measure of financial performance, labour productivity, and quality)	
Wood, Van Veldhoven, Croon, and De Menezes (2012)*	· Perceived HIM (High Involvement Management) practices	· Job satisfaction · Job anxiety-comfort		· Financial performance · Labour productivity · Absenteeism · Quality	

Leadership Studies	**Leadership style**	**Mediator**	**Moderator**	**Outcomes**	
				Performance	**Well-being**
Amundsen and Martisen (2015)*	· Empowering leadership	· Self-leadership · Psychological empowerment		· Work effort · Creativity	· Job satisfaction
Hildenbrand, Sacramento, and Binneweis (2018)	· Transformational leadership	· Thriving at work	· Openness to experience		· Burnout
Jaiswal and Dhar (2017)	· Servant leadership	· Trust in leader	· Thriving at work	· Employee creativity	
Kara, Uysal, Sirgy, and Lee (2013)	· Transactional leadership · Transformational leadership	· Quality of working life		· Organizational commitment	· Burnout · Life satisfaction
Kelloway, Turner, Barling, and Loughlin (2012)	· Transformational leadership	· Trust in leadership			· Psychological well-being

	• Transactional leadership • Passive (Laissez-faire) leadership				
Li, Liu, Han, and Zhang (2016)	• Empowering leadership	• Thriving at work	• Autonomy orientation	• Change-oriented organisational citizenship behaviour (OCB)	
Li, Schaubroeck, Xie, and Keller (2018)	• Leadership role occupancy	• Job demands • Job control			• Psychological well-being • Physiological health
Liang, Hanig, Evans, Brown, and Lian (2017)	• Abusive supervision	• Rumination • Basic need satisfaction • Interpersonal justice perceptions • Organizational social exchange			• Physical health
Montano, Reeske, Franke, and Huffmeier (2017)*	• Transformational leadership • Relationship-oriented leadership • Task-oriented leadership • Destructive leadership • Social interaction processes			• Job performance	• Positive mental health • Negative mental health
Mortier, Vlerick, and Clays (2016)	• Authentic leadership	• Empathy			• Thriving at work
Niessen, Mader, Stride, and Jimmieson (2017)	• Perceived transformational leadership	• Thriving at work	• Emotional exhaustion	• Task mastery • Proactivity	

Nielsen, Randall, Yarker, and Brenner (2008)	· Transformational leadership	· Role clarity · Meaningfulness · Opportunities for development			· A positive state of mind
Rahimnia and Sharifirad (2015)	· Authentic leadership	· Attachment insecurity			· Job satisfaction · Perceived work stress · Stress symptoms
Tafvelin, Armelius, and Westerberg (2011)	· Transformational leadership	· Climate for innovation			· Affective well-being
Walumbwa, Muchiri, Misati, Wu, and Meiliani (2018)	· Servant leadership	· Collective thriving at work · Collective organizational commitment		· Overall performance	
Xu, Loi, and Chow (2019)	· leader-member exchange		· Store spatial crowding · Team negative affective tone		· Thriving at work
Xu and Wang (2019)	· Servant leadership	· Team-member exchange	· Political climate		· Collective thriving

Note. Leadership studies that included thriving at work examined it as a mediator, moderator, or as an outcome. The full reference information for the studies are available upon request from the corresponding author.

*Studies are underpinned by mutual gains perspective.

Table 2

Descriptive Statistics, Reliabilities, and Correlations among Variables

Variables	Mean	*SD*	1	2	3	4	5	6	7	8	9	10
Unit level ($N = 53$)												
1. Department size	24.51	11.78										
2. Service leadership	3.55	.35	-.29*									
3. EHPWS	3.41	.31	-.16	.68**								
4. Thriving at work	4.81	.49	-.11	.73**	.75**							
5. Psychological health	2.93	.25	-.20	.32*	.00	.10						
6. Service performance	4.92	.71	-.15	.29*	.26	.21	.48**					
Individual level ($N = 530$)												
1. Gender	.49	.50	—									
2. Education	2.51	.87	-.16**	—								
3. Organizational tenure	6.31	4.82	-.18**	.11*	—							
4. Customer orientation	3.87	.65	.06	.04	-.00	(.85)						
5. Customer demandingness	3.71	.66	.05	.02	.03	.45**	(.84)					
6. Service leadership	3.55	.67	.01	.03	-.05	.42**	.30**	(.80)				
7. EHPWS	3.41	.52	-.01	.00	-.10*	.36**	.41**	.57**	(.94)			
8. Thriving at work	4.81	.94	.06	.09*	.00	.36**	.34**	.43**	.52**	(.93)		
9. Psychological health	2.93	.44	-.01	.09*	-.01	.28**	.16**	.28**	.19**	.21**	(.80)	
10. Service performance	4.92	.93	-.02	.12**	-.02	.16**	.11**	.18**	.18**	.20**	.35**	(.89)

Note. $N = 530$ at level 1; $N = 53$ at level 2. Gender (0 = male, 1 = female) is a dummy variable. Coefficient alphas appear in parentheses on the diagonal. EHPWS = experienced service-oriented HPWS.

* $p < .05$. ** $p < .01$.

Table 3

MSEM Results: The Estimated Direct Effects and Interaction Effects

	Dependent Variables					
	Thriving at work		Psychological health		Service performance	
	Estimate	*SE*	Estimate	*SE*	Estimate	*SE*
Intercept	4.81***	.04	3.28***	.46	-2.85	2.07
Controls						
Gender	.12†	.07	-.02	.03	-.03	.06
Education	.10*	.04	.02	.02	.08	.04
Organisational tenure	.01	.01	-.00	.00	.01	.01
Customer orientation	.16*	.06	.14***	.03	.03	.05
Customer demandingness	.10†	.06				
Department size	.00	.00	-.00	.00	-.00	.01
Level-2 Independent Variables						
Service leadership	.34*	.17				
EHPWS	.85***	.18				
Thriving at work			-.07	.09	.56*	.25
Psychological health					1.74***	.49
Level-1 Independent Variables						
Service leadership	.16*	.07				
EHPWS	.55***	.10				
Thriving at work			.09***	.02	.10**	.04
Psychological health					.36***	.08
Interaction						
Level-1 EHPWS × Level-2 service leadership	.20	.25				
Level-2 R^2	.67		.14		.34	
Level-1 R^2	.36		.12		.24	

Note. $N = 530$ at level 1; $N = 53$ at level 2. *SE* = standard error. Unstandardized estimates were reported. EHPWS = experienced service-oriented HPWS. R^2 values were calculated using Snijders and Bosker's (1999) formulas.

† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$, two-tailed test.

Table 4

The Estimated Mediating Effects

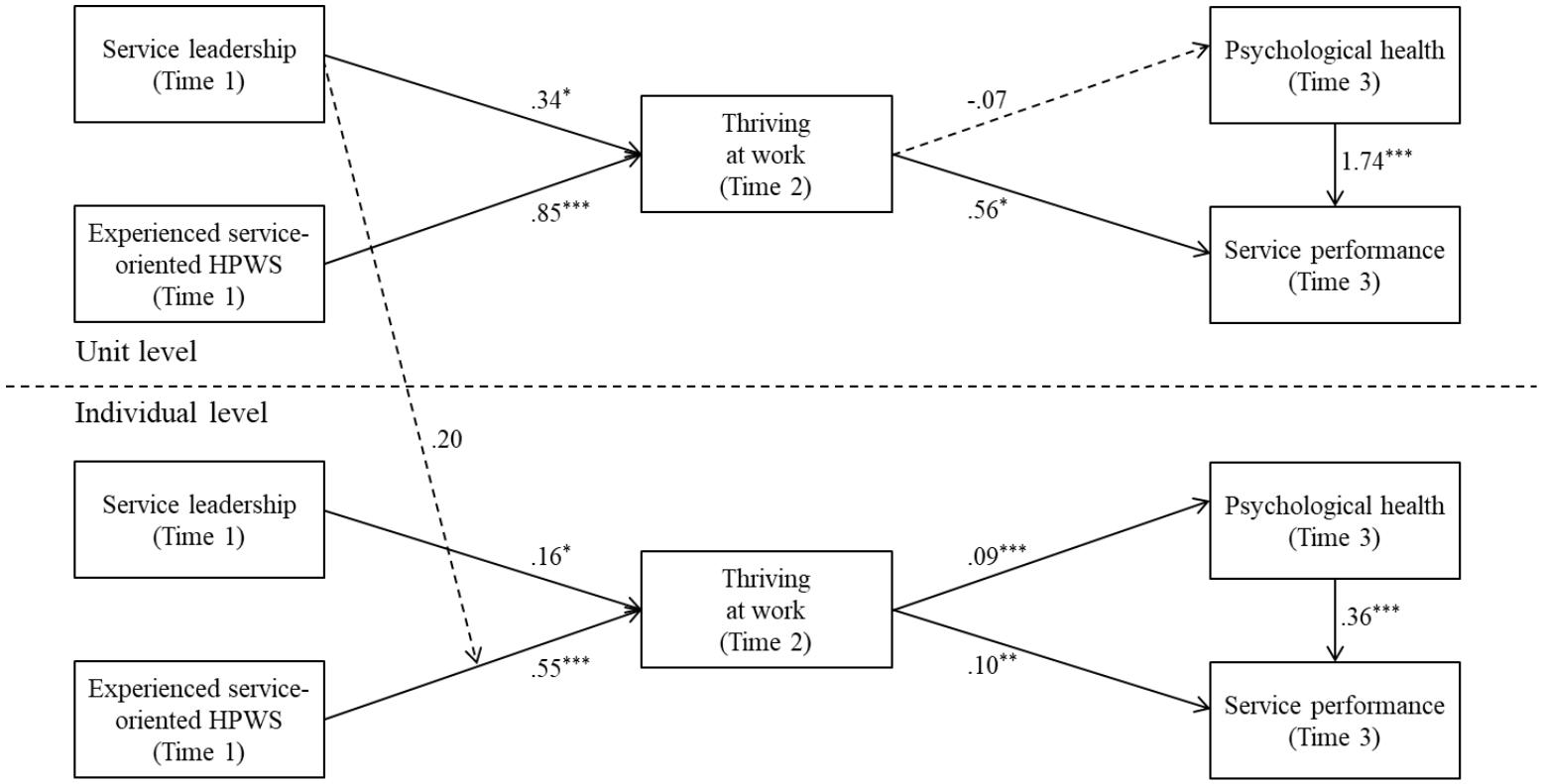
	Individual level			Unit level		
		90% CI			90% CI	
	Estimate	Lower	Upper	Estimate	Lower	Upper
Mediating effects						
H2a: EHPWS → TAW → psychological health	**.050***	**.029**	**.075**	-.061	-.203	.071
H2b: EHPWS → TAW → service performance	**.057***	**.023**	**.094**	.475*	.110	.898
H2c: Service leadership → TAW → psychological health	.015*	.004	.027	**-.025**	**-.093**	**.029**
H2d: Service leadership → TAW → service performance	.017*	.004	.033	**.191***	**.014**	**.440**
H2e: TAW → psychological health → service performance	**.033***	**.017**	**.051**	-.124	-.421	.146
H3a: EHPWS → TAW → psychological health → service performance	**.018***	**.009**	**.030**	-.106	-.370	.120
H3b: Service leadership → TAW → psychological health → service performance	.005*	.001	.010	**-.043**	**-.170**	**.048**
Moderated mediation effects						
H4a: EHPWS → TAW → psychological health						
high level of service leadership (+1 *SD*)	.057*	.030	.088			
low level of service leadership (-1 *SD*)	.044*	.020	.072			
difference between high and low levels of service leadership	.013	-.014	.042			
H4b: EHPWS → TAW → service performance						
high level of service leadership (+1 *SD*)	.064*	.025	.110			
low level of service leadership (-1 *SD*)	.049*	.017	.088			
difference between high and low levels of service leadership	.015	-.016	.051			
H5: EHPWS → TAW → psychological health → service performance						
high level of service leadership (+1 *SD*)	.020*	.009	.034			
low level of service leadership (-1 *SD*)	.016*	.006	.028			
difference between high and low levels of service leadership	.005	-.005	.016			

Note. $N = 530$ at level 1; $N = 53$ at level 2. CI = confidence interval. EHPWS = experienced service-oriented HPWS. TAW = thriving at work. Unstandardized estimates were reported with 3 digits after the decimal point because some estimates were very close to zero. All 90% CIs were derived using the Monte Carlo simulations. The tests of Hypotheses 2c, 2d, and 3b were based on the level-2 estimations, and the tests of the other hypotheses were based on the level-1 estimations.

*$p < .05$, one-tailed test.

Figure 1

MSEM Results of the Hypothesized Model



Note. Level-1 N = 530; level-2 N = 53. Unstandardized estimates were reported.
*$p < .05$, **$p < .01$, ***$p < .001$, two-tailed test.