

How and When Service Beneficiaries' Gratitude Enriches Employees' Daily Lives

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Abstract

Conventional research on gratitude has focused on the benefits of expressing or experiencing gratitude for the individual. However, recent theory and research have highlighted that there may too be benefits associated with *receiving* others' gratitude. Grounded in the Work-Home Resources model (W-HR), we develop a conceptual model to understand *whether, how, and for whom* service providers (i.e., healthcare professionals) benefit from receiving service beneficiaries' (i.e., patients) gratitude in their daily work. We hypothesize that perceived gratitude from service beneficiaries enhances service providers' relational energy at work, which spills over to benefit their family lives later in the day. In addition, we hypothesize that the effect of gratitude on relational energy and its subsequent spillover effect to the family, are contingent on employees' occupational identity. Two experience sampling studies with data collected from healthcare professionals and their spouses for two consecutive weeks (each) provided support for our hypothesized model. We conclude by discussing the theoretical and practical implications of our work.

Keywords: perceived gratitude, relational energy, occupational identity, work-family spillover

As a healthcare professional working in a large national hospital, Daniel's daily job demands are stressful and exhausting.¹ However, he notices that there are some experiences or encounters at work that can redefine his daily outcomes. When his patients show appreciation for his care and work, he feels reenergized for his job and life in general. Daniel's story reflects a sentiment that many service providers may experience. Interactions with customers, clients, and patients constitute a vital part of service providers' daily work lives, and research has found that service beneficiaries' positive emotional expressions can indeed influence employees' outcomes (e.g., Kim & Yoon, 2012; Roter & Hall, 2006).

Gratitude is defined as a "feeling of appreciation in response to an experience that is beneficial to, but not attributable to, the self" (Fehr et al., 2017, p. 363). Research has documented how gratitude can enhance the well-being of individuals who experience or express it (Fredrickson, 2004; Wood et al., 2010), as well as strengthen social bonds between individuals and their benefactors (e.g., Bartlett et al., 2012; Ma et al., 2017). While insightful, this stream of research has limitations – first, previous studies have largely focused on the benefits of experiencing or expressing gratitude (e.g., Algoe et al., 2013; Davis et al., 2016; Emmons & Mishra, 2011), with less research examining how receiving gratitude may too generate resources for recipients (for exceptions, see Grant & Gino, 2010; Lee et al., 2019). Second, research on the outcomes of gratitude at work is typically constrained to its effects for employees' workplace outcomes (e.g., Clark et al., 1988; Converso et al., 2015), and we do not know whether the effects of receiving others' gratitude may persist beyond the workplace and influence employees' family lives.

¹ To ensure participant confidentiality, "Daniel" is not the employee's real name. But this is a real story and we have sought his/her personal permission in using his/her anonymized account of his/her daily work life in our article.

In this paper, we argue that the resource-generating effects of receiving gratitude are so strong that they benefit not only gratitude recipients, but also those who are close to the recipients, such as their spouses. Examining this issue is both theoretically and practically meaningful – in terms of providing organizational scholars with a more holistic view of the outcomes and functions of gratitude in the workplace, and is especially important for service employees whose family lives often suffer as a result of their long and irregular work hours, and difficult interactions with service beneficiaries (Chi et al., 2018; Geiger-Brown & Lipscomb, 2010; Greenbaum et al., 2014).

Further, we seek to examine relational energy as a unique and novel mechanism that links perceptions of gratitude from service beneficiaries during the workday to family outcomes later in the evening, and draw on the Work-Home Resources model (W-HR; ten Brummelhuis & Bakker, 2012) to form the basis of our theorizing. The W-HR model postulates that employees generate personal resources from contextual resources at work (or at home), and these personal resources are then transferred among the work and family domains (e.g., ten Brummelhuis & Greenhaus, 2018). Based on this, we hypothesize that on a day-to-day basis, received gratitude from service beneficiaries is a type of *contextual* resource that generates *personal* resources (in the form of relational energy) for employees, which in turn enriches employees' family lives by increasing employees' relationship-based family role performance and spousal perceptions of familial satisfaction. We focus on relational energy as a motivational (energetic) psychological state generated from positive interpersonal interactions (Owens et al., 2016), that likely include the receipt of others' gratitude. Relational energy is therefore highly relevant to our theorizing, and could serve as a unique resource linking interpersonal interactions at work with familial outcomes.

While receiving beneficiaries' gratitude may have positive implications for employees and their families, it is plausible that not all service employees would experience others' gratitude to the same extent. We therefore seek to examine whether some employees are more sensitive to the energizing effect of receiving gratitude than others. Based on the W-HR model, we propose that service employees' occupational identity, or the extent to which they define themselves based on their occupational group (Ashforth & Kreiner, 1999; Conroy et al., 2017; Skorikov & Vondracek, 2011), is a *key personal resource* that facilitates the identification and utilization of contextual resources to generate personal energetic resources. We theorize that those who identify more strongly with their occupations might reap more energetic resources from others' gratitude and are thus more likely to experience work-family enrichment.

Taken together, we develop a resource-based model that illustrates how the benefits of receiving gratitude is not confined to recipients alone but also spills over to the family, and identify a novel psychological process explaining why receiving gratitude leads to work-family enrichment. We test our hypothesized model (shown in Figure 1) using two multi-source (employees and their spouses) and multi-context (workplace and home) experience-sampling studies (ESM) with healthcare professionals in two hospitals in China and Singapore.

INSERT FIGURE 1 ABOUT HERE

INTENDED CONTRIBUTIONS

Our theorizing and studies make a number of contributions to theory and research on gratitude and work-family spillover in the organizational literature. First and foremost, our work presented here contributes to gratitude research by taking into account how receiving gratitude at work can benefit receivers as well as their spouses at the end of the workday. Extant gratitude

research has overwhelmingly focused on how experiencing gratitude may benefit the self (Fredrickson, 2004; for a review, see Wood et al., 2010), and scholars have recently urged researchers to take recipients' perspectives into account, to increase our understanding of the benefits of receiving gratitude at work (e.g., Converso et al., 2015; Grant & Gino, 2010; Lee et al., 2019).

Relatedly, while past research on the effects of gratitude tends to be limited to the domain in which gratitude was expressed (e.g., Algoe et al., 2010; Grant & Gino, 2010; Park et al., 2019), we extend this body of work by investigating how the effects of receiving gratitude from others are not only evident in the work domain, but may also have implications outside of work on relationships with others at home. Drawing on the W-HR model, we conceptualize and test a work-family enrichment model in which receiving gratitude from beneficiaries at work can benefit service employees' family lives (i.e., improved relationship-based family role performance and higher spousal family satisfaction), through increased relational energy at work. In doing so, our research advances the literature on the positive and restorative potential of service work (Lilius, 2012; Turner et al., 2002), and also contributes to the broader emotions literature on the role and benefits of receiving gratitude in social relationships.

Second, our study contributes to research on the work-family interface, specifically the W-HR model and work-family enrichment literature. Measures of work-family enrichment often ask respondents to rate their work experiences (or feelings at work) and the resulting enhanced family outcomes simultaneously (e.g., "My involvement in my work puts me in a good mood and this helps me be a better family member"; Carlson et al., 2006), which conflates the causes and consequences of work-family enrichment. In our study, we draw on the W-HR model to examine the receipt of gratitude at work as a contextual resource that generates personal

resources, and how increases in these resources enable employees to function more effectively in their family roles on a daily basis. We believe that separating work and family constructs and measuring them in their respective domains, along with adopting a within-individual lens in studying the fluctuations of resources and energies addresses the aforementioned measurement limitations of existing work-family research.

Our study also expands on the W-HR model by examining a novel personal resource underlying the work-family enrichment process. The W-HR model lists energies (e.g., mood, physical energy, cognitive energy) as volatile personal resources that enable contextual resources from work or home to influence the outcomes of another domain (ten Brummelhuis & Bakker, 2012). In this paper, we position relational energy as one such personal resource that may be generated from receiving beneficiaries' gratitude, and that therefore enables employees to perform better in their familial roles. We believe that relational energy is a particularly relevant resource to our theoretical model and we demonstrate how relational energy has additional mediating effects linking perceived gratitude and family outcomes beyond those of other conceptually similar personal resources. In doing so, our study answers Allen and Martin's (2017) call for more research examining relational energy as a psychological mechanism linking work and family.

Last but not least, we integrate the W-HR model with social identity theory and identify an important boundary condition in the work-family enrichment process. We propose that occupational identity is a key personal resource (ten Brummelhuis & Bakker, 2012) that can augment the work-family enrichment process. While meta-analytic research has shown that employees who identify more closely with their occupations spend more time at work (Ng & Feldman, 2008), which could impair relationship-based family performance, our research

attempts to broach this conundrum through a different perspective, by highlighting how high occupational identity could potentially facilitate work-family enrichment and have positive implications for the work-family dynamic – specifically, we propose that for service providers who identify more strongly with their occupations, this occupational identification would serve as a key personal resource (in the W-HR model), such that they are more likely to benefit from receiving gratitude at work, in the form of heightened relational energy, that spills over to the family. Our conceptual model thus serves to advance theory and research regarding the role of occupational identity and individual differences in influencing work-home enrichment processes (e.g., Ilies et al., 2017; Lin et al., 2017; ten Brummelhuis & Greenhaus, 2018).

THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Work-Home Resource Model and the Resource Generation Process

The W-HR model (ten Brummelhuis & Bakker, 2012) adopts a resource-based perspective in explaining both the enriching and conflicting processes linking work and family. With respect to work-family enrichment, the W-HR model delineates how resource gains at work increase personal resources and influence individuals' family outcomes. Indeed, work-family enrichment may occur in the short or long term, depending on the types of resources accrued or spent. The W-HR model categorizes resources based on two dimensions – whether resources are volatile (varying from day to day; e.g., social support, energies) or structural (stable across days; e.g., employment), and whether resources are found outside the self (contextual resources; e.g., positive interactional experiences with others at work; Bhawe & Lefter, 2018) or within the self (e.g., personality, time, mood; Lin et al., 2017; Thoits, 1994).

As interpersonal work events and experiences, especially those involving service beneficiaries, vary on a daily basis (Dong et al., 2015; Wang et al., 2013), our study focuses on

the short-term or within-individual work-family enrichment process. On the basis of the W-HR model, we propose that daily perceived gratitude from service beneficiaries is a type of volatile contextual resource for employees, as gratitude is a social emotion that signals positive interactions with patients or service beneficiaries (Martini & Converso, 2014), and that perceiving gratitude would generate positive emotions and other personal resources for service employees. This is consistent with Fredrickson's (2004) claim that positive emotions such as gratitude generate personal resources that endure long beyond the emotional episode. Indeed, we argue that one personal resources service employees may accrue through receiving gratitude from service beneficiaries is relational energy.

As explained earlier, relational energy is defined as a motivational (energetic) psychological state that can be generated or depleted by interpersonal interactions (Owens et al., 2016). Indeed, research on relational energy in the organizational context is still nascent (Baker, 2019), with most research focused on how different leadership styles influence subordinates' relational energy; for example, employees experienced more relational energy when leaders conveyed higher levels of psychological capital (Rego et al., 2019) or demonstrated greater spiritual leadership (Yang et al., 2019) and more humble behaviors (Wang et al., 2018). Extrapolating outside of the leader-follower relationship, it follows that positive interactions with others at work, such as those that recognize employees' job performance and reinforce their meaning and purpose at work, could similarly generate relational energy for employees.

Based on the few studies that examined receiving gratitude from service beneficiaries (e.g., patients and customers), gratitude is a form of recognition and validation of service providers' effort and time (Algoe et al., 2010; Palmatier et al., 2009). Indeed, Martini and Converso (2014) found that gratitude expressed by service beneficiaries is especially rewarding

for service providers as it signals the significance of their work. Compared to other types of positive interactions with service beneficiaries (e.g., receiving social support or positive emotional displays), receiving gratitude could perhaps have greater impact for service providers because it confers a sense of social worth and conveys the importance of their services to beneficiaries' lives (Grant & Gino, 2010). Drawing from this research, we posit that gratitude from service beneficiaries is particularly meaningful for service providers (Algoe, 2012; Algoe et al., 2013; Fredrickson, 2004), and therefore generates relational energy for them.

While receiving gratitude may generate other types of personal resources, such as positive affect, vitality, and work engagement (Bhave & Lefter, 2018; Kim & Beehr, 2020; Lin et al., 2017), we focus on relational energy in this study as we believe that it represents a distinct mechanism linking interpersonal events at work to employees' behaviors at home. Compared to these aforementioned personal resources that are more general, relational energy is unique in that its source is positive interpersonal interactions, and due to its relational nature, would motivate individuals to pay greater attention to other interpersonal interactions (cf. Dutton, 2003; Owens et al., 2018). It thus stands to reason that relational energy could better capture personal resources generated by interpersonal exchanges at work (i.e., received gratitude from service beneficiaries; Bakker & Demerouti, 2013), and as we detail later, explain the work-home enrichment process by transforming to benefit relational performance in other social domains beyond work, such as the family (Baker, 2019). Taken together, we thus position relational energy as a distinct personal resource that is generated when service employees receive gratitude from their beneficiaries.

Hypothesis 1: Within individuals, daily perceived gratitude from service beneficiaries (i.e., patients) will be positively related to daily relational energy.

Resource Transfer and Work-Family Enrichment

Drawing further from the W-HR model, we posit that the personal resources generated through receiving gratitude from service beneficiaries are in turn likely to facilitate work-home enrichment. Higher levels of energetic resources generated at work may help employees be a better spouse at home, as employees possess sufficient energy to engage in approach-oriented behaviors, pursue additional goals, and provide emotional and instrumental support to their family (ten Brummelhuis & Greenhaus, 2018). Specific to relational energy, receiving gratitude from beneficiaries at work can encourage service employees to be more socially integrated both within and outside the organization, such as with one's family.

To understand how relational energy influences employees' family lives, we focus on two familial outcomes: relationship-based family role performance, which concerns individuals' fulfillment of their role demands and duties pertaining to the psycho-social dynamics within the family unit (Chen et al., 2014), and spousal family satisfaction, defined as an individual's perception of whether their needs, expectations, and desires are met in the marital relationship (Bahr et al., 1983). We chose these two familial outcomes as they are indicative of successful resource transference from the work domain to the family domain (Ilies et al., 2009; ten Brummelhuis & Bakker, 2012).

Based on the W-HR model, we propose that relational energy generated at work would help employees to actively and efficiently manage interpersonal demands at home. Research has suggested that gaining relational energy triggers processes associated with accruing even more relational energy (McDaniel, 2011), and could therefore facilitate subsequent social interactions in other interpersonal contexts beyond work (i.e., at home; Bakker & Demerouti, 2013; Demerouti, 2012). As such, employees who are energized by work interactions may feel that

they have more cognitive, physical, and emotional capabilities to provide support, connect with, and listen to their family members (Baker, 2019; Bhavé & Lefter, 2018; Owens et al., 2018), and may also be more willing to take up family responsibilities to facilitate family functioning (Carlson et al., 2019). In addition, employees' energetic states may further crossover to influence their spouses' perceptions of familial satisfaction. Research has found that resources gained from work may enhance spousal marital satisfaction as a result of the aforementioned positive behaviors initiated by employees, as well as synchronized positive psychological states between the couple (Carlson et al., 2019; Ferguson et al., 2012). Together, on the basis of W-HR model, we hypothesize that relational energy is a specific personal resource that explains the work-home enrichment process examined in our research, such that interpersonal resources in the work context (i.e., receiving gratitude from service beneficiaries) generate relational energy for employees, and this relational energy in turn provides them with the ability and capacity to engage with their familial duties at home on the same day.

Hypothesis 2a: Within individuals, daily relational energy will be positively associated with daily spousal family satisfaction.

Hypothesis 2b: Within individuals, daily relational energy will be positively associated with daily relationship-based family role performance of the focal employee.

Hypothesis 3a: Within-individuals, there will be an indirect relationship between daily perceived gratitude from service beneficiaries and daily spousal family satisfaction via daily relational energy.

Hypothesis 3b: Within-individuals, there will be an indirect relationship between daily perceived gratitude from service beneficiaries and daily relationship-based family role performance via daily relational energy.

The Moderating Effect of Occupational Identification

Our arguments have thus far illustrated how daily perceived gratitude from service beneficiaries generates relational energy for service providers. This relational energy then has positive spillover effects onto the family domain, allowing employees to be better spouses and family members. Yet, within the W-HR model there is an important assumption regarding potential boundary conditions of these proposed relationships – ten Brummelhuis and Bakker (2012, p. 548) proposed that stable personal characteristics may influence the strength of the resource loss and gain processes by facilitating “the selection, alternation, and implementation of other resources (Thoits, 1994).” In her article, Thoits (1994) suggests that key personal characteristics can influence individuals’ involvement in different roles (e.g., parent, spouse, or in the context of our study – service professional), such that individuals are more likely to be involved in roles that are personally rewarding. Put another way, it is likely that individuals’ role identities are a personal characteristic that may influence their experience of resource gains and losses during engagement in a certain role. We therefore examine occupational identity as a key personal resource that strengthens the relationship between perceived gratitude and relational energy, and integrate the W-HR model with work on social identity theory (Ashforth & Mael, 1989; Tajfel & Turner, 1985) to support our propositions.

Social identity theory suggests that individuals’ self-definitions are an integral contextual variable that shapes their appraisals of work events and emotions (Conroy et al., 2017; Lazarus, 1991), and further influence how individuals behave in response (Hekman et al., 2009).

Occupational identity is a specific form of social identity, and refers to the degree to which the employee’s self-image is attached to their membership in their occupational group (Ashforth & Kreiner, 1999; Conroy et al., 2017; Skorikov & Vondracek, 2011); in other words, how central

the values, symbolism, goals, and other characteristics associated with the occupation are to the employee's identity (Kielhofner, 2007). Integrating the tenets of social identity theory with those of the W-HR model outlined above, we argue that employees who have high occupational identity are more likely to experience strengthened resource generation from perceived gratitude from service beneficiaries, and are thus more likely to experience stronger work-family enrichment, for reasons explained below.

According to social identity theory, individuals have two primary identity motives: self-enhancement and self-consistency (Ashforth et al., 2008). Self-enhancement motives refer to the need to feel positively about oneself (Ashforth, 2001; Ashforth et al., 2008; Tajfel & Turner, 1985), while self-consistency motives refer to the need to think, feel, and behave in ways that are consistent with one's identity (Shamir, 1991). We posit that through fulfilling these identity motives, the relationship between gratitude perceptions and relational energy would be strengthened under high levels of occupational identity.

First, perceived gratitude is likely to be self-enhancing for high identifiers, as employees who strongly identify with their occupations are more likely to appraise work events as validating and enhancing their valued identities (Conroy et al., 2017). This is supported by qualitative research illustrating how factors such as performance feedback can serve as an identity validation mechanism for medical residents (Pratt et al., 2006). Similarly, perceived gratitude from service beneficiaries, who are an important stakeholder in service providers' daily work, provide an indication as to how well employees are performing, and allow them to feel more positively about themselves and their occupational roles (Ashforth, 2001; Ashforth et al., 2008), thus amplifying the relational energy generated from perceived gratitude. On the other hand, for employees who identify less strongly with their occupations, gratitude from service

beneficiaries would not enhance their identities to the same level as that of high identifiers, as the identity-validating mechanism of perceived gratitude is weaker.

Second, high identifiers are more attune to social information that affirms that they are aligned with the characteristics or values of their occupational identities (Christiansen et al., 1999). In this case, perceptions of others' gratitude form the social context that provides high identifiers with proof of their self-consistency. For example, prosociality is a characteristic typically associated with the service professional identity (Hsu et al., 2011). In the eyes of high occupational identifiers, service beneficiaries' expressions of gratitude acknowledge their hard work and prosocial behaviors (Mikulincer & Shaver, 2010), and thus affirm the values and characteristics that are central to their occupational identity (Christiansen et al., 1999). This is further supported by emotion theories pinpointing that perceived gratitude, as a social and contextual resource, can endorse the identity of those who receive others' gratitude (cf. Emmons & Crumpler, 2000; Petrocchi & Couyoumdjian, 2016), and by Thoits' (1994) argument that individuals' performance in a specific role can inform their self-evaluations. Finally, scholars examining the restorative potential of workplace interactions have observed that social interactions can be identity-affirming when employees are able to behave in ways that are congruent to their central identities (Bhave & Lefter, 2018; Lilius, 2012). Employees who are higher on occupational identity are therefore more likely to experience self-affirmation when they receive gratitude from service beneficiaries and therefore experience strengthened resource gains from gratitude. Given the theoretical arguments presented, we hypothesize:

Hypothesis 4: The within-individual relationship between daily perceived gratitude from service beneficiaries and relational energy will be stronger for service employees who have higher (vs. lower) occupational identity.

As mentioned above, employees' occupational identity not only determines their psychological responses to specific events, but also influences how they behave as a result (Hekman et al., 2009). We therefore extend this line of inquiry to examine whether the first-stage moderating effects of occupational identity on perceived gratitude also serves as a moderating influence on the indirect effects on spousal family satisfaction and employees' relationship-based family role performance through enhanced relational energy. We therefore propose the following moderated mediation hypotheses:

Hypothesis 5: The indirect effect of perceived gratitude from service beneficiaries on (a) daily spousal family satisfaction, and (b) daily relationship-based family role performance, via relational energy, will be stronger for service employees who have a higher (vs. lower) occupational identity.

OVERVIEW OF STUDIES

We conducted two ESM studies to test our hypotheses. In Study 1 (IRB #DER-18-002, National University of Singapore, "Daily Experiences at Work and Home"), we tested our hypotheses with data collected from healthcare professionals in a large public hospital in Northern China and their spouses. We conducted a second ESM study with another sample of healthcare professionals working in a private hospital in Singapore and their spouses to replicate the findings of Study 1, and to address some of its limitations. In particular, Study 2 (IRB #DER-19-0203, National University of Singapore, "Daily Emotions and Behavior of Healthcare Professionals") aimed to empirically demonstrate the unique effect of perceived gratitude from service beneficiaries on relational energy, above and beyond other positive interactions with beneficiaries at work, such as beneficiaries' positive emotional displays and social support, as well as the unique mediating role of relational energy facilitating the work-family enrichment

process beyond the mediating effects of alternative indicators of personal resources, including positive affect, work engagement, self-efficacy, and interpersonal need fulfillment. Both studies provide support for our hypotheses, demonstrating the robustness of our theoretical model.

STUDY 1

Sample and Procedure

We recruited our focal participants (doctors and nurses) from a large public hospital in Northern China through the contact information provided by their administrative team. As our study focused on the daily spillover effect of perceived service beneficiaries' gratitude on family life, we limited our sample to married employees who were working on the day shift during our study period, and whose spouses were willing to participate in this study. After receiving a brief description of the study through email, interested employees were directed to an online registration platform where they were assigned a participating ID and password. A total of 120 employees registered their interest in the study, which comprised our initial sample. Of these 120 couples who expressed their interest in our study, seven withdrew before the start of the study. Therefore, our final sample consisted of 113 employees and their spouses. On average, the focal participants were 32.55 years old ($SD = 6.52$), and had worked in this hospital for 3.34 years ($SD = 2.46$). The majority of our focal participants were female (53.1%), had either tertiary or vocational education (88.5%), and were nurses (67.3%). As a token of appreciation to their participation, we offered a lucky draw of multiple travel coupons valued at about 600 USD in total.

We collected data via a web-based survey platform in two phases: a one-time baseline survey and daily surveys over a two-week period. The baseline survey included a consent form for participation, measurement of occupational identity, as well as demographic variables. The

daily surveys were administered over the following two weeks, with the focal employee completing three surveys and their spouses completing one survey each day. All participants were given a two-hour window to respond to the survey. The first survey (T1) was sent every morning between 8am and 9am, and measured employees' affect and relational energy at the beginning of the day. The second daily survey (T2) was sent to employees in the afternoon (between 3pm and 4pm), and participants were asked to rate gratitude received from their patients that day. Finally, the third daily survey (T3) was sent to employees in the late afternoon (between 6pm and 7pm), and measured focal participants' relational energy. In addition, employees' spouses were asked to complete one survey every night (T4, at 9pm), to rate their family satisfaction and the focal employee's relationship-based family role performance that evening.

In total, we obtained 798 day-level data points for the focal employees, representing an acceptable response rate of 70.6% similar to other ESM studies (e.g., Matta et al., 2017). In addition, spouses returned 783 daily surveys. Nevertheless, all the 798 daily observations from the focal employees were used in our analyses.²

Measures

We translated the measures from English to Chinese following Brislin's (1980) back-translation procedure. Unless otherwise specified, we used a 7-point Likert scale ranging from 1= strongly agree to 7= strongly disagree to measure all study variables. Appendix A reports all

² We used full information maximum likelihood estimation (FIML) as a more robust method of handling missing data in our multilevel analysis. As noted by Rosen and colleagues (2021), "FIML provides more unbiased estimates of parameters and standard errors in the presence of missing data at random compared to the listwise deletion" (p. 184). As such, we used FIML approach in our analyses across Studies 1 and 2. In addition, to demonstrate whether the pattern of missing data imposes any confounding effect on our hypothesized model, we followed Yoon et al.'s (2021) approach to "create a dummy variable—miss(y)— coded as 1/0 based on whether data for a case was missing or not (Newman, 2014)" and "regressed on [the] predictors" (p. 13). Indeed, adding this missing-data-pattern variable did not change the conclusion of our findings.

the items used in this study.

Occupational Identity

Following Hekman and colleagues (2009), we adapted Mael and Ashforth's (1992) scale to measure occupational identity. Employees were asked to rate their agreement with five items, such as "In general, when someone praises healthcare professionals, it feels like a personal compliment."

Positive and Negative Affect (PA and NA; T1)

We controlled for employees' daily baseline affective states (Uy et al., 2017), using the shortened version of the Positive and Negative Affect Schedule (Mackinnon et al., 1999). Employees indicated the extent to which each item described their feelings at that moment. Sample items for PA include "excited" and "enthusiastic," and sample items for NA are "distressed" and "nervous."

Daily Perceived Service Beneficiaries' Gratitude (T2)

We measured daily perceived gratitude from service beneficiaries using an adapted four-item scale (Emmons & McCullough, 2003). Employees reported their agreement regarding their perceptions of how grateful their patients were towards them that day. Sample items include "Today, my patients were grateful" and "Today, my patients were appreciative."

Daily Relational Energy (T1, T3)

We measured employees' relational energy at both T1 (as a control variable) and T3 using the 5-item scale developed by Owens and colleagues (2016). Participants indicated the extent of agreement with each item. Sample items include "I felt increased vitality when I interacted with my patients today" and "After interacting with my patients, I felt more energy to do my work today."

Daily Spousal Family Satisfaction (T4 Spouse-Report)

We measured daily spousal family satisfaction using a five-item scale (Norton, 1983) that has been used across multiple work-family ESM studies (e.g., Ilies et al., 2011; Ilies et al., 2009). Employee spouses rated their agreement with each item that day. Sample items include “Today, our marriage has been very strong,” and “My relationship with my spouse has made me happy today.”

Daily Relationship-Based Family Role Performance (T4 Spouse-Report)

Spouses also rated their perceptions of the focal participants’ relationship-based family role performance using a four-item scale (Chen et al., 2014). Sample items include “Today, my spouse provided emotional support to my family members,” and “Today, my spouse kept family members connected with each other.”

Analytical Strategy

As our data have a multilevel structure, we conducted multilevel path analysis using Mplus 7.4 to test our hypotheses (Muthén & Muthén, 1998-2015). We also performed multilevel confirmatory factor analysis (MCFA) to verify the distinctiveness of the measured constructs. As our hypothesized model exceeded the recommended parameter to sample size ratio for estimation at Level 2 (1:5; Bentler & Chou, 1987), we followed Landis et al.’s (2000) advice to create two parcels for each latent construct by assigning the item with the highest factor loading to the first parcel, the second highest factor loading to the second parcel, and so forth (i.e., two two-item parcels for all the four-item measures, and one two-item and one three-item parcels for all the five-item measures). This parceling strategy has been commonly applied in ESM studies (e.g., Fehr et al., 2017; Liu et al., 2017). Results showed that our hypothesized model fit the data well, $\chi^2(39) = 47.88$, comparative fit index (CFI) = .99, root mean square error of approximation

(RMSEA) = .02, standardized root mean square residual (SRMR) = .03. Furthermore, our five-factor hypothesized model was superior to the best-fitting alternative model: a four-factor model, in which relational energy and spousal family satisfaction loaded on a single factor, $\Delta\chi^2(7) = 200.65, p < .001, CFI = .84, RMSEA = .07, SRMR = .09$. The model comparisons are presented in Appendix B. Taken together, the results indicated that our five-factor hypothesized model demonstrated good model fit, and we proceeded to test our hypothesized model.³

In our analyses, we followed Hofmann et al.'s (2000) recommendations and group-mean centered exogenous variables measured at the daily level (Level 1) and grand-mean centered between-person variables (Level 2). Group-mean centering our within-person variables helps remove variance attributable to the between-person variation, such that the relations between within-person variables shall not be contaminated by between-person factors. The majority of the variance in our daily variables was at the within-individual level: positive affect at T1 (61%), negative affect at T1 (59%), relational energy at T1 (76%), perceived service beneficiaries' gratitude at T2 (71%), relational energy at T3 (78%), spousal family satisfaction at T4 (76%), and relationship-based family role performance at T4 (70%).

Next, we modeled our main within-individual relationships using random intercept-random slopes models, and tested the cross-level moderation effect of occupational identity by estimating its effect on the within-individual relationship between perceived gratitude and relational energy (and on the indirect effects on the family variables). Following the recommendations of Preacher et al. (2010), we utilized a parametric bootstrap procedure using R (Preacher & Selig, 2010) to generate the confidence intervals around the estimated indirect

³ Following the suggestions from the review team, we also provide additional evidence to differentiate our independent variable and mediator from other possible contextual and personal resources. To do so, we conducted a separate validation study and presented the results in Appendix D.

effects and conditional indirect effects at the low (one standard deviation below the mean) and high (one standard deviation above the mean) values of the moderator. Finally, we estimated the effect sizes by computing pseudo- R^2 values, which indicates the amount of within-individual variance in the outcome variables explained by predictors (Hofmann et al., 2000).⁴

Results

Descriptive statistics, reliabilities, and correlations are presented in Table 1. Results from our multilevel path analyses are shown in Table 2. Supporting Hypotheses 1 and 2, daily perceptions of service beneficiaries' gratitude were positively associated with relational energy ($\gamma = .20, p < .001$), which was in turn positively related to both (a) spousal family satisfaction ($\gamma = .11, p = .006$) and (b) relationship-based family role performance ($\gamma = .15, p = .003$). Hypothesis 3 concerns the indirect effect of perceived gratitude on family outcomes through relational energy. Supporting Hypothesis 3, the indirect effect of perceived gratitude on spousal family satisfaction via relational energy was .022, (95% CI [.007, .042]), and that on relationship-based family role performance via relational energy was .029, (95% CI [.010, .054]). Overall, our model explained 13% of the within-individual variance in daily relational energy, 4% of the within-individual variance in daily spousal family satisfaction, and 5% of the within-individual variance in daily relationship-based family role performance.

 INSERT TABLES 1 & 2 ABOUT HERE

Hypothesis 4 posited that occupational identity would strengthen the relationship between perceived service beneficiaries' gratitude and relational energy. As shown in Table 2, occupational identity moderated this relationship ($\gamma = .18, p < .001$). To examine the direction of

⁴ The syntax and output files for our path analyses can be found at <https://osf.io/d3x7c>.

the cross-level moderation effect, we conducted simple slope analyses (Preacher et al., 2006) and plotted the moderating effect in Figure 2. Results showed that the relationship between perceived service beneficiaries' gratitude and relational energy was stronger among individuals with higher (+1SD) occupational identity ($\gamma = .34, p < .001$), compared to those with lower (-1SD) occupational identity ($\gamma = .06, p = .295$).

 INSERT FIGURE 2 ABOUT HERE

Hypothesis 5 predicted that occupational identity would moderate the indirect relationships between perceived service beneficiaries' gratitude and (a) spousal family satisfaction, and (b) relationship-based family role performance via relational energy, such that the positive indirect effect is stronger for employees with higher occupational identity compared to those with lower occupational identity. Supporting Hypothesis 5a, the indirect relationship on spousal family satisfaction was significantly stronger for employees with higher occupational identity (indirect effect = .037, 95% CI [.012, .071]) than those with lower occupational identity (indirect effect = .006, 95% CI [-.004, .022]; difference = .031, 95% CI [.008, .070]). Similarly, consistent with Hypothesis 5b, the indirect relationship on relationship-based family role performance was significantly stronger for employees with higher occupational identity (indirect effect = .049, 95% CI [.019, .088]) than those with lower occupational identity (indirect effect = .008, 95% CI [-.006, .031]; difference = .041, 95% CI [.015, .083]). Finally, we conducted supplementary analyses to test the robustness of our hypothesized model. We tested a model without any daily control variables (i.e., positive affect, negative affect, and relational energy, which were measured in the T1 survey) and found consistent results for our hypotheses tests.

Discussion

Study 1 provided initial evidence for our theoretical model regarding the resource-generating effect and transferring process of perceived service beneficiaries' gratitude on family outcomes via enhanced relational energy. In addition, we found that employees who identified more strongly with their occupations benefited more from receiving gratitude compared to those who identified less strongly with their occupations. However, this study is not without limitations. In particular, we cannot be certain that the benefit of perceived gratitude for service employees' relational energy is unique, as they might gain relational energy through other types of positive interactions with beneficiaries, such as beneficiaries displaying positive emotions or providing social support to them. In addition, receiving gratitude from service beneficiaries might generate other personal resources besides relational energy, such as positive affect and work engagement that could instead explain the observed work-family enrichment process⁵. Therefore, we conducted Study 2 to examine the unique roles of perceived service beneficiaries' gratitude and relational energy in our hypothesized model.

STUDY 2

Sample and Procedure

Participants were recruited from a private hospital in Singapore with the help of the hospital's human resources department. Similar to Study 1, we limited our sample to nurses who were working in the day shift during our study period and whose spouses were willing to participate as well. While 86 employee-spouse dyads expressed their interest in the study, five withdrew before the start of the study, resulting in a final sample of 81 couples. On average, the focal participants were 35.09 years old ($SD = 8.90$) and had worked in the current organization for 3.58 years ($SD = 2.42$). The majority of our participants were female (75.3%) and had either

⁵ We thank the review team for bringing these possibilities to our attention.

tertiary or vocational education (98.8%). As a token of appreciation to the participants, we provided a lucky draw with multiple cash coupons valued at about 2,200 USD in total. We followed the same procedure used in Study 1 to collect data, with an initial one-time baseline survey, followed by multiple daily surveys over two weeks, including the morning survey (T1), the afternoon survey (T2), the late-afternoon survey (T3), and an evening survey for the spouses (T4). In total, we obtained 560 matched day-level data points from the focal participants, representing an acceptable response rate of 69.1%. Spouses returned 548 daily surveys (a response rate of 67.7%). Nevertheless, similar to Study 1, we utilized the full data and used FIML for data analyses.⁶

Measures

We used the same measurement items used in Study 1 to measure occupational identity, as well as those variables in the daily surveys that were also measured in Study 1, including: perceived service beneficiaries' gratitude, relational energy, spousal family satisfaction, and relationship-based family role performance. Besides, we measured additional control variables to demonstrate the unique effect of perceived gratitude on relational energy beyond other contextual resources, as well as the unique mediating effect of relational energy above and beyond other personal resource mechanisms. Unless otherwise specified, we used a 7-point Likert scale ranging from 1= strongly agree to 7= strongly disagree to measure all study variables. Appendix A also documents the items used in this study.

Alternative Contextual Resources (T2)

We measured two types of alternative contextual resources: patients' positive emotional display and social support. Positive emotional display from patients was measured using four

⁶ Similar to Study 1, we created and added a missing-data-pattern variable into our multilevel analysis, where the inclusion of this variable did not change the conclusion of our results.

items used by Kim and Yoon (2012). Focal employees were asked to rate the extent to which their patients displayed some positive expressions to them in their interactions since the start of their workday. Sample items include “smiling” and “pleasantness.” Social support from patients was measured with four items from Corsun and Enz (1999). Employees rated the extent to which some adjective described their interactions with patients since the start of their workday. Sample items include “trusting” and “supportive.”

Alternative Personal Resources (T3)

We measured four types of potential personal resources that could facilitate the work-home enrichment process. First, to measure positive affect, we used the same five items as in Study 1 and asked employees to indicate the extent to which each item described their feelings at that moment. Second, work engagement was measured using a four-item scale from Parke et al. (2018). Employees rated their agreement with each statement based on their experiences at work that day. A sample item is “I felt energetic at my job today.” Third, we measured self-efficacy using two items from Xanthopoulou et al. (2009). Employees rated their agreement with each statement based on their experiences at work that day. The two items are “I felt I could handle every problem that came my way.” and “I felt I could deal efficiently with unexpected events.” Lastly, we measured interpersonal need fulfillment using four items adapted from Ilies and colleagues (2018). Employees rated their agreement with each statement based on their experiences at work that day. A sample item is “I felt close and connected to my patients.”

Analytical Strategy

As with Study 1, we first performed MCFAs to examine the distinctiveness of our main constructs (using the same parceling procedure in Study 1), where we similarly created two parcels for each latent construct (i.e., two two-item parcels for all the four-item measures, and

one two-item and one three-item parcels for all the five-item measures). Our results indicated that the hypothesized five-factor model fit the data well, $\chi^2(39) = 110.87$, CFI = .98, RMSEA = .06, SRMR = .01. Furthermore, our hypothesized five-factor model was superior to other four-factor models, and the best alternative model is a four-factor model in which perceived gratitude and relationship-based family role performance loaded on a single factor, $\Delta\chi^2(7) = 1127.24$, $p < .001$, CFI = .69, RMSEA = .22, SRMR = .15. These model comparisons are presented in Appendix C. Taken together, the results indicated that our hypothesized five-factor model demonstrated good model fit.

In addition to the supplementary validation reported in Appendix D, we conducted a series of MCFAs using the data in Study 2 to demonstrate that (a) our independent variable (i.e., perceived gratitude) is distinct from other contextual resources (i.e., social support and positive emotional display), and (b) our mediator (i.e., relational energy) is distinct from other personal resources (i.e., positive affect, work engagement, self-efficacy, and interpersonal need fulfillment). We used the aforementioned parceling strategy to ensure an adequate parameter to sample size ratio.

First, we found that perceived gratitude is different from social support and positive emotional display from patients, because the three-factor model demonstrated good model fit, $\chi^2(12) = 15.42$, CFI = .99, RMSEA = .02, SRMR = .01, and it is superior to the best fitting alternative: a two-factor model in which perceived gratitude and social support loaded on a single factor, $\Delta\chi^2(4) = 681.22$, $p < .001$, CFI = .67, RMSEA = .28, SRMR = .17. Second, we found that relational energy is distinct from other personal resources. Specifically, the five-factor model demonstrated good model fit, $\chi^2(50) = 42.00$, CFI = .99, RMSEA = .00, SRMR = .01, and this model is superior to all other four-factor models, with the best fitting alternative as a four-

factor model in which relational energy and self-efficacy loaded on a single factor, $\Delta\chi^2(8) = 941.36, p < .001, CFI = .78, RMSEA = .17, SRMR = .12$. These results are presented in Appendix E.

INSERT TABLES 3 & 4 ABOUT HERE

As our hypotheses testing involves multiple alternative predictors and mediators, we built our model by adding additional paths to the one we used in Study 1. In particular, we estimated at the within-individual level (a) the effects of alternative contextual resources (i.e., positive emotional displays and social support from service beneficiaries) on relational energy, (b) the effects of perceived gratitude from service beneficiaries on alternative personal resources (i.e., positive affect, work engagement, self-efficacy, and interpersonal need fulfillment), and (c) the influences of these alternative personal resources on the two family outcomes. In so doing, we can ascertain the unique influence of perceived gratitude on relational energy (beyond other contextual resources) and the unique mediating effect of relational energy connecting the work domain and the family domain (beyond other personal resources). The majority of the variance in our daily variables was at the within-individual level: positive affect at T1 (85%), negative affect at T1 (89%), relational energy at T1 (87%), service beneficiaries' positive emotional display at T2 (93%), service beneficiaries' social support at T2 (98%), perceived service beneficiaries' gratitude at T2 (97%), positive affect at T3 (97%), work engagement at T3 (96%), self-efficacy at T3 (96%), interpersonal need fulfillment at T3 (97%), relational energy at T3 (97%), spousal family satisfaction at T4 (96%), and daily relationship-based family role

performance at T4 (94%).^{7 8}

Results

Reliabilities, descriptive statistics, and correlations among our study variables are presented in Table 3. Results from our multilevel path analyses are shown in Table 4. Supporting Hypothesis 1, perceived service beneficiaries' gratitude was positively associated with relational energy ($\gamma = .23, p = .002$), and this effect is beyond the influences of patients' positive emotional display ($\gamma = .08, p = .287$) and their social support ($\gamma = .13, p = .074$). Hypotheses 2a and 2b predicted the positive relationships between relational energy and the two family outcomes. First, relational energy was positively related to spousal family satisfaction ($\gamma = .10, p = .026$), even after we controlled for other personal resources (positive affect: $\gamma = .34, p < .001$; work engagement: $\gamma = .14, p = .015$; self-efficacy: $\gamma = .13, p = .009$; and interpersonal need fulfillment: $\gamma = .15, p = .003$). Second, it was also positively related to spouse-rated relationship-based family role performance ($\gamma = .14, p < .001$) and its effect was significant above and beyond the influences of other personal resources (positive affect: $\gamma = .02, p = .600$; work engagement: $\gamma = -.05, p = .232$; self-efficacy: $\gamma = -.01, p = .894$; and interpersonal need fulfillment: $\gamma = .04, p = .319$). Thus, both Hypotheses 2a and 2b received support. Overall, our model explained 5% of the within-individual variance in daily relational energy, 32% of the within-individual variance in daily spousal family satisfaction, and 8% of the within-individual variance in daily relationship-based family role performance.

 INSERT TABLES 5 & 6 ABOUT HERE

⁷ The within-individual variance of our study variables indeed fall within the normal range of within-individual variance "11% to 99%" reported in Podsakoff et al.'s review of ESM studies in the literature (2019, p. 732).

⁸ The syntax and output files for our path analyses can be found at <https://osf.io/d3x7c>.

Hypotheses 3a and 3b hypothesized the positive indirect relationships between perceived service beneficiaries' gratitude and the two family outcomes (i.e., spousal family satisfaction and relationship-based family role performance) through relational energy. The indirect effect of perceived gratitude on spousal family satisfaction via relational energy was .024 (95% CI [.006, .054]), supporting Hypothesis 3a. Supporting Hypothesis 3b, as we found that the indirect effect of perceived gratitude on relationship-based family role performance via relational energy was .032 (95% CI [.010, .068]). These results also indicate that relational energy as a resource mechanism linking the work domain and the family domain has incremental effects above and beyond alternative mechanisms⁹.

Hypothesis 4 posited that occupational identity would moderate the relationship between perceived service beneficiaries' gratitude and relational energy, such that this positive association is stronger for employees with higher (vs. lower) occupational identity. As shown in Table 4, occupational identity moderated the within-individual relationship between perceived gratitude and relational energy ($\gamma = .12, p = .006$). To understand the pattern of the moderating effect, we conducted simple slope analyses and plotted the interaction in Figure 3. Results showed that the positive relationship between perceived gratitude and relational energy was stronger for employees with higher occupational identity ($\gamma = .37, p < .001$), compared to those with lower occupational identity ($\gamma = .09, p = .309$).

 INSERT FIGURE 3 ABOUT HERE

⁹ We also compared the model fit of our hypothesized model (i.e., full model reported with all the mediating effects estimated) with that of a nested model where the relationships between relational energy and the family outcomes are constrained to zero. We followed recent research (e.g., Bennett et al., 2021) to conduct a likelihood ratio difference test and compare the model fit using the Sattora-Bentler scaled chi-square difference and the difference of the Akaike Information Criterion (AIC). Results showed that our hypothesized model fit the data better than the nested model because the $-2 \times \log$ likelihood (i.e., deviance statistic) decreased significantly in our final model compared to the nested model ($\Delta SB \chi^2(9) = 34.36, p < .001$) and the AIC similarly reduced ($\Delta AIC = 38.33$). Therefore, our hypothesized model fit the data better than the model where the relationships between relational energy and family outcomes are not estimated.

Hypothesis 5 predicted that occupational identity would moderate the positive indirect relationships between perceived service beneficiaries' gratitude and (a) spousal family satisfaction, and (b) relationship-based family role performance via heightened relational energy, such that the positive indirect effect is stronger for employees with higher occupational identity compared to those with lower occupational identity. When predicting spousal family satisfaction, in support of Hypothesis 5a, the indirect effect among employees with higher occupational identity (indirect effect = .038, 95% CI [.008, .082]) was significantly stronger than that among employees with lower occupational identity (indirect effect = .009, 95% CI [-.006, .035]; difference = .028, 95% CI [.003, .076]). Similarly, when predicting relationship-based family role performance, we found support for Hypothesis 5b, such that the indirect effect was significantly stronger among employees with higher occupational identity (indirect effect = .051, 95% CI [.021, .099]), compared to those with lower occupational identity (indirect effect = .013, 95% CI [-.009, .047]; difference = .038, 95% CI [.011, .081]).

Similar to Study 1, we tested an alternative model where we excluded all the control variables (i.e., positive affect, negative affect, and relational energy, which were measured at T1 ; service beneficiaries' positive emotional display and service beneficiaries' social support, which were measured at T2; positive affect, work engagement, self-efficacy, and interpersonal need fulfillment, which were measured at T3) from our analyses to ensure the robustness of our results and found support for all hypotheses.

GENERAL DISCUSSION

In this paper, we examined how receiving gratitude from service beneficiaries influences service employees' work and family lives. Integrating the W-HR model with the literatures on

gratitude and occupational identity, we build a resource-based model to depict a work-home enrichment process where receiving gratitude from service beneficiaries generates relational energy for service employees and makes them better spouses at home. The results of our two multi-source and multi-context ESM studies provided support for our research model – that perceived gratitude from service beneficiaries had positive indirect effects on employees' familial outcomes, rated by their spouses, by enhancing employees' relational energy. In addition, the work-home enrichment process, as indicated by increased relational energy and positive family outcomes, were contingent on occupational identity. Employees who identified more closely with their occupation were more energized as a result of receiving gratitude from beneficiaries, had greater relationship-based family role performance, and their spouses had greater family satisfaction, compared to those lower on occupational identity.

Theoretical Implications

Our paper contributes to research on gratitude and the work-family literature in several important ways. First, our studies go beyond prior gratitude research that has predominantly focused on the benefits of feeling or expressing gratitude (e.g., Algoe et al., 2013; Fehr et al., 2017; Williams & Bartlett, 2015) and heeds calls for research on the benefits of receiving gratitude in the organizational setting (Grant & Gino, 2010; Lee et al., 2019). Across two within-person (i.e., ESM) studies, we found that receiving gratitude from service beneficiaries generated relational energy for service providers. Additionally, while prior research mostly examined the positive effects of gratitude in a single domain (e.g., Fehr et al., 2017; Park et al., 2019; Williams & Bartlett, 2015), we showed that gratitude can have far-reaching consequences for recipients beyond the work domain to benefit their family and spouses, through energizing and motivating service employees. To that end, our study not only sheds light on the restorative nature of

positive interactions with service beneficiaries (Lilius, 2012), but also opens a new avenue for future research on the effects of positive service interactions, such as receiving gratitude, on service providers' family lives.

Second, this paper contributes to theory and research on work-family enrichment, and more importantly, helps extend and develop the W-HR model (ten Brummelhuis & Bakker, 2012). In accordance with the W-HR model, we positioned perceived gratitude and relational energy as specific types of contextual and personal resources that may be generated from workplace events. Indeed, in Study 2, we demonstrated that receiving gratitude uniquely predicted an increase in relational energy, even with the inclusion of other potential contextual resources that may be found in service interactions (e.g., positive emotional displays and social support from service beneficiaries). Similarly, our findings support the notion that relational energy is an additional personal resource bridging the work and family domains that can be generated from receiving gratitude – although received gratitude was positively related to other types of personal resources, including positive affect, work engagement, self-efficacy, and interpersonal fulfilment, our results revealed that relational energy explained unique variance in familial outcomes beyond these personal resources (after controlling for their effects on the familial outcomes¹⁰). Taken together, this research contributes to the W-HR model by examining

¹⁰ We ran a supplementary analysis to test whether occupational identity would moderate the relationship between receiving gratitude and interpersonal need fulfilment and whether interpersonal need fulfilment would mediate the relationships between receiving gratitude and family outcomes. Results showed that received gratitude predicted higher interpersonal need fulfilment during the day ($\gamma = .38, p < .001$), occupational identity moderated this relationship ($\gamma = .08, p = .031$), and interpersonal need fulfilment was related to higher spousal family satisfaction ($\gamma = .16, p = .001$), but not relationship-based family role performance ($\gamma = .05, p = .265$). We also found significant conditional indirect effect of received gratitude on spousal family satisfaction via enhanced interpersonal need fulfilment (higher occupational identity: indirect effect = .076, 95% CI [.029, .131]; lower occupational identity: indirect effect = .046, 95% CI [.018, .089]; difference = .030, 95% CI [.004, .075]). Of note, after modeling interpersonal need fulfilment as an alternative mechanism as well as the moderating effect of occupational identity on this alternative mediator, the conclusions that we can draw about our hypothesized model remain the same. This further demonstrates the distinctive effect of relational energy as a unique personal resource in our model (for a similar supplementary analysis, see Koopman et al., 2020).

two theoretically important variables that represent unique contextual and personal resources acquired as a result of positive service interactions.

Finally, by integrating the W-HR model with social identity theory, we identified occupational identity as a key personal resource and boundary condition of the intraindividual - work-family enrichment process (ten Brummelhuis & Bakker, 2012) that may influence how employees interpret, appraise, or react to others' expressions of gratitude. Our findings showed that service providers with higher occupational identity reaped more energetic resources from positive interactions with service beneficiaries in the form of heightened relational energy, and that occupational identity facilitated the emergence of daily work-family enrichment. This finding is intriguing because research has pointed to the potential negative impact of occupational identity on employees' family lives, such that when employees strongly identify with their occupations or view their work as a calling, they tend to work longer hours and find it more difficult to detach psychologically from their work at home (Clinton et al., 2017; Ng & Feldman, 2008). Instead, we concur with Ashforth and Humphrey (1993) that service employees might benefit more from service interactions that are consistent with their core identity, and further demonstrate that such benefits extend to service employees' family lives.

Practical Implications

Our research findings have several implications for managers and organizations. Most importantly, our research sheds light on the importance of expressed gratitude from service beneficiaries (i.e., patients, customers, etc.), particularly for employees in healthcare or service occupations, who typically suffer from high levels of fatigue and burnout (Gomez & Michaelis, 1995). As a contextual resource, expressed gratitude can energize service providers and generate personal resources for employees during the course of the workday, enhancing their subsequent

interactions with service beneficiaries (i.e., customers or patients) and in turn their family outcomes. As such, we encourage managers and organizations to provide more frequent opportunities for service beneficiaries to offer positive feedback and express their gratitude to their service providers. While hospitals may capitalize on annual events such as International Doctors' or Nurses Day to acknowledge the efforts of their employees, our results show that receiving others' gratitude on a daily basis has benefits for employees. Indeed, professional service organizations such as hospitals are increasingly advocating for positive patient-employee communication and encouraging patients to express their gratitude to their hardworking healthcare professionals more regularly (e.g., Converso et al., 2015).

In addition, our study highlights the importance of occupational identity for employees in the service line. Our findings suggest that employees who more strongly identify with specific goals, abilities, or values associated with their profession, such as being caring, saving lives, or as an integral part of society, are better able to reap the benefits from positive work events (e.g., when receiving others' gratitude) compared to those with lower occupational identity.

Organizations and managers could thus find ways to strengthen employees' occupational identities, such as through highlighting the positive qualities and attributes associated with the profession and the organization, or, as in the literature on job crafting (Wrzesniewski & Dutton, 2001), by providing employees with greater autonomy to explore and re-define their job roles, in order to find meaning that strengthens their occupational identities over time. This recommendation echoes Brown's (1997) model that the formation of occupational identity is a dynamic process and can be consolidated over time with continuous interventions.

Finally, our research not only offers practical insights regarding how to energize service employees during the workday, but also provides hints regarding how employees may enrich

their family lives. Previous research has found that heavy workload and job stress can interfere with the quality of family life (Swanson et al., 1998), as service providers may feel drained at work, and thus cannot muster enough resources to meet their familial demands (Yildirim & Aycan, 2008). Our findings show that on days in which service beneficiaries express their appreciation to service providers, these employees are more likely to experience enriched lives within their families on the same day. Ultimately, our research pinpoints multiple advantages to encouraging service beneficiaries to express their gratitude to their service providers.

Strengths, Limitations, and Future Directions

In this research, we conducted two ESM studies, each involving married couples providing data across ten working days. By capturing employees' receipt of gratitude at work as well as their interactions with spouses on a daily basis, we are able to examine the work-home enrichment process as it occurs. As we focus on the within-individual relationships among the study variables, the use of repeated-measures design and multilevel analyses help to rule out potential confounding effects that could be caused by stable individual or environmental factors. Our multi-source (i.e., focal employees and spouses) and multi-context (i.e., surveys administered at work and at home) design further helps to reduce concerns about common method bias that could threaten the validity of our findings (Podsakoff et al., 2003). Notably, we controlled for a number of variables in both studies to demonstrate the robustness of our research findings. In both studies, we controlled for baseline levels of the dependent variables to ascertain the causal direction of our hypothesized relationships (although our study design precludes us from making causal claims). In Study 2, we further controlled for alternative predictors and mediators, and continued to find support for our hypotheses. Taken together, with the sophisticated research design and the replication of findings using two samples from two

countries, we are confident in the validity and robustness of our conclusions.

Despite the strengths highlighted above, there are several limitations of our research that should be noted. First, we used self-report measures of perceived gratitude from service beneficiaries, as opposed to observational or beneficiary-reported expressions of gratitude. However, we believe that the use of self-reported gratitude is adequate for this study, as our goal was to examine the possible energizing effects of employees' perceptions of received gratitude. In addition, research that manipulated gratitude expressions often asked participants to report their receipt of gratitude or perception of being appreciated as a manipulation check (e.g., Grant & Gino, 2010; Williams & Bartlett, 2015), and other research involving couples also showed a strong positive relationship between one's gratitude expression and the spouse's perception of being appreciated (Gordon et al., 2012). As such, we believe that our results should hold even if other-reported gratitude expression is utilized. Yet, we encourage future research to measure gratitude expression using multiple sources to validate our research findings.

Second, the participants in our samples were healthcare professionals from China and Singapore (which is also predominantly Chinese), which may give rise to concerns about the generalizability of our results. There might be cultural differences in the way people perceive and express their gratitude to others, which could lead to different implications of receiving gratitude for the service employees. For instance, preliminary studies found cultural variations in how American and Chinese youth express their gratitude to others (Wang et al., 2015), and that gratitude is associated with negative connotations (e.g., guilt, indebtedness) in countries such as China, Japan, and the United Kingdom, but not in the U.S (Hitokoto et al., 2008; Lambert et al., 2009). How gratitude is expressed, perceived, and received by others, may thus differ across cultures, and future research could examine the relationships proposed in our study in other non-

Chinese cultures.

In this paper, we examined occupational identity as one individual characteristic that moderates the within-person work-family enrichment process during the day. Future research could build on our work by considering other contextual factors that may strengthen or attenuate the spillover process. For example, a strong service climate in the organization may heighten employees' sensitivity towards gratitude from service beneficiaries, so that employees feel more energized upon receiving gratitude (Schneider et al., 1998). In addition, it is also plausible that the perceptions of role stress and/or overload may influence how service employees interpret others' emotional expressions (Bolino & Turnley, 2005). For instance, perceived role stress or role overload may attenuate the benefits brought about by receiving gratitude, as employees are psychologically and physically occupied by excessive role demands (Brown et al., 2005).

Further, we believe that our findings provide insight into future research on occupational identification and occupational choice. As it pertains to the literature on occupational choice, the gravitational hypothesis specifies "that people tend to gravitate towards and remain in jobs that they are able to perform and that are reasonably compatible with their personal characteristics" (McCormick et al., 1979, p. 52). This suggests that there exists innate, personality differences that could determine individuals' sensitivity to receiving gratitude from service beneficiaries, the extent to which they thrive and benefit from such positive interpersonal exchanges at work, and thus individuals' choice of occupations such as healthcare, where there is a greater potential for employees to have substantial impact on others' lives. Empathy, for instance, is one such personality trait that could be highly relevant to receiving gratitude, as empathic individuals are more sensitive to others' emotions (including gratitude), and could therefore reap greater resources from perceived gratitude from service beneficiaries, and thus thrive in their jobs.

Indeed, recent research on empathy in the healthcare setting found that empathic employees indeed had greater job satisfaction and performance compared to less empathic employees, with the authors reasoning that this could be due to their innate tendency to feel more compassion for and greater motivation to help their beneficiaries (Aw et al., 2020). Applied to the context of gratitude, we could therefore imagine that these dispositionally empathic employees would not only be more likely to receive others' gratitude, but also to be more attune to others' displays of gratitude. Therefore, future research could perhaps explore other personal factors that limit or augment the effects of receiving gratitude, including but not limited to empathy and occupational identification.

Finally, future research might consider examining the broader consequences of receiving gratitude. Drawing from the W-HR model, we focused primarily on energy as a *proximal work* outcome of received gratitude, yet other more *distal work* outcomes are likely to emerge as a result. For example, gratitude from others may translate into a better relationship with different stakeholders in the organization (Algoe, 2012), as gratitude is noted to be important for the development and maintenance of social relationships (e.g., Kubacka et al., 2011). For example, gratitude from others may translate into a better relationship with different parties in the organizations (Algoe, 2012), or even evoke moral emotions (McCullough et al., 2001), as gratitude is noted to be important for psychological well-being and moral decision making (e.g., DeSteno et al., 2010; Kubacka et al., 2011; Tang et al., 2020).

CONCLUSION

In light of recent events, such as the coronavirus outbreak across the globe, it has become more apparent than ever that society relies heavily on our essential service providers – our first responders, medical workers, and other unsung heroes (e.g., sanitation workers, delivery riders,

retail staff), who have to make personal sacrifices for the well-being of society at large, and often without acknowledgement. Drawing on the Work-Home Resources model, our two studies presented herein demonstrate that a simple act of thanking our service providers can energize them during the workday and in turn benefit their familial well-being, and corroborates the movement across many global cities to express our gratitude to those working on the frontlines. We hope that our research provides a positive outlook for organizations and employees both within and outside of the healthcare sector, and that it sparks additional research on the role of expressed gratitude for others in different organizational contexts.

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Table 1. Descriptive Statistics and Correlations among Study Variables (Study 1)

Variables	Mean	SD	Correlations												
			1	2	3	4	5	6	7	8	9	10	11	12	13
<u>Within-person variables</u>															
1. Positive Affect (T1)	3.50	.72	(.83)												
2. Negative Affect (T1)	1.84	.57	.00	(.75)											
3. Relational Energy (T1)	3.59	.72	.15	.01	(.82)										
4. Perceived Service Beneficiaries' Gratitude (T2)	3.61	.70	.17	-.03	.20	(.77)									
5. Relational Energy (T3)	3.67	.62	.12	.00	.11	.22	(.76)								
6. Spousal Family Satisfaction (T4)	3.74	.57	.18	.05	.07	.12	.17	(.71)							
7. Relationship-based Family Role Performance (T4)	3.63	.65	.09	.01	.07	.05	.15	.15	(.76)						
<u>Between-person variable</u>															
8. Occupational Identity	3.97	.79	.24	-.11	.21	.42	.22	.25	.10	(.78)					
9. Gender	.53	.50	-.29	-.01	-.23	-.29	-.29	-.04	-.07	-.05	-				
10. Job Position	.33	.47	.21	.02	.21	.22	.08	.27	.16	.15	.01	-			
11. Age	32.55	6.52	.05	.03	.09	.03	-.10	.04	.13	.02	.45	.15	-		
12. Education	3.48	.82	.06	.19	.04	-.01	-.04	.15	.10	.15	.37	.70	.34	-	
13. Organizational Tenure	3.34	2.46	.11	-.02	.14	.14	.06	.18	.20	.13	.30	.19	.48	.21	-

Notes: Level 1 N = 798; Level 2 N = 113. T1 = Time 1 (morning); T2 = Time 2 (afternoon); T3 = Time 3 (late afternoon); T4 = Time 4 (evening). Gender (0 = male; 1 = female). Job position (0 = nurses; 1 = doctors). Education (1 = primary school; 2 = secondary school; 3 = tertiary or vocational school; 4 = postgraduate; 5 = others). Job Means, standard deviations, and correlations represent group-mean centered relationships at the within-individual level of analysis. Reliabilities are in parentheses on the diagonal. For within-person correlations, values above |.06| are significant at $p < .05$. For between-person correlations, values above |.18| are significant at $p < .05$.

Table 2. Multilevel Path Analysis, Mediations and Conditional Indirect Effect (Study 1)

	Relational Energy (T3)		Spousal Family Satisfaction (T4)		Relationship-based Family Role Performance (T4)	
	γ	SE	γ	SE	γ	SE
<u>Between-person Level</u>						
Occupational Identity	.01	.03	—	—	—	—
Interactions	.18*	.05	—	—	—	—
<u>Within-person Level</u>						
<i>Control Variables:</i>						
Positive Affect (T1)	.06	.04	—	—	—	—
Negative Affect (T1)	.03	.05	—	—	—	—
Relational Energy (T1)	.04	.04	—	—	—	—
Spousal Family Satisfaction (Day T-1)	—	—	-.03	.06	—	—
Relationship-based Family Role Performance (Day T-1)	—	—	—	—	-.13*	.05
<i>Main Variables:</i>						
Perceived Service Beneficiaries' Gratitude (T2)	.20*	.04	.07	.04	.01	.04
Relational Energy (T3)	—	—	.11*	.04	.15*	.05
<u>Mediation & Moderated Mediation</u>						
Indirect Effect	—	—	—	.022	—	.029
95% CI				(.007, .042)		(.010, .054)
Indirect Effect (High)	—	—	—	.037	—	.049
95% CI				(.012, .071)		(.019, .088)
Indirect Effect (Low)	—	—	—	.006	—	.008
95% CI				(-.004, .022)		(-.006, .031)
Indirect Effect (Difference)	—	—	—	.031	—	.041
95% CI				(.008, .070)		(.015, .083)

Note: Level 1 N = 798; Level 2 N = 113. T1 = Time 1 (morning); T2 = Time 2 (afternoon); T3 = Time 3 (late afternoon); T4 = Time 4 (evening). Estimates reflect unstandardized coefficients. "Interaction" indicates the cross-level moderation effect. * p < .05.

Table 3. Descriptive Statistics and Correlations among Study Variables (Study 2)

Variables	Mean	SD	Correlations								
			1	2	3	4	5	6	7	8	
<u>Within-person variables</u>											
1. Positive Affect (T1)	4.79	.91	(.94)								
2. Negative Affect (T1)	2.61	.86	-.07	(.75)							
3. Relational Energy (T1)	4.29	.88	.12	-.07	(.84)						
4. Service Beneficiaries' Positive Emotional Display (T2)	5.49	.77	.13	-.08	.03	(.92)					
5. Service Beneficiaries' Social Support (T2)	5.24	.84	.12	-.07	.07	.32	(.92)				
6. Perceived Service Beneficiaries' Gratitude (T2)	4.14	.81	.24	-.10	.15	.30	.35	(.91)			
7. Positive Affect (T3)	4.41	.92	.12	-.04	.15	.22	.28	.29	(.91)		
8. Work Engagement (T3)	4.69	.93	.25	-.09	.17	.17	.27	.36	.32	(.90)	
9. Self-Efficacy (T3)	5.42	1.02	.25	-.03	.09	.22	.24	.26	.14	.23	
10. Interpersonal Need Fulfillment (T3)	4.40	.90	.14	-.05	.10	.31	.26	.33	.29	.22	
11. Relational Energy (T3)	4.15	1.30	.17	-.02	.09	.13	.15	.21	.19	.32	
12. Spousal Family Satisfaction (T4)	4.60	1.12	.22	-.03	.19	.28	.36	.37	.44	.35	
13. Relationship-based Family Role Performance (T4)	4.70	.91	.13	-.07	.07	.09	.11	.14	.08	.06	
<u>Between-person variable</u>											
14. Occupational Identity	4.68	1.17	.11	-.14	.07	.03	-.46	.38	.34	.05	
15. Gender	.25	.43	-.14	.32	.18	.02	.05	-.24	.07	.40	
16. Age	35.09	8.90	.01	.15	.18	.07	.40	.05	-.02	.30	
17. Education	3.61	.62	-.01	-.12	.17	.46	.13	.44	.09	.18	
18. Organizational Tenure	3.58	2.42	.13	.10	.08	.13	.11	.15	-.14	.64	

Table 3. Descriptive Statistics and Correlations among Study Variables (Study 2)

Variables	Correlations										
	9	10	11	12	13	14	15	16	17	18	
<u>Within-person Variables</u>											
9. Self-Efficacy (T3)	(.87)										
10. Interpersonal Need Fulfillment (T3)	.17	(.89)									
11. Relational Energy (T3)	.18	.19	(.94)								
12. Spousal Family Satisfaction (T4)	.27	.32	.29	(.94)							
13. Relationship-based Family Role Performance (T4)	.06	.11	.22	.09	(.92)						
<u>Between-person Variable</u>											
14. Occupational Identity	.13	.01	-.31	.20	.10	(.83)					
15. Gender	-.46	.14	.26	-.27	.27	-.18	-				
16. Age	.11	.22	.57	-.02	.07	-.18	.09	-			
17. Education	-.18	-.13	.04	.33	.13	.05	.13	.02	-		
18. Organizational Tenure	.39	.52	.19	.06	.02	.17	-.08	.44	.01	-	

Notes: Level 1 N = 560; Level 2 N = 81. T1 = Time 1 (morning); T2 = Time 2 (afternoon); T3 = Time 3 (late afternoon); T4 = Time 4 (evening). Gender (0 = male; 1 = female). Education (1 = primary school; 2 = secondary school; 3 = tertiary or vocational school; 4 = postgraduate; 5 = others). Means, standard deviations, and correlations represent group-mean centered relationships at the within-individual level of analysis. Reliabilities are in parentheses on the diagonal. For within-person correlations, values above |.08| are significant at $p < .05$. For between-person correlations, values above |.21| are significant at $p < .05$.

Table 4. Multilevel Path Analysis, Mediations and Conditional Indirect Effect in Study 2

	Relational Energy (T3)		Spousal Family Satisfaction (T4)		Relationship-based Family Role Performance (T4)	
	γ	SE	γ	SE	γ	SE
<u>Between-person Level</u>						
Occupational Identity	.00	.02	—	—	—	—
Interaction	.12*	.04	—	—	—	—
<u>Within-person Level</u>						
<i>Control Variables:</i>						
Positive Affect (T1)	.18*	.09	—	—	—	—
Negative Affect (T1)	.04	.07	—	—	—	—
Relational Energy (T1)	.07	.10	—	—	—	—
Spousal Family Satisfaction (Day T-1)	—	—	-.13*	.05	—	—
Relationship-based Family Role Performance (Day T-1)	—	—	—	—	-.19*	.05
<i>Alternative Predictors:</i>						
Service Beneficiaries' Positive Emotional Display (T2)	.08	.07	—	—	—	—
Service Beneficiaries' Social Support (T2)	.13	.07	—	—	—	—
<i>Alternative Mediators:</i>						
Positive Affect (T3)	—	—	.34*	.05	.02	.04
Work Engagement (T3)	—	—	.14*	.06	-.05	.05
Self-Efficacy (T3)	—	—	.13*	.05	-.01	.04
Interpersonal Need Fulfillment (T3)	—	—	.15*	.05	.04	.04
<i>Main Variables:</i>						
Perceived Service Beneficiaries' Gratitude (T2)	.23*	.07	.20*	.06	.10*	.05
Relational Energy (T3)	—	—	.10*	.05	.14*	.04
<u>Mediation & Moderated Mediation</u>						
Indirect Effect	—	—	—	.024	—	.032
95% CI				(.006, .054)		(.010, .068)

Indirect Effect (High)	—	—	—	.038	—	.051
95% CI				(.008, .082)		(.021, .099)
Indirect Effect (Low)	—	—	—	.009	—	.013
95% CI				(-.006, .035)		(-.009, .047)
Indirect Effect (Difference)	—	—	—	.028	—	.038
95% CI				(.003, .076)		(.011, .081)

Note: Level 1 N = 560; Level 2 N = 81. T1 = Time 1 (morning); T2 = Time 2 (afternoon); T3 = Time 3 (late afternoon); T4 = Time 4 (evening). Estimates reflect unstandardized coefficients. “Interaction” indicates the cross-level moderation effect. In our analysis, we also modelled the relationships between perceived gratitude and other personal resources measured at Time 3, and found that perceived gratitude was positively related to alternative personal resources (i.e., positive affect: $\gamma = .33^*$; work engagement: $\gamma = .41^*$; self-efficacy: $\gamma = .32^*$; interpersonal need fulfilment: $\gamma = .38^*$). For the sake of parsimony, these relationships are not shown in the table. * $p < .05$.

Figure 1. Theoretical Model

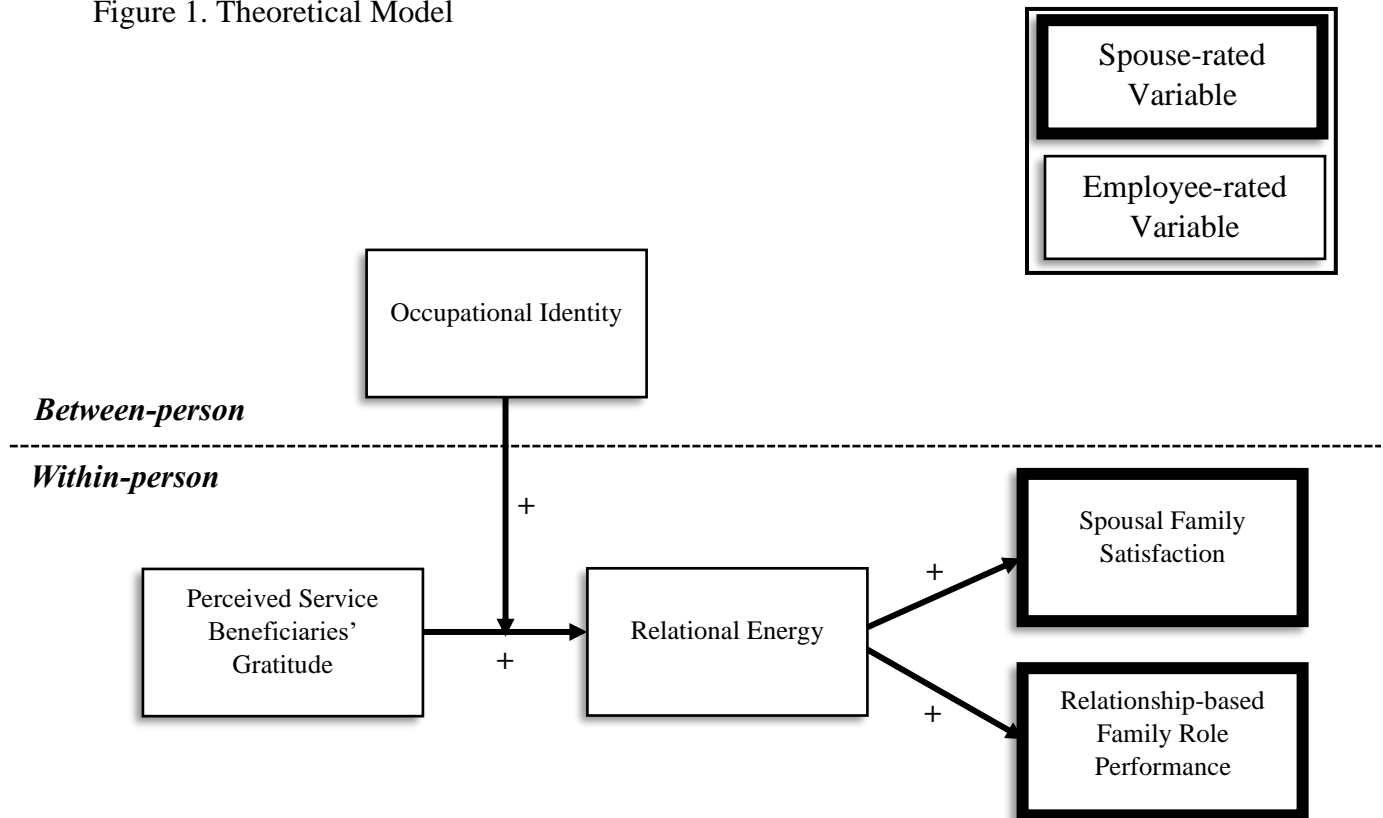


Figure 2. The Cross-level Moderating Effect of Occupational Identity on the Relationship between Perceived Service Beneficiaries' Gratitude and Relational Energy (Study 1)

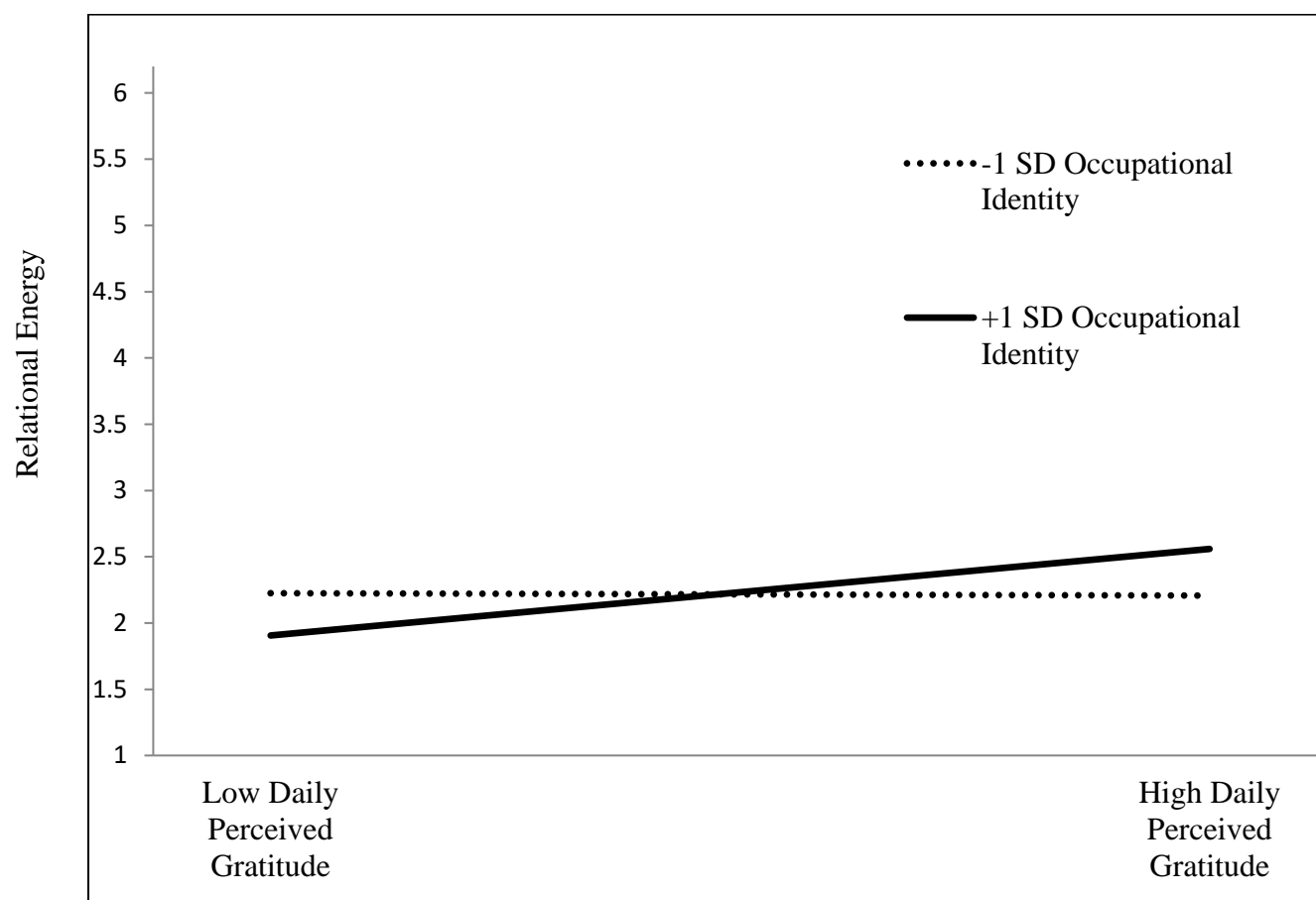
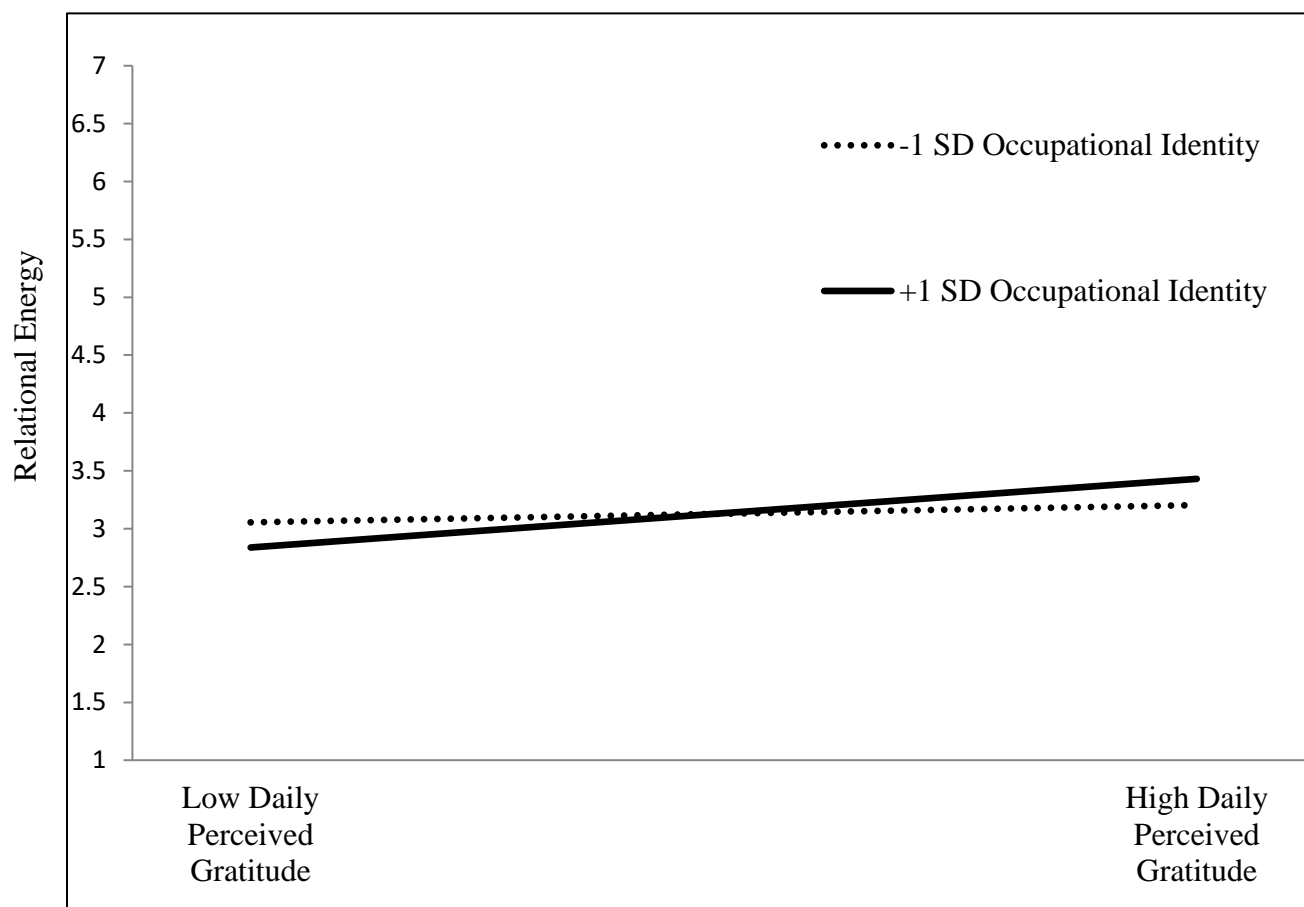


Figure 3. The Cross-level Moderating Effect of Occupational Identity on the Relationship between Perceived Service Beneficiaries' Gratitude and Relational Energy (Study 2)



Appendix A

Measurement Items for Studies 1 and 2

Scales	Items
<i>Both Study 1 and Study 2</i>	
Occupational Identity (Between-person Moderator)	<ol style="list-style-type: none"> 1. In general, when someone praises healthcare professionals, it feels like a personal compliment 2. I am very interested in what others think about healthcare professionals 3. When I talk about healthcare professionals, I usually say “we” rather than “they” 4. The successes of the healthcare occupation are my successes 5. If a story in the media praised healthcare professionals, I would feel proud.
Daily Positive Affect	<ol style="list-style-type: none"> 1. Inspired 2. Alert 3. Excited 4. Enthusiastic 5. Determined
Daily Negative Affect	<ol style="list-style-type: none"> 1. Afraid 2. Upset 3. Nervous 4. Scared 5. Distressed
Daily Perceived Service Beneficiaries’ Gratitude	<ol style="list-style-type: none"> 1. Today, my patients were grateful 2. Today, my patients were appreciative 3. Today, my patients were thankful 4. Today, my patients were glad
Daily Relational Energy	<ol style="list-style-type: none"> 1. I felt invigorated when I interacted with my patients 2. After interacting with my patients, I felt more energy to do my work today 3. I felt increased vitality when I interacted with my patients today 4. I went to my patients when I needed to be “pepped up” today 5. After an exchange with my patients, I felt more stamina to do my work today
Daily Spousal Family Satisfaction	<ol style="list-style-type: none"> 1. Right now, I feel that I have a good marriage 2. At this moment, I feel that my relationship with my spouse is very stable 3. Today, our marriage has been very strong

	<p>4. Today, I have really felt like part of a team with my spouse</p> <p>5. My relationship with my spouse has made me happy today</p>
Daily Relationship-Based Family Role Performance	<p>1. Today, my spouse provided emotional support to my family members</p> <p>2. Today, my spouse provided general support to my family members</p> <p>3. Today, my spouse gave advice to family members</p> <p>4. Today, my spouse kept family members connected with each other</p>
<i>Study 2 only (additional predictors and mediators)</i>	
Daily Positive Emotional Display from Patients	<p>1. Smiling</p> <p>2. Pleasantness</p> <p>3. Greeting</p> <p>4. Eye Contact</p>
Daily Social Support from Patients	<p>1. Trusting</p> <p>2. Supportive</p> <p>3. Friendly</p> <p>4. Open</p>
Daily Work Engagement	<p>1. I felt energetic at my job today</p> <p>2. I was excited about my job today</p> <p>3. I focused a great deal of attention on my job today</p> <p>4. I had good concentration at work today</p>
Daily Self-efficacy	<p>1. I felt that I can handle every problem that came my way today</p> <p>2. I felt that I can deal efficiently with unexpected events today</p>
Daily Interpersonal Need Fulfilment	<p>1. I felt close and connected to my patients today</p> <p>2. I felt a sense of relatedness with my patients today</p> <p>3. I developed good relationships with my patients today</p> <p>4. I received emotional support from my patients today</p>

Appendix B

MCFA Model Comparisons (Study 1)

Model	χ^2	<i>df</i>	CFI	RMSEA	SRMR
The proposed five-factor model	47.88	39	.99	.02	.03
Alternative four-factor model (perceived gratitude and relational energy loaded on a single factor)	391.53	46	.72	.10	.10
Alternative four-factor model (relational energy and spousal family satisfaction loaded on a single factor)	248.53	46	.84	.07	.09
Alternative four-factor model (relational energy and relationship-based family role performance loaded on a single factor)	276.22	46	.82	.08	.09
Alternative four-factor model (perceived gratitude and relationship-based family role performance loaded on a single factor)	304.11	46	.79	.08	.10

Note. N = 798. CFI = normed comparative fit index, RMSEA = root mean square error of approximation, SRMR = standardized root mean square residual (within).

Appendix C

MCFA Model Comparisons (Study 2)

Model	χ^2	<i>df</i>	CFI	RMSEA	SRMR
The proposed five-factor model	110.87	39	.98	.06	.01
Alternative four-factor model (perceived gratitude and relational energy loaded on a single factor)	1820.34	46	.53	.26	.16
Alternative four-factor model (relational energy and spousal family satisfaction loaded on a single factor)	1564.81	46	.60	.24	.16
Alternative four-factor model (relational energy and relationship-based family role performance loaded on a single factor)	2235.43	46	.42	.29	.18
Alternative four-factor model (perceived gratitude and relationship-based family role performance loaded on a single factor)	1238.11	46	.69	.22	.15

Note. N = 560. CFI = normed comparative fit index, RMSEA = root mean square error of approximation, SRMR = standardized root mean square residual (within).

Appendix D: A validation study

Sample and Procedure

We conducted a supplementary study to assess whether perceived gratitude and relational energy are different from other related constructs. Specifically, in responses to the review team's comments, we tested (1) whether perceived gratitude is different from other types of contextual resources, such as perceived positive emotional display and social support from service beneficiaries, and (2) whether relational energy is distinct from other types of personal resources, including positive affect, work engagement, self-efficacy, and interpersonal need fulfillment. British employees were recruited via Prolific Academic, an online research platform that provides access to participants who are more naïve and less dishonest than those from other online research platforms (Peer, Brandimarte, Samat, & Acquisti, 2017). As a prerequisite, employees should hold jobs involving interactions with customers (61.5%), clients (24.3%), or patients (14.3%) on a daily basis to be eligible to participate. Our sample included 301 participants (57.5% women, $M_{\text{age}} = 35.45$, $SD_{\text{age}} = 10.47$) who had worked in their current organizations for an average of 6.16 years ($SD = 5.62$).

We sent out the online survey at the end of a workday to measure participants' work experiences that day. Besides the measures of perceived gratitude and relational energy that were used in our main studies, we also measured perceived positive emotional display (4 items, Kim & Yoon, 2012) and social support from customers or patients (4 items, Corsun & Enz, 1999), positive affect (5 items, MacKinnon, Jorm, Christensen, Korten, Jacomb, & Rodgers, 1999), work engagement (4 items, Parke, Weinhardt, Tangirala & DeVoe, 2018), self-efficacy (2 items, Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009), and interpersonal need fulfillment (4 items, Ilies, Lanaj, Pluut, & Goh, 2018).

Results

Correlational results showed that perceived gratitude from customers/clients/patients was positively related to perceived positive emotional display ($r = .56$, $p < .05$) and social support from service beneficiaries ($r = .65$, $p < .05$). In addition, relational energy was positively related to positive affect ($r = .77$, $p < .05$), work engagement ($r = .55$, $p < .05$), self-efficacy ($r = .34$, $p < .05$), and interpersonal need fulfillment ($r = .44$, $p < .05$). That is, perceived gratitude and relational energy are indeed closely related to these alternative constructs. We further conducted two sets of CFAs to demonstrate the discriminant validity of our study constructs and their related constructs.

In the first CFA, we found that the three-factor model (i.e., perceived gratitude, perceived positive emotional display, and social support from service beneficiaries) demonstrated acceptable model fit: $\chi^2(51) = 184.05$ ($p < .01$), comparative fit index (CFI) = .94, standardized root mean square residual (SRMR) = .05, and root mean square error of approximation (RMSEA) = .09. Additionally, all items loaded significantly on their corresponding factors. In addition, this model was superior to two alternative models: (1) a two-factor model, in which

perceived gratitude and perceived positive emotional display from service beneficiaries were loaded on a single factor ($\Delta\chi^2(2) = 203.28, p < .01, CFI = .84, SRMR = .07, \text{ and RMSEA} = .15$), and (2) another two-factor model, in which items for perceived gratitude and perceived social support from service beneficiaries were loaded on a single factor ($\Delta\chi^2(2) = 193.67, p < .01, CFI = .85, SRMR = .07, \text{ and RMSEA} = .14$). Taken together, these results revealed that perceived gratitude is distinct from perceived positive emotional display and social support from service beneficiaries.

In our second CFA, we found that the five-factor model (i.e., relational energy, positive affect, work engagement, self-efficacy, and interpersonal need fulfillment) demonstrated acceptable model fit, $\chi^2(160) = 533.36, p < .01, CFI = .93, SRMR = .06, \text{ and RMSEA} = .08$. Additionally, all items loaded significantly on their designated factors. The five-factor model was superior to four alternative models: (1) a four-factor model, in which items for relational energy and positive affect were loaded on a single factor ($\Delta\chi^2(4) = 634.02, p < .01, CFI = .82, SRMR = .06, \text{ and RMSEA} = .14$), (2) a four-factor model, in which items for relational energy and work engagement were loaded on a single factor ($\Delta\chi^2(4) = 577.39, p < .01, CFI = .83, SRMR = .09, \text{ and RMSEA} = .14$), (3) a four-factor model, in which items for relational energy and interpersonal need fulfillment were loaded on a single factor ($\Delta\chi^2(4) = 490.84, p < .01, CFI = .84, SRMR = .11, \text{ and RMSEA} = .13$), and (4) the last four-factor model, in which items for relational energy and self-efficacy were loaded on a single factor ($\Delta\chi^2(4) = 284.88, p < .01, CFI = .88, SRMR = .09, \text{ and RMSEA} = .12$). Therefore, relational energy is distinct from positive affect, work engagement, self-efficacy, and interpersonal need fulfillment.

Appendix E

Additional MCFA Model Comparisons (Study 2)

Comparisons among our Predictor and Alternative *Contextual Resources* (i.e., social support and positive emotional display) (Study 2)

Model	χ^2	<i>df</i>	CFI	RMSEA	SRMR
Model 1: Hypothesized Three-Factor Model	15.42	12	.99	.02	.01
Model 2: Two-Factor Model Combining Perceived Gratitude and Social Support	696.64	16	.67	.28	.17
Model 3: Two-Factor Model Combining Perceived Gratitude and Positive Emotional Display	1495.16	16	.29	.41	.18

Note: CFI = normed comparative fit index, RMSEA = root mean square error of approximation, SRMR = standardized root mean square residual (within).

Comparisons among our Mediator and Alternative *Personal Resources* (i.e., positive affect, work engagement, self-efficacy, and interpersonal need fulfilment) (Study 2)

Model	χ^2	<i>df</i>	CFI	RMSEA	SRMR
Model 1: Hypothesized Five-Factor Model	42.00	50	.99	.00	.01
Model 2: Four-Factor Model Combining Relational Energy and Positive Affect	1268.25	58	.71	.19	.15
Model 3: Four-Factor Model Combining Relational Energy and Work Engagement	1225.39	58	.72	.19	.13
Model 4: Four-Factor Model Combining Relational Energy and Self-Efficacy	983.36	58	.78	.17	.12
Model 5: Four-Factor Model Combining Relational Energy and Interpersonal Need Fulfilment	1637.05	58	.62	.22	.14

Note: CFI = normed comparative fit index, RMSEA = root mean square error of approximation, SRMR = standardized root mean square residual (within).