Received: 18 September 2023 | Accepted: 13 August 2025

DOI: 10.1111/apps.70029

ORIGINAL ARTICLE

APPLIED PSYCHOLOGY IAAP

The impact of positive work relationships on proactive behaviors: A multilevel study

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Funding information
Dublin City University; Irish Research Council for the Humanities and Social Sciences (IRCHSS) (now incorporated within the funding body Taighde Éireann – Research Ireland)

Abstract

This paper proposes and then tests a cross-level model pertaining to the intrapersonal and collective antecedents of work-related proactive behaviors. The model posits individual-level positive relational experiences and unit-level relational coordination as social contextual antecedents of individual-level proactive behaviors. The effects of these mechanisms are hypothesized to be mediated respectively by individual-level role breadth self-efficacy and unit-level psychological safety climate. To test the proposed model, multi-source data were collected from a representative sample of 246 staff nurses and their respective unit managers, based in four privately owned hospitals. Supporting evidence for the model enriches understanding of the role of social context in variously enabling and undermining the expression of proactive behaviors on the part of individuals, suitably aligned with the wider needs of key organizational units, in safety-critical work environments. We discuss the implications of our findings for fostering such behavioral alignment and outline directions for future research.

KEYWORDS

Ireland, proactive behaviors, psychological safety climate, relational coordination, role breadth self-efficacy, social context, work relationships, workplace interactions

INTRODUCTION

Proactive behaviors comprise the self-directed actions individuals take to anticipate or initiate changes in their work roles and/or their wider work environments (Carpini et al., 2017; Griffin et al., 2007). Such actions are linked to a range of important outcomes including increased job performance, enhanced job satisfaction, and career success (e.g., Thomas et al., 2010; Tornau & Frese, 2013). Given the benefits of proactivity for individuals and organizations, researchers have explored its antecedents (e.g., Batistič et al., 2016; Beltrán-Martín et al., 2017; Grant & Parker, 2009). This research indicates that the wider organizational context has an important bearing on the likelihood of individuals taking the initiatives required to improve work performance (Den Hartog & Belschak, 2017; Ohly & Schmitt, 2017).

Almost all jobs in contemporary workplaces entail interdependent work processes with a relational component (Claggett & Karahanna, 2018; Heaphy et al., 2018). Proactivity is a relational process that requires ongoing interaction with colleagues, customers, and supervisors, rather than a series of individualized acts played out in isolation (Vough et al., 2017). Therefore, the quality and content of relationships can fundamentally influence individuals' proactive behaviors.

Despite a body of work demonstrating that social and relational contexts are important drivers of proactive behaviors, there is a lack of clarity concerning the precise underlying mechanisms that trigger such behaviors and in particular how these mechanisms, operating in isolation or in unison, might variously enable and undermine the development and expression of proactivity in the workplace (Cai et al., 2019). Instead, the literature has been dominated by studies concerning leadership (Cai et al., 2019) and job design (Parker et al., 2006), with comparatively less research on the role of social contextual factors as enablers and inhibitors of work-related proactive behaviors.

In highly regulated contexts, such as emergency services, process control, military, and health care settings, although proactive behaviors on the part of individuals are highly desirable, it is crucial that they are aligned with the collective requirements of key organizational units, thereby constituting functional behaviors as opposed to dysfunctional behaviors that may ultimately harm the effectiveness and wellbeing of those units and, indeed, organizations as a whole (cf. Lai et al., 2024; Lai & Frimpong, 2025; Parker et al., 2010, 2019; Srulovici et al., 2023). We maintain that social and relational factors are likely to be particularly important in these settings because they serve as vital mechanisms of cohesion, ensuring that the development and expression of proactive behaviors on the part of individuals is indeed aligned with the functional requirements of the wider organization (see also Parker et al., 2019).

To advance this important agenda, in the present paper, we build on social cognitive theory (Bandura, 2001) to develop and then test the cross-level mediation model outlined in Figure 1. Our model predicts that high-quality relationships manifested in the form of positive relational experiences at the individual-level and relational coordination at the unit-level positively influence proactive behaviors among individuals via role breadth self-efficacy at the individual-level and psychological safety climate at the unit-level.

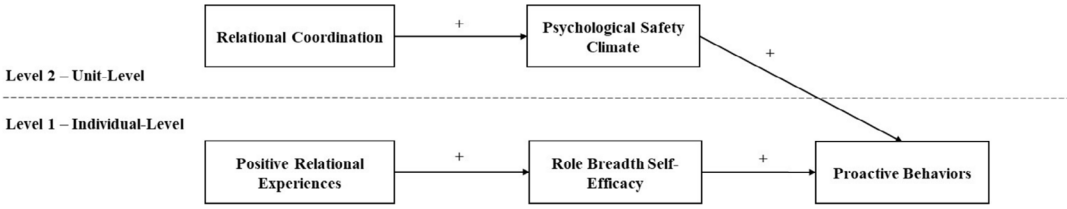

FIGURE 1 *Conceptual Model of the variables examined in the present study.*

We reason that self-efficacy related to one's role, especially when developed in a discerning and supportive social and relational context, is likely to lead to the expression of suitably reflexive proactive behaviors. In such contexts, interactions with coworkers are more likely to be constructive (manifest as positive relational experiences). Accordingly, employees are more likely to want to collect information, exchange resources, and adjust their behavior in response to the feedback they receive in their day-to-day encounters (Cai et al., 2019).

In a similar vein, we reason that relational coordination constitutes a second, equally important mechanism that ensures that the agentic behavior of individuals, when fostered within a psychologically safe climate, is aligned better with the collective requirements of key organizational units. By definition, employees who are located in organizational units characterized by greater levels of relational coordination are more likely to enjoy higher quality communication, shared goals, shared knowledge, and mutual respect (Carmeli & Gittell, 2009; Gittell, 2002). In consequence, the members of such units are more likely to be cognizant of the social context in which they are operating and mindful of how their proactive behaviors will affect their immediate colleagues and the wider organization; indeed, in order to succeed, the members of such units typically require substantive inputs and approval from their fellow unit members (Parker et al., 2019).

In testing our proposed model, we contribute to the proactivity literature by advancing understanding of how relational and social contextual factors shape the expression of proactive behaviors on the part of individuals in the workplace (Parker et al., 2010, 2019). More specifically, the present study examines the potentially potent social and relational antecedent mechanisms of positive relational experiences (Carmeli, 2009) and relational coordination (Gittell, 2002). In particular, it investigates the extent to which, and in what ways, the effects of these mechanisms are respectively mediated by role breadth self-efficacy (Parker, 1998) and psychological safety climate (Edmondson, 1999). In so doing, our study responds to the call of Cai et al. (2019) to broaden the nascent empirical literature addressing the social and relational contextual predictors of proactive behaviors, which, they argue, has been dominated by studies that have typically examined these predictors on an isolated basis; i.e., the majority of studies have each investigated just one factor.

THEORY AND HYPOTHESES

As noted earlier, to advance our proposed model, we draw on social cognitive theory (Bandura, 2001), which posits that learning occurs through a combination of observation, modeling, and social interaction. In other words, individuals' behaviors are shaped by observing others, experiencing consequences (both directly and vicariously), and an assortment of internal

cognitive processes. Viewed from this perspective, social and relational contexts influence the expression of proactivity on the part of individuals through a wide-ranging assortment of intrapersonal, interpersonal, and extra-personal mechanisms. Building on this essential foundation, the present model offers a potentially fruitful explication of the key social and relational mechanisms that ensure the development and expression of proactive behaviors in the workplace by those individuals ultimately meets the requirements of the units to which they belong.

Individual-level mechanisms

Positive relational experiences

As we have seen, social cognitive theory highlights the importance of the social context in fostering learning and shaping behaviors in the workplace and, indeed, beyond it (for a detailed overview, see Bandura, 2001). A significant manifestation of this context in the workplace is reflected in the quality of individuals' relational experiences. Drawing on the work of Dutton (2003), we maintain that *positive relational experiences* in the workplace are particularly important for fostering proactive behaviors. Relationships are effectively the nervous system of an organization, which affects how individuals think, feel, and act when they are at work (Kahn & Heaphy, 2014). When employees enjoy positive relational experiences with their co-workers, their interpersonal encounters are characterized by vitality, mutual positive regard, and a sense that both parties are invested equally in their relationships (Cameron et al., 2003; Methot et al., 2017). Individuals who experience such positive relationships are likely to find the experience of work to be pleasurable and motivating, thereby resulting in a greater willingness to learn (Carmeli et al., 2009). They are also more inclined to explore new possibilities and master unfamiliar environments, two of the key defining characteristics of proactivity (Parker & Wu, 2014). In the context of developing and expressing proactive behaviors, positive relationships are important because they provide a motivational stimulus for exploring fresh ideas and initiatives (Feeney, 2007) and they have been found to consistently predict idea generation and risk-taking (Carmeli et al., 2015). Therefore, we predict the following hypothesis:

> **Hypothesis 1.** Positive relational experiences at the individual level are positively related to individual-level proactive behaviors.

Role breath self-efficacy

In line with social cognitive theory (Bandura, 2001), we argue that when employees enjoy positive relational experiences with their co-workers, they gain an enhanced sense of role breadth self-efficacy, a second key individual-level antecedent of proactivity (Parker et al., 2010). Role breadth self-efficacy reflects individuals' perceived ability to engage successfully in proactive behaviors (Parker, 1998). More specifically, individuals with greater role breadth self-efficacy have the confidence to engage in "a range of proactive, interpersonal and integrative activities beyond the prescribed technical core" (Parker & Collins, 2010, p. 641). In this regard, role breadth self-efficacy essentially gives individual employees the confidence they need to exhibit proactivity (Beltrán-Martín et al., 2017). Prior research has revealed that role breadth self-efficacy predicts a variety of proactive behaviors including personal initiative (Hong

et al., 2016), proactive problem solving (Parker et al., 2006), engaging in initiatives to enhance safety (Curcuruto et al., 2019), and suggesting improvements (Axtell et al., 2000).

In accordance with social cognitive theory (Bandura, 2001), positive relational experiences create the interpersonal context for learning, modelling, and reinforcement that builds an individual's confidence to handle new and challenging tasks. In this regard, positive relational experiences can act as a source of positive social feedback (Leonard et al., 1999), which is a central mechanism that promotes the development of self-efficacy more generally (Bandura, 2001; Zimmerman & Kitsantas, 2002). When employees enjoy positive relational experiences with their co-workers, they feel supported and encouraged, thus reinforcing their belief that they can proactively execute the requisite behaviors for performing tasks beyond their core roles (cf. Vinarski-Peretz et al., 2011). Hence, such employees are more likely to be willing to initiate change (Bandura, 2001). Furthermore, when employees experience mutuality in terms of their relationship with their co-workers, they are more likely to learn from one another and thus meet their needs for growth and development on a social basis (DeRue & Morgeson, 2007). Positive relational experiences thus represent a critically important social mechanism for fostering proactivity via role breadth self-efficacy.

As observed by Parker et al. (2019), role breadth self-efficacy, fostered through positive relational experiences, enables people to navigate their relational contexts more effectively. When receiving feedback from colleagues in the course of social interactions, employees are more likely to detect the social cues that convey the types of proactive behaviors that are acceptable and beneficial to the wider group and/or their organization as a whole. Moreover, relationships that are characterized by mutuality and positive regard ensure greater respect and interdependency. In particular, such relationships lessen the likelihood that employees will engage in proactive behaviors of a sort that will ultimately damage their esteemed coworkers and other organizational stakeholders. In this way, positive relational experiences serve a vital regulatory function, helping to ensure that proactivity on the part of individuals is harnessed for the greater good of the relevant organizational unit (cf. Cai et al., 2019).

In sum, we maintain that positive relational experiences should enable the development and expression of work-related proactive behaviors, both directly, and indirectly *through* role breadth self-efficacy. Supporting this conclusion, Vinarski-Peretz et al. (2011) investigated and found support for the existence of a positive connection between positive relational experiences and engagement in innovative behaviors at work, mediated via self-efficacy. Hence, we predict the following:

> **Hypothesis 2.** Positive relational experiences at the individual level are positively related to individual-level role breadth self-efficacy.

> **Hypothesis 3.** Role breadth self-efficacy at the individual level mediates the individual-level relationship between positive relational experiences and proactive behaviors.

Unit-level mechanisms

Relational coordination

Relational coordination comprises a mutually reinforcing social psychological process at the unit level, whereby timely, frequent, and accurate communication, based on shared knowledge,

shared goals, and mutual respect, enables people to integrate their efforts to accomplish a given task (cf. Bolton et al., 2021; Flood et al., 2024; Gittell, 2002). As such, relational coordination is another construct that contributes important theoretical insights into the development and expression of high-quality relationships in the workplace (Dutton, 2003). However, whereas the notion of positive relational experiences is a broader, within-person concept, relational coordination promotes individual proactive behaviors as a result of the shared understanding of what is required of the focal unit to achieve particular outcomes, based on the coordinated efforts of its members occupying interdependent roles essential to the task at hand (Carmeli & Gittell, 2009). Although levels of relational coordination can vary within a particular work unit, this notion is generally regarded as a collective-level construct that reflects how well (or otherwise) members of a given unit communicate and collaborate with each other, in their efforts to achieve common goals and objectives (Gittell, 2016). Accordingly, researchers typically aggregate individual-level perceptions of relational coordination to the unit level (Chen et al., 2005; Gittell, 2000).

Shared goals generally benefit work units as a whole because they encourage each unit member to fulfill their individual task requirements on an adaptive basis that proactively ensures collective success. Shared knowledge, in contrast, enables focal individuals to assess the impact of their own particular proactive behaviors on significant others within their immediate work units. Hence, when a work unit enjoys a combination of shared goals and shared knowledge, a mutual understanding is created, which enables its members to communicate their ideas more effectively (Myers, 2018), thereby increasing the likelihood that their proactive efforts will yield mutually beneficial outcomes (Parker et al., 2019). A shared understanding including knowledge of others' intentions, stakes, and goals, as well as knowing what constitutes appropriate behaviors in a given setting, is particularly important for the successful implementation of proactive ideas because such understanding enables individuals to "sell" their ideas effectively to significant others within their networks (Dutton et al., 2001).

The mutual respect aspect of relational coordination reflects the degree to which a given work unit encourages feelings of confidence in and an appreciation of its members. In units that foster such respect, employees will be more inclined to explore and experiment (Spreitzer et al., 2005), proactive behaviors that are vital to productivity and personal and organizational success. We conjecture that the interpersonal context fosters an environment that is variously more and less conducive to proactive learning and experimenting, dependent on the degree of positive reinforcement from one's immediate colleagues (Bandura, 1977). Mutual respect promotes such behaviors, we suggest, by reducing the likelihood of negative interactions, which so often undermine efforts to improve work processes. By way of illustration, generating mutual respect between individuals of varying status has been found to encourage behaviors associated with significant quality improvements (Nembhard & Edmondson, 2006). Mutual respect helps to minimize the psychological distractions that can arise when people worry about how others might react to their suggestions, liberating in turn the psychological resources required for the development and expression of innovative ideas on a proactive basis (Vinarski-Peretz et al., 2011).

In sum, to the extent that a given work unit is characterized by high relational coordination, its members tend to enjoy a positive work environment, in which proactive behaviors conducive to learning and experimentation are modeled and sustained through positive reinforcement by unit members, on a collective basis. Hence, we predict:

Hypothesis 4. Unit-level relational coordination is positively related to individual-level proactive behaviors.

Psychological safety climate

Our model posits that a psychologically safe work climate, defined as "a sense of confidence that the team will not embarrass, reject or punish someone for speaking up ... [stemming] from mutual trust and respect among team members" (Edmondson, 1999, p. 354), is an important mechanism for promoting work-related proactive behaviors. A recent review of the literature revealed that psychological safety climate serves as a mediator of the effects of a variety of organizational practices, leadership behaviors, team characteristics, and individual differences on a wide-ranging assortment of individual, team, and organizational outcomes (Newman et al., 2017). However, the role of unit-level psychological safety climate as a mediator of the link between unit-level relational coordination and individual-level proactivity has not been subjected to empirical testing. Following calls from Newman et al. (2017) to understand better the predictors and outcomes of the psychological safety climate construct, we conjecture that unit-level psychological safety climate explains how unit-level relational coordination transmits its effects on proactive behaviors at the individual level.

Previous empirical research shows that psychological safety is important in reducing perceived risks associated with a range of proactive behaviors (Liang et al., 2012; Siemsen et al., 2008). In a psychologically safe climate, individuals engaging in proactive behaviors are not viewed as troublemakers; instead, they are seen positively as team members who are concerned with eliminating errors and improving work situations (Carmeli et al., 2009). In accordance with social cognitive theory (Bandura, 2001), a psychological safety climate enables learning by removing the fear of hostile, embarrassing, or threatening peer reactions to a variety of pro-organizational behaviors encompassed within the notion of proactivity (Marlow & Lacerenza, 2025; Marlow et al., 2024). Hence, employees are not distracted or threatened by potential or actual negative reactions of their co-workers, thus freeing up valuable cognitive resources, which, in turn, can enable them to become more fully engaged in taking the initiative to solve work-related problems (Kahn, 2007; Liang et al., 2012). We thus posit that relational coordination is an important factor that fosters this collective sense of psychological safety. Relational coordination increases information processing capacity within work units by connecting individuals who hold differing role responsibilities (Carmeli & Gittell, 2009). In health care settings, for example, the provision of quality care requires the coordination of work between colleagues occupying interdependent roles. Previous studies within health care settings have identified that where division exists between those who carry these different roles and responsibilities, psychological safety is negatively affected. This is because focusing on function-specific goals, fragmented knowledge, and disrespect each increase fear of reprisals (Edmondson et al., 2001). Conversely, in work contexts characterized by shared goals, shared knowledge, and mutual respect employees are less likely to be fearful of such reprisals from their co-workers, thus lessening the potential risks associated with exhibiting proactive behaviors (Carmeli & Gittell, 2009).

As noted earlier, viewed from the standpoint of social cognitive theory (Bandura, 2001), relational coordination creates an important context for vicarious experiences involving mutual respect, shared goals, and shared learning, which, together with high quality communication, create the enabling conditions for risk-taking and authenticity in team settings (see also Newman et al., 2017). In work units that share these characteristics, norms are established that encourage unit members with divergent opinions to speak up, without the fear of being sanctioned for so doing. Instead, such individuals feel safe and confident that their co-workers will maintain positive views of them, even if failure occurs (Edmondson, 1999).

While recognizing that relational coordination stimulates psychological safety, more importantly, our model emphasizes the significance of the former as a mechanism that serves to ensure that the proactive behaviors displayed by individuals are aligned with the functional requirements of the units in which they are embedded. As noted earlier, such alignment is critically important in high-stakes, safety-critical environments such as the military, emergency services, process control industries, and health care. Based on the foregoing arguments, we predict the following:

Hypothesis 5. Unit-level relational coordination is related positively to unit-level psychological safety climate.

Hypothesis 6. Unit-level psychological safety climate is related positively to individual-level proactive behaviors.

Hypothesis 7. Unit-level psychological safety climate mediates the cross-level relationship between relational coordination at the unit level and individual-level proactive behaviors.

METHODS

Study context, sample, and procedures

Our study focuses on nurses based in hospital settings. Although proactive behaviors are important in virtually all occupations, they are particularly salient in the health care context, especially among hospital-based nurses. A multitude of professions are involved in delivering hospital services. However, nurses play a number of pivotal roles in ensuring patient safety and the delivery of high-quality patient care, not least by observing patients, identifying near misses, and refining the processes involved in delivering high-quality care (World Health Organization, 2020). Inter alia, proactive behaviors in this context are essential in monitoring patient status, anticipating surgeons' needs, and helping to reduce waiting lists and improving the throughput of patients (cf. Galletta et al., 2019). However, despite the obvious importance of proactivity within the nursing profession, surprisingly few studies, thus far, have investigated its antecedents in this particular context (Htet et al., 2024).

Nurses are an ideal occupational group for testing our hypotheses because they have the potential to engage proactively in potentially damaging actions; for example, making errors of medical judgment, over-treating patients, overlooking the need for vital interventions, and offering inconsistent standards of care (see, e.g., Srulovici et al., 2023). All-too-often, however, nurses are disinclined to behave proactively because they fear the consequences of making these sorts of mistakes (O'Donovan & McAuliffe, 2020). Hence, the hospital-based nursing profession is a most suitable context in which to advance theoretical understanding of the social psychological mechanisms that might variously constrain unwanted actions and harness instead proactive behaviors for organizationally functional purposes (cf. Lai et al., 2024; Ndirangu-Mugo, 2024).

To ascertain the veracity of our proposed cross-level model, we collected data from a representative sample of staff nurses and their managers, based in four separate hospitals in Ireland. To sample respondents, we compiled a sampling frame comprising all 21 of the privately owned

hospitals operating in Ireland, based on data within the Irish Medical Directory and the Private Hospital Association of Ireland membership list. We selected four geographically dispersed hospitals from this population, which were located variously in the western, southern, and eastern regions of the country. The four hospitals selected were not significantly different from the rest of the hospital population in terms of their size ($t = -.292$, $p = .774$) or age ($t = -.242$, $p = .807$). The University ethics committee of the first author and the medical research ethics committees of the four participating hospitals granted ethical approval for the study.

All of the staff nurses employed within each hospital were invited to participate in the study, on an unpaid, voluntary basis, via a letter that accompanied the questionnaire survey instruments, together with a stamped, addressed envelope for returning their responses. The data pertaining to all of the predictor variables were obtained directly from the staff nurses who opted to participate in the study. However, in order to minimize the dangers of common method bias and common method variance, we gathered the data pertaining to our dependent variable—i.e., the proactive behaviors of the relevant staff nurses—from their respective unit managers (Podsakoff et al., 2012). All questionnaires were returned directly to the lead author, with a guarantee of anonymity with respect to how the findings would be reported in published outputs.

In total, 620 staff nurses were invited to participate. The final sample comprised N = 246 nurses, nested in K = 35 units (wards), representing a response rate of 39.8%. The mean age of the nurses who participated in the study was 40.17 years, the majority of whom were female (97%). The mean organizational tenure of the staff nurses who participated in the study was 8.90 years, drawn from a range of nursing specialties, namely, general ward, theatre, endoscopy, ICU, and ER. However, the majority of participants were general ward nurses. There was no significant difference between respondents and non-respondents in terms of gender (χ^2 [1, n = 620] = .09, $p = .75$) or nursing discipline (χ^2[1, n = 620] = 9.09, $p = .06$).

Measures

Individual-level constructs

Positive relational experiences ($\Omega = .91$) were measured using the nine-item instrument adapted by Vinarski-Peretz et al. (2011) from Carmeli's (2009) 15-item measure. This scale measures subjective positive relationships at work, based on Dutton and Heaphy's (2003) conceptualization of high-quality relationships. It assesses the extent to which the work relationships experienced by respondents with their co-workers are characterized by positive regard (sample item: "I feel liked in my workplace"), mutuality (sample item: "My coworkers and I are committed to one another at work"), and vitality (sample item: "My relationships with my co-workers make me full of positive energy"). As reported by Vinarski-Peretz et al. (2011), there is ample evidence demonstrating the psychometric equivalency of the short (adopted for present purposes) and longer versions of this instrument. Participants rated all items on a five-point Likert scale, ranging from 1 = *strongly disagree* to 5 = *strongly agree*.

Role breadth self-efficacy ($\Omega = .82$) was assessed with Parker's (1998) six-item instrument (sample items: "I feel confident analyzing a long-term problem to find a solution" and "I feel confident helping to set targets/goals in my work area"). Again, participants responded to the items using a five-point Likert scale, ranging from 1 = *strongly disagree* to 5 = *strongly agree*.

Proactive behaviors ($\Omega = .97$) were assessed with the nine-item scale developed by Griffin et al. (2007). This scale captures proactive behaviors pertaining to work tasks, teams, and

organizations as a whole. Unit managers were asked to indicate the extent to which the relevant members of their respective units had engaged in proactive behaviors within the past six weeks (sample items: "Initiated better ways of doing core tasks" and "Suggested ways in which to make my unit more effective"). Responses were recorded on a five-point Likert scale, ranging from 1 = *not at all* to 5 = *a great deal*.

Unit-level constructs

Relational coordination (Ω = .78) was measured with six items adapted from Gittell et al.'s (2010) measure of relational coordination (sample items: "In this unit we share with one another the subject we are working on" and "In this unit we communicate frequently regarding patient care"). Responses were recorded using a five-point Likert scale, ranging from 1 = *strongly disagree* to 5 = *strongly agree*.

Psychological safety climate (Ω = .71) was measured using three items from Edmondson's (1999) psychological safety climate scale. The items were as follows: "If you make a mistake on this unit it is often held against you", "People who work in this unit sometimes reject others for being different", and "It is difficult to ask other members of this unit for help". Once again, responses were recorded using a five-point Likert scale, which ranged from 1 = *strongly disagree* to 5 = *strongly agree*. The respective items were reverse scored so that higher scores indicated higher levels of psychological safety climate.

Control variables

Proactive personality (Ω = .82) was assessed with Bateman and Crant's (1993) six-item scale. This construct reflects variations in a dispositional inclination to behave proactively (sample items: "If I see something I don't like, I fix it" and "No matter what the odds, if I believe in something I will make it happen"). Responses were recorded using a five-point Likert scale, ranging from 1 = *strongly disagree* to 5 = *strongly agree*. We incorporated this measure as an *individual-level control variable*, with a view to ascertaining the unique contribution of the relational factors specified in our substantive model in the prediction of proactive behaviors.[1]

In addition, we incorporated *age*, *gender*, and *tenure* as *individual-level controls*, again, with a view to ascertaining the unique contributions of our substantive predictor variables in explaining our dependent variable, based on the following rationale. Ng and Feldman (2013) cite previous research showing that older employees are less inclined to behave proactively. A study by Griffin et al. (2007) found inconsistent results across varied samples with respect to the relationship between gender and proactivity. Previous work has also yielded mixed findings regarding the impact of organizational tenure on work-related proactive behaviors. Some studies have found that tenure positively influences such behaviors, whereas other studies have observed a negative relationship between these variables (for an overview, see Bindl & Parker, 2011).[2]

[1]Having established that this control variable was not correlated with our dependent variable, based on the guidelines of Spector and Brannick (2011), and in alignment with previous proactivity research (Tornau & Frese, 2013), we omitted it from further consideration.

[2]In the present study, as reported in Table 1, age and tenure shared significant variance with our dependent variable, proactive behaviors, whereas gender did not. Therefore, age and tenure were retained in our substantive analyses, and we omitted gender from further consideration.

Finally, we controlled for potential variations due to the *organizational-level* factors beyond the scope of our substantive model. For this purpose, we formed separate dummy variables for each of the four hospitals from which we recruited our sample of participants.[3]

Data analysis

In order to justify the aggregation of data collected from individuals to the unit level, inter-rater agreement and inter-rater reliability were examined (LeBreton & Senter, 2008). The $R_{WG(j)}$ for both of the unit-level variables was above the conventional .70 cut-off point (LeBreton & Senter, 2008), indicating that unit members agreed on the level of relational coordination ($R_{WG(j)}$ .75) and psychological safety ($R_{WG(j)}$ .72) in their respective units. The ICC(1) values pertaining to relational coordination (.14) and psychological safety (.19) were higher than the threshold median value of .12, the cut-off advocated by James (1982) as evidence of a medium level of consensus at the unit level. The ICC(2) values pertaining to relational coordination (.60) and psychological safety (.62) were also satisfactory, respectively being at and above the .60 cut-off point recommended by Glick (1985) as evidence of sufficient consensus among individuals to warrant treating their perceptions as a shared team or unit-level climate. Taken together, these results suggest that there is an acceptable level of reliable variance at the unit level with respect to our unit-level constructs to justify their aggregation to the unit level.

Because of the nested structure of our data (i.e., individuals nested in units), we used multilevel path modeling to examine the hypothesized relationships. All models were specified with the software Mplus 8.5 (Muthén & Muthén, 2017), using maximum likelihood estimation with robust standard errors (Hox et al., 2010). Missing data were handled through full information maximum likelihood estimation (Newman, 2014).

We tested the proposed hypotheses by specifying a mediation model at both the individual and unit levels. That is, at the unit level, the means of focal variables were aggregated (cf., Preacher et al., 2010), whereas the individual-level variables were group-mean centered (Ohly et al., 2010). More specifically, at the individual level, we subtracted the mean score of the focal unit from each individual-level score so that the scores represented each individual's deviations from their respective unit-level mean rather than their absolute scores. This two-step computational process allowed us to disentangle relationships across the two levels of analysis and distinguish between individual-level and unit-level relationships (Gabriel et al., 2019). At the individual level, we specified the direct paths between positive relational experiences and role breadth self-efficacy. Furthermore, we specified paths from both positive relational experiences and role breadth self-efficacy to proactive behaviors. We also included our significant control variables tenure, age, and organization (dummy coded variously to reflect the appropriate organization, i.e., organizations 1, 2, 3, and 4, with organization 4 as the reference) to predict each of the endogenous variables.

To test the predictions of our substantive model, at the unit level, we specified that relational coordination would predict psychological safety climate. Moreover, both relational coordination and psychological safety climate were specified to predict proactive behaviors.[4]

[3]As shown in Table 2, significant organizational differences emerged.

[4]Our initial analyses were confined to the set of relationships outlined in Figure 1, as theorized. However, as reported in a later subsection of the present results section, at the request of an anonymous reviewer, we subsequently tested a more comprehensive version of our substantive model to ascertain whether the relationships we theorized a priori at the individual level might also emerge at the unit level of analysis and whether the unit-level relationships we theorized a priori may similarly manifest at the individual level of analysis.

Finally, to examine the degree of homogeneity of the proposed relationships across the two levels of analysis, we specified all relationships that were hypothesized at the individual level to also be present at the unit level and vice versa.

Because the conventional bootstrapping method of resampling cannot be applied to multilevel modelling (Leeden et al., 2008), we utilized a Monte Carlo approach of resampling to estimate the confidence intervals for the 1–1-1 mediations model at both the individual level and the team level (Preacher & Selig, 2012). Specifically, we computed bias-corrected 95% confidence intervals for the indirect effects based on 20,000 re-samples, using the software developed by Preacher and Selig (2010) for creating confidence intervals for indirect effects in 1-1-1 multilevel models. The presence of an indirect effect is indicated if the confidence interval of the indirect effect does not include zero (Preacher & Selig, 2012).

RESULTS

Main Findings

Table 1 presents the descriptive statistics pertaining to each of the study variables. We began our substantive analysis by testing Hypotheses 1–3 concerning the direct and indirect effects of individual-level positive relational experiences on individual-level proactive behaviors (see Table 2). The results of our multilevel path model demonstrate that the direct relationship between positive relational experiences and proactive behaviors was statistically significant (Est. = .30, SE = .10, $p < .01$), providing support for Hypothesis 1. Positive relational experiences were also positively related to role breadth self-efficacy (Est. =.37, SE = .08, $p < .01$), providing support for Hypothesis 2. In turn, role breadth self-efficacy was positively associated with proactive behaviors (Est. = .19, SE = .09, $p = .03$). Furthermore, the confidence interval

TABLE 1 *Descriptive Statistics, Intercorrelations, and Reliabilities.*

Variable		1	2	3	4	5	6	7	8
1.	Positive relational experiences	*0.91*	**0.43**	**0.58**	**0.64**	**0.43**	0.29	0.32	0.26
2.	Role breadth self-efficacy	**0.41**	*0.82*	**0.38**	0.05	0.10	0.31	0.27	0.13
3.	Proactive behaviors	**0.25**	**0.24**	*0.97*	**0.39**	**0.55**	**0.34**	0.32	0.28
4.	*Relational coordination*	**0.55**	**0.29**	0.10	*0.78*	0.57	0.26	0.17	0.27
5.	*Psychological safety climate*	**0.27**	0.12	0.12	**0.34**	*0.71*	0.35	0.22	**0.53**
6.	Tenure	0.11	0.08	**0.17**	0.06	0.01	-	**0.79**	0.27
7.	Age	0.18	0.07	−0.06	**0.14**	0.05	**0.62**	-	0.05
8.	Gender[a]	0.08	0.04	0.09	0.03	0.04	0.03	−0.02	-
	M	3.82	3.55	3.17	3.96	3.75	8.90	40.17	1.97
	ICC (1)	0.03	0.04	0.34	0.14	0.19	0.27	0.26	0.03
	ICC (2)	0.19	0.22	0.79	0.60	0.62	0.72	0.71	0.18
	SD-Within	0.61	0.66	0.83	0.55	0.77	6.91	9.02	0.17
	SD-Between	0.10	0.14	0.60	0.22	0.37	4.18	5.30	0.00

Notes: Variables in italic are conceptualized as between-person variables in the model. Reliabilities (Omega across levels) pertaining to the first five variables are presented along the leading diagonal. Correlations in bold are significant at $p < 0.05$.
[a]Gender 1 = Male; 2 = Female.

TABLE 2 *Results of the Multilevel Path Model.*

	Role breadth self-efficacy			Psychological safety climate			Proactive behaviors		
	Estimate	**SE**	**z**	**Estimate**	**SE**	**z**	**Estimate**	**SE**	**z**
Unit-level									
Intercept	2.115	0.850	2.487 *	−0.010	1.454	−0.007	−1.388	1.402	−0.990
Organization Dummy 1[a]	−0.297	0.184	−1.617	−0.225	0.213	−1.056	−0.519	0.262	−1.980 *
Organization Dummy 2[b]	0.004	0.150	0.025	0.122	0.122	0.998	−0.431	0.226	−1.910 +
Organization Dummy 3[c]	−0.067	0.183	−0.364	−0.028	0.162	−0.174	−0.390	0.187	−2.083 *
Positive relational experiences	0.873	0.341	2.558 *	0.092	0.316	0.290	0.779	0.472	1.651 +
Role breadth self-efficacy							0.227	0.210	1.083
Relational coordination	−0.459	0.286	−1.604	0.865	0.358	2.417 *	−0.227	0.378	−0.602
Psychological safety climate							0.550	0.188	2.932 **
Variance	0.080	0.017	4.795 **	0.157	0.036	4.424 **	0.218	0.056	3.907 **
Individual-level									
Age	−0.004	0.006	−0.647	0.001	0.006	0.241	−0.027	0.010	−2.747 **
Tenure	0.007	0.008	0.790	−0.003	0.010	−0.327	0.038	0.011	3.481 **
Positive relational experiences	0.371	0.078	4.765 **	0.142	0.138	1.029	0.299	0.104	2.866 **
Role breadth self-efficacy							0.188	0.085	2.229 *
Relational coordination	0.153	0.096	1.595	0.383	0.112	3.439 **	−0.099	0.121	−0.820
Psychological safety climate							0.095	0.071	1.344
Variance	0.306	0.029	10.522 **	0.438	0.059	7.474 **	0.497	0.061	8.094 **

Notes: All relationships were tested using one model. SE = Standard Error; n = 246 individual nurses, K = 35 units. + p < .10* p < .05, ** p < .01,

[a]Dummy variable for Organization 1,

[b]Dummy variable for Organization 2,

[c]Dummy variable for Organization 3,

for the corresponding indirect effect of positive relational experiences on proactive behaviors through role breadth self-efficacy at the individual level did not contain zero (Est. = .07, SE = .03, 95% confidence interval [0.008, 0.141]), thus lending support for Hypothesis 3.

The next step in our analysis involved testing Hypotheses 4–7, which propose a mediation effect of unit-level psychological safety climate on the relationship between unit-level relational coordination and individual-level proactive behaviors. First, we examined the direct link between unit-level relational coordination and individual-level proactive behaviors, as specified by Hypothesis 4. This relationship was not significant Est. = − .23, SE = .38, *p = .55)*. Therefore, our findings did not lend support for Hypothesis 4.

Next, we examined the link between unit-level relational coordination and unit-level psychological safety climate. Our results indicated that relational coordination is indeed positively and significantly related to psychological safety climate (Est. = .87, SE = .36, p = .02), thereby supporting Hypothesis 5. Our results also indicated a positive and significant relationship between unit-level psychological safety climate and individual-level proactive behaviors (Est. = .55, SE = .19, p < .01), thereby providing support for Hypothesis 6.

Finally, we examined the indirect effect of relational coordination at the unit level on proactive behaviors at the individual level via psychological safety climate at the unit level. As predicted, our results demonstrate a significant indirect effect (Est. = .46, SE = .24, 95% confidence interval [.067, .983]), thus supporting Hypothesis 7.

Post-hoc analyses and results

As noted earlier, our initial theorizing and analyses were restricted to the set of relationships outlined in Figure 1. However, at the request of an anonymous reviewer, we reran our analyses in such a way that we could determine whether the focal relationships hypothesized in our proposed model, that is, the ones we had theorized a priori at the individual level, might also emerge at the unit level of analysis, and whether the unit-level relationships we had theorized a priori might similarly manifest at the individual level of analysis.[5]

The results of these supplementary analyses reveal a complex pattern of relationships across both levels of analysis. At both the unit level (Est. = .78, SE = .47, p < .10) and the individual level (Est. = .30, SE = .10, p < .01), positive relational experiences were positively related to proactive behaviors. Even though the unit-level relationship is only marginally significant, we argue that these results suggest that the link between positive relational experiences and proactive behaviors is likely to be isomorphic across both levels of analysis. Similarly, our results highlight that the relationship between positive relational experiences and role breadth-self efficacy is also isomorphic across levels of analysis as this relationship is significant at both the unit level (Est. = .87, SE = .34, p = .01) and the individual level (Est. = .37, SE = .08, p < .01). However, our post-hoc analyses suggest that the relationship between role breadth self-efficacy and proactive behaviors is likely to be non-isomorphic as it is non-significant at the unit level (Est. = .23, SE = .21, p = .28) but significant at the individual level (Est. = .19, SE = .09, p = .03). Thus, in sum, the relationships proposed in Hypothesis 1 and 2 are isomorphic whereas the relationship proposed in Hypothesis 3 is non-isomorphic across levels of analysis.

Regarding Hypotheses 4–7, the relationship between relational coordination and proactive behaviors was non-significant across both levels of analysis and therefore isomorphic (unit

[5]We are grateful to the reviewer concerned for this suggestion.

level: Est. = − .23, SE = .38, p = .55; individual level: Est. = − .10, SE = .12, p = .41). Similarly, the significant relationship between relational coordination and psychological safety climate was isomorphic across the two levels (unit level: Est. = .87, SE = .36, p = .02; individual level: Est. = .38, SE = .11, p < .01). However, the relationship between psychological safety climate and proactive behaviors was non-isomorphic across levels as this relationship was significant at the unit level (Est. = .55, SE = .19, p < .01) but non-significant at the individual level (Est. = .10, SE = .07, p = .18).

DISCUSSION

Currently, a great deal is still unknown about *how* and *why* relational experiences affect the decisions of individuals and wider collectives to initiate changes to their work situations (Cai et al., 2019). Our findings demonstrate that a combination of within-person and unit-level effects arising from the overall quality of interpersonal relationships helps explain what drives proactive behaviors at the individual level.

Building on social cognitive theory (Bandura, 2001), our findings demonstrate that one of the ways in which positive relational experiences motivate proactive behaviors at the individual level is by fueling role breadth self-efficacy beliefs (cf. Parker et al., 2010). In other words, positive work relationships are important for encouraging proactivity because they endow individuals, through affirmation and more general positive reinforcement, with a sense of confidence in their own ability to engage in a broader range of tasks (Leonard et al., 1999).

Also building on social cognitive theory, our study supports the notion that psychological safety is an important unit-level mediating mechanism linking unit-level relational coordination with individual-level proactivity. In this way, a strong psychological safety climate signals to employees that their work environment supports them to engage in proactive behaviors without feeling personally over-exposed to risk and/or fearing reprisals in the event that things do not go according to plan.

Theoretical implications

According to Cai et al. (2019), previous studies of social contextual antecedents of proactive behaviors in the workplace have typically examined the key mechanisms in play on a singular basis, without considering their joint effects within and/or across varied levels of analysis. The present study, in contrast, has examined a series of mechanisms in concert and, in so doing, demonstrated how a combination of unit-level (relational coordination and psychological safety climate) and individual-level (positive relational experiences and role breadth self-efficacy) mechanisms ultimately influence individual-level proactive behaviors. Our study has thus responded to a number of calls to ascertain the predictive efficacy of individual and cross-level mechanisms of this nature (cf. Cai et al., 2019; Frazier & Bowler, 2015; Raub & Liao, 2012), and contributed to the growing literature on the importance of aligning proactivity on the part of individuals with the needs of the wider organizational ecosystem (cf. Wang et al., 2025).

Our choice of social and relational predictors is particularly apposite, given the importance of understanding better the impact of factors that might help to ensure that the expression of proactive behaviors on the part of individuals is indeed suitably aligned with the functional requirements of particular organizational units or, indeed, the wider organizational and inter-organizational ecosystem as a whole (cf. Parker et al., 2019; Wang et al., 2025). Building on

social cognitive theory (Bandura, 2001), we have risen to this challenge through the development and validation of a novel cross-level model that has explicated key social and relational mechanisms that have the potential to promote this much-needed alignment.

The health care settings in which we undertook our empirical work represented an ideal context for doing so because, as noted earlier, hospital nurses have considerable latitude to act proactively in ways that might variously result in improvements to patient care and safety and promote organizational efficiency and effectiveness or, conversely, lead to damaging outcomes (cf. Srulovici et al., 2023). Frequently, however, nurses shy away from behaving proactively, fearful of the potentially negative repercussions of making high-profile mistakes (O'Donovan & McAuliffe, 2020). The results of our study have helped to illuminate key social psychological mechanisms that can explain this wide variety of outcomes (cf. Lai et al., 2024).

As we have seen, individual-level role breadth self-efficacy mediates the effects of individual-level positive relational experiences on proactive behaviors, suggesting that individuals who feel that they enjoy high-quality relationships within their immediate work units also feel a sense of enhanced self-efficacy, which in turn drives them to engage in proactive behaviors. These individual-level mechanisms thus play complementary roles. While role breadth self-efficacy is the immediate individual-level driver of proactivity on the part of individuals, its effects are harnessed by the enjoyment of positive relational experiences, which help ensure that such behaviors meet the needs of the immediate organizational unit to which they are attached, if not the wider organization and inter-organizational ecosystem (cf. Parker et al., 2019). Prior research has only investigated positive relational experiences with respect to a limited range of proactive outcomes, such as innovative behaviors (Vinarski-Peretz et al., 2011) and strategic issue selling (Ashford et al., 1998), and has not fully addressed the underlying theoretical mechanisms involved (Cai et al., 2019). Contributing to this endeavor, our model offers a more comprehensive understanding of how individual-level positive relational experiences ultimately drive proactive outcomes on the part of individuals, i.e., by enhancing and harnessing self-efficacy.

With respect to our unit-level predictor of relational coordination, in line with our theorizing we found that this variable is an important enabler of psychological safety climate, which in turn elicits proactive behaviors at the individual level. These findings highlight the importance of coordination in teams as a means of affording individuals access to the relevant information they need to be able to gauge the impact of their personal initiatives on their fellow unit members (Dutton et al., 2001; Howell & Boies, 2004). Having shared goals and knowledge (which jointly create a shared understanding), together with mutual respect, positions individuals to communicate effectively with one another and learn about any future-focused changes that might be required in order to achieve their collective ambitions (cf. Healey et al., 2015). Therefore, while psychological safety at the unit level is fostered through unit-level relational coordination, thereby influencing proactivity at the individual level, relational coordination also ensures that the agentic behavior of proactive individuals is aligned better with the functional requirements of the constituent work units of the organization in which employees at all levels are embedded (Parker et al., 2019).

Limitations and future directions

The present study has several limitations that should be acknowledged. First, despite the careful theoretical reasoning behind the temporal sequence of connections postulated within the

overall model tested, the cross-sectional research design limits our ability to draw strong causal inferences. Future work, therefore, requires a longitudinal approach, to enable researchers to explore more directly the dynamic interplay of the relational/social contextual variables and psychological states incorporated in the present study, in terms of their impact on proactivity at work, and investigate potential gain spirals driven by the various mechanisms shaping these dynamics (cf. Newman et al., 2017; Xanthopoulou et al., 2009).

Secondly, as our study was restricted to organizations in the health care sector, we need to acknowledge that the present findings may be context-specific, thus precluding broader generalization. To address this concern, future research should extend the present line of inquiry to a wider array of sectors; i.e., ones facing a diversity of strategic and operational challenges.

Thirdly, our study is limited by our choice of variables in our attempt to uncover the factors that drive proactive behaviors. In the present work, we chose to focus on positive relational experiences and relational coordination because these specific mechanisms are known to be particularly potent proximal precursors to a positive team climate (Carmeli et al., 2015; Vinarski-Peretz et al., 2011). Furthermore, as noted earlier, these particular mechanisms are potentially powerful as a means of ensuring that agentic behaviors activated in safety critical contexts like emergency services, military, health care, and process control settings is socially regulated, with a view to averting potentially unintended consequences (cf. Lai et al., 2024; Lai & Frimpong, 2025; Parker et al., 2010, 2019; Srulovici et al., 2023). Nevertheless, in future studies it would be useful to incorporate additional contextual factors that might have a bearing on high-quality relationships, not least, leadership, organizational culture, and organizational routines (Carmeli & Gittell, 2009), with a view to ascertaining their relative importance.

Practical implications

The present study has several important implications for practice. To the extent that health care organizations are looking to boost the proactivity of their workforces, our findings highlight the need to explore strategies by which they can develop and improve interpersonal workplace experiences among staff members. In the first instance, organizations can boost their intake of managers and employees skilled in forming and fostering respectful and meaningful relationships by refining their personnel selection processes. Relational skills such as empathetic competence (the ability to understand others' experiences and perspectives) and emotional intelligence (the ability to understand emotional cues) could be included in the selection criteria for appointing new recruits (Baker & Dutton, 2006). Where unit members work interdependently, organizations should also select for cross-functional teamwork, a process that has been found to be particularly important in strengthening mutual respect across functional boundaries (Gittell et al., 2010).

Given that nurturing meaningful work relationships is critical for fostering a range of outcomes, including but going well beyond proactivity per se, organizations should consider designing HR practices with relational outcomes in mind (Beltrán-Martín et al., 2017). For example, organizations that reward co-operation over competitiveness are more likely to harness the potential benefits of positive relationships in the workplace. Achieving this important goal requires leaders and managers to engage in skills-based training and coaching in relationship-building and collaboration (Dutton & Heaphy, 2003).

In the immediate context of the study, it is important to acknowledge that nurses are committed professionals, who want to provide the best care possible for their patients (Goethals et al., 2010). Working with colleagues who respect each other's unique contributions to patient care can alleviate the stresses associated with this fast-paced and often overburdened sector (Havens et al., 2018). Given the financial constraints of the health care sector, creating work environments that encourage positive interactions among team members is even more important, as a basis for stimulating a proactive approach to the delivery of high-quality outcomes (Gittell et al., 2020; Havens et al., 2010).

Whereas the majority of previous studies have focused on leadership as a major precursor of proactivity (Cai et al., 2019), the present findings highlight the potential of comparatively inexpensive alternative social mechanisms as a means of fostering suitably aligned proactive behaviors (cf. Parker et al., 2019). Importantly, in safety critical contexts like hospitals, where the unfettered expression of proactive behaviors can be risky, our study demonstrates that while both psychological safety climate and role breadth self-efficacy are crucial antecedents of proactive behaviors, relational coordination and positive relational experiences are two central social mechanisms that make it more likely that proactivity is aligned with the functional requirements of higher-level work units. This crucial insight is important for averting unintended consequences that might otherwise arise.

It is tempting, at this juncture, to conclude that our post-hoc supplementary findings indicate that the notion of positive relational experiences represents a homologous multilevel construct that shares similar meaning and functions across levels as a predictor and enabler of proactive behaviors (Chen et al., 2005). To the extent that is indeed the case, our additional findings could inform the design of interventions directed at work units in their entirety, as well as interventions directed at particular individuals. Role breadth self-efficacy, in contrast, would appear to be a strictly individual-level construct, whereby personalized approaches to foster its development are more important. However, in view of the post-hoc nature of both of these sets of findings, we must refrain from further speculating on their theoretical or applied significance, until such time as they are replicated on fresh and larger samples, preferably employing longitudinal research designs.

CONCLUSION

The present paper reported the development and testing of a new model, which identified social contextual factors that predict proactive behaviors and uncovered the underlying mechanisms involved. Specifically, we modelled positive relational experiences at the individual level and relational coordination at the unit level as predictors of individual-level proactive behaviors on the part of nurses based in hospital settings. Our results revealed that both of these antecedents increase proactive behaviors but do so via rather different mediating pathways. At the individual level, role breadth self-efficacy explains how positive relational experiences influence proactive behaviors. Our study also found that unit-level psychological safety climate mediates the effects of unit-level relational coordination on individual-level proactive behaviors. Taken together, our findings indicate that both of these social psychological mechanisms at the heart of our model can be harnessed to help ensure that much-needed proactive behaviors on the part of individuals in the workplace are activated in such a way that they ultimately meet the functional needs of the wider organizational and interorganizational ecosystem, an exciting prospect.

ACKNOWLEDGMENTS

The former Irish Research Council for the Humanities and Social Sciences (IRCHSS) (now incorporated within the funding body Taighde Éireann – Research Ireland), through the award of a PhD Scholarship to Jennifer B. Farrell, and Dublin City University Business School, through the award of a visiting Professorship to Gerard P. Hodgkinson, via its international visitor programme, supported the research reported in this paper.

CONFLICT OF INTEREST STATEMENT

There is no conflict of interest and funding directly associated with this manuscript.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

This research was conducted in accordance with the ethical guidelines of Dublin City University. This ensured the respect for the dignity of all participants and that integrity was maintained throughout all stages of the study. All participants gave informed consent before the study commenced, their privacy and confidentiality were protected, and the research received approval from the ethical review board of Dublin City University and the medical research ethics committees of the four hospitals that participated in the study.

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REFERENCES

Ashford, S. J., Rothbard, N. P., Piderit, S. K., & Dutton, J. E. (1998). Out on a limb: The role of context and impression management in selling gender-equity issues. *Administrative Science Quarterly*, *43*(1), 23–57. https://doi.org/10.2307/2393590

Axtell, C. M., Holman, D. J., Unsworth, K. L., Wall, T. D., Waterson, P. E., & Harrington, E. (2000). Shopfloor innovation: Facilitating the suggestion and implementation of ideas. *Journal of Occupational and Organizational Psychology*, *73*(3), 265–285. https://doi.org/10.1348/096317900167029

Baker, W., & Dutton, J. (2006). Enabling positive social capital. In J. Dutton & B. Ragins (Eds.), *Exploring positive relationships at work: Building a theoretical and research foundation*. Lawrence Erlbaum Associates Publishers.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191–215. https://doi.org/10.1037/0033-295X.84.2.191

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, *52*, 1–26. https://doi.org/10.1146/annurev.psych.52.1.1

Bateman, T. S., & Crant, J. M. (1993). The proactive component of organizational behavior: A measure and correlates. *Journal of Organizational Behavior*, *14*(2), 103–118. https://doi.org/10.1002/job.4030140202

Batistič, S., Černe, M., Kaše, R., & Zupic, I. (2016). The role of organizational context in fostering employee proactive behavior: the interplay between HR system configurations and relational climates. *European Management Journal*, *34*(5), 579–588. https://doi.org/10.1016/j.emj.2016.01.008

Beltrán-Martín, I., Bou-Llusar, J. C., Roca-Puig, V., & Escrig-Tena, A. B. (2017). The relationship between high performance work systems and employee proactive behaviour: Role breadth self-efficacy and flexible role orientation as mediating mechanisms. *Human Resource Management Journal*, *27*(3), 403–422. https://doi.org/10.1111/1748-8583.12145

Bindl, U. K., & Parker, S. K. (2011). Proactive work behavior: Forward-thinking and change-oriented action in organizations. In S. Zedeck (Ed.), *APA handbook of industrial and organizational psychology, Vol. 2. Selecting and developing members for the organization* (pp. 567–598). American Psychological Association. https://doi.org/10.1037/12170-019

Bolton, R., Logan, C., & Gittell, J. H. (2021). Revisiting relational coordination: A systematic review. *The Journal of Applied Behavioral Science*, *57*(3), 290–322. https://doi.org/10.1177/0021886321991597

Cai, Z., Parker, S. K., Chen, Z., & Lam, W. (2019). How does the social context fuel the proactive fire? A multilevel review and theoretical synthesis. *Journal of Organizational Behavior*, *40*(2), 209–230. https://doi.org/10.1002/job.2347

Cameron, K., Dutton, J., & Quinn, R. E. (Eds.). (2003). *Positive organizational scholarship*. Berrett-Koehler.

Carmeli, A. (2009). Positive work relationships, vitality, and job performance. In C. E. J. Härtel, N. M. Ashkanasy, & W. J. Zerbe (Eds.), *Emotions in groups, organizations and cultures*. Research on Emotion in Organizations (Vol. 5, pp. 45–71). Emerald Group Publishing Limited. https://doi.org/10.1108/S1746-9791(2009)0000005005

Carmeli, A., Brueller, D., & Dutton, J. E. (2009). Learning behaviours in the workplace: The role of high-quality interpersonal relationships and psychological safety. *Systems Research and Behavioral Science*, *26*(1), 81–98. https://doi.org/10.1002/sres.932

Carmeli, A., Dutton, J. E., & Hardin, A. E. (2015). Respect as an engine for new ideas: Linking respectful engagement, relational information processing and creativity among employees and teams. *Human Relations*, *68*(6), 1021–1047. https://doi.org/10.1177/0018726714550256

Carmeli, A., & Gittell, J. H. (2009). High-quality relationships, psychological safety, and learning from failures in work organizations. *Journal of Organizational Behavior*, *30*(6), 709–729. https://doi.org/10.1002/job.565

Carpini, J. A., Parker, S. K., & Griffin, M. A. (2017). A look back and a leap forward: A review and synthesis of the individual work performance literature. *Academy of Management Annals*, *11*(2), 825–885. https://doi.org/10.5465/annals.2015.0151

Chen, G., Bliese, P. D., & Mathieu, J. E. (2005). Conceptual framework and statistical procedures for delineating and testing multilevel theories of homology. *Organizational Research Methods*, *8*(4), 375–409. https://doi.org/10.1177/1094428105280056

Claggett, J. L., & Karahanna, E. (2018). Unpacking the structure of coordination mechanisms and the role of relational coordination in an era of digitally mediated work processes. *Academy of Management Review*, *43*(4), 704–722. https://doi.org/10.5465/amr.2016.0325

Curcuruto, M., Parker, S. K., & Griffin, M. A. (2019). Proactivity towards workplace safety improvement: An investigation of its motivational drivers and organizational outcomes. *European Journal of Work and Organizational Psychology*, *28*(2), 221–238. https://doi.org/10.1080/1359432X.2019.1572115

Den Hartog, D. N., & Belschak, F. D. (2017). Leadership and employee proactivity. In S. K. Parker & U. K. Bindl (Eds.), *Proactivity at work: Making things happen in organizations* (pp. 411–433). Taylor & Francis.

DeRue, D. S., & Morgeson, F. P. (2007). Stability and change in person-team and person-role fit over time: The effects of growth satisfaction, performance, and general self-efficacy. *Journal of Applied Psychology*, *92*(5), 1242–1253. https://doi.org/10.1037/0021-9010.92.5.1242

Dutton, J. E. (2003). *Energize your workplace: How to build and sustain high-quality relationships at work*. Jossey-Bass.

Dutton, J. E., Ashford, S. J., O'Neill, R. M., & Lawrence, K. A. (2001). Moves that matter: Issue selling and organizational change. *Academy of Management Journal*, *44*(4), 716–736. https://doi.org/10.5465/3069412

Dutton, J. E., & Heaphy, E. D. (2003). The power of high-quality connections. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship: Foundations of a new discipline* (pp. 263–278). Berrett-Koehler.

Edmondson, A. (1999). Psychological safety and learning behaviour in work teams. *Administrative Science Quarterly*, *44*(2), 350–383. https://doi.org/10.2307/2666999

Edmondson, A. C., Bohmer, R. M., & Pisano, G. P. (2001). Disrupted routines: Team learning and new technology implementation in hospitals. *Administrative Science Quarterly*, *46*(4), 685–716. https://doi.org/10.2307/3094828

Feeney, B. C. (2007). The dependency paradox in close relationships: Accepting dependence promotes independence. *Journal of Personality and Social Psychology*, *92*(2), 268–285. https://doi.org/10.1037/0022-3514.92.2.268

Flood, P. C., Coetsee, J., & Maitha, O. (2024). Relational Co-ordination at work. In S. Procter (Ed.), *A research agenda for work and employment* (pp. 207–223). Edward Elgar. https://doi.org/10.4337/9781803929972.00019

Frazier, M. L., & Bowler, W. M. (2015). Voice climate, supervisor undermining, and work outcomes: A group-level examination. *Journal of Management*, *41*(3), 841–863. https://doi.org/10.1177/0149206311434533

Gabriel, A. S., Podsakoff, N. P., Beal, D. J., Scott, B. A., Sonnentag, S., Trougakos, J. P., & Butts, M. M. (2019). Experience sampling methods: A discussion of critical trends and considerations for scholarly advancement. *Organizational Research Methods*, *22*(4), 969–1006. https://doi.org/10.1177/1094428118802626

Galletta, M., Vandenberghe, C., Portoghese, I., Allegrini, E., Saiani, L., & Battistelli, A. (2019). A cross-lagged analysis of the relationships among workgroup commitment, motivation and proactive work behaviour in nurses. *Journal of Nursing Management*, *27*, 1148–1158. https://doi.org/10.1111/jonm.12786

Gittell, J. H. (2000). Organizing work to support relational co-ordination. *The International Journal of Human Resource Management*, *11*(3), 517–539. https://doi.org/10.1080/095851900339747

Gittell, J. H. (2002). Coordinating mechanisms in care provider groups: Relational coordination as a mediator and input uncertainty as a moderator of performance effects. *Management Science*, *48*, 1408–1426. https://doi.org/10.1287/mnsc.48.11.1408.268

Gittell, J. H. (2016). Rethinking autonomy: Relationships as a source of resilience in a changing healthcare system. *Health Services Research*, *51*(5), 1701–1705. https://doi.org/10.1111/1475-6773.12578

Gittell, J. H., Logan, C., Cronenwett, J., Foster, T. C., Freeman, R., Godfrey, M., & Vidal, D. C. (2020). Impact of relational coordination on staff and patient outcomes in outpatient surgical clinics. *Health Care Management Review*, *45*(1), 12–20. https://doi.org/10.1097/HMR.0000000000000192

Gittell, J. H., Seidner, R., & Wimbush, J. (2010). A relational model of how high-performance work systems work. *Organization Science*, *21*(2), 490–506. https://doi.org/10.1287/orsc.1090.0446

Glick, W. H. (1985). Conceptualizing and measuring organizational and psychological climate: Pitfalls in multilevel research. *Academy of Management Review*, *10*(3), 601–616. https://doi.org/10.5465/amr.1985.4279045

Goethals, S., Gastmans, C., & de Casterlé, B. D. (2010). Nurses' ethical reasoning and behaviour: A literature review. *International Journal of Nursing Studies*, *47*(5), 635–650. https://doi.org/10.1016/j.ijnurstu.2009.12.010

Grant, A. M., & Parker, S. K. (2009). Redesigning work design theories: The rise of relational and proactive perspectives. *Academy of Management Annals*, *3*, 317–375. https://doi.org/10.1080/19416520903047327

Griffin, M. A., Neal, A., & Parker, S. K. (2007). A new model of work role performance: Positive behavior in uncertain and interdependent contexts. *Academy of Management Journal*, *50*(2), 327–347. https://doi.org/10.5465/amj.2007.24634438

Havens, D. S., Gittell, J. H., & Vasey, J. (2018). Impact of relational coordination on nurse job satisfaction, work engagement and burnout: Achieving the quadruple aim. *JONA: The Journal of Nursing Administration*, *48*(3), 132–140. https://doi.org/10.1097/NNA.0000000000000587

Havens, D. S., Vasey, J., Gittell, J. H., & Lin, W. T. (2010). Relational coordination among nurses and other providers: Impact on the quality of patient care. *Journal of Nursing Management*, *18*(8), 926–937. https://doi.org/10.1111/j.1365-2834.2010.01138.x

Healey, M. P., Vuori, T., & Hodgkinson, G. P. (2015). When teams agree while disagreeing: Reflexion and reflection in shared cognition. *Academy of Management Review*, *40*(3), 399–422. https://doi.org/10.5465/amr.2013.0154

Heaphy, E. D., Byron, K., Ballinger, G. A., Gittell, J. H., Leana, C., & Sluss, D. M. (2018). Introduction to special topic forum: The changing nature of work relationships. *Academy of Management Review*, *43*(4), 558–569. https://doi.org/10.5465/amr.2018.0222

Hong, Y., Liao, H., Raub, S., & Han, J. H. (2016). What it takes to get proactive: An integrative multilevel model of the antecedents of personal initiative. *Journal of Applied Psychology*, *101*(5), 687–701. https://doi.org/10.1037/apl0000064

Howell, J. M., & Boies, K. (2004). Champions of technological innovation: The influence of contextual knowledge, role orientation, idea generation, and idea promotion on champion emergence. *The Leadership Quarterly*, *15*(1), 123–143. https://doi.org/10.1016/j.leaqua.2003.12.008

Hox, J. J., Maas, C. J. M., & Brinkhuis, M. J. S. (2010). The effect of estimation method and sample size in multilevel structural equation modeling. *Statistica Neerlandica*, *64*(2), 157–170.

Htet, H. Y., Abhicharttibutra, K., & Wichaikum, O.-A. (2024). Factors predicting proactive work behaviors among nurses: A descriptive predictive study. *International Nursing Review*, *71*(1), 101–107. https://doi.org/10.1111/inr.12856

James, L. R. (1982). Aggregation bias in estimates of perceptual agreement. *Journal of Applied Psychology*, *67*(2), 219–229. https://doi.org/10.1037/0021-9010.67.2.219

Kahn, W. A. (2007). Meaningful Connections: Positive Relationships and Attachments at Work. In J. Dutton & B. Ragins (Eds.), *Exploring positive relationships at work* (pp. 189–207). Lawrence Erlbaum.

Kahn, W. A., & Heaphy, E. (2014). Relational Contexts of Personal Engagement at Work. In C. Truss, R. Delbridge, K. Alfes, A. Shantz, & E. Soane (Eds.), *Employee engagement in theory and practice* (pp. 82–96). Routledge.

Lai, A. Y., & Frimpong, J. A. (2025). What makes proactive behaviors at work effective? Perspectives of health care executives. *Health Care Management Review*, *50*(1), 13–22. https://doi.org/10.1097/HMR.0000000000000421

Lai, A. Y., Wee, K. Z., & Frimpong, J. A. (2024). Proactive behaviors and health care workers: A systematic review. *Health Care Management Review*, *49*(3), 239–251. https://doi.org/10.1097/HMR.0000000000000409

LeBreton, J. M., & Senter, J. L. (2008). Answers to 20 questions about interrater reliability and interrater agreement. *Organizational Research Methods*, *11*(4), 815–852. https://doi.org/10.1177/1094428106296642

Leonard, N. H., Beauvais, L. L., & Scholl, R. W. (1999). Work motivation: The incorporation of self-concept-based processes. *Human Relations*, *52*(8), 969–998. https://doi.org/10.1023/A:1016927507008

Liang, J., Farh, C. I. C., & Farh, J.-L. (2012). Psychological antecedents of promotive and prohibitive voice: A two-wave examination. *Academy of Management Journal*, *55*(1), 71–92. https://doi.org/10.5465/amj.2010.0176

Marlow, S. L., & Lacerenza, C. N. (2025). There is no end to learning, but how does it Begin? A meta-analysis of the team learning pathway. *Journal of Management Studies*, *62*(2), 597–631. https://doi.org/10.1111/joms.13064

Marlow, S. L., Lacerenza, C. N., & Salas, E. (2024). Examining how psychological safety consensus emerges over time. *Small Group Research*, *56*(2), 175–205. https://doi.org/10.1177/10464964241288221

Methot, J. R., Melwani, S., & Rothman, N. B. (2017). The space between us: A social-functional emotions view of ambivalent and indifferent workplace relationships. *Journal of Management*, *43*(6), 1789–1819. https://doi.org/10.1177/0149206316685853

Muthén, L. K., & Muthén, B. O. (2017). *Mplus: Statistical Analysis with Latent Variables: User's Guide (Version 8)*. Authors.

Myers, C. G. (2018). Coactive vicarious learning: Toward a relational theory of vicarious learning in organizations. *Academy of Management Review*, *43*(4), 610–634. https://doi.org/10.5465/amr.2016.0202

Ndirangu-Mugo, E. (2024). Nurses' experiences and leadership roles in sub-Saharan Africa. *Nurse Leader*, *23*(1), 82–86. https://doi.org/10.1016/j.mnl.2024.10.012

Nembhard, I. M., & Edmondson, A. (2006). Making it safe: The effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. *Journal of Organizational Behavior*, *27*(7), 941–966. https://doi.org/10.1002/job.413

Newman, A., Donohue, R., & Eva, N. (2017). Psychological safety: A systematic review of the literature. *Human Resource Management Review*, *27*(3), 521–535. https://doi.org/10.1016/j.hrmr.2017.01.001

Newman, D. A. (2014). Missing data: Five practical guidelines. *Organizational Research Methods*, *17*(4), 372–411. https://doi.org/10.1177/1094428114548590

Ng, T. W. H., & Feldman, D. C. (2013). Age and innovation-related behavior: The joint moderating effects of supervisor undermining and proactive personality. *Journal of Organizational Behavior*, *34*(5), 583–606. https://doi.org/10.1002/job.1802

O'Donovan, R., & McAuliffe, E. (2020). A systematic review exploring the content and outcomes of interventions to improve psychological safety, speaking up and voice behaviour. *BMC Health Services Research*, *20*(101), 1–11. https://doi.org/10.1186/s12913-020-4931-2

Ohly, S., & Schmitt, A. (2017). Work design and proactivity. In S. K. Parker & U. K. Bindl (Eds.), *Proactivity at work: Making things happen in organizations* (pp. 387–410). Taylor & Francis.

Ohly, S., Sonnentag, S., Niessen, C., & Zapf, D. (2010). Diary studies in organizational research. *Journal of Personnel Psychology*, *9*(2), 79–93. https://doi.org/10.1027/1866-5888/a000009

Parker, S. K. (1998). Enhancing role breadth self-efficacy: The roles of job enrichment and other organizational interventions. *Journal of Applied Psychology*, *83*(6), 835–852. https://doi.org/10.1037/0021-9010.83.6.835

Parker, S. K., Bindl, U. K., & Strauss, K. (2010). Making things happen: A model of proactive motivation. *Journal of Management*, *36*(4), 827–856. https://doi.org/10.1177/0149206310363732

Parker, S. K., & Collins, C. G. (2010). Taking stock: Integrating and differentiating multiple proactive behaviors. *Journal of Management*, *36*(3), 633–662. https://doi.org/10.1177/0149206308321554

Parker, S. K., Wang, Y., & Liao, J. (2019). When is proactivity wise? A review of factors that influence the individual outcomes of proactive behavior. *Annual Review of Organizational Psychology and Organizational Behavior*, *6*(1), 221–248. https://doi.org/10.1146/annurev-orgpsych-012218-015302

Parker, S. K., Williams, H. M., & Turner, N. (2006). Modelling the antecedents of proactive behavior at work. *Journal of Applied Psychology*, *91*(3), 636–652. https://doi.org/10.1037/0021-9010.91.3.636

Parker, S. K., & Wu, C. (2014). Leading for proactivity: How leaders cultivate staff who make things happen. In D. Day (Ed.), *Oxford handbook of leadership and organizations*. Oxford University Press.

Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social research and recommendation on how to control it. *Annual Review of Psychology*, *63*, 539–569. https://doi.org/10.1146/annurev-psych-120710-100452

Preacher, K. J., & Selig, J. P. (2010). Monte Carlo method for assessing multilevel Mediation: An interactive tool for creating confidence intervals for indirect effects in 1-1-1 multilevel models [Computer software]. Available from https://quantpsy.org/medmc/medmc111.htm

Preacher, K. J., & Selig, J. P. (2012). Advantages of monte carlo confidence intervals for indirect effects. *Communication Methods and Measures*, *6*(2), 77–98. https://doi.org/10.1080/19312458.2012.679848

Preacher, K. J., Zyphur, M. J., & Zhang, Z. (2010). A general multilevel SEM framework for assessing multilevel mediation. *Psychological Methods*, *15*(3), 209–233. https://doi.org/10.1037/a0020141

Raub, S., & Liao, H. (2012). Doing the right thing without being told: Joint effects of initiative climate and general self-efficacy on employee proactive customer service performance. *Journal of Applied Psychology*, *97*(3), 651–667. https://doi.org/10.1037/a0026736

Siemsen, E., Roth, A. V., Balasubramanian, S., & Anand, G. (2008). The influence of psychological safety and confidence in knowledge on employee knowledge sharing. *Manufacturing & Service Operations Management*, *11*(3), 429–447. https://doi.org/10.1287/msom.1080.0233

Spector, P. E., & Brannick, M. T. (2011). Methodological urban legends: The misuse of statistical control variables. *Organizational Research Methods*, *14*(2), 287–305. https://doi.org/10.1177/1094428110369842

Spreitzer, G., Sutcliffe, K., Dutton, J., Sonenshein, S., & Grant, A. M. (2005). A socially embedded model of thriving at work. *Organization Science*, *16*(5), 537–549. https://doi.org/10.1287/orsc.1050.0153

Srulovici, E., Azriel, Y., Golfenshtein, N., & Drach-Zahavy, A. (2023). Job crafting strategies of nurse mentors as mentors and nurses and their impact on missed nursing care: A cross-sectional study. *Nurse Education Today*, *127*, 105844. https://doi.org/10.1016/j.nedt.2023.105844

Thomas, J. P., Whitman, D. S., & Viswesvaran, C. (2010). Employee proactivity in organizations: A comparative meta-analysis of emergent proactive constructs. *Journal of Occupational and Organizational Psychology*, *83*(2), 275–300. https://doi.org/10.1348/096317910X502359

Tornau, K., & Frese, M. (2013). Construct clean-up in proactivity research: A meta-analysis on the nomological net of work-related proactivity concepts and their incremental validities. *Applied Psychology. An International Review*, *62*(1), 44–96. https://doi.org/10.1111/j.1464-0597.2012.00514.x

van der Leeden, R., Meijer, E., & Busing, F. M. T. A. (2008). Resampling multilevel models. In J. de Leeuw & E. Maijer (Eds.), *Handbook of multilevel analysis* (pp. 401–433). Springer.

Vinarski-Peretz, H., Binyamin, G., & Carmeli, A. (2011). Subjective relational experiences and employee innovative behaviors in the workplace. *Journal of Vocational Behavior*, *78*(2), 290–304. https://doi.org/10.1016/j.jvb.2010.09.005

Vough, H. C., Bindl, U. K., & Parker, S. K. (2017). Proactivity routines: The role of social processes in how employees self-initiate change. *Human Relations*, *70*(10), 1191–1216. https://doi.org/10.1177/0018726716686819

Wang, Y., Parker, S. K., Wu, C. H., Zhou, M., & Liao, J. (2025). Wise proactivity: Antecedents, outcomes, and a mechanism. *Journal of Organizational Behavior*, *46*, 923–938. https://doi.org/10.1002/job.2887

World Health Organization. (2020). *State of the world's nursing: Investing in education, jobs, and leadership*. WHO. Retrieved February 4, 2024, from https://www.who.int/publications/i/item/9789240003279

Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2009). Reciprocal relationships between job resources, personal resources, and work engagement. *Journal of Vocational Behavior*, *74*(3), 235–244. https://doi.org/10.1016/j.jvb.2008.11.003

Zimmerman, B. J., & Kitsantas, A. (2002). Acquiring writing revision and self-regulatory skill through observation and emulation. *Journal of Educational Psychology*, *94*(4), 660–668. https://doi.org/10.1037/0022-0663.94.4.660

How to cite this article: Farrell, J. B., Flood, P. C., Hodgkinson, G. P., Kilroy, S., Rivkin, W., & Strauss, K. (2025). The impact of positive work relationships on proactive behaviors: A multilevel study. *Applied Psychology*, *74*(5), e70029. https://doi.org/10.1111/apps.70029