



Deposited via The University of Leeds.

White Rose Research Online URL for this paper:

<https://eprints.whiterose.ac.uk/id/eprint/244042/>

Version: Accepted Version

Article:

Mostafa, A. (Accepted: 2026) How and When Does Negative Beneficiary Contact Relate to Service Behaviours? Unpacking the Roles of Prosocial Impact and Service-Oriented High-Performance Work Systems in Public Healthcare. International Public Management Journal. ISSN: 1096-7494 (In Press)

This is an author produced version of an article accepted for publication in International Public Management Journal, made available via the University of Leeds Research Outputs Policy under the terms of the Creative Commons Attribution License (CC-BY), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

Reuse

This article is distributed under the terms of the Creative Commons Attribution (CC BY) licence. This licence allows you to distribute, remix, tweak, and build upon the work, even commercially, as long as you credit the authors for the original work. More information and the full terms of the licence here: <https://creativecommons.org/licenses/>

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.

How and When Does Negative Beneficiary Contact Relate to Service Behaviours? Unpacking the Roles of Prosocial Impact and Service-Oriented High-Performance Work Systems in Public Healthcare

Abstract

Although public healthcare workers frequently encounter negative interactions with patients and care recipients, research on how such contact shapes staff behaviour is limited. The purpose of the current study is to advance knowledge of *how* and *under what conditions* negative beneficiary contact is related to service-oriented organizational citizenship behaviours (OCBs) in public healthcare organisations. Drawing on the relational job design perspective, this study examines prosocial impact as a mediator of the link between negative beneficiary contact and service-oriented OCBs, and the buffering role of service-oriented high-performance work systems (HPWS) on this mediated relationship. Two time-lagged, multisource datasets from nurses and their direct supervisors in hospitals in Romania (Study 1) and Egypt (Study 2) were used to test the proposed model. The results showed that prosocial impact mediates the relationship between negative beneficiary contact and service OCBs, but this indirect link was insignificant when perceptions of HPWS were high. Implications for public management theory and practice are discussed.

Keywords: Negative beneficiary contact; Prosocial impact; Service-oriented high-performance work systems; Service-oriented organisational citizenship behaviours; Relational job design

Introduction

With the growth of the service sector, scholars have become increasingly aware of the significance of interpersonal interactions and social relationships in job design (Grant and Parker 2009; Grant 2012). Thus, rather than simply seeing jobs as a group of tasks, scholars recognised that social characteristics are a core element of an individual's work (Grant 2007, 2012). Out of several identified social characteristics, beneficiary contact, which involves interactions with those whom individuals believe are influenced by their work and gain from their efforts, is viewed as the most important for enhancing task meaningfulness and significance (Grant and Parker 2009; Grant 2012). Therefore, several public sector studies have examined its outcomes (e.g., Grant et al. 2007; Grant 2008a; Siciliano and Thompson 2022). However, these studies focused primarily on positive or neutral contact, and much less attention has been given to the consequences of negative employee interactions with beneficiaries (Nielsen and Colbert 2022). This is surprising because negative beneficiary contact is prevalent in public service organisations, especially healthcare (Mostafa 2022; Xu et al. 2025).

In public healthcare organisations, poor or improper treatment workers receive from patients or their families is an endemic (Mostafa 2022; Mostafa et al. 2025; Xu et al. 2025). It is a daily hassle that healthcare personnel, especially nurses, have to deal with on a day-to-day basis, and has many deleterious consequences like reducing nurses mental and physical wellbeing and increasing on-the-job errors (Mostafa et al. 2025; Xu et al. 2025). Hence, understanding the implications of this phenomenon on nurse behaviours merits attention.

This study seeks to add to recent research on negative beneficiary contact in healthcare (e.g., Nielsen and Colbert 2022; Xu et al. 2025) by examining *how* and *when* it is related to nurses' service-oriented organisational citizenship behaviours (OCBs). Service-oriented OCBs are prosocial employee behaviours displayed during service encounters to promote

effective service delivery and enhance customer satisfaction (Bettencourt et al. 2001). They are critical to the performance and success of service organisations, including healthcare, because of the direct contact between employees and service users, and the unpredictability of user requests in service settings (Mostafa 2022). Therefore, understanding the factors that could relate to such behaviours is essential.

To delve into *how* and *when* negative beneficiary contact is linked to service OCBs, the current study draws on the relational job design perspective (Grant 2007). This perspective, largely based on Salancik and Pfeffer's (1978) social information processing theory, proposes that beneficiary contact conveys social cues that help employees become aware of the impact of their work on others. This, in turn, drives employee behaviours and actions. Drawing on this theory, the current study first examines the mediating role of perceived prosocial impact on the negative beneficiary contact-service OCBs relationship. Prosocial impact, which is a major theme in nursing (Santos et al. 2016), refers to the extent to which individuals view their actions at work as useful and contribute to the welfare of beneficiaries (Grant 2007). The current research proposes that, contrary to positive contact, unpleasant interactions with patients and their families give negative social signals that could be detrimental to nurse perceptions of impact on beneficiaries, which in turn will reduce their levels of service citizenship behaviours.

The relational job design perspective posits that individual responses to social job characteristics are influenced by the organisational context, and that organisational factors could act as a form of control that provides social information about beneficiaries and their importance (Grant 2007). This means that the effect of the social signals communicated by beneficiaries could vary depending on the social cues provided by the organisation. The HRM literature suggests that high-performance work systems (HPWS) are a crucial tool that offers important organisational information and cues that help favourably shape employees

work perceptions and experiences (Chuang and Liao 2010; Van De Voorde and Beijer 2015; Chen et al. 2024). Accordingly, this study proposes that, in service organisations, service-oriented HPWS could buffer the influence of negative beneficiary contact on service OCBs via prosocial impact. Service-oriented HPWS are a bundle or “system of HR practices designed to enhance employees’ competencies, motivation, and performance in providing high-quality service to external customers” (Liao et al. 2009, 373). Such systems send signals regarding the importance of nurses and the beneficiaries of their work (Chuang and Liao 2010; Van De Voorde and Beijer 2015). This should help increase nurses’ perceptions of their impact on beneficiaries, even when mistreated by them, thereby increasing their levels of service citizenship behaviours. Figure 1 presents this study’s moderated mediation model, in which the indirect association between negative beneficiary contact and employee service OCBs via prosocial impact is conditional on perceptions of service-oriented HPWS.

-Insert Figure 1 here-

The study makes several contributions to the literature. First, it extends the literature on relational job design by testing the association between negative beneficiary contact, perceived prosocial impact, and service OCBs. Even though existing research on job design acknowledges the presence of negative beneficiary contact (Grant 2007; Grant and Parker 2009), no studies have sought to explain how it could be linked to employee awareness of the positive difference they make through their work, and their consequent behaviours. By testing the mediating role of prosocial impact, the study extends our understanding of the consequences of negative beneficiary contact and offers a different perspective on its relationship with employee behaviours, as existing studies largely focused on illuminating motivational or emotion-related mechanisms, such as work engagement and emotional exhaustion, rather than prosocial impact perceptions (Lavelle et al. 2021; Mostafa 2022).

The study also contributes to the prosocial impact literature. Prior research has been devoted to understanding the factors that could promote prosocial impact such as positive beneficiary contact, task significance and transformational leadership (Bolino and Grant 2016; Lee et al. 2019) and less focus has been given to its deterrents. By considering negative beneficiary contact, the study sheds light on an important work-related factor that could inhibit prosocial impact in healthcare organisations.

Finally, the study extends research on the factors that could help alleviate the adverse impact of negative beneficiary contact. Previous studies have considered the role of individual factors (such as nurse resilience) and leadership styles (such as servant or ethical leadership) in ameliorating the unfavourable effects of unpleasant interactions with beneficiaries (Mostafa 2022; Mostafa et al. 2025; Xu et al. 2025). However, there is paucity of research on how organisational level practices, particularly HRM practices, could help employees deal with negative beneficiary contact (Hu et al. 2018). Testing service HPWS as a boundary condition helps provide an understanding of the role of management practices in shielding workers from negative beneficiary contact and answers calls for research that integrates the HRM literature with research on workplace mistreatment (Salin and Notelaers 2020).

Theory and Hypotheses Development

The propositions of the relational job design perspective mainly originate from social information processing theory, which asserts that the social context is a key determinant of which information is being processed and how, and that cues and signals from the social environment influence individual perceptions of their work (Salancik and Pfeffer 1978). The relational perspective on work design posits that, in service jobs, beneficiaries constitute a primary source of information about the significance and purposefulness of an individual's work. Beneficiaries express, both through words and actions, how workers are impacting

them. Therefore, the more the contact with them, the more the cues an employee receives regarding their prosocial impact (Grant 2007).

Prosocial impact is “the experience of making a positive difference in the lives of others through one’s work” (Bolino and Grant 2016, 38). According to the relational job design theory, when perceptions of prosocial impact are high, employees will put more efforts into making a positive difference in beneficiaries’ lives and will offer help beyond their formal role requirements.

The relational perspective also highlights the importance of the organisational context in influencing employee reactions to contact with beneficiaries. Specifically, organisations communicate social information that could help hold beneficiaries in high regard or devalue them, and consequently influence employees job experiences. When organisations provide positive social information about beneficiaries, employees will develop a greater awareness of their impact on them. Hence, the social information provided by the organisation about beneficiaries is instrumental in moderating the influence of beneficiary contact (Grant 2007).

This paper extends research on the relational job design perspective by considering the link between negative, rather than positive, beneficiary contact, employees prosocial impact perceptions and their service citizenship behaviours. The study also considers the role of service-oriented HPWS and argues that the effects of negative beneficiary contact could vary depending on the organisational signals provided by such systems.

Negative Beneficiary Contact and Service OCBs in Public Healthcare

Negative beneficiary contact refers to adverse interactions with individuals whom employees perceive they are meant to benefit, help or serve (Nielsen and Colbert 2022). In public healthcare organisations, beneficiaries are typically patients and their families (Guidroz et al. 2010; Nielsen and Colbert 2022; Xu et al. 2025). Negative interactions with these beneficiaries commonly arise when they are experiencing worry, uncertainty, or frustration

with treatment outcomes, and may manifest as verbal aggression, such as displaying anger through raised voices or insulting remarks; emotional manipulation, including attempts to induce guilt to secure preferential treatment; resistance or noncompliance with medical recommendations or prescribed care plans; and unreasonable expectations, such as demanding immediate assistance despite limited staffing or resource constraints (Nielsen and Colbert 2022; Xu et al. 2025).

The target population for this study comprises frontline nurses in public hospitals. Negative beneficiary contact constitutes a subtle and pervasive form of interpersonal stress that occurs during everyday interactions in relationally intensive professions such as nursing (Nielsen and Colbert 2022; Xu et al. 2025). Research suggests that about nine out of ten nurses experience negative contact with patients or their families, which has negative implications for both nurses' overall functioning and the quality of care provided (Mostafa et al. 2025; Xu et al. 2025).

Handling adverse beneficiary encounters demands considerable cognitive effort, as nurses must control their emotions, uphold professionalism, and deliver high-quality care despite the unpleasant interactions (Xu et al. 2025). This added mental load can divert attention from main tasks, increase the risk of errors, and heighten pressure, ultimately undermining nurses' willingness or capacity to engage in discretionary service behaviours that exceed their formal role requirements (i.e., service OCBs; Mostafa 2022; Xu et al. 2025). However, because of the nature of public healthcare organisations, discretionary service behaviours are crucial (Lee 2001; Mostafa 2022) as employees operate under conditions of high uncertainty, where it is often difficult to determine beforehand all that is required to address unanticipated beneficiary needs or expectations. For example, in nursing work, the combination and sequence of skills used in certain circumstances is hard to identify in advance because the performance of specific tasks depends on situational requirements that relate to patients'

conditions (Lee 2001). Therefore, service-oriented OCBs are essential for everyday nursing operations and effective healthcare delivery.

To better understand the relationship between negative beneficiary contact and nurses' service OCBs, scholars have started to consider the processes underlying this link. Recent studies have shown that, emotion-focused factors, such as emotional exhaustion (Lavelle et al. 2021), and motivational factors, such as work engagement (Mostafa 2022), mediate this association. The current study adds to the literature by considering the mediating role of perceived prosocial impact.

The Mediating Role of Prosocial Impact

According to the relational job design theory, contact with beneficiaries allows workers to “grasp the impact of their actions on others” (Grant 2007, 400). Beneficiaries provide employees with verbal and nonverbal information and feedback regarding their work and its effect on them. For example, when beneficiaries smile, they send a signal of pleasant employee interaction and experience, and a gratitude of employee efforts, which enables an employee to feel their crucial role in meeting others' expectations and needs (Drouvelis and Grosskopf 2021; Zhang et al. 2025). This helps enhance employees' realisation of their impact and the difference they make through their work (Lee et al. 2019). Thus, respectful beneficiary contact provides positive social cues that increase employees' awareness of the positive influence of their acts on others (Grant 2007).

On the contrary, negative contact with beneficiaries could reduce prosocial impact perceptions (Grant and Parker 2009). Negative beneficiary contact is a form of social rejection, which signals increased levels of customer dissatisfaction with the quality of the service received (Matthews et al. 2022). When beneficiaries are aggressive or rude, they communicate that the employee is not able to appropriately deal with their needs and has failed in fulfilling their job duties and achieving work-related goals (Park and Kim 2020;

Zhang et al. 2020; Nielsen and Colbert 2022). Unpleasant interactions with beneficiaries give negative social signals that reduce employee feelings of competence, self-worth and appreciation (Park and Kim 2020; Zhang et al. 2020), and convey to them that “they are not in service of something greater than the self” (Mostafa et al. 2025, 103). In fact, recent research has shown that negative beneficiary contact is associated with a sense of lack of value and significance in work (Nielsen and Colbert 2022; Mostafa et al. 2025), and perceptions of being worthless and insignificant members of the organisation (Park and Kim 2020).

Hypothesis 1: Negative beneficiary contact is negatively related to employee perceptions of prosocial impact.

According to the relational job design perspective, perceptions of prosocial impact are associated with the desire to make a positive difference in the lives of beneficiaries (Grant 2007). This suggests that when individuals are aware of the positive difference they make through their efforts and actions, their citizenship behaviours are likely to increase (Grant 2007; Lemoine et al. 2015). Prosocial impact perceptions help elevate positive emotions and enhance employees’ psychological wellbeing. Such perceptions direct employees’ attention to the needs of others rather than the self (Grant and Sonnentag 2010). They signal to individuals that their jobs are important and meaningful. Consequently, employees will have a strong drive to exert physical energies into their work and will work harder and expend greater effort for prosocial missions and tasks (Grant 2012). They will prioritise improving beneficiaries’ welfare and demonstrate dedication to addressing their needs (Patil and Lebel 2019). In fact, prior research has demonstrated that employee evaluations of their actions as having a positive impact on others is associated with increased identification, commitment and concern to beneficiaries (Castanheira 2016). Conversely, individuals with low perceptions of prosocial impact, due to negative beneficiary contact, are likely to be less

motivated to ‘make a prosocial difference’ because they “do not feel that they have the opportunity to achieve this outcome” (Grant 2007, 403). Such individuals will have a reduced sense of efficacy and increased feelings of helplessness. They will not be fully invested in their work and will be detached from their job roles (Mostafa 2022). Moreover, with the passage of time, they will suffer from increased strain and reduced subjective wellbeing (Sonnentag and Starzyk 2015; Xu et al. 2025). Consequently, workers with low prosocial impact perceptions won’t be able to go out of their way and exhibit service citizenship behaviours. Accordingly, this study proposes that negative beneficiary contact will be associated with decreased levels of service OCBs via restricting prosocial impact.

Hypothesis 2: Prosocial impact perceptions mediate the relationship between negative beneficiary contact and service OCBs.

The Moderating Role of Service-Oriented HPWS Perceptions

Service-oriented HPWS are a bundle of HR practices directed towards the delivery of superior customer service (Liao et al. 2009). They include HR practices such as employee staffing and training that focus on customer-oriented values and customer service skills, compensation and performance appraisals that are linked to the quality of services, and involving employees in service-related decision making (Chuang and Liao 2010; Luu 2019). The focus in this study is on the overall effect of a system or bundle of service-oriented HRM practices, rather than individual or single practices, because employees are concurrently exposed to different practices and the effectiveness of an individual practice is dependent on other practices. When practices are aligned together and fit into a system (i.e. horizontal fit), they create synergies and reinforce one another (Boon et al. 2019).

Service-oriented HPWS send signals to employees about (1) the degree to which they are viewed as important and valuable to the organisation, and (2) the level of expectations at work (Chuang and Liao 2010; Van De Voorde and Beijer 2015). They convey to employees

that the organisation cares about them, respects their initiatives and ideas, and recognises their contributions (Saks 2022). Such signals make employees feel valued and help enhance their sense of self-worth and their perceptions of themselves as doing work that is important and useful to others (Korff et al. 2017).

Service HPWS also convey what the organisation desires, views as appropriate, and expects from its workers (Chuang and Liao 2010; Korff et al. 2017). One of the main aims of service-oriented HPWS is to ensure that employees conform to organisationally approved values and norms, and show concern for the organisation's beneficiaries (Wang 2010). Such systems promote shared perceptions among employees of the importance of effectively satisfying beneficiaries' needs (Liao et al. 2009). They signal to employees that the organisation is concerned for its beneficiaries' interests, and expects, values and rewards providing good quality service (Chuang and Liao 2010). This allows employees to recognize the connection between their actions and outcomes in the lives of others and makes them realise that their behaviours could positively influence beneficiaries (Bolino and Grant 2016). Accordingly, it is expected that perceptions of service-oriented HPWS can weaken the negative association between negative beneficiary contact and prosocial impact perceptions.

First, HPWS practices such as staffing, training and performance appraisals will ascertain that service employees possess the knowledge, skills and competencies required to effectively perform their jobs (Chuang and Liao 2010; Luu 2019). Such practices will ensure that employees are cognizant of the challenges related to interacting with beneficiaries and how to deal with these challenges (Hu et al. 2018). Therefore, employees with high HPWS perceptions will be less likely to view negative beneficiary contact as a personal criticism. They will instead empathise with their beneficiaries and will view negative contact with them as a kind of 'need signal' that offers employees the chance to enhance their prosocial impact

by properly applying their knowledge and skills in helping unsatisfied beneficiaries and providing them with better service (Hu et al. 2018; Matthews et al. 2022).

Second, practices such as involvement and participation will enable workers exercise autonomy and control, and will provide them the latitude to deal with beneficiary issues in the way they see fit (Chuang and Liao 2010; Wang et al. 2022). This independence and sense of ownership will help enhance employees' prosocial impact, even when mistreated by beneficiaries (Hu et al. 2018). Rather than viewing negative beneficiary contact as a threat, employees will view it as an 'opportunity signal' that helps strengthen their role as valuable organisational actors and key contributors who can make a significant difference in the lives of others.

Third, practices such as caring for employees and providing fair compensation and rewards will give 'support, justice and trust' signals to employees and convey to them that they are valued organisational members who enjoy high status (Chuang and Liao 2010; Xu et al. 2022). Consequently, employees will become emotionally connected and psychologically engaged with the organisation and will internalise its service-oriented goals and values, which are the central aim of service-oriented HPWS (Wang et al. 2021; Xu et al. 2022). This, in turn, will make the demanding aspect of negative beneficiary contact less salient and, instead of viewing it as a hindrance or obstacle, individuals will perceive it as a situation or task that tests their ability, and allows them to return the favour to the organisation and help it achieve its mission of serving and benefiting others (Chuang and Liao 2010; Wang et al. 2021).

Hypothesis 3: Perceptions of service-oriented HPWS moderate the negative relationship between negative beneficiary contact and employee prosocial impact perceptions. This negative relationship will be weaker when employee perceptions of service-oriented HPWS are high.

Based on hypotheses 2 and 3, and consistent with the logic of moderated mediation, it is proposed that when perceptions of service-oriented HPWS are high, the mediated relationship between negative beneficiary contact and service-oriented OCBs via prosocial impact will be weaker.

Hypothesis 4: Perceptions of service-oriented HPWS moderate the indirect relationship between negative beneficiary contact and employees service OCBs through prosocial impact. This mediated relationship will be weaker under high perceptions of service-oriented HPWS.

Method

Two time-lagged multisource studies were conducted to examine the hypotheses. Study 1 utilises data gathered from nurses and their immediate supervisors in Romanian public sector hospitals. Study 2 involves data gathered from nurses and their supervisors in Egyptian public sector hospitals, which helps establish the generalisability of the findings. Study 2 also extends Study 1 by accounting for the role of previously identified mediator variables of the negative beneficiary contact-service OCBs link. In particular, the potential mediating influence of emotional exhaustion, as an emotion-focused mechanism (Lavelle et al. 2021 Auh et al. 2024), and work engagement as a motivational mechanism (Mostafa 2022), was controlled for. This helps assess whether prosocial impact makes a distinctive contribution relative to the mechanisms identified in prior research and provides evidence for the robustness of the proposed model. The measures used were the same in both studies.

Measures

All the questionnaire items are presented in Appendix 1. In Study 1, the items were translated from English into Romanian using Brislin's (1970) back-translation procedure. In Study 2, using the same procedure, the items were translated from English into Arabic. All responses were measured on a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Negative Beneficiary Contact. The 10-item patient incivility scale developed by Guidroz et al. (2010) was used to assess nurses' perceptions of negative beneficiary contact. The scale focuses on nurse interactions with service recipients who are "disrespectful, difficult to help, aggressive, rude, or hostile" (Grant 2007, 402). It covers two aspects: lack of respect and displaced frustration. The lack of respect dimension reflects recipients' dismissive or condescending behaviours, such as distrusting nurses' information, whereas displaced frustration captures more aggressive or hostile actions, including taking out personal frustrations on nurses. Together, the two dimensions capture the main adverse behaviours underlying negative beneficiary contact. Cronbach's alpha of this scale was 0.900 in Study 1 and 0.927 in Study 2.

Service-Oriented HPWS. HPWS were assessed using Chuang and Liao's (2010) scale. The scale consists of six dimensions or practices: staffing, training, participation/involvement, performance appraisals, caring, and rewards/compensation. Cronbach's alpha was 0.947 in Study 1 and 0.952 in Study 2.

Prosocial Impact. The 3-item scale developed by Grant (2008b) was used to measure nurses' prosocial impact perceptions. Cronbach's alpha was 0.864 in Study 1 and 0.876 in Study 2.

Service-Oriented OCBs. Employees service OCBs were evaluated by the immediate supervisors using four items from Bettencourt et al. (2001). Cronbach's alpha was 0.873 in Study 1 and 0.871 in Study 2.

Controls. Previous empirical studies and meta-analyses suggest that gender, age, and organisational tenure are important influences on citizenship behaviours and could influence prosocial impact (e.g. Ng and Feldman 2009, 2010; Bauwens et al. 2019). Therefore, these variables were controlled for in the analysis in both Study 1 and 2.

In Study 2, the personality trait of conscientiousness was also controlled for since it is viewed as a main antecedent of OCBs and could predict prosocial impact perceptions (Grant and Berg 2011). Four items from Donnellan et al.'s (2006) Mini International Personality Item Pool (Mini-IPIP) were used to measure conscientiousness ($\alpha = 0.935$). Moreover, as noted before, in Study 2, to explore whether prosocial impact can provide an additional explanation for the relationship between negative beneficiary contact and service citizenship, the mediating influence of emotional exhaustion and work engagement, which were identified as mediators of this relationship in previous research (Lavelle et al. 2021 Auh et al. 2024; Mostafa 2022), was also controlled for. Emotional exhaustion was assessed using Demerouti and Bakker's (2008) Oldenburg Burnout Inventory (OLBI) 8-item subscale ($\alpha = 0.949$), whereas work engagement was measured using Schaufeli et al.'s (2006) 9-item scale that assesses the three work engagement dimensions of vigour, dedication and absorption ($\alpha = 0.914$).

Study 1

Research Context and Data Collection Procedure

In Romania, the healthcare workforce accounts for nearly 2% of the population and 6.5% of the salaried workforce, with nurses representing its largest professional group (Zapata et al. 2025). Although the country ranks high in the EU for nursing graduates, nurse density remains below the EU average due to ongoing migration to Western Europe (Rusu et al. 2025; Zapata et al. 2025). Chronic underfunding and unequal access to services have strained public hospitals and weakened primary care, heightening the risk of patient dissatisfaction and negative interactions with healthcare recipients (Popa et al. 2017; Rusu et al. 2025). In fact, recent research suggests that a significant proportion of Romanian public healthcare workers, including nurses, experience workplace violence from patients and their relatives

(Friganović et al. 2024; Rusu et al. 2025), which in turn undermines nurses' prosocial behaviours (Mostafa 2022).

In 2022, the Romanian Government launched the Multi-annual Strategy for Human Resources Development in Health (2022–2030), placing the health workforce at the core of system reform and targeting improvements in governance, education, and workforce planning (James et al. 2025). The strategy introduces HRM measures to stabilize and support the workforce and improve working conditions through salary increases, expanded public-sector employment opportunities, streamlined recruitment, and infrastructure enhancements. Beyond retention, these reforms seek to strengthen organizational support and staffing capacity (James et al. 2025; Zapata et al. 2025), helping mitigate the effects of negative beneficiary contact and sustain worker prosocial behaviour in Romania's healthcare system.

Using paper and pen questionnaires, data for this study were gathered from a convenience sample of nurses and their immediate supervisors in 22 Romanian public sector hospitals across three counties in the North-West development region between late November 2024 and March 2025. The use of convenience sampling reduces the representativeness of the study findings compared to those obtained from a random sample. A contact person in each hospital was responsible for the distribution and the collection of the questionnaires after completion. Data were gathered in several phases to minimise concerns for common method bias. In Phase 1 (at Time 1), data were collected from nurses on negative beneficiary contact, perceived HPWS, and their demographics. Two weeks later (at Time 2), nurses rated the mediating variable, prosocial impact. Data on employees' service-oriented OCBs were gathered from respective supervisors two weeks after the completion of Phase 2 (at Time 3). Supervisors only rated OCBs of each of their nurses who completed the Time 1 and Time 2 surveys. The data collector (i.e. the contact person) assigned a unique code to each of the nurses taking part in the study and used this code to match their responses at each time point

and with their supervisors' evaluations of their service OCBs. All participants were assured anonymity and informed, via a cover letter that was attached to every questionnaire, that taking part in the study is voluntary.

A total of 400 nurses and 77 supervisors were contacted. The final sample consisted of 241 nurses (response rate 60%) working under 54 supervisors (response rate 70%). Most of the nurses in the final sample were female (61.3%), aged 40 or below (79%), and had a tenure of 10 years or less with their hospital (89%).

Analytical Strategy

The study data comprised 241 nurses working under 54 supervisors in 22 hospitals. There was a significant between-group variance, where the intraclass correlation coefficient (ICC) for service OCBs was 0.19. Therefore, generalized multilevel structural equation modeling (GSEM) with STATA was used to test the hypotheses. Composite scores were used in the analysis, and in line with the recommendations of Hofmann et al. (2000), all variables were grand mean-centred.

Since the analysis was conducted using GSEM with composite scores representing the study variables, the model was estimated as a path model with observed variables.

Accordingly, conventional structural model fit indices such as the CFI, TLI, and RMSEA are not available for this model specification (Rabe-Hesketh et al. 2004; Comulada 2021; Hair et al. 2020; Dash and Paul 2021; StataCorp 2025).

Results

Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) was conducted to assess the psychometric properties of the constructs. Since the sample size was not large enough and to reduce the indicator-to-sample ratio (Little et al. 2013), item parcels were used in the analysis. For perceived service-oriented HPWS, in line with prior research (e.g. Jo et al. 2020), six parcels were created by

averaging the items of the six dimensions. Before forming these parcels, a second-order CFA was conducted, and the six practices or dimensions of HPWS were specified as first-order factors with their respective items as indicators. The second-order loadings ranged between 0.782 to 0.894, all significant at $p < 0.001$. As regards the remaining constructs (i.e. negative beneficiary contact, prosocial impact, and service OCBs), parcels were created by successively averaging the lowest and highest factor loading items.

The four-factor model achieved a marginally acceptable fit ($\chi^2 = 293.07$, $df = 84$, $p < 0.001$; CFI = 0.91, TLI = 0.89, RMSEA = 0.10). The RMSEA is slightly above the conventional thresholds (Hu and Bentler 1999). However, since it is sensitive to both sample size and degrees of freedom (Kenny et al. 2015; Shi et al. 2022), the somewhat high value does not necessarily reflect serious model misspecification (Browne and Cudeck 1993). Moreover, the CFI value indicates acceptable fit (Hu and Bentler 1999). Therefore, and in line with recommendations that model fit should be evaluated holistically rather than relying on a single index (Marsh et al. 2004), the overall pattern of results suggests that the measurement model provides an adequate representation of the data.

The loadings of all indicators on their corresponding factors were significant ($p < 0.001$), and all of them were above 0.70. The composite reliability scores were more than 0.80 and the average variance extracted (AVE) scores were more than 0.50. Thus, the internal consistency was high for all constructs. As Table 1 shows, the AVE square root was higher than the corresponding inter-construct correlations. Hence, discriminant validity was also achieved (Fornell and Larcker 1981).

-Table 1 here-

Hypotheses Testing Results

As Table 2 shows, perceived negative beneficiary contact was negatively related to prosocial impact ($B = -0.20$, $SE = 0.08$, $p < 0.01$), which confirms Hypothesis 1. Prosocial impact, in turn, had a significant positive association with service-oriented citizenship behaviours ($B = 0.22$, $SE = 0.08$, $p < 0.01$). In addition, the indirect link between negative beneficiary contact and service OCBs through prosocial impact was negative and significant ($B = -0.05$, $SE = 0.02$, $p < 0.05$, 95% CI = -0.09 to -0.00). Together, these results confirm Hypothesis 2.

-Table 2 here-

As regards the moderating role of perceived service-oriented HPWS, the interaction of negative beneficiary contact and perceived HPWS was positive and significant ($B = 0.09$, $SE = 0.05$, $p < 0.05$). Figure 2 shows the simple slope plot for this interaction following Aiken and West's (1991) procedure. The relationship between negative beneficiary contact and prosocial impact was significant when HPWS perceptions were low ($B = -0.30$, $SE = 0.08$, $t = -3.66$, $p < 0.01$), but was not significant than when HPWS perceptions were high ($B = -0.11$, $SE = 0.10$, $t = -1.16$, $p = 0.25$). This confirms Hypothesis 3.

-Figure 2 here-

The indirect association between negative beneficiary contact and OCBs via prosocial impact was significant when HPWS perceptions were low ($B = -0.07$, $SE = 0.03$, $p < 0.05$, 95% CI = -0.12 to -0.01), but not significant when HPWS perceptions were high ($B = -0.02$, $SE = 0.02$, $p = 0.28$, 95% CI = -0.07 to 0.02). This provides support for Hypothesis 4.

Study 2

Research Context and Data Collection Procedure

Even though nurses are widely recognized as the cornerstone of any healthcare system, in Egypt, there is a severe shortage of nurses, with only 19.2 nurses per 10,000 population for

over 100 million citizens, a situation further exacerbated by increased nurse migration (Mostafa 2016; Mousa et al. 2024). Most Egyptian nurses (approximately 90%) are trained through a two-year vocational program, while a minority hold bachelor's degrees, limiting their preparation for the complex demands of their roles. In addition, they work long shifts for low pay and report limited recognition (Mousa et al. 2024).

Egypt ranks among the highest in Africa for workplace violence against healthcare workers, including nurses (Njaka et al. 2020). The chronic understaffing, increased workload and failure to fulfil patient needs have led to increased nurse exposure to physical, verbal, and emotional abuse, particularly from patients and their relatives (Njaka et al. 2020; Assil et al. 2022; Zoromba et al. 2025). This, in turn, contributes to work withdrawal behaviours, which ultimately result in substantial decline in the quality of healthcare services delivered (Arafa et al. 2022; Zoromba et al. 2025).

In 2018, Egypt introduced a 10-year Universal Health Insurance (UHI) strategy to achieve universal health coverage and ensure that all citizens can access high-quality, comprehensive health services without financial hardship (El Sobky and Aladdin 2024; Hammad et al. 2025). As part of this plan, the UHI law established a new authority to set and enforce accreditation standards for health facilities, requiring them to meet quality criteria to remain in the system. This focus on quality encourages facilities to provide excellent care that attracts and retains patients, with particular emphasis on beneficiaries' satisfaction. Consequently, service quality is now starting to be embedded in HRM through employment contracts, compensation mechanisms, and performance-based accountability, ensuring that staff are responsible for delivering high-quality care (Hammad et al. 2025). Moreover, to address staff shortages, the government has expanded medical education and increased the number of graduating healthcare professionals. Private medical colleges have been established in response to labour market demands, aiming to improve the readiness and efficiency of graduating doctors and

nurses. Priority has been given to expanding enrolment in nursing colleges and promoting fair distribution across regions to address healthcare personnel deficits in remote areas (World Health Organization 2025). All these measures are likely to reduce negative interactions with beneficiaries while promoting employee behaviours that enhance service delivery and satisfaction.

Using paper and pen questionnaires, data for this study were collected from nurses and their immediate supervisors in 24 public hospitals across two Egyptian cities, one in the southern region of the country (Upper Egypt) and one in the northern part, between end of January 2025 and April 2025. A convenience sample was used due to data collection challenges in Egypt, limiting the representativeness of the findings compared to a random sample (Mostafa 2016). Access to hospitals was attained through personal contacts, who were also responsible for the distribution and collection of the questionnaires. As in Study 1, to lessen common method bias concerns, data were collected from nurses at two different times. At Time 1, data were collected from nurses on negative beneficiary contact, perceived HPWS, their demographics and conscientiousness. Two weeks later (at Time 2), nurses rated prosocial impact and the two other mediators (i.e. emotional exhaustion and work engagement). Supervisors provided data on service OCBs after an additional two weeks (at Time 3). Like Study 1, a unique code was used to match the data at the two time points, and match nurses and supervisors' data.

The questionnaires were distributed to 400 nurses and 81 supervisors. The final sample consisted of 278 nurses (response rate 70%) working under 57 supervisors (response rate 70%). The majority of the nurses in the final sample were female (61%), aged 40 or below (73%), and had been working for 10 years or less at their current hospital (78%).

Analytical Strategy

The data for this study comprised 278 nurses working under 57 supervisors in 24 hospitals and there was a significant between-group variance, where for service OCBs, the ICC was 0.22. Therefore, the same analytical procedure used in Study 1 was used in Study 2.

Results

Confirmatory Factor Analysis

First, a CFA was conducted for a second-order measurement model of HPWS and work engagement. For HPWS, the standardized second-order factor loadings ranged between 0.743 and 0.900, whereas for work engagement, they ranged between 0.769 and 0.824, and all were significant at the $p < 0.001$ level. Then, like Study 1, item parcels were used in the CFA and the seven-factor model achieved a good fit ($\chi^2 = 510.10$, $df = 231$, $p < 0.001$; CFI = 0.947, TLI = 0.937, RMSEA = 0.066). In addition, the internal consistency was high for all constructs and discriminant validity was achieved (see Table 3).

-Table 3 here-

Hypotheses Testing Results

As Table 4 shows, negative beneficiary contact was associated negatively with prosocial impact ($B = -0.19$, $SE = 0.06$, $p < 0.01$), which supports Hypothesis 1. Prosocial impact, in turn, had a positive association with service-oriented citizenship behaviours ($B = 0.25$, $SE = 0.07$, $p < 0.001$). The indirect link between negative beneficiary contact and service OCBs through prosocial impact was negative and significant ($B = -0.05$, $SE = 0.02$, $p < 0.05$, 95% CI = -0.08 to -0.01). Together, these results confirm Hypothesis 2.

-Table 4 here-

The interaction of negative beneficiary contact and perceived HPWS was positive and significant ($B = 0.14$, $SE = 0.06$, $p < 0.05$). Figure 3 shows the simple slope plot for this

interaction. The association between negative beneficiary contact and prosocial impact was significant when HPWS perceptions were low ($B = -0.34$, $SE = 0.08$, $t = -4.45$, $p < 0.001$), but was not significant when HPWS perceptions were high ($B = -0.04$, $SE = 0.09$, $t = -0.50$, $p = 0.62$). This confirms Hypothesis 3.

-Figure 3 here-

Finally, the indirect association between negative beneficiary contact and OCBs via prosocial impact was significant when HPWS perceptions were low ($B = -0.08$, $SE = 0.03$, $p < 0.01$, 95% CI = -0.14 to -0.03), but not significant when HPWS perceptions were high ($B = -0.01$, $SE = 0.02$, $p = 0.62$, 95% CI = -0.05 to 0.03). This provides support for Hypothesis 4.

Robustness Checks

To compare the relative strength of the mediators' indirect effects (Preacher and Hayes 2008), a multiple mediation model was tested with negative beneficiary contact as the independent variable, service-oriented OCBs as the dependent variable, and the three proposed mediators: emotional exhaustion, prosocial impact, and work engagement (see Table 5).

In multiple mediation models, the indirect effect of X (i.e. negative beneficiary contact) on Y (i.e. service-oriented OCBs) through each mediator is defined as the product of the two unstandardized paths (i.e., $a \times b$) linking X to Y via that mediator. Thus, the indirect effect through M₁ (i.e. emotional exhaustion) is calculated as a_1b_1 , through M₂ (i.e. prosocial impact) as a_2b_2 , and through M₃ (i.e. work engagement) as a_3b_3 . The total indirect effect is the sum of these individual indirect effects ($a_1b_1 + a_2b_2 + a_3b_3$). The total effect of X on Y (c) equals the direct effect (c') plus the total indirect effect, so that $c = c' + (a_1b_1 + a_2b_2 + a_3b_3)$.

As shown in Table 5, analysis of the individual indirect effects showed that emotional exhaustion had the strongest contribution (a_1b_1 (emotional exhaustion) = -0.08 , $SE = 0.04$, p

< 0.05 , 95% CI = -0.15 to -0.01), followed by prosocial impact (a_2b_2 (prosocial impact) = -0.055, $SE = 0.020$, $p < 0.01$, 95% CI = -0.095 to -0.016), whereas the indirect effect via work engagement was not significant (a_3b_3 (work engagement) = -0.03, $SE = 0.03$, $p = 0.19$, 95% CI = -0.08 to 0.02). The total indirect effect through the three mediators together was negative and significant ($ab_{total} = -0.17$, $SE = 0.04$, $p < 0.001$, 95% CI = -0.26 to -0.09), indicating that the indirect pathways collectively reduced the total effect. Overall, this suggests that emotional exhaustion largely drives the suppressive effect, with prosocial impact moderately contributing, and work engagement having negligible influence.

The direct effect of negative beneficiary contact on service-oriented OCBs, controlling for the three mediators, was small and not significant ($c' = 0.01$, $p = 0.87$), resulting in a small negative total effect ($c = -0.16$). The opposing signs of the direct and indirect effects indicate inconsistent mediation (suppression), in which the indirect pathways collectively counteract the direct effect (MacKinnon et al. 2000; MacKinnon et al. 2007; Coutts and Hayes 2023). Because the total indirect effect was larger in magnitude than the total effect, the proportion mediated (i.e., ab_{total}/c) was slightly higher than 1 (was approximately 1.06), which is not substantively interpretable due to the instability of this ratio when the total effect is small and multiple suppression pathways exist. Nonetheless, the results highlight that emotional exhaustion is the main mechanism driving the reduction of the direct effect, with prosocial impact contributing to a lesser extent, and work engagement having no significant role.¹

Discussion

This research aimed to extend our understanding of *how* and *under which conditions* negative beneficiary contact relates to nurses' service-oriented OCBs in healthcare organisations. Drawing on the relational job design perspective, the research tested prosocial impact as a linking mechanism in the association between negative beneficiary contact and service-oriented OCBs, and evaluated the extent to which service-oriented HPWS perceptions could

moderate this mediated relationship. The findings revealed that prosocial impact mediates the association between negative beneficiary contact and service OCBs. Moreover, the relationship between negative beneficiary contact and OCBs via prosocial impact was stronger when service-oriented HPWS perceptions were low.

Theoretical Implications

This study extends the relational job design literature. While existing research acknowledges the presence of negative beneficiary contact (Grant 2007; Grant and Parker 2009), no studies have sought to explain how it could be related to employee awareness of the positive difference they make through their work and their consequent behaviours. Negative beneficiary contact is deeply ingrained within service organisations, especially healthcare, and represents a persistent challenge that healthcare staff, specifically nurses, regularly encounter (Mostafa et al. 2025; Xu et al. 2025). This research confirms that such negative contact has significant ramifications for nurses and lessens their service behaviours (Mostafa 2022; Nielsen and Colbert 2022; Mostafa et al. 2025; Xu et al. 2025).

The study also provides a better understanding of *how* negative beneficiary contact is associated with service-oriented OCBs. Previous research has mostly focused on the mediating role of motivational and emotion-related mechanisms (Lavelle et al. 2021; Mostafa 2022; Auh et al. 2024). This study extends prior research and highlights the important role of prosocial impact in the negative beneficiary contact-service OCBs relationship. The findings revealed that prosocial impact mediates this link, even (as shown in Study 2) after controlling for work engagement (as a motivational mechanism) and emotional exhaustion (as an emotion-focused mechanism). Consistent with the relational job design perspective, this indicates that unpleasant interactions with beneficiaries give negative social signals that reduce employee feelings of making a difference in other people's lives and, as a result, lower the efforts directed towards serving beneficiaries.

Notably, in Study 2, while work engagement did not make a significant contribution to the indirect relationship between negative beneficiary contact and service OCBs, emotional exhaustion played a more prominent role than prosocial impact. The stronger indirect effect via emotional exhaustion suggests that negative beneficiary contact primarily operates by depleting employees' emotional resources. Challenging interactions with beneficiaries often require employees to regulate negative emotions and manage interpersonal strain, which can lead to exhaustion and, in turn, weaken service behaviours (Lavelle et al. 2021; Auh et al. 2024). Prosocial impact, on the other hand, reflects a *relatively stable*, relationally grounded perception that one's work benefits others (Allan 2017; Meng et al. 2023), making it less sensitive to individual negative encounters while still playing a role in linking them to service OCBs.

The study also advances knowledge of the factors that could hinder prosocial impact perceptions. Previous research has mostly focused on the factors that could promote prosocial impact such as positive beneficiary contact, task significance and transformational leadership (Bolino and Grant 2016; Lee et al. 2019) and gave less attention to its deterrents. This research is the first to examine how adverse experiences with beneficiaries are related to employees' awareness of the positive influence of their acts on others. The findings show that negative beneficiary contact is inversely related to prosocial impact, which confirms that unfavourable interactions with beneficiaries give negative cues that decrease worker perceptions of being useful to others. However, the effect size of negative beneficiary contact on prosocial impact was modest (R^2 was 0.15 in Study 1 and 0.09 in Study 2), which suggests that perceived beneficiary contact is only one of several predictors of prosocial impact in service organisations and there are other factors that are likely to facilitate or impede it.

The study also enhances the understanding of the buffers of negative beneficiary contact. Prior research has examined the moderating role of factors such as leadership styles and

employee resilience (Mostafa 2022; Mostafa et al. 2025; Xu et al. 2025) in mitigating the deleterious effects of negative beneficiary contact, but rarely considered the role of organisational level practices such as HPWS (Hu et al. 2018). This study's findings demonstrate that, since service-oriented HPWS signal the importance of both nurses and their beneficiaries (Chuang and Liao 2010; Van De Voorde and Beijer 2015), they help weaken the negative association between unfavourable interactions with beneficiaries, prosocial impact and consequent service-oriented OCBs. Thus, consistent with the relational perspective, when organisations provide positive social information about beneficiaries (via practices such as HPWS), employees will develop a greater awareness of their impact on them, even if mistreated by beneficiaries, and will put more efforts into making a positive difference in their lives (Grant 2007). This underscores the significance of considering other organisational practices, such as management support and communication mechanisms, when examining the consequences of negative beneficiary contact.

Finally, notably, the mean scores of the study's variables were largely comparable across nurses in Romania and Egypt, with the exception of negative beneficiary contact. Specifically, perceptions of negative beneficiary contact were higher among Romanian nurses ($M = 3.12$) than Egyptian nurses ($M = 1.89$). This difference can be attributed to cultural and workplace factors that influence how nurses perceive and report negative interactions with patients. In Egypt, social disapproval associated with delicate matters and sensitive topics, such as sexual misconduct and racial bias, may discourage nurses from labelling or reporting such encounters as negative, especially when doing so could expose them to social judgment or reprisal (Zoromba et al. 2025). Additionally, hostile patient interactions are often normalized within Egyptian public healthcare settings, where difficult or aggressive patient behaviour may be perceived as an inherent aspect of the job (Allam et al. 2025). Hierarchical workplace structures may further inhibit reporting or disclosure due to concerns about blame

or limited administrative support (Allam et al. 2025; Zoromba et al. 2025). Conversely, Romanian healthcare institutions more commonly enforce zero-tolerance policies towards aggressive patient behaviour and try to promote respect for healthcare professionals (Friganović et al. 2024). In this environment, nurses may exhibit greater sensitivity to and recognition of negative beneficiary contact. Accordingly, the higher mean observed among Romanian nurses likely reflects increased perceptual sensitivity and a stronger reporting culture rather than a higher occurrence of negative beneficiary contact (Allam et al. 2025; Zoromba et al. 2025).

Practical Implications

Although public healthcare organisations have limited control over beneficiary behaviour, they need to work on preventing negative contact from happening. This could be, for example, through introducing a zero-tolerance policy towards poor or uncivil treatment from beneficiaries. This will help reduce incivility and signify organisations' care for their employees and their desire for staff to be treated with respect and dignity. Nowadays, hospitals are increasingly using signs to remind patients and their visitors to be civil and polite to staff. Public healthcare organisations could also regularly monitor customer feedback to ensure that lapses in service delivery are quickly detected and rectified. This will ensure that beneficiaries receive high quality services and will avert negative beneficiary behaviour (Shao and Skarlicki 2014).

Public healthcare organisations could also invest in service-oriented HPWS because such systems can erode the effects of negative beneficiary contact on prosocial impact and service behaviours. They need to design and implement practices that give regard to the interests of employees and are also directed towards the interests of service users (Chuang and Liao 2010). Healthcare organisations should hire candidates with strong service orientation, and provide training programs that encourage and motivate employees to serve others and

enhance their skills and knowledge about service delivery. They also need to offer feedback to employees on service behaviours and compensate them based on service performance (Wang and Xu 2017; Luu 2019).

Limitations and Future Research

First, in spite of the time-lagged nature of the data, it is hard to draw any causal inferences. Research using experimental designs is needed to gauge causality. Second, service-oriented OCBs were rated by supervisors. Future studies using more objective measures of service performance, such as customer satisfaction or number of customer complaints, could help provide a more complete picture of the effect of negative beneficiary contact and the role of HPWS. Third, the study focused on employees' experience of negative beneficiary contact rather than observed or witnessed contact. Future studies could assess the influence of witnessing unfavourable interactions with beneficiaries especially that prior research suggests that the harmful consequences of negative beneficiary contact could extend to workers who observe this type of interaction (Miranda et al. 2020). Finally, both Study 1 and Study 2 relied on convenience samples, which limits the generalizability of the findings. This is important especially that in both Egypt and Romania, nursing is still relatively undervalued (Limani 2023; Zapata et al. 2025). Future research could focus on healthcare systems in other cultures and countries where the nursing profession is more respected to assess how nurse interactions with patients and their families are influenced by social views and how negative beneficiary contact is conveyed, perceived and handled (Xu et al. 2025).

Notes

1. To assess the relative size of the indirect effect via prosocial impact in Study 1, a mediation only model was tested with negative beneficiary contact as the independent variable, prosocial impact as the mediator, and service-oriented OCBs as the dependent variable. The results are presented in Appendix 2.

References

- Aiken, Leona S., and Stephen G. West. 1991. *Multiple Regression: Testing and Interpreting Interactions*. Newbury Park, CA: Sage.
- Allam, Rasha Mahmoud, Fatma Mohamed Hassan, Shaimaa Abdalaleem Abdalgeleel, Marwa Ibrahim Mahfouz Khalil, Ola Osama Khalaf, Rana Hamdy Abd Elsalam, and Eman D. El Desouky. 2025. "Prevalence of Workplace Violence and Associated Factors among Different Healthcare Sectors in Egypt: A Cross-Sectional Survey." *Journal of Public Health*. <https://doi.org/10.1007/s10389-024-02389-7>.
- Allan, Blake A. 2017. "Task Significance and Meaningful Work: A Longitudinal Study." *Journal of Vocational Behavior* 102: 174–182. <https://doi.org/10.1016/j.jvb.2017.07.011>.
- Arafa, Ahmed, Ahmed Shehata, Mohamed Youssef, and Shaimaa Senosy. 2022. "Violence against Healthcare Workers during the COVID-19 Pandemic: A Cross-Sectional Study from Egypt." *Archives of Environmental and Occupational Health* 77(8): 621–627. <https://doi.org/10.1080/19338244.2021.1982854>.
- Assil, Altaf O., Amna A. Salem, Omnya A. Mokhtar, Omnia H. Taha, Amany M. Ramadan, Amal H. R. Mansour, Amal A. E. Awad, Amira A. El-Hossainy, Amir A. Khattab, Alshaymaa M. Salem, Amany E. A. Dalaab, and Sonya M. S. Azab. 2022. "Workplace Violence at Emergency Departments, Ain Shams University Hospitals, Cairo, Egypt." *BMC Health Services Research* 22(1): 1437. <https://doi.org/10.1186/s12913-022-08867-6>.
- Auh, Seigyoung, Bulent Menguc, Frauke Mattison Thompson, and Aypar Uslu. 2024. "Conflict-Solving as a Mediator between Customer Incivility and Service Performance." *The Service Industries Journal* 44(5–6): 342–377. <https://doi.org/10.1080/02642069.2022.2094916>.
- Bauwens, Robin, Mieke Audenaert, and Adeliën Decramer. 2019. "Fostering Societal Impact and Job Satisfaction: The Role of Performance Management and Leader–Member Exchange." *Public Management Review* 21(10): 1486–1515. <https://doi.org/10.1080/14719037.2018.1561928>.
- Bettencourt, Lance A., Kevin P. Gwinner, and Matthew L. Meuter. 2001. "A Comparison of Attitude, Personality, and Knowledge Predictors of Service-Oriented Organizational Citizenship Behaviors." *Journal of Applied Psychology* 86(1): 29–41. <https://doi.org/10.1037/0021-9010.86.1.29>.
- Bolino, Mark C., and Adam M. Grant. 2016. "The Bright Side of Being Prosocial at Work, and the Dark Side, Too: A Review and Agenda for Research on Other-Oriented Motives, Behavior, and Impact in Organizations." *Academy of Management Annals* 10(1): 599–670. <https://doi.org/10.1080/19416520.2016.1153260>.
- Boon, Corine, Deanne N. den Hartog, and David P. Lepak. 2019. "A Systematic Review of Human Resource Management Systems and Their Measurement." *Journal of Management* 45(6): 2498–2537. <https://doi.org/10.1177/0149206318818718>.
- Brislin, Richard W. 1970. "Back-Translation for Cross-Cultural Research." *Journal of Cross-Cultural Psychology* 1(3): 185–216. <https://doi.org/10.1177/135910457000100301>.
- Browne, Michael W., and Robert Cudeck. 1993. "Alternative Ways of Assessing Model Fit." In *Testing Structural Equation Models*, edited by Kenneth A. Bollen and J. Scott Long, 136–162. Newbury Park, CA: Sage.
- Castanheira, Filipa. 2016. "Perceived Social Impact, Social Worth, and Job Performance: Mediation by Motivation." *Journal of Organizational Behavior* 37(6): 789–803. <https://doi.org/10.1002/job.2056>.
- Chen, Feinian, Patrick J. Curran, Kenneth A. Bollen, James Kirby, and Pamela Paxton. 2008. "An Empirical Evaluation of the Use of Fixed Cutoff Points in RMSEA Test Statistic in Structural Equation Models." *Sociological Methods & Research* 36(4): 462–494. <https://doi.org/10.1177/0049124108314720>.

- Chen, Yang, Rong Fu, Mengying Xie, Fang Lee Cooke, and Qi Song. 2024. "How Does Human Resource Management Help Service Organizations to Thrive in Uncertainties and Risks: Postcrisis as a Context." *Human Resource Management* 63(4): 581–600. <https://doi.org/10.1002/hrm.22216>.
- Chuang, Chih-Hsun, and Hui Liao. 2010. "Strategic Human Resource Management in Service Context: Taking Care of Business by Taking Care of Employees and Customers." *Personnel Psychology* 63(1): 153–96. <https://doi.org/10.1111/j.1744-6570.2009.01165.x>.
- Comulada, W. Scott. 2021. "Calculating Level-Specific SEM Fit Indices for Multilevel Mediation Analyses." *The Stata Journal: Promoting Communications on Statistics and Stata* 21(1): 195–205. <https://doi.org/10.1177/1536867X211000022>.
- Coutts, Jacob J., and Andrew F. Hayes. 2023. "Questions of Value, Questions of Magnitude: An Exploration and Application of Methods for Comparing Indirect Effects in Multiple Mediator Models." *Behavior Research Methods* 55(7): 3772–3785. <https://doi.org/10.3758/s13428-022-01988-0>.
- Dash, Ganesh, and Justin Paul. 2021. "CB-SEM vs PLS-SEM Methods for Research in Social Sciences and Technology Forecasting." *Technological Forecasting and Social Change* 173: 121092. <https://doi.org/10.1016/j.techfore.2021.121092>.
- Demerouti, Evangelia, and Arnold B. Bakker. 2008. "The Oldenburg Burnout Inventory: A Good Alternative to Measure Burnout and Engagement." In *Handbook of Stress and Burnout in Health Care*, edited by Jonathon R. B. Halbesleben, 65–78. New York: Nova Science Publishers.
- Donnellan, M. Brent, Frederick L. Oswald, Brendan M. Baird, and Richard E. Lucas. 2006. "The Mini-IPIP Scales: Tiny-Yet-Effective Measures of the Big Five Factors of Personality." *Psychological Assessment* 18(2): 192–203. <https://doi.org/10.1037/1040-3590.18.2.192>.
- Drouvelis, Michalis, and Brit Grosskopf. 2021. "The Impact of Smiling Cues on Social Cooperation." *Southern Economic Journal* 87(4): 1390–1404. <https://doi.org/10.1002/soej.12485>.
- El-Sobky, Ahmed, and Mazen Aladdin. 2024. "From Reform to Excellence: The Future of Health Care in Egypt." *The Lancet Global Health* 12(10): e1584–e1585. [https://doi.org/10.1016/S2214-109X\(24\)00310-3](https://doi.org/10.1016/S2214-109X(24)00310-3).
- Fornell, Claes, and David F. Larcker. 1981. "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error." *Journal of Marketing Research* 18(1): 39–50. <https://doi.org/10.1177/002224378101800104>.
- Friganović, Adriano, Jelena Slijepčević, Slađana Režić, Cristina Alfonso-Arias, Monika Borzuchowska, Anca Constantinescu-Dobra, Madalina-Alexandra Coțiu, Estel Curado-Santos, Beata Dobrowolska, Aleksandra AGutysz-Wojnicka, Maria Hadjibalassi, Mireia Llauro-Serra, Adrian Sabou, and Evanthia Georgiou. 2024. "Critical Care Nurses' Perceptions of Abuse and Its Impact on Healthy Work Environments in Five European Countries: A Cross-Sectional Study." *International Journal of Public Health* 69: 1607026. <https://doi.org/10.3389/ijph.2024.1607026>.
- Grant, Adam M. 2007. "Relational Job Design and the Motivation to Make a Prosocial Difference." *Academy of Management Review* 32(2): 393–417. <https://doi.org/10.2307/20159308>.
- Grant, Adam M. 2008a. "Employees Without a Cause: The Motivational Effects of Prosocial Impact in Public Service." *International Public Management Journal* 11(1): 48–66. <https://doi.org/10.1080/10967490801887905>.
- Grant, Adam M. 2008b. "The Significance of Task Significance: Job Performance Effects, Relational Mechanisms, and Boundary Conditions." *Journal of Applied Psychology* 93(1): 108–124. <https://doi.org/10.1037/0021-9010.93.1.108>.

- Grant, Adam M. 2012. "Leading with Meaning: Beneficiary Contact, Prosocial Impact, and the Performance Effects of Transformational Leadership." *Academy of Management Journal* 55(2): 458–476. <https://doi.org/10.5465/amj.2010.0588>.
- Grant, Adam M., and Justin M. Berg. 2011. "Prosocial Motivation at Work: When, Why, and How Making a Difference Makes a Difference." In *The Oxford Handbook of Positive Organizational Scholarship*, edited by Kim S. Cameron and Gretchen M. Spreitzer, 28–44. New York: Oxford University Press.
- Grant, Adam M., and Sabine Sonnentag. 2010. "Doing Good Buffers against Feeling Bad: Prosocial Impact Compensates for Negative Task and Self-Evaluations." *Organizational Behavior and Human Decision Processes* 111(1): 13–22. <https://doi.org/10.1016/j.obhdp.2009.07.003>.
- Grant, Adam M., and Sharon K. Parker. 2009. "Redesigning Work Design Theories: The Rise of Relational and Proactive Perspectives." *Academy of Management Annals* 3(1): 317–375. <https://doi.org/10.1080/19416520903047327>.
- Grant, Adam M., Elizabeth M. Campbell, Grace Chen, Keenan Cottone, David Lapedis, and Karen Lee. 2007. "Impact and the Art of Motivation Maintenance: The Effects of Contact with Beneficiaries on Persistence Behavior." *Organizational Behavior and Human Decision Processes* 103(1): 53–67. <https://doi.org/10.1016/j.obhdp.2006.05.004>.
- Guidroz, Ashley M., Jennifer L. Burnfield-Geimer, Olga Clark, Heather M. Schwetschenau, and Steve M. Jex. 2010. "The Nursing Incivility Scale: Development and Validation of an Occupation-Specific Measure." *Journal of Nursing Measurement* 18(3): 176–200. <https://doi.org/10.1891/1061-3749.18.3.176>.
- Hair, Joe F., Jr., Matt C. Howard, and Christian Nitzl. 2020. "Assessing Measurement Model Quality in PLS-SEM Using Confirmatory Composite Analysis." *Journal of Business Research* 109: 101–110. <https://doi.org/10.1016/j.jbusres.2019.11.069>.
- Hammad, Ahmed S., Ahmed Mahmoud Fouad, Ahmed Taha Aboushady, and Amira Aly Hegazy. 2025. "A Qualitative Study of the Government's Implementation of the Universal Health Coverage in Egypt: Stakeholders' Perspective." *Health Research Policy and Systems* 23: 150. <https://doi.org/10.1186/s12961-025-01412-x>.
- Hofmann, David A., Mark B. Griffin, and Mark B. Gavin. 2000. "The Application of Hierarchical Linear Modeling to Organizational Research." In *Multilevel Theory, Research, and Methods in Organizations: Foundations, Extensions, and New Directions*, edited by Katherine J. Klein and Steve W. Kozlowski, 467–511. San Francisco, CA: Jossey-Bass.
- Hu, Li-tze, and Peter M. Bentler. 1999. "Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives." *Structural Equation Modeling: A Multidisciplinary Journal* 6(1): 1–55. <https://doi.org/10.1080/10705519909540118>.
- Hu, Xiaoxiao, Yujie Zhan, Rebecca Garden, Mo Wang, and Junqi Shi. 2018. "Employees' Reactions to Customer Mistreatment: The Moderating Role of Human Resource Management Practices." *Work & Stress* 32(1): 49–67. <https://doi.org/10.1080/02678373.2017.1330836>.
- James, Rosemary, Cris Scotter, Alexandru Florin Rogobete, Teodor Cristian Blidaru, Alexandru Rafila, Gareth Rees, Ioana Novac, Daphne Kaiteladou, Yanina Andersen, Khamis Al-alawy, Olympia Konstantakopoulou, Natasha Azzopardi Muscat, Tomas Zapata, and Nicolae Dragoş Garofil. 2025. "Strengthening Romania's Health Workforce: Leading by Example." *The Lancet Regional Health – Europe* 49: 101191. <https://doi.org/10.1016/j.lanepe.2024.101191>.
- Kenny, David A., Burcu Kaniskan, and D. Betsy McCoach. 2015. "The Performance of RMSEA in Models With Small Degrees of Freedom." *Sociological Methods & Research* 44(3): 486–507. <https://doi.org/10.1177/0049124114543236>.
- Korff, Jörg, Torsten Biemann, and Sven C. Voelpel. 2017. "Human Resource Management Systems and Work Attitudes: The Mediating Role of Future Time Perspective." *Journal of Organizational Behaviour* 38(1): 45–67. <https://doi.org/10.1002/job.2110>.

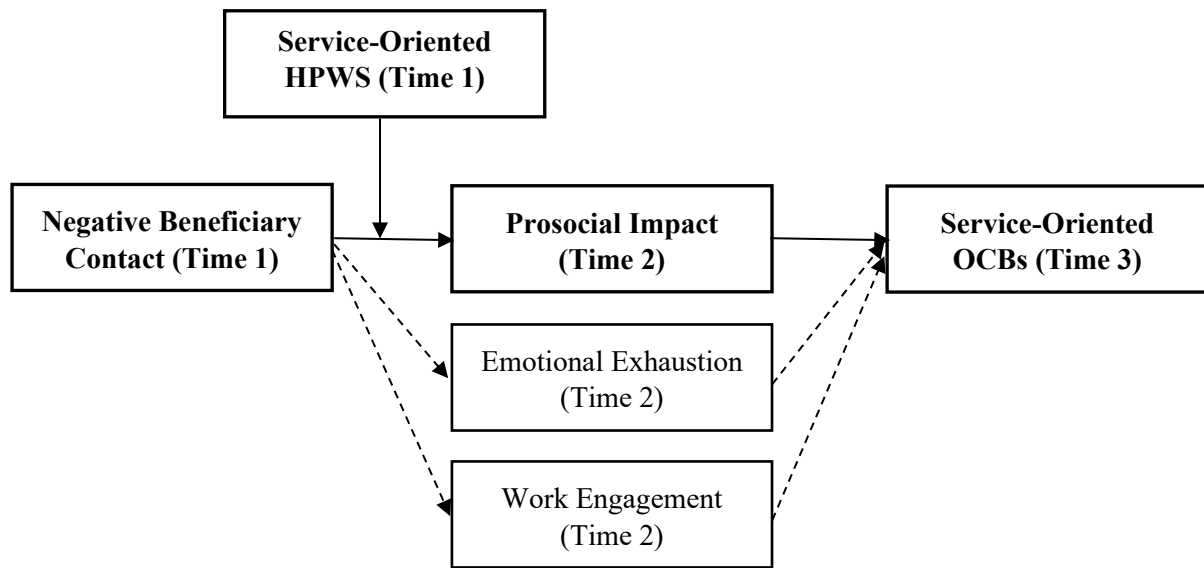
- Lavelle, James J., Deborah E. Rupp, David N. Herda, Alankrita Pandey, and John R. Lauck. 2021. "Customer Injustice and Employee Performance: Roles of Emotional Exhaustion, Surface Acting, and Emotional Demands—Abilities Fit." *Journal of Management* 47(3): 654–682. <https://doi.org/10.1177/0149206319869426>.
- Lee, Hun Whee, Jacob Bradburn, Russell E. Johnson, Szu-Han (Joanna) Lin, and Chu-Hsiang (Daisy) Chang. 2019. "The Benefits of Receiving Gratitude for Helpers: A Daily Investigation of Proactive and Reactive Helping at Work." *Journal of Applied Psychology* 104(2): 197–213. <https://doi.org/10.1037/apl0000346>.
- Lee, Hyun-Jung. 2001. "Willingness and Capacity: The Determinants of Prosocial Organizational Behaviour Among Nurses in the UK." *International Journal of Human Resource Management* 12(6): 1029–1048. <https://doi.org/10.1080/713769686>.
- Lemoine, G. James, Charles K. Parsons, and Shibani Kansara. 2015. "Above and Beyond, Again and Again: Self-Regulation in the Aftermath of Organizational Citizenship Behaviors." *Journal of Applied Psychology* 100(1): 40–55. <https://doi.org/10.1037/a0036902>.
- Liao, Hui, Keiko Toya, David P. Lepak, and Ying Hong. 2009. "Do They See Eye to Eye? Management and Employee Perspectives of High-Performance Work Systems and Influence Processes on Service Quality." *Journal of Applied Psychology* 94(2): 371–391. <https://doi.org/10.1037/a0013504>.
- Limani, Donika. 2023. "Nurses and Midwives: Overworked, Underpaid, Undervalued?" *ILOSTAT*. 12 May. <https://ilostat.ilo.org/nurses-and-midwives-overworked-underpaid-undervalued/>.
- Little, Todd D., Mijke Rhemtulla, Kimberly Gibson, and Alexander M. Schoemann. 2013. "Why the Items Versus Parcels Controversy Needn't Be One." *Psychological Methods* 18(3): 285–300. <https://doi.org/10.1037/a0033266>.
- Luu, Trong Tuan. 2019. "Service-Oriented High-Performance Work Systems and Service-Oriented Behaviours in Public Organizations: The Mediating Role of Work Engagement." *Public Management Review* 21(6): 789–816. <https://doi.org/10.1080/14719037.2018.1526314>.
- MacKinnon, David P., Amanda J. Fairchild, and Matthew S. Fritz. 2007. "Mediation Analysis." *Annual Review of Psychology* 58: 593–614. <https://doi.org/10.1146/annurev.psych.58.110405.085542>.
- MacKinnon, David P., Jennifer L. Krull, and Chondra M. Lockwood. 2000. "Equivalence of the Mediation, Confounding, and Suppression Effect." *Prevention Science* 1(4): 173–181. <https://doi.org/10.1023/A:1026595011371>.
- Marsh, Herbert W., Kit-Tai Hau, and Zhonglin Wen. 2004. "In Search of Golden Rules: Comment on Hypothesis-Testing Approaches to Setting Cutoff Values for Fit Indexes and Dangers in Overgeneralizing Hu and Bentler's (1999) Findings." *Structural Equation Modeling: A Multidisciplinary Journal* 11(3): 320–341. https://doi.org/10.1207/s15328007sem1103_2.
- Matthews, Russell A., Benjamin M. Walsh, Claire E. Smith, Marilyn V. Whitman, and Sara J. McKersie. 2022. "Can Incivility Be Informative? Client Incivility as a Signal for Provider Creativity." *Journal of Occupational Health Psychology* 27(4): 392–410. <https://doi.org/10.1037/ocp0000323>.
- Meng, Ling, Xinyue Lin, Juan Du, Xiaoshuang Zhang, and Xiang Lu. 2023. "Autonomy Support and Prosocial Impact Facilitate Meaningful Work: A Daily Diary Study." *Motivation and Emotion* 47(4): 538–553. <https://doi.org/10.1007/s11031-023-10006-5>.
- Miranda, Gerardo A., Jennifer L. Welbourne, and Ana M. Sariol. 2020. "Feeling Shame and Guilt When Observing Workplace Incivility: Elicitors and Behavioural Responses." *Human Resource Development Quarterly* 31: 371–392. <https://doi.org/10.1002/hrdq.21395>.

- Mostafa, Ahmed Mohammed Sayed, Suhaer Yunus, and Wee Chan Au. 2025. "Customer Incivility, Person–Organization Fit and Psychological Well-Being in Healthcare: Does Ethical Leadership Matter?" *International Journal of Workplace Health Management* 18(5): 473–491. <https://doi.org/10.1108/IJWHM-11-2024-0221>.
- Mostafa, Ahmed Mohammed Sayed, Zeynep Y. Yalabik, Ceyda Maden Eyiusta, Monica Zaharie, and Gaye Özçelik. 2025. "Mistreated but Still Resilient! Unraveling the Role of Servant Leadership in Mitigating the Adverse Consequences of Care Recipients' Incivility." *Human Resource Management* 64(1): 99–115. <https://doi.org/10.1002/hrm.22251>.
- Mostafa, Ahmed Mohammed Sayed. 2016. "High-Performance HR Practices, Work Stress and Quit Intentions in the Public Health Sector: Does Person–Organization Fit Matter?" *Public Management Review* 18(8): 1218–1237. <https://doi.org/10.1080/14719037.2015.1100319>.
- Mostafa, Ahmed Mohammed Sayed. 2022. "Customer Incivility, Work Engagement and Service-Oriented Citizenship Behaviours: Does Servant Leadership Make a Difference?" *Human Performance* 35(1): 31–47. <https://doi.org/10.1080/08959285.2021.1998061>.
- Mousa, Mohamed, Ahmad Arslan, Cary Cooper, and Shlomo Tarba. 2024. "Live Like an Ant to Eat Sugar: Nurses' Engagement in Extreme Work Conditions and Their Perceptions of Its Ethicality." *The International Journal of Human Resource Management* 35(2): 309–332. <https://doi.org/10.1080/09585192.2023.2237877>.
- Mousa, Mohamed, Ahmad Arslan, Hala Abdelgaffar, Jean Pierre Seclen Luna, and Bernardo Ramon Dante de la Gala Velasquez. 2024. "Extreme Work Environment and Career Commitment of Nurses: Empirical Evidence from Egypt and Peru." *International Journal of Organizational Analysis* 32(1): 58–79. <https://doi.org/10.1108/IJOA-08-2022-3400>.
- Ng, Thomas W. H., and Daniel C. Feldman. 2009. "How Broadly Does Education Contribute to Job Performance?" *Personnel Psychology* 62(1): 89–134. <https://doi.org/10.1111/j.1744-6570.2008.01130.x>.
- Ng, Thomas W. H., and Daniel C. Feldman. 2010. "Organizational Tenure and Job Performance." *Journal of Management* 36(5): 1220–1250. <https://doi.org/10.1177/0149206309359809>.
- Nielsen, Jordan D., and Amy E. Colbert. 2022. "It's Not Always Sunny in Relationally Rich Jobs: The Influence of Negative Beneficiary Contact." *Academy of Management Journal* 65(6): 1894–1922. <https://doi.org/10.5465/amj.2019.1288>.
- Njaka, Stanley, Oswald C. Edeogu, Constance Chioma Oko, Mohammad Dauda Goni, and Ndidi Nkadi. 2020. "Workplace Violence (WPV) Against Healthcare Workers in Africa: A Systematic Review." *Heliyon* 6(9): e04800. <https://doi.org/10.1016/j.heliyon.2020.e04800>.
- Park, Jeongdoo, and Hyun Jeong Kim. 2020. "Customer Mistreatment and Service Performance: A Self-Consistency Perspective." *International Journal of Hospitality Management* 86: 102367. <https://doi.org/10.1016/j.ijhm.2019.102367>.
- Patil, Shefali V., and R. David Lebel. 2019. "I Want to Serve but the Public Does Not Understand: Prosocial Motivation, Image Discrepancies, and Proactivity in Public Safety." *Organizational Behavior and Human Decision Processes* 154: 34–48. <https://doi.org/10.1016/j.obhdp.2019.07.002>.
- Popa, Daniela, Daniela Druguș, Florin Leășu, Doina Azoicăi, Angela Repanovici, and Liliana Marcela Rogozea. 2017. "Patients' Perceptions of Healthcare Professionalism—A Romanian Experience." *BMC Health Services Research* 17: 463. <https://doi.org/10.1186/s12913-017-2412-z>.
- Preacher, Kristopher J., and Andrew F. Hayes. 2008. "Asymptotic and Resampling Strategies for Assessing and Comparing Indirect Effects in Multiple Mediator Models." *Behavior Research Methods* 40(3): 879–891. <https://doi.org/10.3758/brm.40.3.879>.

- Rabe-Hesketh, Sophia, Anders Skrondal, and Andrew Pickles. 2004. "Generalized Multilevel Structural Equation Modeling." *Psychometrika* 69(2): 167–190.
<https://doi.org/10.1007/BF02295939>.
- Rusu, Roxana Elena, Bianca Hanganu, Magdalena Iorga, Vasile-Cătălin Rusu, Adorata Elena Coman, and Beatrice Gabriela Ioan. 2025. "Workplace Verbal Violence Toward Romanian Doctors and Nurses: Prevalence, Contributing Factors, and Psychological Correlates." *Healthcare (Basel)* 13(7): 786. <https://doi.org/10.3390/healthcare13070786>.
- Saks, Alan M. 2022. "Caring Human Resources Management and Employee Engagement." *Human Resource Management Review* 32(3): 100835.
<https://doi.org/10.1016/j.hrmr.2021.100835>.
- Salancik, Gerald R., and Jeffrey Pfeffer. 1978. "A Social Information Processing Approach to Job Attitudes and Task Design." *Administrative Science Quarterly* 23(2): 224–253.
- Salin, Denise, and Guy Notelaers. 2020. "Friend or Foe? The Impact of High-Performance Work Practices on Workplace Bullying." *Human Resource Management Journal* 30(2): 312–326. <https://doi.org/10.1111/1748-8583.12281>.
- Santos, Alda, Maria Jose Chambel, and Filipa Castanheira. 2016. "Relational Job Characteristics and Nurses' Affective Organizational Commitment: The Mediating Role of Work Engagement." *Journal of Advanced Nursing* 72(2): 294–305.
<https://doi.org/10.1111/jan.12834>.
- Schaufeli, Wilmar B., Arnold B. Bakker, and Marisa Salanova. 2006. "The Measurement of Work Engagement with a Short Questionnaire: A Cross-National Study." *Educational and Psychological Measurement* 66(4): 701–716. <https://doi.org/10.1177/0013164405282471>.
- Shao, Ruodan, and Daniel P. Skarlicki. 2014. "Service Employees' Reactions to Mistreatment by Customers: A Comparison Between North America and East Asia." *Personnel Psychology* 67(1): 23–59. <https://doi.org/10.1111/peps.12021>.
- Shi, Dexin, Christine DiStefano, Alberto Maydeu-Olivares, and Taehun Lee. 2022. "Evaluating SEM Model Fit with Small Degrees of Freedom." *Multivariate Behavioral Research* 57(2–3): 179–207. <https://doi.org/10.1080/00273171.2020.1868965>.
- Siciliano, Michael D., and James R. Thompson. 2022. "A Field Experiment on the Impact of Beneficiary Contact on Federal Employee Perceptions of Prosocial Impact and Social Worth." *International Public Management Journal* 25(1): 120–139.
<https://doi.org/10.1080/10967494.2021.1887985>.
- Sonnentag, Sabine, and Anita Starzyk. 2015. "Perceived Prosocial Impact, Perceived Situational Constraints, and Proactive Work Behavior: Looking at Two Distinct Affective Pathways." *Journal of Organizational Behaviour* 36(6): 806–824. <https://doi.org/10.1002/job.2005>.
- StataCorp. 2025. *Stata 19 Structural Equation Modeling Reference Manual*. College Station, TX: Stata Press.
- Van De Voorde, Karina, and Susanne E. Beijer. 2015. "The Role of Employee HR Attributions in the Relationship Between High-Performance Work Systems and Employee Outcomes." *Human Resource Management Journal* 25(1): 62–78. <https://doi.org/10.1111/1748-8583.12062>.
- Wang, Mei-Ling. 2010. "Does Organisational Support Promote Citizenship? The Moderating Role of Market-Focused HRM." *The Service Industries Journal* 30(7): 1077–1095.
<https://doi.org/10.1080/02642060802298368>.
- Wang, Zhen, Haoying Xu. 2017. "How and When Service-Oriented High-Performance Work Systems Foster Employee Service Performance: A Test of Mediating and Moderating Processes." *Employee Relations: The International Journal* 39(4): 523–540.
<https://doi.org/10.1108/ER-07-2016-0140>.
- Wang, Zhen, Lu Xing, and Yuqi Zhang. 2021. "Do High-Performance Work Systems Harm Employees' Health? An Investigation of Service-Oriented HPWS in the Chinese Healthcare

- Sector.” *The International Journal of Human Resource Management* 32(10): 2264–2297.
<https://doi.org/10.1080/09585192.2019.1579254>.
- Wang, Zhen, Lu Xing, Lynda Jiwen Song, and Sherry E. Moss. 2022. “Serving the Customer, Serving the Family, and Serving the Employee: Toward a Comprehensive Understanding of the Effects of Service-Oriented High-Performance Work Systems.” *The International Journal of Human Resource Management* 33(10): 2052–2082.
<https://doi.org/10.1080/09585192.2020.1837201>.
- World Health Organization. 2025. “Health and Care Workforce — Global Strategy on Human Resources for Health: Workforce 2030: Intervention by Egypt at the 156th WHO Executive Board Meeting.” Statement delivered at the 156th session of the WHO Executive Board, Geneva, Switzerland.
- Xu, Tong, Haihong Xu, and Zhen Wang. 2025. “Frontline Fallout in Chinese Healthcare: Does Negative Beneficiary Contact Harm Nurses’ Mental Health?” *Journal of Advanced Nursing* 81: 6364–79. <https://doi.org/10.1111/jan.16760>.
- Xu, Xiao-Min, Danyang Du, Russell E. Johnson, and Chang-Qin Lu. 2022. “Justice Change Matters: Approach and Avoidance Mechanisms Underlying the Regulation of Justice over Time.” *Journal of Applied Psychology* 107(7): 1070–1093.
<https://doi.org/10.1037/apl0000973>.
- Zapata, Tomas, Teodor Cristian Blidaru, Alexandru Rafila, Radu Comşa, Natasha Azzopardi Muscat, Yanina Andersen, Cris Scotter, James Buchan, Ioana Novac, Khamis Al-Alawy, and Nicolae Dragoş Garofil. 2025. “Mitigating Health Workforce Migration in Romania: Policy Lessons for Europe.” *Human Resources for Health* 23: 31. <https://doi.org/10.1186/s12960-025-01003-5>.
- Zhang, Linlin, Yang Qiu, Nan Zhang, and Shuang Li. 2020. “How Difficult Doctor–Patient Relationships Impair Physicians’ Work Engagement: The Roles of Prosocial Motivation and Problem-Solving Pondering.” *Psychological Reports* 123(3): 885–902.
<https://doi.org/10.1177/0033294119826887>.
- Zhang, Yannan, Yanghao Zhu, Yanxi Qiang, and Zejie Huang. 2025. “A ‘Thanks’ from Customers Energizes Employees to Serve with a Smile: The Roles of Work Meaningfulness and Work Role Salience.” *Current Psychology* 44: 10468–10481.
<https://doi.org/10.1007/s12144-025-07910-z>.
- Zoromba, Mohamed Ali, Mohamed Hussein Ramadan Atta, Sameer A. Alkubati, Shimmaa Elsayed, Naglaa Gamal Eldien Abdelhafez Hariedy, Asmaa Ali Ahmed Mohamed, and Heba Emad El-Gazar. 2025. “Experiences of Workplace Violence and Coping Strategies among Emergency Nurses in Egypt: A Descriptive Qualitative Study.” *SAGE Open Nursing* 11: 23779608251363858. <https://doi.org/10.1177/23779608251363858>.

Figure 1. The Conceptual Model



Note: Variables in bold and solid lines represent key research variables and hypothesized relationships. Emotional exhaustion and work engagement represent control variables included in Study 2 for their possible mediating effects.

Figure 2. The Moderating Role of Service-Oriented HPWS Perceptions in the Relationship between Negative Beneficiary Contact and Prosocial Impact (Study 1)

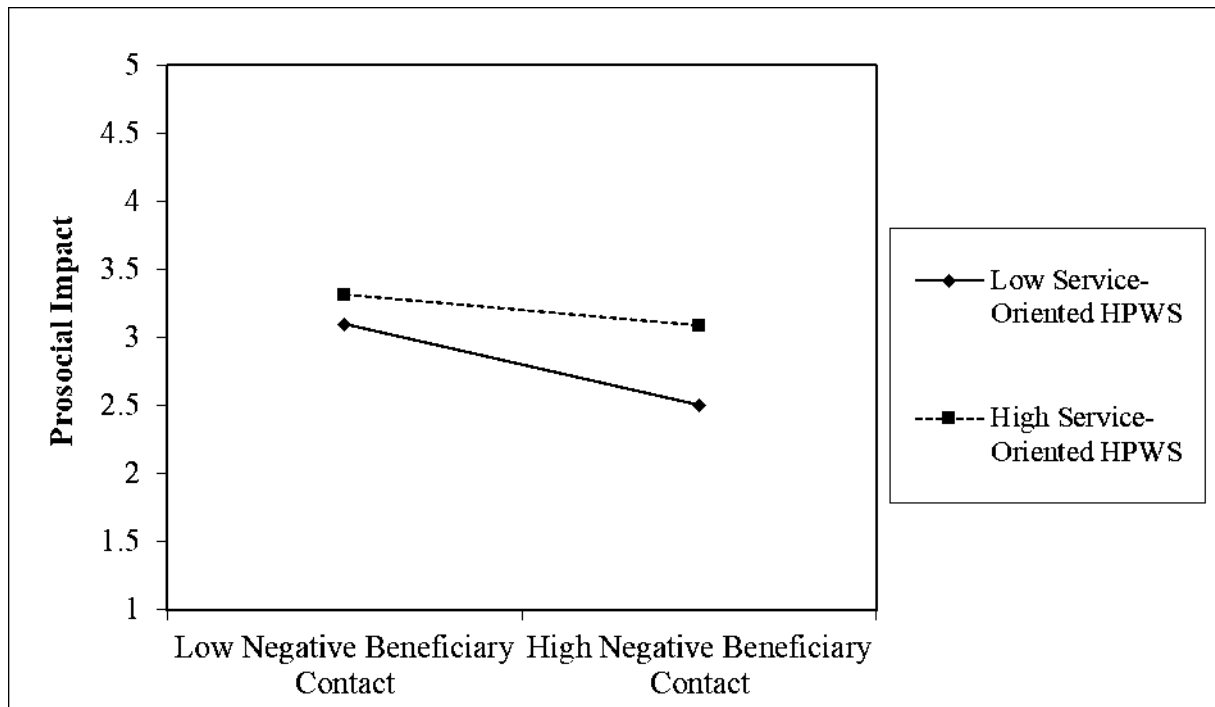


Figure 3. The Moderating Role of Service-Oriented HPWS Perceptions in the Relationship between Negative Beneficiary Contact and Prosocial Impact (Study 2)

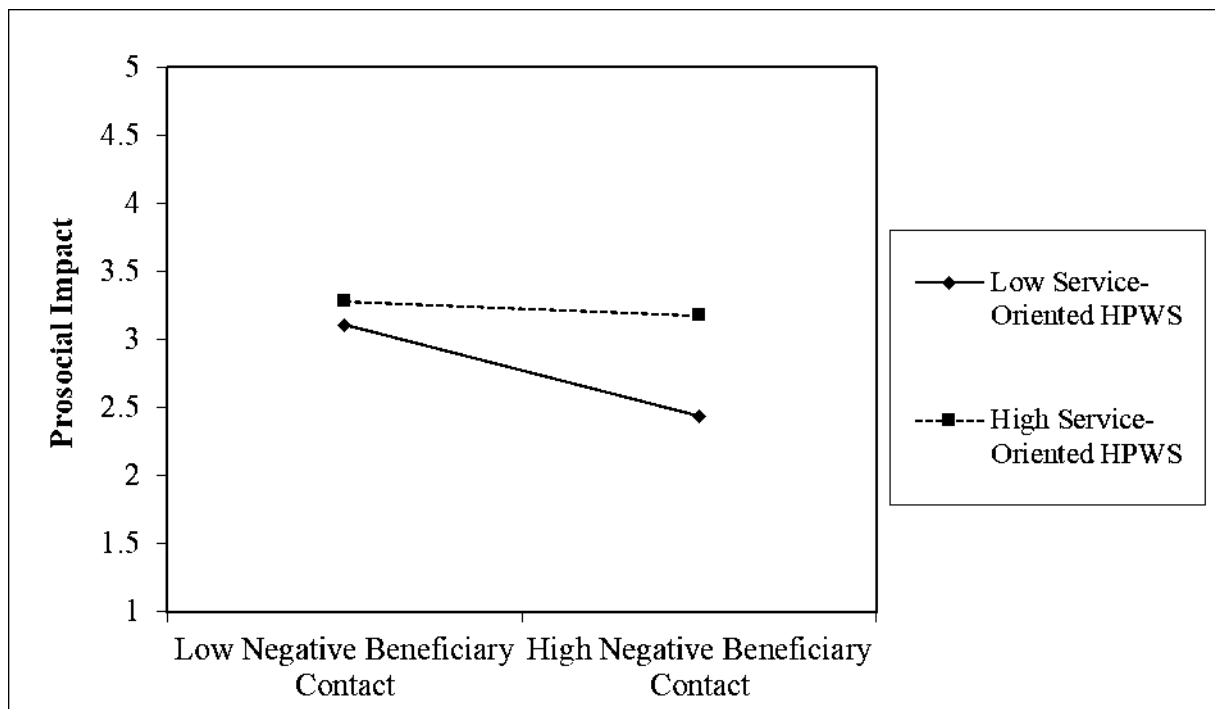


Table 1. Intercorrelations, Reliability Estimates and Descriptive Statistics (Study 1)

Construct	1	2	3	4	5	6	7
1. Gender							
2. Age	-.21***						
3. Hospital Tenure	-.10	.64***					
4. Negative Beneficiary Contact	.07	.03	-.02	.80, (.90)			
5. Service-Oriented HPWS	-.03	-.10	-.07	-.71***	.76, (.89)		
6. Prosocial Impact	.09	-.05	-.08	-.39***	.37***	.86, (.85)	
7. Service OCBs	-.04	.15*	.10	-.39***	.39***	.31***	.92, (.91)
Mean	1.61	1.70	1.48	3.12	4.68	5.84	4.82
SD	.49	.95	.81	1.21	1.02	1.10	1.34

Note: Sub-diagonal entries are the latent construct inter-correlations. The first entry on the diagonal is the AVE square root and the second (in parentheses) is the composite reliability estimate.

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 2. Results of Moderated Mediation Model (Study 1)

	Prosocial Impact		Service-Oriented OCBs	
	<i>B (SE)</i>	95% CI	<i>B (SE)</i>	95% CI
Control Variables				
Gender	.28 (.14)*	[.02, .55]	-.00 (.16)	[-.32, .31]
Age	.06 (.09)	[-.11, .24]	.20 (.11)	[-.01, .41]
Hospital Tenure	-.08 (.10)	[-.28, .13]	.06 (.12)	[-.18, .30]
Predictor Variable				
Negative Beneficiary Contact	-.20 (.08)**	[-.35, -.06]	-.19 (.09)*	[-.36, -.01]
Moderator Variable				
Service-Oriented HPWS	.20 (.09)*	[.02, .38]	.32 (.11)**	[.11, .53]
Mediator Variable				
Prosocial Impact			.22 (.08)**	[.07, .37]
Interaction Effect				
Negative Beneficiary Contact × Service-Oriented HPWS	.09 (0.05)*	[.00, .18]	-.09 (.05)	[-.20, .01]
Conditional Indirect Effect				
Low Service-Oriented HPWS Perceptions			-.07 (.03)*	[-.12, -.01]
Mean Service-Oriented HPWS Perceptions			-.05 (.02)*	[-.09, -.00]
High Service-Oriented HPWS Perceptions			-.02 (.02)	[-.07, .02]

Note: *N* = 241. Unstandardized coefficients are reported. *SE* refers to standard errors and CI refers to confident intervals.

p* < .05; *p* < .01

Table 3. Intercorrelations, Reliability Estimates and Descriptive Statistics (Study 2)

Construct	1	2	3	4	5	6	7	8	9	10
1. Gender										
2. Age	-.03									
3. Hospital Tenure	-.04	.69***								
4. Conscientiousness	-.04	-.08	-.01	.91, (.91)						
5. Emotional Exhaustion	.03	-.22***	-.23***	-.46***	.92, (.95)					
6. Work Engagement	-.04	.01	.06	.64***	-.69***	.76, (.80)				
7. Negative Beneficiary Contact	-.14*	.23***	.16**	-.14*	.15*	-.25***	.86, (.93)			
8. Service-Oriented HPWS	-.08	-.18**	-.14*	.66***	-.48***	.62***	-.22***	.77, (.90)		
9. Prosocial Impact	.12*	.10	-.05	.38***	-.35***	.46***	-.30***	.38***	.89, (.88)	
10. Service OCBs	-.08	.14*	.14*	.31***	-.56***	.48***	-.11	.34***	.35***	.91, (.90)
Mean	1.61	1.88	1.76	4.82	3.65	4.74	1.89	4.65	5.82	4.95
SD	.49	1.02	1.04	1.53	1.62	1.18	1.10	1.06	1.12	1.33

Note: Sub-diagonal entries are the latent construct inter-correlations. The first entry on the diagonal is the AVE square root and the second (in parentheses) is the composite reliability estimate.

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 4. Results of Moderated Mediation Model (Study 2)

	Prosocial Impact		Emotional Exhaustion		Work Engagement		Service-Oriented OCBs	
	<i>B (SE)</i>	95% CI	<i>B (SE)</i>	95%CI	<i>B (SE)</i>	95% CI	<i>B (SE)</i>	95% CI
Control Variables								
Gender	.26 (.12)*	[.02, .49]					-.14 (.14)	[-.40, .13]
Age	-.03 (.08)	[-.19, .13]					.02 (.09)	[-.15, .20]
Hospital Tenure	.05 (.08)	[-.10, .21]					-.02 (.08)	[-.19, .14]
Conscientiousness	.17 (.05)**	[.07, .27]					-.03 (.06)	[-.15, .09]
Predictor Variable								
Negative Beneficiary Contact	-.19 (.06)**	[-.30, -.08]	.22 (.09)*	[.05, .39]	-.27 (.06)***	[-.39, -.14]	-.00 (.06)	[-.12, .12]
Moderator Variable								
Service-Oriented HPWS	.23 (.08)**	[.08, .38]					-.01 (.09)	[-.19, .17]
Mediator Variable(s)								
Emotional Exhaustion							-.38 (.06)***	[-.50, -.26]
Work Engagement							.13 (.09)	[-.06, .31]
Prosocial Impact							.25 (.07)***	[.12, .37]
Interaction Effect								
Negative Beneficiary Contact × Service-Oriented HPWS	.14 (.06)*	[.03, .25]					-.07 (.06)	[-.20, .05]
Conditional Indirect Effect								
Low Service-Oriented HPWS Perceptions							-.08 (.03)**	[-.14, -.03]
Mean Service-Oriented HPWS Perceptions							-.05 (.02)*	[-.08, -.01]
High Service-Oriented HPWS Perceptions							-.01 (.02)	[-.05, .03]

Note: *N* = 278. Unstandardized coefficients are reported. *SE* refers to standard errors and CI refers to confident intervals.

p* < .05; *p* < .01; ****p* < .001

APPENDIX 1

Questionnaire Items and Statistics

	Study 1			Study 2		
	Mean	SD	Factor Loadings	Mean	SD	Factor Loadings
Negative Beneficiary Contact						
Patients/visitors do not trust the information I give them and ask to speak with someone of higher authority	2.08	1.330	.570	1.59	1.129	.715
Patients/visitors are condescending to me	2.55	1.454	.628	1.87	1.418	.556
Patients/visitors make comments that question the competence of nurses	2.93	1.616	.608	1.79	1.313	.761
Patients/visitors criticize my job performance	3.14	1.719	.633	1.63	1.238	.748
Patients/visitors make personal verbal attacks against me	3.20	1.678	.508	2.17	1.601	.833
Patients/visitors pose unreasonable demands	3.93	1.903	.388	1.78	1.330	.804
Patients/visitors have taken out their frustrations on nurses	3.54	1.742	.889	2.08	1.561	.810
Patients/visitors make insulting comments to nurses	3.24	1.728	.843	2.00	1.473	.877
Patients/visitors treat nurses as if they were inferior or stupid	3.21	1.680	.862	2.12	1.580	.712
Patients/visitors show that they are irritated or impatient	3.41	1.787	.817	1.85	1.503	.688
Service-Oriented High-Performance Work Systems						
Staffing						
The hospital selects the best all around candidates when recruiting nursing staff	4.92	1.539	.601	4.91	1.444	.750
The hospital places priority on candidates' potential to learn when recruiting nurses	5.35	1.427	.754	5.28	1.389	.767
Recruitment emphasizes traits and abilities required for providing high quality of patient services	5.43	1.365	.715	5.48	1.353	.764
Internal candidates in this hospital have the priority for job openings	5.20	1.715	.497	5.35	1.618	.537
Qualified employees have good opportunities for promotion in this hospital	5.34	1.571	.582	5.36	1.510	.649
Training						
The hospital provides an orientation program for newcomers to learn about the hospital and their work	5.34	1.557	.706	5.15	1.699	.702
The hospital continuously provides training programs	4.79	1.904	.840	4.82	1.850	.834
The hospital invests considerable time and money in training	4.73	1.828	.891	4.67	1.855	.922
The training we get in the hospital is comprehensive, not only limited to skill training	4.45	1.906	.864	4.33	1.969	.865
The hospital emphasizes high quality of customer services in the training it provides	4.97	1.662	.817	4.96	1.718	.772
Involvement and Participation						
If a decision made might affect nurses, the hospital asks them for opinions in advance	4.07	1.885	.763	3.85	1.798	.699
Nurses are often asked to participate in work-related decisions	3.89	1.712	.836	3.66	1.695	.761
Nurses have discretion in handling patients' additional requests	4.23	1.647	.644	4.11	1.632	.710
Nurses have discretion in settling patients' complaints without reporting to a supervisor or doctors	3.66	1.803	.376	3.49	1.784	.367
Nurses are allowed to make necessary changes in the way they perform their work	3.89	1.560	.406	3.80	1.581	.477
The hospital fully supports nurses with necessary resources for providing high quality services for patients	5.12	1.479	.625	5.02	1.422	.717
The hospital often shares information with nurses	4.97	1.562	.741	4.99	1.457	.651
Performance Appraisals						
Performance appraisals provide nurses feedback for personal development	4.98	1.606	.834	5.04	1.638	.848
Performance appraisals in the hospital are based on multiple sources (self, coworkers, supervisors, customers, etc.)	4.94	1.788	.698	5.04	1.814	.751
Performance appraisals in this hospital are based on objective, quantifiable results	4.97	1.689	.757	5.09	1.641	.764
Supervisors in this hospital get together with nurses to set their personal goals	4.60	1.746	.723	4.63	1.831	.668

I get chores done right away	-	-	-	5.05	1.583	.875
I often do not forget to put things back in their proper place	-	-	-	4.81	1.624	.908
I like order	-	-	-	4.82	1.706	.883
I never make a mess of things	-	-	-	4.61	1.756	.880

Note: There is debate regarding appropriate cutoff values for factor loadings (Hair et al., 2009; Stevens, 1992). However, Tabachnick and Fidell (2007) offer guidelines for assessing factor loadings, suggesting that loadings of around 0.32 are considered poor, 0.45 fair, 0.55 good, 0.63 very good, and 0.71 excellent. Using these thresholds, most of the items exhibited very good or excellent loadings, and only 3 items had relatively low loadings in either Study 1 or Study 2 or both. To remain consistent with the previously validated measures, the 3 items were retained especially that they loaded significantly on their intended constructs and there were no cross or double loadings.

References

- Hair, Joseph F., Jr., William C. Black, Barry J. Babin, and Rolph E. Anderson. 2009. *Multivariate Data Analysis*. 7th ed. Upper Saddle River, NJ: Prentice Hall.
- Stevens, James. 1992. *Applied Multivariate Statistics for the Social Sciences*. 2nd ed. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Tabachnick, Barbara G., and Linda S. Fidell. 2007. *Using Multivariate Statistics*. 5th ed. Boston: Pearson Education.

APPENDIX 2

Results of Mediation Model (Study 1)

To assess the relative size of the indirect effect via prosocial impact in Study 1, a mediation only model was tested with negative beneficiary contact as the independent variable, prosocial impact as the mediator, and service-oriented OCBs as the dependent variable. In this model, the coefficient associated with the indirect path (i.e., $a \times b$) was -0.083 (-0.36×0.23) and was significantly different from zero ($SE = 0.03$, $p < 0.01$, 95% CI = -0.14 to -0.02). Moreover, the direct path from negative beneficiary contact to service-oriented OCBs, controlling for prosocial impact, was significant ($c' = -0.33$, $p < 0.001$). The proportion or ratio of the indirect to total effect was 0.20 [$(a \times b)/(a \times b + c')$]. This indicates that 20% of the variance in service OCBs explained by both negative beneficiary contact and prosocial impact is accounted for by the indirect pathway via prosocial impact, and while partial mediation is present, the direct path remains predominant.

Table 5. Results of Mediation Model (Study 2)

	<i>a</i>		<i>b</i>		<i>c'</i>		<i>a × b</i>	
	<i>B (SE)</i>	95% CI	<i>B (SE)</i>	95%CI	<i>B (SE)</i>	95% CI	<i>B (SE)</i>	95% CI
<i>a</i>								
Negative Beneficiary Contact → Emotional Exhaustion	.22 (.09)*	[.05, .39]						
Negative Beneficiary Contact → Work Engagement	-.27 (.06)***	[-.39, -.14]						
Negative Beneficiary Contact → Prosocial Impact	-.23 (.07)***	[-.34, -.12]						
<i>b</i>								
Emotional Exhaustion → Service-Oriented OCBs			-.38 (.06)***	[-.50, -.26]				
Work Engagement → Service-Oriented OCBs			.13 (.09)	[-.05, .31]				
Prosocial Impact → Service-Oriented OCBs			.24 (.06)***	[.11, .36]				
<i>c'</i>								
Negative Beneficiary Contact → Service-Oriented OCBs					.01 (.06)	[-.11, .13]		
Indirect Effects								
Negative Beneficiary Contact → Emotional Exhaustion → Service-Oriented OCBs							-.08 (.04)*	[-.15, -.01]
Negative Beneficiary Contact → Work Engagement → Service-Oriented OCBs							-.03 (.03)	[-.08, .02]
Negative Beneficiary Contact → Prosocial Impact → Service-Oriented OCBs							-.06 (.02)**	[-.09, -.02]

Note: $N = 278$. *SE* refers to standard errors and CI refers to confident intervals.

* $p < .05$; ** $p < .01$; *** $p < .001$