

Linking leader-member exchange and work–nonwork balance: the mediating role of thriving at work and the moderating role of gender

Linking LMX
and WNWb

155

Received 14 March 2022
Revised 4 June 2022
Accepted 5 August 2022

Lee Di Milia

*School of Business and Law, Central Queensland University,
Rockhampton, Australia, and*

Zhou Jiang

Graduate School of Business and Law, RMIT University, Melbourne, Australia

Abstract

Purpose – The authors tested (1) the mediating role of thriving in the association between leader-member exchange (LMX) and work–nonwork balance (WNWB) and (2) the moderating effect of gender in the relationship between LMX and thriving.

Design/methodology/approach – Cross-sectional data were collected from six separate participant groups across an eight-month period ($n = 522$). Data analysis included confirmatory factor analysis to assess the construct validity of the proposed three-factor model. Hierarchical regression and the PROCESS macro were used to test three hypotheses.

Findings – The authors found thriving mediated an indirect effect of LMX on WNWb. In addition, we found that the relationship between LMX and thriving was moderated by gender, such that the relationship was found for females. Overall, the authors identified a moderated-mediation effect indicating an indirect effect of LMX on WNWb via thriving for females.

Research limitations/implications – Cross-sectional design suggests their results are theory driven. The authors suggest future studies replicate the study employing experimental designs.

Practical implications – The authors suggest organisations develop programs to enhance leadership and thriving capabilities as tools to manage WNWb.

Originality/value – The authors add to the thriving literature by revealing gender differences in the effectiveness of relational resources (i.e. LMX) in fostering employee thriving. Furthermore, the authors extend the efficacy of thriving beyond the workplace to include WNWb. The authors demonstrate the skills and knowledge acquired at work can be used to lessen the impact of WNWb.

Keywords Gender, Quantitative, Human resource management, Leader-member exchange (LMX), Thriving, Work, Non-work balance

Paper type Research paper

1. Introduction

Thriving is a relatively new construct that has attracted a good deal of research interest. The construct is defined as a psychological state that denotes the joint experience of vitality and learning at work (Spreitzer *et al.*, 2005). A recent meta-analytic study identified consistent evidence linking thriving with health, work-related outcomes and performance (Kleine *et al.*, 2019). However, the literature to date has focused on thriving in a work context only.

© Lee Di Milia and Zhou Jiang. Published by Emerald Publishing Limited. This article is published under the Creative Commons Attribution (CC BY 4.0) licence. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this licence may be seen at <http://creativecommons.org/licences/by/4.0/legalcode>



Personnel Review
Vol. 53 No. 1, 2024
pp. 155-172
Emerald Publishing Limited
0048-3486
DOI 10.1108/PR-03-2022-0211

We argue that work is part of a broader social system such that the benefits that accrue from thriving can be applied to lessen the impact of “work-nonwork balance” (WNWB) – a person’s overall assessment that their “affective experiences and their perceived involvement and effectiveness in work and nonwork roles are commensurate with the value they attach to these roles.” (Casper *et al.*, 2018, p. 197). We favour WNWB over similar constructs such as work–family balance (Allen and Martin, 2017), because non-work commitments are more inclusive of demands than those generated by family obligations alone.

Greenhaus and Beutell’s (1985) seminal work identified WNWB conflict may arise due to time, strain or the incompatibility between the specific behaviours required from work and non-work. Despite the intervening years WNWB remains an important research topic given the pressures caused by work intensification, changes to family demographics and technology have blurred the boundary between work and home (Reinwald *et al.*, 2021). For example, there is greater demand for on call workers (Vincent *et al.*, 2018) and data suggests 13% of Australian employees work more than 50 hours per week (OECD, 2020). The workforce participation rate of Australian women 30 years of age increased from 46% in 1980, to 73% in 2020 and some 67% of coupled families with dependent children are both employed (ABS, 2021). Women are often impacted by WNWB, and COVID-19 seems to have reinforced gender participation norms. In an Icelandic study, a country that scores high on the gender equity index, mothers reported intense emotional labour leading to stress and frustration from the allocation of tasks that fell “on their shoulders” (Hjálmsdóttir and Bjarnadóttir, 2021). Other data suggests that working from home resulted in significantly more nonwork-based interruptions for women compared to men and greater fragmentation of time (Leroy *et al.*, 2021).

Several approaches have been used to ameliorate WNWB. These include intervention studies designed to modify work schedules (see review, Hammer *et al.*, 2016) and training supervisors’ to be family friendly. Employees of these supervisors reported better job satisfaction and less inclination to resign (Odle-Dusseau *et al.*, 2016). Other studies have examined the role of peer and organisational support and findings suggest, organisational support is most valuable (French *et al.*, 2018).

The aim of this study is to extend the WNWB literature by drawing on the leader-member exchange (LMX; Dansereau *et al.*, 1975) and thriving literature (Spreitzer *et al.*, 2005). An important tenet of LMX is that workers in high-quality LMX relationship are more likely to receive forms of emotional and relational support from their supervisor that allow them to develop strategies to meet their WNWB demands (Litano *et al.*, 2016). A key and relatively new perspective is that such social-psychological support enables employees to thrive at work, so that they can effectively adapt to challenging or demanding situations to achieve positive outcomes in professional and personal lives (e.g. Kleine *et al.*, 2019; Spreitzer *et al.*, 2005). This view is in line with some existing but sparse studies that support LMX as an enabler of thriving (Kleine *et al.*, 2019). As mentioned earlier, we focus on WNWB as an outcome of thriving. One explanation is that thriving serves as a critical transitional state between the influence of work contexts (e.g. relational context) and well-being (Jiang *et al.*, 2020; Spreitzer *et al.*, 2005).

Drawing upon the integrative model of human growth (IMHG, Spreitzer and Porath, 2014) as an overarching framework, we propose a mediation chain where LMX is an antecedent for thriving at work (Liu *et al.*, 2021) and that thriving provides individuals with the resources to better manage WNWB. Furthermore, we suggest gender may act as a moderator between LMX and thriving, given that social role theory underscores males and females may place differential importance on relationships with leaders (Collins *et al.*, 2014). Employees in high-quality LMX relationships are more likely to thrive and the skills and strategies developed by thriving can be used to manage WNWB (Russo *et al.*, 2018). We propose and test a moderated-mediation model that is shown in Figure 1.

We contribute to the literature in the following ways. First, we explicitly address WNBW from the LMX perspective and extend prior studies which investigated the work–nonwork interface drawing on leadership constructs such as supervisor support and family friendly supervision (French *et al.*, 2018; Russo *et al.*, 2018). Second, by exploring thriving as an explanatory mechanism linking LMX to WNBW, we extend the utility of thriving beyond its origin in the workplace. In doing so, we respond to Spreitzer and Porath’s (2014) call for a wider understanding of the interrelationships between thriving at work and outcomes outside work, and requests for studies to understand the role of leadership in promoting thriving at work (Spreitzer and Hwang, 2019). Third, the suggestion that the proposed model may depend on gender creates a boundary condition that is grounded in social roles to explain for whom LMX might be more beneficial in maintaining thriving and WNBW. Finally, we move the discussion away from the “socially embedded model” that first defined thriving (Spreitzer *et al.*, 2005) and adopt the more recent IMHG (Spreitzer and Porath, 2014).

2. Theoretical backgrounds and hypothesis development

2.1 LMX and work–nonwork interface

A distinguishing feature of LMX is the view that the relationships between leaders and their followers are not homogeneous for several factors (Liden and Graen, 1980). Nonetheless, there is an intuitive logic to the argument that leaders are proximal to providing the enabling resources (relational, financial resources) that assist followers to achieve their goals (Major and Morganson, 2011). High-quality LMX relationships tend to be exemplified by four characteristics: mutual affect, perceived contribution to goals, loyalty such that parties have trust in the relationship and professional respect (Litano *et al.*, 2016; Major and Morganson, 2011).

LMX has been demonstrated to serve as an antecedent in several work settings (Martin *et al.*, 2016) and evidence suggests that the provision of organisational support from leaders and supervisors are key to managing WNBW (Allen *et al.*, 2012; French *et al.*, 2018). A study by Tummers and Bronkhorst (2014) reported that LMX served to decrease work–family interference by reducing employees’ work pressure. These authors also found LMX contributed positively to work–family facilitation because LMX enabled employees to perceive the meaningfulness of work. Similarly, Russo and his colleagues (2018) reported family supportive supervisory behaviours were positively associated with work–family enrichment. These behaviours, which include emotional support, instrumental support, role modelling and creative solutions to assist the work–family interface, are resources that facilitate employees to manage the competing work and non-work goals. Finally, a meta-analytic review of LMX and the work–family literature has produced small- to medium-sized correlations. LMX was negatively linked with work interfering in family life ($\rho = -0.26$) and family interfering with work ($\rho = -0.13$), but LMX was positively associated with work–family enrichment ($\rho = 0.38$) and family–work enrichment ($\rho = 0.28$) (French *et al.*, 2018). In summary, the literature generally indicates that LMX has important implications on the interface between work and nonwork domains.

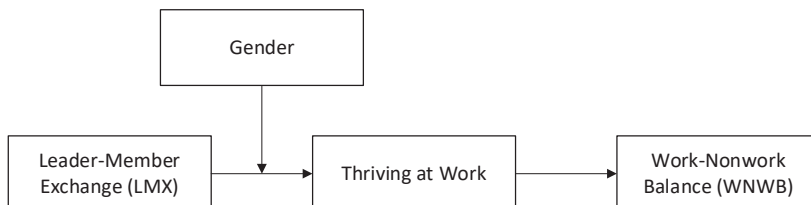


Figure 1.
Proposed
research model

2.2 The integrative model of human growth (IMHG)

The IMHG (Spreitzer and Porath, 2014) is grounded in self-determination theory (SDT; Deci and Ryan, 2000) and serves as the overarching theoretical framework to explain the process through which LMX leads to WNB. The IMHG proposes that workplace contextual enablers play a critical role in driving individuals' sense of thriving at work, and ultimately lead to desirable human growth outcomes (e.g. performance, adaptation and health) (Spreitzer and Porath, 2014) that signal a balance between one's work and nonwork domains (Timms *et al.*, 2015). IMHG is grounded in SDT to explain why individuals thrive when relevant social, contextual features are present. A key notion of SDT is that individuals have an innate propensity to develop psychologically and in part, this growth depends on the broader social context. As per Spreitzer and Porath (2014), SDT portends the importance of three psychological needs that are central to feelings of growth and vitality: (1) relatedness – a sense of feeling connected and cared for, (2) competence – the notion of feeling capable in the environment and (3) autonomy – the perception of having volition to deal with the situation. The IMHG explains that employees can thrive largely because key social contexts help fulfil these psychological needs, which make them self-determined to be energized and grow.

Unpacking the implications of the IMHG, Spreitzer and Porath (2014) provide non-exclusive examples of contextual enablers to articulate the nature of the social context that operates to help employees achieve balanced human growth outcomes through fostering their sense of thriving. They describe that the development of thriving is facilitated by workplace social contexts that are characterized by decision-making discretion, information sharing, climate of trust and respect, performance feedback and/or low environmental volatility, which feed autonomy, competence and relatedness. That is, social, contextual factors that provide opportunities for autonomous decision-making, feedback receiving, and interpersonal interaction and support will be able to trigger employees' sense of thriving. LMX is such a factor, given that it represents a relational resource that employees can leverage to pursue thriving-enabling conditions within their workplace social context (Kleine *et al.*, 2019). Supporting this view, the literature has shown that high-quality LMX leads employees to perceive more empowerment, volition and autonomy at work (Gómez and Rosen, 2001); allows them to gain more trust, respect and support from the leader (Martin *et al.*, 2016); and helps them obtain meaningful and positive feedback (Cogliser *et al.*, 2009). Due to these attributes and functions associated with LMX, it could be well positioned as a contextual enabler in the overarching framework of IMHG. Also, gender roles prove to be salient in processes of developing and reacting to LMX (Bauer and Green, 1996; Kailasapathy *et al.*, 2014), echoing the traditional social role perspective that males and females differ in their relationship orientation (Cron *et al.*, 2009). Integrating these perspectives with the IMHG we contend that LMX feeds psychological nutrients for thriving to benefit WNB, a signal of positive human growth outcomes, and this process can vary with gender. We elaborate our reasoning in the following sections.

2.3 Thriving as a mediator between LMX and WNB

Linking LMX and thriving. In this section, we outline the origins of thriving and then suggest how thriving can be fostered by LMX. As mentioned earlier, thriving is underpinned by SDT (Deci and Ryan, 2000) but we highlight there are also parallels between LMX and SDT. Thriving is defined as a psychological state that denotes the joint experience of vitality and learning at work (Spreitzer *et al.*, 2005). Vitality captures the essence of feeling energised and being alive, while learning refers to a sense of growing via knowledge acquisition and utilisation. It is important to highlight that as a state construct, thriving is “socially-embedded” and as such, is malleable in response to the changing contextual factors and resources at work.

Porath *et al.*'s (2012) seminal study found that thriving, being a state condition shaping several job and health-related outcomes, could result from various contextual settings. Over a one-month period the authors reported thriving fluctuated in response to changes in participants' work and non-work environment. Similarly, a one-week diary study identified that thriving increased when participants experienced meaning at work (Niessen *et al.*, 2012). It is not our intention to conduct a systematic review on the thriving literature, but we refer readers to a meta-analytic study of approximately 22,000 participants. Kleine *et al.* (2019) identified consistent evidence highlighting the effectiveness of relational resources in enabling employee thriving (Kleine *et al.*, 2019).

More recent theorising has redefined thriving in terms of the IMHG (Spreitzer and Porath, 2014), which argues the importance of three psychological needs (i.e. autonomy, competence and relatedness) underlying SDT to subsequently feed vitality and learning (Spreitzer and Porath, 2014). The successful application of the contextual enablers in the IMHG is consistent with the resources that are provided in high-quality LMX relationships. Leaders that develop high-quality relationships with their followers are in effect providing the opportunity for thriving. Participating in, and/or making the decisions, joining in open information sharing, receiving feedback to adjust performance, feeling supported during challenges at work contribute to mutual respect and trust; high-quality interpersonal relationships that underpin a well-functioning dyad or team (Liden *et al.*, 1977). These high-quality LMX relationships would seem to contribute to the development of a sense of autonomy, competence and relatedness, thereby demonstrating a close link between LMX and SDT (Deci and Ryan, 2000).

There is an emerging literature supporting the linkage between LMX and thriving. In a multi-level study of retail workers, Xu *et al.* (2019) reported a small-medium association between LMX and thriving ($r = 0.23$, $p < 0.001$). Paterson *et al.* (2014) reported that supervisors played a key role in creating a supportive work climate that predicted thriving and subsequently job performance, and Li (2015) reported thriving mediated the relationship between LMX and job performance. A meta-analytic study (Liu *et al.*, 2021) reported that several leadership styles were antecedents of thriving, but the association was strongest with LMX. Leadership is a pivotal enabler (Rego *et al.*, 2020) that creates and sustains high-quality relationships.

Linking Thriving and WNBW. We argue that employees' sense of thriving fostered by LMX will further help them achieve WNBW. Thriving has been associated with several positive health, work-related attitudes and task performance outcomes (Kleine *et al.*, 2019) but we are unaware of prior studies linking thriving and WNBW. Unlike such popular and explicit outcomes identified in the current thriving literature, WNBW extends the implications of workplace thriving beyond a bounded work context to acknowledge the potential consequences of thriving in domains outside work. Thriving was originally conceived in terms of being socially embedded in relationships at work (Spreitzer *et al.*, 2005). However, the work setting is one component of a broader social system that includes the non-work domain (Ten Brummelhuis and Bakker, 2012). The interface between the work and non-work domains is permeable, and this suggests that resources and challenges across the social systems can be exchanged. We contend that the benefits of thriving at work can equally be transmitted to the non-work domain.

The innate tendency for psychological growth (Deci and Ryan, 2000) suggests that people who are thriving are active participants in shaping their social environment. As active participants, thriving individuals aim to develop high-quality relational links with their leaders and peers, they seek to develop their knowledge and seek opportunities for continued development (Spreitzer *et al.*, 2005). These types of behaviours allow individuals to develop confidence, strategic skills in prioritising their issues and problem solving. The fact that thriving is embedded in a social system suggests that the resources acquired via thriving

have the potential to generalise to the non-work domain. SDT proposes that the motivation to grow, allows individuals to acquire energy via purposeful self-regulation which can be vitalising (Spreitzer and Porath, 2014). The tenets of SDT are not restricted to the work environment but apply to the broader social system.

There is some evidence in the literature that resources and skills acquired in one domain are transferable to the other domain to meet respective challenges (Greenhaus and Powell, 2006). For example, the contextual resources acquired from family supportive supervisors were shown to be linked with work–family enrichment and then thriving (Russo *et al.*, 2018). Similarly, Ren *et al.* (2022) reported that family support led to family–work enrichment which in turn, predicted thriving. In addition to these studies which showcase the impact of family domains on workplace experiences, empirical research has just emerged to suggest that thriving at work can positively affect one’s life satisfaction (e.g. Zhai *et al.*, 2020). Coupled with Spreitzer and Porath’s (2014) theoretical emphasis on the benefits of thriving beyond employees’ specific work settings, this emerging evidence has consolidated the view that workplace thriving may help individuals achieve a positive, balanced interface between work and nonwork areas (e.g. Xu *et al.*, 2020).

To summarise our discussion so far, we argued that LMX is an antecedent for thriving. LMX is a key enabler providing the necessary resources to allow followers to develop the necessary personal and intellectual resources to thrive at work. We then proposed that people that thrive are growing psychologically and responding in ways that allow them to maintain a balanced status between work and nonwork domains. On this basis, we posit that thriving is the mediator that links LMX with WNBW.

H1. The relationship between LMX and WNBW is mediated by thriving at work.

2.4 Moderating role of gender linking LMX and thriving

A central principle of LMX theory is the notion that leaders form differential relationships with followers and the impact of LMX diversifies across different population groups (Martin *et al.*, 2016). LMX is essentially a relationship-based construct and those who place greater importance on socialisation and relationship in the workplace, are more inclined to value LMX (Son *et al.*, 2014).

Social role theory would suggest that through socialisation and the development of gender roles, men and women perpetuate the division of labour along stereotypical lines such that males are the primary family earners and reflect agentic qualities such as competitiveness and assertiveness. In contrast, female roles are characterised by communal and caring qualities (Eagly and Wood, 2016; Parry *et al.*, 2021). Consistent with these gender role expectations, females are likely to be motivated and energized in situations where personal relationships with others are effective and salient (Jiang and Hu, 2016). A main reason is that females are usually believed to be more interpersonally sensitive than males (Briton and Hall, 1995) and tend to be more psychologically reactive to interpersonal relationships at work (e.g. Jiang and Hu, 2016).

In keeping with the idea of gender differences there is also evidence to support a preference for distinct leadership styles. Males are considered to favour autocratic or task-focused leadership styles, while women favour interpersonal styles (Eagly *et al.*, 2003). Based on a study that employed LMX, Collins *et al.* (2014) reported women responded more favourably when leaders were focused on communal behaviour, but no gender differences were found for agentic or task-focused behaviours. Other studies have reported that women favour leadership styles that are participative and democratic (Tziner *et al.*, 2020). This logic that gender differences exist in leadership preferences has some implications for how males and females may react to LMX. In line with the gender role perspective (Eagly *et al.*, 2003; Eagly and Wood, 2016), it might be more likely that females, who are usually more sensitive

to interpersonal qualities, will benefit more from LMX to be fuelled with the nutriments of thriving (i.e. learning and vitality). In contrast, males care relatively less about relationship-driven leadership styles (Tziner *et al.*, 2020) and may not respond to LMX as strongly as females. This line of reasoning would suggest that LMX might be more likely to enable females than males to thrive at work. Accordingly, we propose:

- H2. The relationship between LMX and thriving at work is moderated by gender, such that this relationship is more positive for females than for males.

Our earlier theorization indicates that LMX can potentially enable employee thriving, which in turn would foster WNBW (Hypothesis 1). We have also suggested that gender would diversify one's reliance on LMX to thrive at work (Hypothesis 2). The combination of these mediation and moderation effects indicates a potential conditional indirect effect (Hayes, 2013), which denotes that the thriving-mediated relationship between LMX and WNBW varies with gender. Considering our prediction that females may more strongly react to LMX than males, we expect there will be a stronger indirect effect of LMX on WNBW via thriving among females. This leads us to state our third hypothesis.

- H3. Gender moderates the indirect effect of LMX on WNBW via thriving at work, such that this indirect effect is more positive for females than for males.

3. Method

3.1 Participants and procedures

All student nurses ($n = 892$) undertaking a clinical placement at an Australian university were invited to participate in the study. Data were collected from six cohorts across two semesters given the staggered nature of the placements. Placements were held across a variety of health-care settings, but mostly in hospitals in multiple locations.

Participants received an email one-week prior to the end of their placement to ensure responses were based on their immediate experience. The invitation set out the purpose of the study, assured participants their involvement was voluntary, confidential and anonymous, and contained a weblink to access the survey. Participants were offered a one-in-five chance to obtain movie tickets as an incentive and they provided informed consent prior to completing the survey.

The final sample consisted of 522 participants (59% response rate) and 95% were female. Mean age was 33 years ($SD = 10.55$) and age did not differ by gender ($p = 0.79$). Two-thirds of the sample were partnered and 59% were full-time students. Almost half the sample (48%) did not have children under 18 years of age living at home. The mean number of children in the sample was 1.18 ($SD = 1.39$). These participants were non-traditional students that represent a cohort of mature adults juggling study, parenting, work and placement. These characteristics make them a suitable sample for studying WNBW.

3.2 Measures

Participants provided demographic information and completed the following scales.

Leader-member exchange (LMX) ($\alpha = 0.89$). We used the twelve-item scale developed by Liden and Maslyn (1998). A sample item is: "My supervisor is the kind of person one would like to have as a friend". Responses ranged from 1 = strongly disagree to 7 = strongly agree. Respondents rated the person that supervised their clinical placement.

Thriving ($\alpha = 0.91$) was measured using the ten-item scale developed by Porath *et al.* (2012). A sample item from the learning sub-scale is: "I found myself learning often" and a sample item from the vitality sub-scale is: "I had energy and spirit". Responses ranged from 1 = strongly disagree, 7 = strongly agree.

Work–nonwork balance ($\alpha = 0.94$) was assessed using five items from Valcour (2007). For example, participants were asked about their satisfaction with “*The way you divide your time between work and personal or family life*”. Responses were recorded using a five-point scale: 1 = very dissatisfied, 5 = very satisfied.

Control variables. We included several variables related to WNWB (Tummers and Bronkhorst, 2014). Age, weekly paid working hours and the number of children under 18 years of age living at home were entered as continuous variables. We also used three categorical variables: gender (0 = men, 1 = women), marital status (0 = single, 1 = partnered) and study pattern (0 = part-time, 1 = full-time).

3.3 Data analyses

We conducted confirmatory factor analysis (CFA, AMOS V.26) to assess the construct validity of the hypothesized three-factor model (Figure 1). To conduct the CFA, we retained the five WNWB items as latent indicators of the construct and item parcelling to define the thriving and LMX factors. Item parcelling reduces the number of parameters being estimated and creates a parsimonious model (Little *et al.*, 2002). For thriving, we combined the five items from the learning and vitality sub-scales to create two item parcels and we created three item parcels for the LMX scale by randomly assigning the items.

To test the hypotheses, we employed hierarchical regression (SPSS V.26) and Hayes’ PROCESS macro (V3.5.3). Model 4 tested the indirect effect of LMX on WNWB via thriving, and Model 7 tested the moderated-mediation analysis. The presence of an indirect effect requires three conditions to be met; (1) the predictor (LMX) is significantly related to the mediator (thriving), (2) the mediator is significantly related to the dependent variable (WNWB) and (3) the product of these two relationships is significant (Zhao *et al.*, 2010). Analyses were conducted with confidence intervals (CI) set at 95% and 5,000 bootstrap samples. CIs that do not include zero are considered significant. Bootstrapping is considered a robust approach for testing mediation effects and dispenses with concerns whether data are normally distributed (Shrout and Bolger, 2002).

4. Results

Descriptive statistics and correlations for the study variables can be found in Table 1. The correlation matrix shows there are some associations between the demographic variables, but none are significantly related to LMX, thriving or WNWB. LMX is related to thriving (0.39, $p < 0.001$) and WNWB (0.16, $p < 0.001$). Thriving is related to WNWB (0.27, $p < 0.001$).

4.1 Measurement model

The results suggested the three-factor model fitted the data well ($\chi^2 = 129.98$, $df = 40$, $p = 0.001$; CFI = 0.98; RMSEA = 0.07 [90% CI 0.05 to 0.08]; SRMR = 0.04). In comparison, the single-factor model was a poor fit of the data ($\chi^2 = 1,581.47$, $df = 34$, $p = 0.001$; CFI = 0.61; RMSEA = 0.30 [90% CI 0.28 to 0.31] SRMR = 0.21). The results lend initial support that common method variance (CMV) may not have a major impact in our dataset.

4.2 Common method variance (CMV)

For a more rigorous test of CMV, we adopted an advanced procedure grounded in structural equation modelling (Williams *et al.*, 2010), to perform an ad hoc marker variable analysis. We followed prior researchers’ (e.g. Soo *et al.*, 2017) practice to identify an appropriate variable as a proxy marker; one that is unrelated or weakly related to the core study variables (e.g. Cooper *et al.*, 2020). Following this principle, we identified “year of study” as an ad hoc marker variable.

	Mean	SD	1	2	3	4	5	6	7	8
1. Age	33.00	10.55								
2. Weekly working hours	19.03	14.48	0.13**							
3. No. of children under 18	1.18	1.39	0.26**	0.26**						
4. Single vs Partnered	0.66	0.47	0.38**	0.07	0.35**					
5. Study pattern	0.59	0.49	0.38**	-0.20**	-0.15**	0.20**				
6. Gender	0.95	0.22	-0.02	-0.06	0.00	0.03	-0.14**			
7. Leader-member exchange	5.82	0.84	-0.04	0.03	0.01	-0.09*	0.01	0.04		
8. Thriving	6.02	0.77	0.03	0.02	0.02	-0.06	0.05	0.03	0.39**	
9. Work-Nonwork Balance	3.44	0.84	0.05	0.06	-0.01	-0.05	-0.01	-0.03	0.16**	0.27**
Note(s): Single versus partnered: single = 0 and partnered = 1. Study pattern: part time = 0 and full time = 1. Gender: male = 0 and female = 1										
* <i>p</i> < 0.05, ** <i>p</i> < 0.001										

Table 1.
Descriptive
statistics and
correlations (*n* = 522)

Consistent with Williams *et al.* (2010), we tested five nested CFA models. Model 1 is a CFA model, containing the three core variables (LMX, thriving and WNWB) and the marker variable (year of study). Since year of study had only one indicator for the latent variable, its factor loading was fixed at one and error variance was fixed at zero (Loehlin, 2004). Model 2 is a baseline CFA model, in which the three core variables are correlated but the marker variable is not correlated to the core variables. The marker variable's factor loadings and error variance remained the same as Model 1. Model 3, named Method-C model, added to Model 2 additional paths from the marker variable to each indicator of the three latent core variables; these paths' factor loadings were specified to be equal. Model 4, named Method-U model, removed constraints from Model 3 and allowed the factor loadings, which were associated with the paths from the marker variable to indicators of core variables, to vary. Model 5, named Method-R model, was equivalent to the better of Model 3 and Model 4, while also fixing the correlations among core variables using the values obtained from Model 2 (the baseline model). The principle is that if Model 5 does not have a significantly better fit than Model 3 or Model 4 (depending on which has a better fit), it is less likely that CMV would impact the study results (Williams *et al.*, 2010).

Results showed no significant differences in terms of model fit between Model 3 (Method-C model) ($\chi^2 = 166.55$, $df = 41$, $p = 0.000$; CFI = 0.97; RMSEA = 0.08 [90% CI 0.06 to 0.09]; SRMR = 0.037) and Model 2 (baseline model) ($\chi^2 = 166.55$, $df = 42$, $p = 0.000$; CFI = 0.97; RMSEA = 0.08 [90% CI 0.06 to 0.09]; SRMR = 0.037); $\Delta\chi^2 = 0.005$, $\Delta df = 1$, $p = 0.945$. These results initially suggest that CMV might not be a significant issue. Our further model comparison demonstrated that Model 3 (Method-C model) was significantly better than Model 4 (Method-U model) in term of model fit ($\chi^2 = 403.69$, $df = 33$, $p = 0.000$; CFI = 0.91; RMSEA = 0.15 [90% CI 0.13 to 0.16]; SRMR = 0.123); $\Delta\chi^2 = 237.14$, $\Delta df = 8$, $p = 0.000$. Thus, Model 3 was compared against Model 5 (Method-R model). Our findings suggested that Model 5 ($\chi^2 = 166.55$, $df = 44$, $p = 0.000$; CFI = 0.97; RMSEA = 0.07 [90% CI 0.06 to 0.09]; SRMR = 0.037) was not a significantly better fit than Model 3; $\Delta\chi^2 = 0.000$, $\Delta df = 3$, $p = 1.000$. As such, our empirical results were less likely to be distorted by CMV.

4.3 Hypothesis testing

Regression results can be found in Table 2. LMX was significantly related with thriving (Model 1: $\beta = 0.35$, $SE = 0.04$, $p = 0.000$). Model 2 shows that thriving was a significant predictor of WNWB ($\beta = 0.26$, $SE = 0.05$, $p = 0.000$). Results from PROCESS demonstrated that the 95% bias-corrected CI for the indirect effect of LMX on WNWB via thriving did not include zero, indicating the indirect effect was significant ($\beta = 0.09$, $SE = 0.02$, CI = [0.05, 0.13]). These results supported Hypothesis 1.

Hierarchical regression was used to investigate Hypotheses 2; the moderating role of gender in the relationship between LMX and thriving. The results found a significant interaction between LMX and gender on thriving (Model 3: $\beta = 0.48$, $SE = 0.17$, $p = 0.004$). The interaction effect was plotted in Figure 2. Simple slope analysis suggested that the effect of LMX on thriving was positive and significant for females (simple slope = 0.37, $t = 9.77$, $p = 0.000$) than for males (simple slope = -0.11, $t = -0.682$, $p = 0.495$). Thus, Hypothesis 2 was supported.

Building on Hypothesis 1, which demonstrated an indirect effect of LMX on WNWB via thriving and Hypothesis 2, which evidenced that gender moderated the path between LMX and thriving, we continued to test Hypothesis 3. Results from PROCESS Model 7 showed that the conditional indirect effect of LMX on WNWB via thriving was significant for females ($\beta = 0.10$, $SE = 0.02$, CI = [0.06, 0.14]) but not for males ($\beta = -0.03$, $SE = 0.06$, CI = [-0.14, 0.10]). The index of moderated mediation was significant ($\beta = 0.13$, $SE = 0.60$, CI = [0.01, 0.25]). These results indicated that thriving was more likely to mediate between LMX and WNWB for females than for males, supporting Hypothesis 3.

	Mediation			Moderation		
	Model 1 (Mediator: Thriving)	Model 2 (Outcome: WNBW)	Model 3 (LMX × gender → thriving)			
	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>
Constant	3.68***	0.29	0.000	1.50***	0.38	0.000
Demographic Variables						
Age	0.01	0.00	0.131	0.00	0.00	0.281
Work hours	0.00	0.00	0.514	0.00	0.00	0.280
No. of children under 18	0.02	0.03	0.396	0.00	0.03	0.912
Single vs Partnered	−0.09	0.08	0.225	−0.09	0.09	0.279
Study pattern	0.10	0.07	0.137	−0.00	0.08	0.669
Gender	0.11	0.14	0.444	−0.13	0.16	0.423
LMX	0.35***	0.04	0.000	0.06	0.05	0.181
Thriving				0.26***	0.05	0.000
LMX × Gender						0.48**
<i>R</i> ²	0.16***		0.000	0.08***		0.000
Δ <i>R</i> ²						0.01***

Indirect effect of LMX on WNBW via thriving at work

	Boot B	Boot SE	95% bias-corrected CI
LMX → thriving → WNBW	0.09	0.02	[0.05, 0.13]

Note(s): LMX = Leader-member exchange; WNBW = work–nonwork balance. Single vs partnered: single = 0 and partnered = 1. Study pattern: part time = 0 and full time = 1. Gender: male = 0 and female = 1. Moderation: Model 1 represents Step 1 and Model 3 represents Step 2 of the hierarchical regression for the interaction effect of LMX and gender on thriving. Unstandardized coefficients are reported. Indirect effect was tested based on 5,000 bootstrap samples

^a relative to Model 1 (Step 1)

p* < 0.01, *p* < 0.001

Table 2.
Hierarchical and
moderated regression
analyses

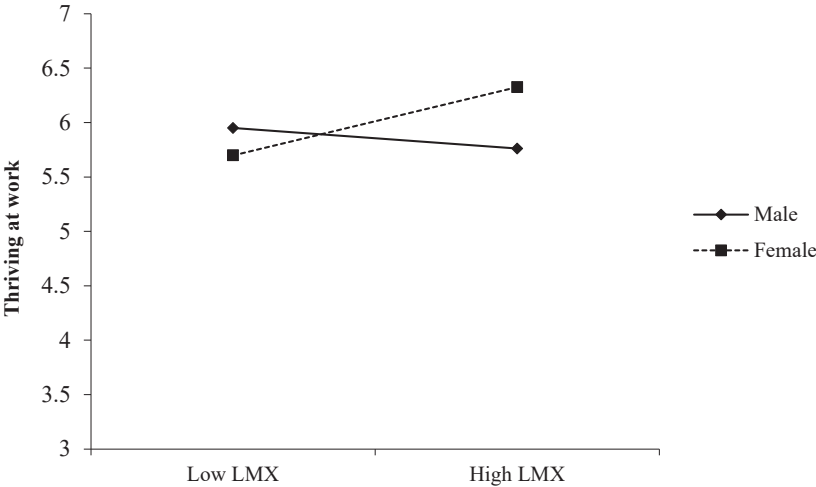


Figure 2.
The interaction effect
of leader-member
exchange (LMX) and
gender on thriving
at work

5. Discussion

In this study we brought together the LMX (Liden and Maslyn, 1998) and thriving (Spreitzer *et al.*, 2005) literature to predict WNWB. We proposed that the accrued benefits from a high-quality LMX relationship would enhance thriving, and that the skills and knowledge generated from thriving at work are transferable to the non-work environment. In addition, we proposed that this indirect relationship would be more positive for females than for males given the nature of LMX relationships and the implication of social role theory on gender differences in leadership preferences (Eagly and Wood, 2016). Our results provided support for these arguments. We discuss the theoretical and practical implications of these findings and conclude by noting the limitations of our study, and future research endeavours.

5.1 Theoretical contribution

The first contribution of this study is that we draw closer links between LMX (Dansereau *et al.*, 1975) and the SDT (Deci and Ryan, 2000) literature to extend empirical literature focused on LMX and work–life/family interactions (e.g. French *et al.*, 2018; Litano *et al.*, 2016; Russo *et al.*, 2018). Most prior studies in this area have investigated LMX as an antecedent in the studies of work–family interface with a focus on work–family facilitation and conflict (e.g. Culbertson *et al.*, 2009) and work interface with family (e.g. Litano *et al.*, 2016). Our study extends this line of work to broaden the focus to WNWB, which potentially captures aspects outside of family, work and other professional domains (e.g. education). The LMX–WNWB relationship is hinted at in the IMHG framework (Spreitzer and Porath, 2014) and we now make explicit. High-quality LMX relationships are mutually beneficial. From the follower’s perspective they receive a variety of relational, intellectual and emotional resources that provide them with opportunities to grow and develop as capable employees. The resources provided from high-quality LMX relationships run parallel with the antecedents in the IMHG (Spreitzer and Porath, 2014) that are considered as contextual enablers of performance. Involvement in decision making, the sharing of information with a supervisor, a relationship that fosters a sense of climate of trust and respect based on honesty and feedback and being supported in a turbulent environment are resources that create the three key conditions for human growth: autonomy, competence and relatedness (Deci and Ryan, 2000). These three characteristics are necessary to fuel thriving (Porath *et al.*, 2012). In bringing the LMX (Dansereau *et al.*, 1975) and SDT (Deci and Ryan, 2000) literature together we contribute to a better understanding of the importance of leadership in sponsoring thriving at work (Spreitzer and Hwang, 2019) and subsequently in enabling WNWB. In doing so, we also add to the emerging studies that link LMX and thriving. Xu *et al.* (2019) found a smaller association between these variables ($r = 0.23$, $p = 0.001$) whereas our results show a moderate correlation between LMX and thriving ($r = 0.39$, $p = 0.001$). These results provide further evidence that LMX is an antecedent in fostering employee thriving.

A second contribution from our study is the finding that gender acted as a significant moderator in the path between LMX and thriving and subsequently, the indirect effect with WNWB. Specifically, the relationship between LMX and thriving was more positive for females. We hypothesised the relationship may be explained by sex role theory and a preference among females for interpersonal forms of leadership (Eagly *et al.*, 2003). While our results are largely consistent with our predictions, these results were grounded in nurse interns who were dominated by females. As such, we encourage future studies to draw on population-based samples to avoid occupation and gender bias to confirm our findings.

Arguably, the main and novel contribution of this study is that we advance both the thriving (Spreitzer and Porath, 2014) and the WNWB literature (Casper *et al.*, 2018; Hammer *et al.*, 2016). To date, the literature has focused on the benefits of thriving in explaining job-related outcomes (Jiang *et al.*, 2020; Kleine *et al.*, 2019) but in demonstrating that thriving predicts WNWB, our results suggest thriving has potential to explain other phenomena in the social system. While boundary theory (Ashforth *et al.*, 2000) would suggest that some people

are better able to separate their work and non-work responsibilities, this distinction is to some extent artificial. The notion that the social systems of work and non-work interact such that they influence each other is increasingly recognised (Ten Brummelhuis and Bakker, 2012). For example, Ren and her colleagues (2021) reported that family-work conflict and family-work enrichment predicted thriving at work.

We add to the non-work literature in two ways. First, we add to the evidence suggesting leadership can positively facilitate WNWB (Litano *et al.*, 2016; Russo *et al.*, 2018). Our results suggest the benefits of a high-quality LMX relationship allows individuals to thrive and that, the intellectual and emotional resources accruing from this relationship were transferred to the non-work setting. Second, we identified thriving as a construct that may extend benefits into the nonwork domain. Several dispositional trait-like constructs such as self-efficacy and negative affect have previously been found to be linked with WNWB, but unlike these constructs, thriving is considered a psychological state (Spreitzer and Porath, 2014) that varies in response to the subjective experience of vitality and growth. The opportunities presented to thrive at work appear to provide individuals with the strategies, tools and knowledge to manage their non-work environment.

5.2 Practical implications

In today's pressured work environments, the results from this study have important implications for human resource management (HRM). Based on our finding that LMX enables employee thriving, which in turn fosters WNWB, we suggest organisations should invest in leadership programs that facilitate thriving at work. While we employed LMX, other literature has reported associations between thriving and other leadership styles, such as transformational (Hildenbrand *et al.*, 2018) and servant leadership (Walumbwa *et al.*, 2018), which tends to foster high-quality LMX. What seems important are forms of leadership that provide relational and supportive resources such that they fuel employees to develop a sense of autonomy, competence and relatedness (Deci and Ryan, 2000) to enable thriving (Spreitzer *et al.*, 2005).

Situating our findings in broader HRM contexts, we suggest that employers may implement targeted management and HRM practices to facilitate the development of thriving, in addition to focusing on the leadership (LMX) itself. A better job (re)design might be an option. For example, Jiang and his colleagues (2020) reported that jobs with task identity and autonomy led to thriving and subsequently, job satisfaction. This suggests that it might be useful that managers to initiate practices which enable these motivational job characteristics to be featured in work design.

An extended implication for HRM is to reconsider their working from home policies. The popular press describes working from home as the “new normal” in response to COVID-19 but a review across nine countries and 800 jobs by McKinsey Consulting suggests working from home will primarily continue among the educated and well-paid workforce (Lund *et al.*, 2020). Nonetheless, the continued blurring of the work non-work boundary requires organisations to rethink how to sustain supportive forms of leadership that allow thriving to be sustained in the workplace. For example, Chaundhry and Rosenbloom (2021) suggested, employers may focus on three strategies to enable employees to thrive and flourish in the new normal: recalibrate expectations, re-establish commitment and rebuild capacity.

5.3 Limitations and future research directions

The results need to be considered in the context of some limitations; these limitations serve as features to be addressed in future studies. First, we collected cross-sectional data and this design precludes causal inferences from the findings. Our explanation of the direction of relationships among variables is mainly driven by theory than by empirical data. Future

studies should employ cross-lagged, or longitudinal designs to capture the causal chain embedded in our research model.

A second limitation is that the data is self-reported, and this raises potential the data is tainted by CMV (Podsakoff *et al.*, 2012). We partially addressed this issue statistically. Model fit of our hypothesized three-factor model was superior to alternative models and the use of the “marker variable” technique (Soo *et al.*, 2017; Williams *et al.*, 2010) also suggested the results may not be influenced by CMV. Also, some researchers (Podsakoff *et al.*, 2012; Siemsen *et al.*, 2010) generally believe that CMV does not affect interaction effects, and thus the moderating role of gender detected in our study is less likely to be driven by CMV. However, it is important we highlight that self-report data is entirely appropriate in measuring two of our core variables. Perceptions of thriving and WNWb are subjective responses to an individual’s dynamic environment. Both constructs cannot be objectively measured.

Finally, we used an undergraduate sample that were undertaking a work placement. While the practicum is typical of a work setting, participants were not actual employees. On the other hand, we underline our sample consisted of older adults ($M = 33$ years) with work and life experiences; two-thirds were partnered, and half the sample were parents. A related limitation may be that our sample was 95% female. The bias is perhaps unavoidable given nursing remains a profession dominated by females. Estimates suggest females make up 88% of the Australian nursing workforce (Nursing and Midwifery Board, 2021).

References

- Allen, T.D. and Martin, A. (2017), “The Work-Family Interface: a retrospective look at 20 years of research in JOHP”, *Journal of Occupational Health Psychology*, Vol. 22, pp. 259-272, doi: [10.1037/ocp0000065](https://doi.org/10.1037/ocp0000065).
- Allen, T.D., Johnson, R.C., Saboe, K.N., Cho, E., Dumani, S. and Evans, S. (2012), “Dispositional variables and work-family conflict: a meta-analysis”, *Journal of Vocational Behavior*, Vol. 80, pp. 17-26, doi: [10.1016/j.jvb.2011.04.004](https://doi.org/10.1016/j.jvb.2011.04.004).
- Ashforth, B.E., Kreiner, G.E. and Fugate, M. (2000), “All in a day’s work: boundaries and micro role transitions”, *Academy of Management Review*, Vol. 25, pp. 472-491, doi: [10.5465/amr.2000.3363315](https://doi.org/10.5465/amr.2000.3363315).
- Australian Bureau of Statistics (2021), “Changing female employment over time”, available at: <https://www.abs.gov.au/articles/changing-female-employment-over-time> (accessed 9 September 2021).
- Bauer, T.N. and Green, S.G. (1996), “Development of leader-member exchange: a longitudinal test”, *Academy of Management Journal*, Vol. 39 No. 6, pp. 4538-1567, doi: [10.5465/257068](https://doi.org/10.5465/257068).
- Briton, N.J. and Hall, J.A. (1995), “Beliefs about female and male nonverbal communication”, *Sex Roles*, Vol. 32 Nos 1-2, pp. 79-90, doi: [10.1007/BF01544758](https://doi.org/10.1007/BF01544758).
- Casper, W.J., Vaziri, H., Wayne, J.H., DeHauw, S. and Greenhaus, J. (2018), “The jingle-jangle of work-nonwork balance: a comprehensive and meta-analytic review of its meaning and measurement”, *Journal of Applied Psychology*, Vol. 103, pp. 182-214, doi: [10.1037/apl0000259](https://doi.org/10.1037/apl0000259).
- Chaundhry, A. and Rosenbloom, A. (2021), “3 strategies to help employees thrive in the ‘new normal’”, *Harvard Business Review*, available at: <https://hbr.org/2021/11/3-strategies-to-help-employees-thrive-in-the-new-normal> (accessed 26 November).
- Cogliser, C.C., Schriesheim, C.A., Scandura, T.A. and Gardner, W.L. (2009), “Balance in leader and follower perceptions of leader-member exchange: relationships with performance and work attitudes”, *The Leadership Quarterly*, Vol. 20 No. 3, pp. 452-465, doi: [10.1016/j.leaqua.2009.03.010](https://doi.org/10.1016/j.leaqua.2009.03.010).
- Collins, B.J., Burrus, C.J. and Meyer, R.D. (2014), “Gender differences in the impact of leadership styles on subordinate embeddedness and job satisfaction”, *The Leadership Quarterly*, Vol. 25, pp. 660-671, doi: [10.1016/j.leaqua.2014.02.003](https://doi.org/10.1016/j.leaqua.2014.02.003).

- Cooper, B., Eva, N., Fazlelahi, F.Z., Newman, A., Lee, A. and Obschonka, M. (2020), "Common method variance in vocational behavior research: reviewing the state of the literature", *Journal of Vocational Behavior*, Vol. 121, 103472, doi: [10.1016/j.jvb.2020.103472](https://doi.org/10.1016/j.jvb.2020.103472).
- Cron, W.L., Gilly, M.C., Graham, J.L. and Slocum, J.W. Jr (2009), "Gender differences in the pricing of professional services: implications for income and customer relationships", *Organizational Behavior and Human Decision Processes*, Vol. 109 No. 1, pp. 93-105, doi: [10.1016/j.obhdp.2008.11.004](https://doi.org/10.1016/j.obhdp.2008.11.004).
- Culbertson, S.S., Huffman, A.H. and Alden-Anderson, R. (2009), "Leader-member exchange and work-family interactions: the mediating role of self-reported challenge-and hindrance-related stress", *The Journal of Psychology*, Vol. 144 No. 1, pp. 15-36, doi: [10.1080/00223980903356040](https://doi.org/10.1080/00223980903356040).
- Dansereau, F., Graen, G. and Haga, W. (1975), "A vertical dyad approach to leadership within formal organizations", *Organizational Performance and Human Performance*, Vol. 13, pp. 46-78, doi: [10.1016/0030-5073\(75\)90005-7](https://doi.org/10.1016/0030-5073(75)90005-7).
- Deci, E.L. and Ryan, R.M. (2000), "The 'what' and 'why' of goal pursuits: human needs and the self-determination of behavior", *Psychological Inquiry*, Vol. 11 No. 4, pp. 227-268, doi: [10.1207/S15327965PLI1104_01](https://doi.org/10.1207/S15327965PLI1104_01).
- Eagly, A.H. and Wood, W. (2016), "Social role theory of sex differences", in, Wong, A., Wickramasinghe, M., Hoogland, T. and Naples, N.A. (Eds), *The Wiley Blackwell Encyclopedia of Gender and Sexuality Studies*, doi: [10.1002/9781118663219.wbegss183](https://doi.org/10.1002/9781118663219.wbegss183).
- Eagly, A.H., Johannesen-Schmidt, M.C. and van Engen, M.L. (2003), "Transformational, transactional, and laissez-faire leadership styles: a meta-analysis comparing men and women", *Psychological Bulletin*, Vol. 129, pp. 569-591, doi: [10.1037/0033-2909.129.4.569](https://doi.org/10.1037/0033-2909.129.4.569).
- French, K.A., Dumani, S., Allen, T.D. and Shockley, K.M. (2018), "A meta-analysis of work-family conflict and social support", *Psychological Bulletin*, Vol. 144, pp. 284-314, doi: [10.1037/bul0000120](https://doi.org/10.1037/bul0000120).
- Gómez, C. and Rosen, B. (2001), "The leader-member exchange as a link between managerial trust and employee empowerment", *Group and Organization Management*, Vol. 26 No. 1, pp. 53-69, doi: [10.1177/1059601101261004](https://doi.org/10.1177/1059601101261004).
- Greenhaus, J.H. and Beutell, N.J. (1985), "Sources of conflict between work and family roles", *The Academy of Management Review*, Vol. 10, pp. 76-88.
- Greenhaus, J.H. and Powell, G.N. (2006), "When work and family are allies: a theory of work-family enrichment", *The Academy of Management Review*, Vol. 31, pp. 72-92, doi: [10.2307/20159186](https://doi.org/10.2307/20159186).
- Hammer, L.B., Demsky, C.A., Kossek, E.E. and Bray, J.W. (2016), "Work-family intervention research", in, Allen, T.D. and Eby, L.T. (Eds), *The Oxford Handbook of Work and Family*, Oxford University Press, Oxford, pp. 349-361.
- Hayes, A.F. (2013), *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-based Approach*, Guilford Press, NY.
- Hildenbrand, K., Sacramento, C.A. and Binnewies, C. (2018), "Transformational leadership and burnout: the role of thriving and followers' openness to experience", *Journal of Occupational Health Psychology*, Vol. 23, pp. 31-43, doi: [10.1037/ocp0000051](https://doi.org/10.1037/ocp0000051).
- Hjálmsdóttir, A. and Bjarnadóttir, V.S. (2021), "'I have turned into a foreman here at home': families and work-life balance in times of COVID-19 in a gender equality paradise", *Gender Work and Organisation*, Vol. 28, pp. 268-283, doi: [10.1111/gwao.12552](https://doi.org/10.1111/gwao.12552).
- Jiang, Z. and Hu, X. (2016), "Knowledge sharing and life satisfaction: the roles of colleague relationships and gender", *Social Indicators Research*, Vol. 126 No. 1, pp. 379-394, doi: [10.1007/s11205-015-0886-9](https://doi.org/10.1007/s11205-015-0886-9).
- Jiang, Z., Di Milia, L., Jiang, Y. and Jiang, X. (2020), "Thriving at work: a mentoring-moderated process linking task identity and autonomy to job satisfaction", *Journal of Vocational Behavior*, Vol. 118, 103373, doi: [10.1016/j.jvb.2019.103373](https://doi.org/10.1016/j.jvb.2019.103373).
- Kailasapathy, P., Krammer, M.L. and Metz, I. (2014), "The interactive effects of leader-member exchange, gender and spouse's gender role orientation on work interference with family

- conflict", *The International Journal of Human Resource Management*, Vol. 25 No. 19, pp. 2681-2701, doi: [10.1080/09585192.2014.891637](https://doi.org/10.1080/09585192.2014.891637).
- Kleine, A.K., Rudolph, C.W. and Zacher, H. (2019), "Thriving at work: a meta-analysis", *Journal of Organizational Behaviour*, Vol. 40, pp. 973-999, doi: [10.1002/job.2375](https://doi.org/10.1002/job.2375).
- Leroy, S., Schmidt, A.M. and Majar, N. (2021), "Working from home during COVID-19: a study of the interruption landscape", *Journal of Applied Psychology*, Vol. 106, pp. 1448-1465, doi: [10.1037/apl0000972](https://doi.org/10.1037/apl0000972).
- Li, J. (2015), "The mediating roles of job crafting and thriving in the LMX employee outcomes relationship", *Japanese Journal of Administrative Science*, Vol. 28, pp. 39-51, doi: [10.5651/jaas.28.39](https://doi.org/10.5651/jaas.28.39).
- Liden, R.C. and Graen, G. (1980), "Generalizability of the vertical dyad linkage model of leadership", *Academy of Management Journal*, Vol. 23, pp. 451-465, doi: [10.2307/255511](https://doi.org/10.2307/255511).
- Liden, R.C. and Maslyn, J.M. (1998), "Multidimensionality of leader-member exchange: an empirical assessment through scale development", *Journal of Management*, Vol. 24, pp. 43-72, doi: [10.1016/S0149-2063\(99\)80053-1](https://doi.org/10.1016/S0149-2063(99)80053-1).
- Liden, R.C., Sparrowe, R.T. and Wayne, S. (1997), "Leader-member exchange theory: the past and potential for the future", *Research in Personnel and Human Resources Management*, Vol. 15, pp. 47-120.
- Litano, M.L., Major, D.A., Landers, R.N., Streets, V.N. and Bass, B.I. (2016), "A meta-analytic investigation of the relationship between leader-member exchange and work-family experiences", *The Leadership Quarterly*, Vol. 27, pp. 802-817, doi: [10.1016/j.leaqua.2016.06.003](https://doi.org/10.1016/j.leaqua.2016.06.003).
- Little, T.D., Cunningham, W.A., Shahar, G. and Widaman, K.F. (2002), "To parcel or not to parcel: exploring the question, weighing the merits", *Structural Equation Modelling*, Vol. 9, pp. 151-173, doi: [10.1207/S15328007SEM0902_1](https://doi.org/10.1207/S15328007SEM0902_1).
- Liu, D., Zhang, S., Wang, Y. and Yan, Y. (2021), "The antecedents of thriving at work: a meta-analytic review", *Frontiers in Psychology*. doi: [10.3389/fpsyg.2021.659072](https://doi.org/10.3389/fpsyg.2021.659072).
- Loehlin, L.C. (2004), *Latent Variable Models: An Introduction to Factor, Path, and Structural Equation Analysis*, Lawrence Erlbaum Associates, Mahwah, NJ.
- Lund, S., Madgavkar, A., Manyika, J. and Smit, S. (2020), What's next for remote work: an analysis of 2000, tasks, 800 jobs and nine countries, *McKinsey Global Institute*. available at: https://www.mckinsey.com/~/media/mckinsey/featured%20insights/future%20of%20organizations/whats%20next%20for%20remote%20work%20an%20analysis%20of%202000%20tasks%20800%20jobs%20and%20nine%20countries/whats_next_for_remote_work_f.pdf?shouldIndex=false (accessed 14 November 2021).
- Major, D.A. and Morganson, V.J. (2011), "Coping with work-family conflict: a leader-member exchange perspective", *Journal of Occupational Health Psychology*, Vol. 16, pp. 126-139, doi: [10.1037/a0021727](https://doi.org/10.1037/a0021727).
- Martin, R., Guillaume, Y., Thomas, G., Lee, A. and Epitropaki, O. (2016), "Leader-member exchange (LMX) and performance: a meta-analytic review", *Personnel Psychology*, Vol. 69, pp. 67-121, doi: [10.1111/peps.12100](https://doi.org/10.1111/peps.12100).
- Niessen, C., Sonnentag, S. and Sach, F. (2012), "Thriving at work—a diary study", *Journal of Organizational Behavior*, Vol. 33, pp. 468-487, doi: [10.1002/job.763](https://doi.org/10.1002/job.763).
- Nursing and Midwifery Board (2021), "Statistics", available at: <https://www.nursingmidwiferyboard.gov.au/about/statistics.aspx> (accessed 13 November 2021).
- Odle-Dusseau, H.N., Hammer, L.B., Crain, T.L. and Bodner, T.E. (2016), "The influence of family-supportive supervisor training on employee job performance and attitudes: an organizational work-family intervention", *Journal of Occupational Health Psychology*, Vol. 21, pp. 296-308, doi: [10.1037/a0039961](https://doi.org/10.1037/a0039961).

- Organisation for Economic Co-operation and Development (2020), "Better life index", available at: <https://www.oecdbetterlifeindex.org/topics/work-life-balance/> (accessed 9 September 2021).
- Paterson, T.A., Luthans, F. and Jeung, W. (2014), "Thriving at work: impact of psychological capital and supervisor support", *Journal of Organizational Behaviour*, Vol. 35, pp. 434-446, doi: [10.1002/job.1907](https://doi.org/10.1002/job.1907).
- Parry, J., Brookfield, K. and Bolton, V. (2021), "'The long arm of the household': gendered struggles in combining paid work with social and civil participation over the lifecourse", *Gender, Work and Organization*, Vol. 28, pp. 361-378, doi: [10.1111/gwao.12569](https://doi.org/10.1111/gwao.12569).
- Podsakoff, P., MacKenzie, S. and Podsakoff, N. (2012), "Sources of method bias in social science research and recommendations on how to control it", *Annual Review of Psychology*, Vol. 63, pp. 539-569, doi: [10.1146/annurev-psych-120710-100452](https://doi.org/10.1146/annurev-psych-120710-100452).
- Porath, C., Spreitzer, G., Gibson, C. and Garnett, F.G. (2012), "Thriving at work: toward its measurement, construct validation, and theoretical refinement", *Journal of Organizational Behavior*, Vol. 33, pp. 250-275, doi: [10.1002/job.756](https://doi.org/10.1002/job.756).
- Rego, A., Cavazotte, F., Cunha, M.P.E., Valverde, C., Meyer, M. and Giustiniano, L. (2020), "Gritty leaders promoting employees thriving at work", *Journal of Management*, Vol. 47, pp. 1155-1184, doi: [10.1177/0149206320904765](https://doi.org/10.1177/0149206320904765).
- Reinwald, M., Zimmermann, S. and Kunze, F. (2021), "Working in the eye of the pandemic: local COVID-19 infections and daily employee engagement", *Frontiers in Psychology*, Vol. 12, 654126, doi: [10.3389/fpsyg.2021.654126](https://doi.org/10.3389/fpsyg.2021.654126).
- Ren, S., Babalola, M.T., Ogbonnaya, C., Hochwarter, W.A., Akemu, O. and Agyemang-Mintah, P. (2022), "Employee thriving at work: the long reach of family incivility and family support", *Journal of Organizational Behaviour*, Vol. 43 No. 1, pp. 17-35, doi: [10.1002/job.2559](https://doi.org/10.1002/job.2559).
- Russo, M., Buonocore, F., Carmeli, A. and Guo, L. (2018), "When family supportive supervisors meet employees' need for caring: implications for work-family enrichment and thriving", *Journal of Management*, Vol. 44, pp. 1678-1702, doi: [10.1177/014926315618013](https://doi.org/10.1177/014926315618013).
- Shrout, P.E. and Bolger, N. (2002), "Mediation in experimental and nonexperimental studies: new procedures and recommendations", *Psychological Methods*, Vol. 7 No. 4, pp. 422-445, doi: [10.1037/1082-989X.7.4.422](https://doi.org/10.1037/1082-989X.7.4.422).
- Siemsen, E., Roth, A. and Oliveira, P. (2010), "Common method bias in regression models with linear, quadratic, and interaction effects", *Organizational Research Methods*, Vol. 13 No. 3, pp. 456-476, doi: [10.1177/1094428109351241](https://doi.org/10.1177/1094428109351241).
- Son, S., Kim, D.Y. and Kim, M. (2014), "How perceived interpersonal justice relates to job burnout and intention to leave: the role of leader-member exchange and cognition-based trust in leaders", *Asian Journal of Social Psychology*, Vol. 17 No. 1, pp. 12-24, doi: [10.1111/ajsp.12038](https://doi.org/10.1111/ajsp.12038).
- Soo, C., Tian, A.W., Teo, S.T. and Cordery, J. (2017), "Intellectual capital-enhancing HR, absorptive capacity, and innovation", *Human Resource Management*, Vol. 56 No. 3, pp. 431-454, doi: [10.1002/hrm.21783](https://doi.org/10.1002/hrm.21783).
- Spreitzer, G.M. and Porath, C. (2014), "Self-determination as nutriment for thriving: building an integrative model of human growth at work", in: Gagne, M. (Ed.), *The Oxford Handbook of Work Engagement, Motivation and Self-Determination Theory*, Oxford University Press, doi: [10.1093/oxfordhb/9780199794911.001.0001](https://doi.org/10.1093/oxfordhb/9780199794911.001.0001).
- Spreitzer, G. and Hwang, E.B. (2019), "How thriving at work matters for creating psychologically healthy workplaces: current perspectives and implications for the new world of work", in: Burke, R.J. and Richardsen, A.M. (Eds), *Creating Psychologically Healthy Workplaces*, pp. 293-310, Elgaronline, doi: [10.4337/9781788113427](https://doi.org/10.4337/9781788113427).
- Spreitzer, G., Sutcliffe, K., Dutton, J., Sonenshein, S. and Grant, A. (2005), "A socially embedded model of thriving at work", *Organization Science*, Vol. 16, pp. 537-549, doi: [10.1287/orsc.1050.0153](https://doi.org/10.1287/orsc.1050.0153).
- Ten Brummelhuis, L. and Bakker, A. (2012), "A resource perspective on the work-home interface: the work-home resources model", *American Psychologist*, Vol. 67, pp. 545-556, doi: [10.1037/a0027974](https://doi.org/10.1037/a0027974).

- Timms, C., Brough, P., Siu, O.L., O'Driscoll, M. and Kalliath, T. (2015), "Cross-cultural impact of work-life balance on health and work outcomes", in, Lu, L. and Cooper, C.L. (Eds), *Handbook of Research on Work-Life Balance in Asia*, Edward Elgar Publishing, pp. 295-314, doi: [10.4337/9781783475094](https://doi.org/10.4337/9781783475094).
- Tummers, L.G. and Bronkhorst, B.A.C. (2014), "The impact of leader-member exchange (LMX) on work-family interference and work-family facilitation", *Personnel Review*, Vol. 43, pp. 573-591, doi: [10.1108/PR-05-2013-0080](https://doi.org/10.1108/PR-05-2013-0080).
- Tziner, A., Shkoler, O. and Fein, E.C. (2020), "Examining the effects of cultural value orientations, emotional intelligence, and motivational orientations: how do LMX mediation and gender-based moderation make a difference?", *Frontiers in Psychology*, doi: [10.3389/fpsyg.2020.502903](https://doi.org/10.3389/fpsyg.2020.502903).
- Valcour, M. (2007), "Work-based resources as moderators of the relationship between work hours and satisfaction with work-family balance", *Journal of Applied Psychology*, Vol. 92, pp. 1512-1523, doi: [10.1037/0021-9010.92.6.1512](https://doi.org/10.1037/0021-9010.92.6.1512).
- Vincent, G., Kinchin, K., Ferguson, S.A. and Jay, S.M. (2018), "The cost of inadequate sleep among on-call workers in Australia: a workplace perspective", *International Journal of Environmental Research and Public Health*, Vol. 15, p. 398, doi: [10.3390/ijerph15030398](https://doi.org/10.3390/ijerph15030398).
- Walumbwa, F.O., Muchiri, M.K., Misati, E., Wu, C. and Meiliani, M. (2018), "Inspired to perform: a multilevel investigation of antecedents and consequences of thriving at work", *Journal of Organizational Behavior*, Vol. 39, pp. 249-261, doi: [10.1002/job.2216](https://doi.org/10.1002/job.2216).
- Williams, L.J., Hartman, N. and Cavazotte, F. (2010), "Method variance and marker variables: a review and comprehensive CFA marker technique", *Organizational Research Methods*, Vol. 13 No. 3, pp. 477-514, doi: [10.1177/2F1094428110366036](https://doi.org/10.1177/2F1094428110366036).
- Xu, A., Loi, R. and Chow, C. (2019), "What threatens retail employees' thriving at work under leader-member exchange? The role of store spatial crowding and team negative affective tone", *Human Resource Management*, Vol. 58, pp. 371-382, doi: [10.1002/hrm.21959](https://doi.org/10.1002/hrm.21959).
- Xu, A.J., Loi, R. and Chow, C.W. (2020), "Can taking charge at work help hospitality frontline employees enrich their family life?", *International Journal of Hospitality Management*, Vol. 89, 102594, doi: [10.1016/j.ijhm.2020.102594](https://doi.org/10.1016/j.ijhm.2020.102594).
- Zhai, Q., Wang, S. and Weadon, H. (2020), "Thriving at work as a mediator of the relationship between workplace support and life satisfaction", *Journal of Management and Organization*, Vol. 26 No. 2, pp. 168-184, doi: [10.1017/jmo.2017.62](https://doi.org/10.1017/jmo.2017.62).
- Zhao, X., Lynch, J.G. Jr and Chen, Q. (2010), "Reconsidering Baron and Kenny: myths and truths about mediation analysis", *Journal of Consumer Research*, Vol. 37, pp. 197-206, doi: [10.1086/651257](https://doi.org/10.1086/651257).

Corresponding author

Lee Di Milia can be contacted at: v.dimilia@cqu.edu.au