

A closer look at how managerial support can help improve patient experience: insights from the UK's National Health Service

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**A closer look at how managerial support can help improve patient experience: Insights
from UK's National Health Service**

Abstract

Recent debates in healthcare emphasize the need for more respectful and responsive services that meet patients' expectations. These debates have inspired research into the concept of patient experience, one of the most critical factors for measuring healthcare performance. Yet, important questions remain: how can managers or supervisors help improve patient experience? What is the role of employees in this context? Addressing these issues, we examine whether perceived supervisor support (PSS) promotes patient experience through a serial mediation involving perceived organizational support (POS), and positive employee outcomes such as engagement, involvement, and advocacy. Using two-wave data from the British National Health Service, we show that PSS is strongly associated with POS, which in turn improves engagement, involvement and advocacy among healthcare employees. PSS also has a positive indirect influence on patient experience through POS and advocacy; but the indirect paths involving engagement and involvement are not supported. We offer useful guidance on how healthcare employers can support employees and improve the quality of services rendered to patients.

Keywords Perceived supervisor support, perceived organizational support, engagement, involvement, advocacy, and patient experience.

Introduction

As one of the largest sectors in the service industry, healthcare plays a vital role in modern societies. This role has many facets, including job creation, social welfare, and the delivery of efficient care to individuals, families and communities. Nevertheless, healthcare systems face enormous challenges (e.g., an aging population, rising healthcare expenditure, health and social inequalities) that remain at the forefront of public debates (Goedhart, van Oostveen and Vermeulen, 2017). A key priority in these debates concerns the need to improve patient experience, or the overall quality of respectful and responsive healthcare services as reported by patients (Doyle, Lennox and Bell, 2013). Patient experience is increasingly recognized, alongside clinical performance and safety, as a critical measure of healthcare performance (Doyle et al., 2013; Murrells, Robert, Adams, Morrow and Maben, 2013; Price et al., 2014). Academic and policy reports have outlined useful ways to improve patient experience, however, one pertinent issue has remained conspicuously absent: the role of managerial support and the implications for employees' delivery of healthcare. Evidence suggests that employees are more likely to perform well when immediate managers or supervisors are perceived as being supportive (see Kirrane, Lennon, O'Connor and Fu, 2017); yet, the relevance of this is often neglected in debates about patient-centred care.

The concept of managerial support has generated a great deal of interest in non-healthcare settings, given its centrality to job resource theories (Bakker and Demerouti, 2007) and approaches to creating psychologically healthy workplaces (Moyle, 1998; Parker and Price, 1994). When assessed from the perspective of employees, support from an immediate manager or supervisor represents the notion of perceived supervisor support (PSS: Kirrane et al., 2017; Saks, 2006). PSS refers to the extent to which employees perceive that their immediate managers, acting as agents

of the organization, value and care for their well-being (Eisenberger et al., 2002). It has been associated with shared benefits for both employees (e.g., job satisfaction, commitment and work engagement) and the organization (e.g., productivity, reduced staff turnover and lower sickness absence rates) (Eisenberger et al., 2002; Kurtessis et al., 2017; Riggle et al., 2009; Saks, 2006). Despite these benefits, the links between managerial support and healthcare outcomes have received scant attention in the research literature. We lack adequate insights on how PSS might influence patients' experience of healthcare quality, and the underlying mechanisms for such effects. This indicates an important theoretical and empirical gap that should be explored in ensuring better patient-centred services.

The present study seeks to fill this gap, looking at the mechanisms through which PSS might influence one of the most important performance outcomes in healthcare (i.e., patient experience). The goal is to determine whether PSS improves patient experience via its impact on another key aspect of support: perceived organizational support (POS). POS represents employees' shared perceptions about the extent to which the employing organization acts favourably towards their well-being (Eisenberger, Fasolo and Davis-LaMastro, 1990; Kirrane et al., 2017; Riggle, Edmondson and Hansen, 2009; Saks, 2006; Vardaman et al., 2016). POS has benefits in its own right, but also as a mechanism for achieving effectiveness at work (Kurtessis et al., 2017). As outlined in social exchange theory, adequate levels of organizational support create a conducive work environment, characterized by mutual trust, respect, and cooperation between employees and management (Saks, 2006). This work environment, in turn, inspires a sense of obligation, on the part of employees, to invest themselves both physically and emotionally in ways consistent with organizational goals. In this light, POS and corresponding employee outcomes could serve as underlying mechanisms for deploying managerial support and improving the quality of healthcare.

We explore the nature of these mechanisms, focusing on three employee outcomes – engagement, involvement, and advocacy. These outcomes constitute the British National Health Service’s (NHS) framework on how employees might help improve patient experience (Admasachew and Dawson, 2011; Fletcher and Robinson, 2014; West and Dawson, 2012). Accordingly, the salient preconditions for enhanced patient-centred care include employees’ work motivation, their sense of work empowerment, and willingness to engage in advocacy behaviours on the organization’s behalf (Admasachew and Dawson, 2011; Fletcher and Robinson, 2014). The NHS framework further outlines the importance of providing adequate support to healthcare professionals (including over 1.5 million workers employed by the British NHS); thus, as long as healthcare workers are adequately supported to do their jobs, they will reciprocate through positive attitudes and behaviours, leading to better services offered to patients. Using this framework, we examine three serial mediation processes linking PSS to patient experience: a motivational indirect path (involving POS and engagement), an empowerment indirect path (involving POS and involvement), and a behavioural indirect path (involving POS and advocacy).

Our study enriches the literature in several notable ways. It provides deeper insights on how supportive resources at work might engender positive work attitudes and behaviours, and ultimately improve patient experience – the latter being a fairly neglected domain in management research. We know from existing research that supportive workplace practices offer a range of social, economic and psychological benefits; yet, the inherent implications for patients and health service users are not fully understood. The present study addresses an important research gap, highlighting useful ways to support employees and improve the quality of services rendered to patients. This framework cuts across different, but relatively important, research disciplines such as human resource management (i.e., managerial and organizational support), organizational

behaviour (work attitudes and behaviours), and healthcare management (patient experience). The goal is to generate insights on the most critical mechanisms linking perceived support at work to better outcomes for both employees and patients. Using two-wave, multi-source, repeated cross-sectional data from the British NHS, we use robust empirical analyses to provide new insights on a set of complementary hypotheses.

– *Insert Figure 1* –

Research background

It is widely acknowledged that managerial support boosts employee morale and performance (Kirrane et al., 2017; Riggle et al., 2009; Rofcanin, Las Heras, Bosch, Wood and Mughal, 2019; Vardaman et al., 2016). Organizations are placing greater emphasis on practices that demonstrate adequate levels of concern for the health, well-being, and welfare of employees. In public healthcare organizations, such as the British NHS, managerial support includes treating staff fairly, creating effective communication channels between employees and supervisors, helping staff to balance their work and home life, and protecting staff from harassment and physical harm. These practices shape patient experience, which represents an important proxy for healthcare performance (Doyle et al., 2013; Jenkinson et al., 2002; Murrells et al., 2013). Patient experience is defined as the sum of all interactions, shaped by the organization's culture, that determine patients' perceptions across the continuum of services in healthcare (Wolf et al., 2014). It is characterized by a range of factors including reduced waiting time in hospital, prompt and coordinated hospital care, perceptions of safety and physical comfort in hospital, and involvement in decisions regarding patients' care and treatment conditions (Doyle et al., 2013).

One of the most influential models for explaining supportive workplace relationships is social exchange theory (Byrne and Hochwarter, 2008; Eisenberger et al., 1990; Gould-Williams,

2007; Kurtessis et al., 2017; Ogbonnaya, 2019). At its core lies the assumption that positive actions taken by the organization (or its agents) in the interest of employees can elicit positive workplace attitudes and behaviours. Such actions may be interpreted as the organization's 'goodwill' towards the workforce, or perhaps, as a sign that the organization intends to establish high-quality employment relationships with employees (Eisenberger et al., 1990). Consequently, employees are inspired to exercise discretionary effort, engage in proactive behaviours, and act in ways consistent with the organization's strategic goals. The principle of social exchanges is premised on the norm of reciprocity, according to which people will respond favourably if they perceive actions performed by others as being of greater benefit (Gould-Williams, 2007). In other words, we would expect employees to respond favourably if actions performed by their immediate managers or supervisors are perceived as being supportive.

Drawing on social exchange theory, we examine the mechanisms via which PSS might influence patient outcomes. We argue that supportive managerial actions shape employees' perceptions about the organization's level of supportiveness towards them. This in turn stimulates employees' felt obligation to reciprocate through positive workplace attitudes and behaviours. In this context, the British NHS identifies three relevant employee outcomes (Admasachew and Dawson, 2011; MacLeod and Clarke, 2009; Purcell, 2014). *Engagement* represents employees' feelings of enthusiasm or being completely immersed in their job. It includes the types of emotional states described by Schaufeli et al. (2002), such as intrinsic motivation, dedication and absorption at work. *Involvement* represents employees' sense of empowerment, their ability to show initiative at work, and their capacity to make improvements happen in their work area. *Advocacy* represents employees' sense of pride in, and endorsement for, the quality of services offered by the healthcare organization. It stipulates employees' willingness to promote the organization's service standards

and recommend the organization as a good healthcare provider. We investigate how PSS might improve patient experience through POS and these three outcomes respectively.

Linking PSS to POS

Much has been written about the importance of managerial support in promoting employees' favourable perceptions about organizational support (Campbell et al., 2013; Eisenberger et al., 2002; Lapalme, Tremblay and Simard, 2009; Saks, 2006; Yoon and Thye, 1999). The assumption is that employees might interpret supportive managerial actions as indicative of the organization's benevolent intent towards the workforce, and therefore as key factors influencing employees' feelings or emotional disposition towards the organization. In other words, employees may ascribe human-like characteristics to the organization because immediate managers or supervisors are perceived as agents acting on behalf of the organization (Eisenberger et al., 1986; Kurtessis et al., 2017). Thus, if employees' perceive their immediate managers as being supportive and caring, they might respond favourably – such as thinking more positively about organizational actions (Eisenberger et al., 2002; Yoon and Thye, 1999). The reverse might be true, too, as unpleasant managerial actions towards employees could generate negative perceptions of organizational support.

In their study of 343 social workers, Campbell et al. (2013) argued that perceptions of organizational support are largely dependent on employees' access to supervisory support. Positive supervisor–subordinate interactions strengthen employees' morale, as well as their general perceptions that the work environment is conducive for personal growth and development. Consequently, employees are likely to feel more secure, confident and reassured that their interests are safeguarded by the organization (Yoon and Thye, 1999; Kurtessis et al., 2017). In the specific context of healthcare, research has shown that workers who feel valued and supported by their

supervisors may attribute such support to the employing healthcare organization (Ogbonnaya et al., 2018; West and Dawson, 2012). The reasoning is that supervisory support stimulates workers to see their employer as one that is genuine and committed to ensuring that healthcare services are delivered in a safe and healthy fashion. In this sense, one would expect a positive relationship between PSS and employees' generalized perceptions about organizational support.

Hypothesis 1: PSS is directly and positively associated with POS.

POS and positive employee outcomes

Extant research has reported strong links between POS and positive attitudes and behaviours among employees (Byrne and Hochwarter, 2008; Eisenberger et al., 1990; Kurtessis et al., 2017; Riggle et al., 2009; Rofcanin et al., 2019). The general belief is that the more employees perceive their organization as being adequately supportive, the more likely they will report better levels of satisfaction, engagement, motivation, and in-role performance. Research in this area invokes social exchange theory, the idea that supportive work environments engender high-quality, respectful and cooperative employer–employee relationships (Gould-Williams, 2007). Employees in such environments are viewed as valuable assets whose contribution to performance is respected and appreciated by the organization (Eisenberger et al., 2002). Thus, as part of a positive social exchange process, employees may feel obliged to repay the organization by investing themselves, both physically and cognitively, when performing their jobs (Saks, 2006).

Going by the above principles, Saks' (2006) study of 102 Canadian workers reported positive links between POS and both employees' engagement with the job and the organization. Saks defined job engagement as being highly absorbed in one's role, and organization engagement as one's level of involvement in organizational activities. Similarly, Byrne and Hochwarter's (2008) study of full-time employees showed positive links between POS and outcomes such as

organizational citizenship behaviours, in-role and extra-role performance. Byrne and Hochwarter described POS as a key resource for promoting employees' work experiences through positive interrelationships between management and employees. These relationships stimulate employees' deeper sense of work involvement and dedication, prompting them to enact positive actions and behaviours on behalf of the organization. By extension, POS should have positive effects on other workplace outcomes such as employees' sense of empowerment and advocacy behaviours. Specifically, we would expect POS to have a positive role in improving not only employees' motivation at work, but also their sense of empowerment, participation in workplace activities, and willingness to promote the organization's healthcare services.

Hypothesis 2: POS is directly and positively associated with (a) engagement (b) involvement and (c) advocacy.

In subsequent sections, we examine how PSS might influence patient experience through a motivational indirect path (involving POS and engagement), an empowerment path (involving POS and involvement), and a behavioural path (involving POS and advocacy). Our premise is that supportive actions taken by managers in the interest of employees will send positive cues regarding the extent to which the organization values and cares about employee well-being (Ogbonnaya and Messersmith, 2019; Saks, 2006). Employees perceive these cues as indicative of the organization's benevolent intentions, prompting employees to respond favourably (Eisenberger et al., 2002; Kurtessis et al., 2017). In the healthcare context, such perceptions could improve employee performance, and ultimately, patients' access to appropriate care.

Motivational indirect path via POS and engagement

Research has shown that psychologically engaged workers are generally more enthusiastic about their jobs, and therefore well-positioned to perform well at work (e.g., Harter et al., 2002;

Karatepe, 2013; Salanova et al., 2005). Engaged workers are also quite keen to prioritize organizational goals, such as offering high-quality services to customers and organizational clients (Harter et al., 2002). While testing these assumptions, Salanova et al. (2005) reported positive effects for employee engagement on both job performance and customer loyalty. Salanova et al. emphasized the role of organizational support in promoting employees' emotional attachment towards the job, which in turn has positive implications for the quality of services offered to customers. Echoing this, Karatepe (2013) described the importance of employee engagement as a mediator between HRM practices and extra-role customer service (defined as the capacity to serve customers beyond the formal requirements of the job). Karatepe emphasized the relevance of such practices in creating a productive work environment where employees feel inspired to respond thoughtfully towards customers' needs.

In the specific context of the British NHS, however, the evidence base is inconclusive. While some studies report positive links between work engagement and patient outcomes (e.g., Wake and Green, 2019; West and Dawson, 2012), other studies, particularly those looking at the psychological components of engagement (e.g., Ogbonnaya and Valizade, 2018; Ogbonnaya et al., 2018), report marginal effects. Ogbonnaya et al.'s (2018) explanation is that the actual impact of psychological engagement on patient outcomes could be partly distorted by patients' own beliefs or expectations about the quality of care. Notwithstanding, there are logical reasons to expect a positive impact on patient experience via engagement. Take for example the idea that an engaged worker is more likely to feel vigorous when performing their duties (Schaufeli et al., 2002), or that an engaged workers is able to express a greater sense of dedication in their jobs, thereby ensuring that patients are treated with dignity and respect (West and Dawson, 2012). Drawing on these

examples, it becomes plausible to predict a positive relationship between workplace support and engagement, and consequently, patients' positive perceptions of healthcare services.

Hypothesis 3: PSS will positively influence patient experience through a serial mediation involving POS and engagement.

Empowerment indirect path via POS and involvement

As with engagement, the idea of involvement has received considerable scholarly attention, both in the context of HRM activities and organizational support practices. High levels of involvement provide opportunities for employees to make the most of their skills while performing their duties (May, Richard, Gilson, Lynn and Harter, 2004; Wood, Van Veldhoven, Croon and de Menezes, 2012). Also, work involvement fosters a resourceful work situation in which employees feel encouraged to show initiative in their role, engage in positive decision-making, and accomplish meaningful goals (May et al., 2004). In the healthcare literature, employee involvement is generally discussed under the umbrella term of 'structural empowerment' – defined as having the ability to mobilize information and resources through opportunities to learn and grow (Goedhart et al., 2017; Laschinger, Almost and Tuer-Hodes, 2003; Metcalf, Habermann, Fry and Stoller, 2018). Healthcare workers who feel empowered are able to perform their day-to-day responsibilities in a professional and autonomous manner, leading to more effective services being offered to patients and healthcare users (Goedhart et al., 2017).

In their study of respiratory care physicians, Metcalf et al. (2018) established the role of organizational support in promoting employees' sense of empowerment, leading to considerable improvements in patient care. Metcalf et al. emphasized the value of organizational support as a key resource for optimizing workers' efforts, and also their efficacy in meeting the healthcare needs and preferences of patients. Similarly, Laschinger et al. (2003) discussed nurses' sense of

empowerment in terms of their access to supportive resources at work. Laschinger et al. argued that employees who made better use of support resources were typically more efficient in delivering safer healthcare services to patients. Along similar lines, we assert that supportive healthcare environments place employees in a better position to perform their jobs at optimal levels, thereby offering the quality of services that patients can admire and appreciate. Based on the foregoing, we formulate the following hypothesis:

Hypothesis 4: PSS will positively influence patient experience through a serial mediation involving POS and involvement.

Behavioural indirect path via POS and advocacy

Of the three employee outcomes, advocacy is possibly the least studied in management research. Much of what we know about advocacy comes from the marketing literature, where employee advocates have been described as “brand ambassadors”, “brand maniacs”, “brand champions” and “brand evangelists” (Morhart, Herzog and Tomczak, 2009: 123). Advocacy is conceptually different from, but closely related to, service-orientated commitment and organizational citizenship behaviours (Bettencourt, Gwinner and Meuter, 2001). It represents employees’ willingness to undertake voluntary actions on the organization’s behalf, such as generating positive publicity for the organization’s brand image and recommending the organization as a good provider of high-quality services (Bettencourt et al., 2001; Miles and Mangold 2004; Morhart et al., 2009). In the healthcare context, advocacy encapsulates employees’ confidence in, and endorsement of, the organization’s healthcare standards (Wake and Green, 2019; West and Dawson, 2012). In this sense, employee advocates will behave in such a manner as to readily endorse and promote the quality of services rendered by their employer (Fletcher and

Robinson, 2014). Notwithstanding how advocacy is measured or conceptualized, proponents view it as an important determinant of quality customer (or patient) service performance.

Morhart et al.'s (2009) study of 269 frontline employees highlights the role of organizational support, particularly a leader's commitment to encouraging and motivating his/her followers, in shaping advocacy behaviours among employees. Supportive leader-follower relationships create a proper alignment between employees' interests and the organization's service priorities. This encourages greater employees' trust and confidence in the organization, prompting employees to support the organization's customer-oriented branding efforts (Morhart et al., 2009). Similarly, research in the healthcare context has linked different types of workplace support to advocacy behaviours among workers. West and Dawson (2012), for example, explained that employees who feel adequately supported will show a deeper sense of appreciation for organizational values, and therefore uphold the organization's healthcare standards. Echoing this, Wake and Green (2019) argued that employee advocates are themselves quite keen and motivated to deliver high-quality care to patients. Such workers envision long-term employment relationships with the organization and therefore invest their time and effort towards ensuring better levels of healthcare services. On this basis, the following hypothesis is formulated:

Hypothesis 5: PSS will positively influence patient experience through a serial mediation involving POS and advocacy.

Methodology

The study uses two-wave (2010 and 2011), repeated cross-sectional data from the NHS Staff Survey, matched with data from the 2011 NHS Adult Inpatients Survey. The NHS Staff Survey provides information on employees' working conditions across different acute, mental health, ambulance services, and community health NHS Trusts. NHS Trusts are, by definition,

legal entities or organizations authorized to manage social, health and hospital services for the communities or locations they serve. A single Trust thus comprises multiple clinics, departments and health service centres, serving a specified local area. Data were gathered by self-completion questionnaires distributed to a random selection of employees in participating Trusts, including doctors, nurses, midwives and allied health professionals of different age and ethnic backgrounds. Around 164,916 questionnaires from 386 NHS Trusts were completed and returned in 2010. The median number of respondents in sampled Trusts was 446, and the range was 44 to 833. The 2011 survey includes 134,967 completed questionnaires from 368 NHS Trusts. The median number of respondents in the sampled NHS Trusts was 425, and the range was 28 to 678.

Data for the Adult Inpatients Survey are collected annually to assess patients' perspectives on the quality of care and treatment received in hospital. The survey covers a wide range of issues such as the experience of coordinated care, physical and emotional comfort in hospital, quality of interaction with healthcare professionals, quality of care and treatment received, and waiting time in hospital. As with the Staff Survey, data for the Adult Inpatients Survey include respondents of different age, ethnic, and socio-economic backgrounds. Around 70,863 patient respondents from 161 NHS Trusts completed the survey in 2011, with a response rate of 53 percent. The median number of respondents in sampled NHS Trusts was 850, and the range was 502 to 855.

We applied a systematic data management strategy to accomplish two main objectives: i) to minimize artefactual covariation due to common method bias, and ii) to match and merge multiple sources data appropriately. The first objective was achieved using multiple sources of data: measurement items for PSS were derived from the 2010 NHS Staff Survey, whereas measurement items for the mediators (i.e., POS, engagement, involvement, and advocacy) were from the 2011 version of the survey. This provides necessary temporal separation between the

predictor and mediators (Podsakoff, MacKenzie, Lee and Podsakoff, 2003). To further alleviate concerns of common method bias, data from the 2011 NHS Staff data were split randomly into two groups, so that half of the respondents provided information on the POS and the other half provided information on engagement, involvement, and advocacy, respectively. As patient experience was measured from a different source, the 2011 Adult Inpatients Survey, we ensured adequate temporal and methodological separation between the predictor and outcome.

The second objective was achieved by aggregating all measurement items as mean scores at the NHS Trust level. This crucial step was performed with the intent of matching and combining data from the different sources into a unified dataset. Prior to data aggregation, Intraclass Correlation Coefficients 1 and 2 (ICC1 and ICC2) were tested to verify interrater reliability among individual respondents. ICC1 values for the 2010/11 NHS Staff Surveys ranged from 0.02 to 0.06, suggesting less than six per cent of variability in employees' responses was accounted for by each individual in the survey (Bliese, 2000, p. 356). ICC2 values ranged from 0.60 to 0.95, suggesting that employees were relatively consistent in terms of their collective workplace experiences. Similarly, ICC1 values for the 2011 Adult Inpatients Survey ranged from 0.03 to 0.08, whereas ICC2 values ranged from 0.61 to 0.96. All ICC values in the current study fall within the recommended thresholds for justifying data aggregation (LeBreton and Senter, 2008). Once data were aggregated and merged into a unified dataset, the final sample size was 161 NHS Trusts.

Measures

Perceived supervisor support (PSS) was measured by five items from the 2010 NHS Staff Survey (see details in Table 1). All items are consistent with those from previous research (e.g., Eisenberger et al., 2002; Kirrane et al. 2017; Saks, 2006).

Perceived organizational support (POS) was measured by five items from the 2011 NHS Staff Survey, selected based on the precedents in previous organizational support research (e.g., Eisenberger et al., 2002) and adapting these to the British NHS' context (see details in Table 1).

Engagement was measured by three items from the 2011 NHS Staff Survey, measured on a five-point Likert scale (see Table 1). These items were derived from Schaufeli et al.'s (2002) work engagement scale, but adjusted to match the British NHS' context (Admasachew and Dawson, 2011).

Involvement was measured by three items from the 2011 NHS Staff Survey. These items assessed three key issues: whether employees were able to make suggestions to improve their work, whether employees had frequent opportunities to show initiative in their role, and whether employees were able to make improvements happen in their area of work (see Table 1).

Advocacy was measured by three items assessing the degree to which employees would recommend the Trust as a place to work, or as a place to receive high-quality care (Admasachew and Dawson, 2011; Fletcher and Robinson, 2014; Purcell, 2014; West and Dawson, 2012). These items were from the 2011 NHS Staff Survey.

Patient experience was measured by seven items from the 2011 Adult Inpatients Survey, measured along the lines suggested by previous studies (e.g., Doyle et al., 2013; Jenkinson et al., 2002; Murrells et al., 2013). These items cover aspects of both relational care (e.g., patient experience of emotional support and involvement in decisions regarding patients' health and treatment) and functional care (e.g., patient experience of privacy and reduced waiting time).

Control variables. In line with previous studies (e.g., Powell et al., 2014; Ogbonnaya and Valizade, 2018; Ogbonnaya et al., 2018), we applied the following control variables to the current analysis: patients' length of stay in hospital; patients' age (four age bands, reference category is

‘66 years and above’); patients’ gender (reference category is female); hours worked by employees (reference category is ‘less than 30 hours’); extent of employee contact with patients (reference category is ‘no contact’); and occupational group (ten categories, reference category is ‘registered nurses and midwives’). These variables have strong implications for patient experience: for example, long working hours are potential stress factors that increase the likelihood of errors and near misses in hospital care, whereas the employees’ face-to-face interactions with patients could potentially affect the quality and efficiency of healthcare services. All control variables were measured as aggregated proxies at the NHS Trust level (see Table 1).

– *Insert Table 1* –

Analytical procedure

Data were analysed by Structural Equation Modelling (SEM) with latent variables, using the Mplus software program (version 7.1). The estimator of choice was the robust maximum likelihood (MLR) estimator, which adjusts for measurement errors in large-scale survey data (Asparouhov and Muthén, 2006). The measurement component of the model comprised six latent variables, including PSS, POS, engagement, involvement, advocacy, and patient experience. Overall goodness-of-fit for was adequate: $X^2 = 459.92$; $df = 280$; $p\text{-value} < 0.001$; Root Mean Square Error of Approximation (RMSEA) = 0.06; Comparative Fit Index (CFI) = 0.96, Tucker-Lewis Index (TLI) = 0.95, Standardized Root Mean Square Residual (SRMR) = 0.08. An alternative one-factor measurement model was estimated to determine whether all six variables were reducible to a single latent construct. This model failed to fit the data adequately: RMSEA = 0.22; CFI = 0.44; TLI = 0.39; SRMR = 0.16; thus, confirming that the latent constructs are discrete and less likely influenced by common method bias. A two-factor measurement model – one factor

for PSS and POS, and the other for engagement, involvement, advocacy and patient experience – also failed to fit the data adequately: RMSEA = 0.24; CFI = 0.34; TLI = 0.28; SRMR = 0.18.

The structural component of the analysis examined a serial mediation model whereby three mediators (engagement, involvement, and advocacy) were influenced by another mediator (POS). The analysis comprised the following set of equations: i) the latent construct for POS was regressed on the latent construct for PSS; ii) the latent constructs for engagement, involvement, and advocacy were respectively regressed on the latent constructs for PSS and POS; iii) the latent construct for patient experience was regressed on the latent constructs for PSS, POS, engagement, involvement and advocacy, and the control variables; and iv) a syntax to generate parameter estimates for indirect effects. This syntax is based on the product-of-coefficient method (MacKinnon, Fritz, Williams and Lockwood, 2007), where each indirect effect represents the product of three regression coefficients: i) between the predictor and first mediator; ii) between the first and second mediator; and iii) between the second mediator and outcome.

Results

Table 2 shows that the bivariate correlations among study variables were mostly consistent with expectations. PSS was positively correlated with POS, the three employee outcomes, and patient experience. POS had similar positive correlations with these variables. Involvement and advocacy were positively correlated with patient experience, whereas engagement was not significantly correlated with patient experience ($r = 0.08, p > .05$).

– *Insert Table 2* –

Table 3 reports parameter estimates for all direct and indirect effects in the model. As predicted, PSS had a direct positive relationship with POS ($\beta = 0.25, p < .001$), indicating full support for Hypothesis 1. This positive result echoes prior claims that adequate levels of support

from an immediate manager stimulate employees to reflect more positively about organizational actions towards the workforce. Hypotheses 2a, 2b and 2c, concerning the direct relationships between POS and three employee outcomes, were also fully supported by the data. Parameter estimates for these relationships were both significant and positive: engagement ($\beta = 0.24, p < .001$), involvement ($\beta = 0.20, p < .001$) and advocacy ($\beta = 0.43, p < .001$). Our study therefore corroborates the social exchange principle that employees are likely to respond with desirable attitudes and behaviours if they feel adequately supported and cared for.

As reported in Table 3, PSS ($\beta = -0.00, p = .96$) and involvement ($\beta = 0.09, p = .23$), respectively, had no significant direct effects on patient experience, whereas POS ($\beta = -0.10, p < .05$) and engagement ($\beta = -0.15, p < .01$), respectively, had significant and negative effects on patient experience. These results may be interpreted to suggest that PSS, POS, engagement and involvement do not, in themselves, engender any significant improvements in patient experience. In contrast, advocacy ($\beta = 0.65, p < .001$) had a significant and positive direct relationship with patient experience. Thus, compared to engagement and involvement, advocacy satisfied the relevant precondition for a significant indirect path between PSS and patient experience.

– *Insert Table 3* –

Hypothesis 3 suggests that PSS will positively influence patient experience through a serial mediation involving POS and engagement (i.e., a motivational indirect path). As reported in Table 3, this hypothesis was not supported as the observed indirect effect was significant and negative ($\alpha\beta = -0.01, p < .05$). This unexpected result indicates a type of inconsistent mediation (MacKinnon, Krull and Lockwood, 2000) or suppression effect (Conger, 1974). Suppression effects are said to occur when the respective effects of the predictor and mediator on the outcome cancel each other, causing either a full, or perhaps partial, distortion in the overall predictive

relationship. In the present analysis, this distortion may have resulted from a relatively strong POS–engagement relationship, versus a relatively weak engagement–patient experience path.

Hypothesis 4, concerning the positive influence of PSS on patient experience via a serial mediation involving POS and involvement, was not supported. The parameter estimate for this indirect path was positive but not statistically significant ($\alpha\beta = 0.00$, $p = .25$). Thus, as with the motivational indirect path, PSS may not necessarily influence patient experience through the empowerment indirect route. In contrast, the parameter estimate for the behavioural indirect path, involving POS and advocacy, was significant and positive ($\alpha\beta = .007$, $p < .001$). This result supports the prediction that PSS will improve patient experience via both employees’ positive perceptions of organizational support and advocacy behaviours (full support for Hypothesis 5).

Discussion

The idea of managerial support continues to enjoy increasing attention in the academic literature. Several studies have documented its role in shaping employees’ favourable disposition towards the organization, as well as their positive attitudes and behaviours at work. Nevertheless, there has been less discussion of the nature and outcomes of managerial support structures in healthcare settings. Inspired by social exchange principles, the current study sought to understand the mechanisms via which PSS might improve patient experience, focusing on POS and three employee outcomes (i.e., engagement, involvement, and advocacy). Using two-wave data from the British NHS, we report differential effects between these outcomes and patient experience.

Our analysis showed a strong, positive relationship between PSS and POS. This positive relationship echoes previous reports that supportive managerial actions encourage employees’ favourable perceptions about organizational support (Eisenberger et al., 2002; Yoon and Thye, 1999). Immediate managers or supervisors are often seen as organizational representatives whose

levels of care and assistance may be interpreted as the organization's benevolent intent towards employees and their well-being. It is argued that the more employees experience supportive managerial relationships, the greater their shared perceptions of the organization as being supportive. In addition, we found evidence that POS relates positively with all three employee outcomes – engagement, involvement, and advocacy. These positive effects corroborate social exchange principles that employees are more likely to respond positively when operating in a supportive work environment (Saks, 2006). In such an environment, employees perceive positive signals about the extent to which employees are cared for and valued by either the organization or its agents (in this case immediate managers). These signals are interpreted as the organization's desire to foster positive employment relationships with the workforce, thereby encouraging positive employee attitudes and behaviours (Ogbonnaya and Messersmith, 2019).

Contrary to expectations, our test for a positive indirect relationship between PSS and patient experience via POS and engagement returned a negative effect; that is, the motivational indirect path from PSS to patient experience was not supported. This rather contradictory result deviates from previous research linking high levels of engagement to better customer service experience (e.g., Salanova et al., 2005). A possible explanation might be due to suppression effects, whereby a relatively weak correlation between engagement and patient experience may have offset the respective impacts of managerial and organizational support on patient experience (Ogbonnaya et al., 2018). An alternative explanation is, perhaps, the idea that psychological engagement represents one's feelings (i.e., an affective state of mind), rather than one's concrete actions. In other words, 'feeling engaged' does not automatically imply 'acting engaged'. For example, a psychologically engaged worker's feeling of enthusiasm may not necessarily translate into positive

patient outcomes, unless such a feeling is backed by concrete patient-centred actions. Ultimately, further research is needed to shed more light on the true nature of these relationships.

Another unexpected finding concerns PSS' indirect effect on patient experience via POS and involvement (i.e., the empowerment indirect path), which we found to be positive but non-significant. Although the effect size is relatively weak, this finding contradicts previous evidence from both healthcare (e.g., Goedhart et al., 2017; Metcalf et al., 2018) and non-healthcare (e.g., Wood et al., 2012) settings. Typically, employee involvement is considered as a vital resource for employees to perform well and make significant improvements happen in their work area. Involvement is also viewed as a major source of employee empowerment (Laschinger et al., 2003), with positive implications for employee performance and ability to help the organization achieve its objectives. Nevertheless, as shown in the current analysis, involvement has negligible effects when explored as a mediator between employees' perceptions of support and patients' experience of healthcare. We argue that both forms of workplace support, PSS and POS, influence employee involvement significantly and positively; yet, critical questions remain as to whether involvement has significant implications for patient experience.

Of the three employee outcomes examined, only advocacy played a significant and positive role in terms of our proposed behavioural indirect path. Specifically, PSS had a positive indirect relationship with patient experience via POS serially linked with advocacy. This result is expected given prior evidence that employees' brand-building, extra-role and citizenship behaviours have widespread benefits for organizations (e.g., Morhart et al., 2009). The result has also strengthened key arguments about the relevance of advocacy behaviours in the context of patient-centred care. Because advocacy behaviours represent employees' appreciation of, and endorsement for, the quality of services offered by the organization, such behaviours encourage employees to deliver

high-quality services that meet patients' expectations (Fletcher and Robinson, 2014). Echoing this, we argue that PSS, through its positive effects on both POS and advocacy, represents an important determinant of patient experience. Healthcare employers would be better served by supporting employees, treating them fairly, and encouraging their positive behaviours towards organizational goals and values.

Implications for theory

This study offers important theoretical insights. By exploring the PSS–POS nexus and highlighting its significance for both employee and patient outcomes, the study provides a more nuanced understanding of key social exchange principles. In particular, the study illustrates how supportive workplace relationships can be nurtured and translated into more respectful and responsive services for patients. The study thus extends key tenets of social exchange theory from the management and psychological disciplines (where they are mostly examined) to the literature on healthcare efficiency. Our results are not only pertinent but largely consistent with Eisenberger et al.'s (1990) proposition: thus, immediate managers, or those with supervisory authority over employees, are typically seen as organizational agents whose positive actions increase employees' positive feelings about the organization. Such feelings might, in turn, inspire employees to express higher levels of energy at work, strive to make improvements happen in their work area, and treat patients with dignity and respect.

One impetus for the current research was to establish the various pathways in which workplace support, from immediate managers and the organization alike, might improve patient-centred care. In this light, our results underscore the role of PSS in fostering a conducive work environment where healthcare workers feel inspired to provide quality services to patients; however, the caveat is that not all employee outcomes contribute significantly to patient

experience. In fact, two employee outcomes, engagement and involvement, which have been studied extensively in management research, showed little or no positive effects on patient experience; whereas the least studied outcome (i.e., advocacy) had a relatively strong positive effect. Clearly the data examined in the current study cannot provide definitive answers to these inconsistencies, but future research may delve more deeply into the intricate processes or interrelationships through which PSS might influence patient outcomes.

Implications for practice

The present study provides practical guidance on effective organizational support practices for improving the quality of services that patients receive. The study has shown particularly that positive social exchanges between employees and immediate managers play an important role in ensuring valuable and meaningful services for patients. In other words, when managerial efforts are focused on supporting employees and encouraging them to perform well, this could stimulate employees' positive perceptions of organizational support, and strengthen the quality of care offered to patients. The key message, therefore, is to recognize that healthcare efficiency may not always arise from further restructuring of healthcare systems (a phenomenon that has, in recent times, characterized the public healthcare sector), but perhaps by strengthening workplace support policies and encouraging employees' positive perceptions about organizational support. Healthcare employers should examine the nature of such policies, particularly how they can be deployed in motivating employees to render the quality of services that makes a difference to patients. For healthcare organizations such as the British NHS, where some of these support policies are already in place (e.g., through the Improving Working Lives [IWL] framework), the present study highlights some of the most important benefits.

Another practical message to healthcare employers is that certain workplace attitudes and behaviours may not necessarily generate optimal effects when aiming to improve healthcare efficiency. Importantly, while employees' positive attitudes towards the organization and its values (e.g., advocacy behaviours) have strong positive implications for patient-centred care, employees' affective state (e.g., engagement) and sense of involvement may not engender such strong effects. In the particular context of the British NHS, where employees are typically assigned to different occupational groups (e.g., social care, clerical staff, nursing, housekeeping and technical staff), it becomes necessary for healthcare employers to pay closer attention to the kinds of support structures available across occupational groups. In so doing, healthcare employers should employ best practices in ensuring that employees deliver the quality of services that they aspire to.

Strengths and limitations of study

The strengths of the present study are varied. For example, our use of large-scale, archival data from the British NHS – one of the world's largest public healthcare organizations – enabled a more comprehensive investigation into different managerial and organizational support structures at work, as well as their implications for both employee- and patient-centred outcomes. In addition, our use of well-founded theory, coupled with our robust two-wave analytical strategy, reinforced the overall contributions that we make. Despite these strengths, one source of weakness in our study is the use of aggregated data. Although data aggregation was necessary for appropriately matching and merging multiple sources data, and minimizing artefactual covariation due to common method bias, it allowed important drawbacks in terms of the study's level of analysis (i.e., individual-level theory versus organizational-level analysis). Nevertheless, post-hoc analyses revealed statistical estimates were largely consistent for both aggregated and non-aggregated versions of our data. Another possible study limitation lies in the fact that data for POS,

engagement, involvement, and advocacy were derived from the same survey instrument (i.e., the 2011 NHS Staff survey). Although we have applied standard statistical procedures in addressing potential problems with self-reported measures, we advise caution when interpreting our results beyond this limitation.

A natural progression from the present study is to examine managerial and organizational support practices in the context of a much wider range of healthcare antecedents and outcomes. Future research may, for example, examine whether advocacy, relative to engagement and involvement, has stronger positive effects on patient safety and mortality rates across different healthcare departments or units. Such research will add value to the organizational support literature and provide deeper insights regarding efficiency and effectiveness of operations in healthcare. More research is also needed to better understand the boundary conditions under which different forms of support might influence employee and patient outcomes. Researchers may, for example, examine to what extent the impact of support on employee outcomes are conditional on such demographic characteristics as personality types, educational attainment, gender and age differences. Research in this area will not only inform policy debates, but accentuate the importance of organizational support for a more diverse range of employment characteristics.

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Table 1

Study variables, observed items, Cronbach's alpha (α), composite reliability (CR), average variance extracted (AVE), and response scale

Variables	Observed Items	Factor loadings	α	CR	AVE	Response scale
Perceived supervisor support (PSS)	My immediate manager encourages those who work for her or him to work as a team.	0.88	0.94	0.95	0.78	1 = 'Strongly disagree' to 5 = 'Strongly agree'
	My immediate manager can be counted on to help me with a difficult task at work.	0.93				
	My immediate manager gives me clear feedback on my work.	0.91				
	My immediate manager asks for my opinion before making decisions that affect my work.	0.90				
	My immediate manager is supportive in a personal crisis.	0.80				
Perceived organizational support (POS)	My Trust is committed to helping staff balance their work and home life	0.86	0.92	0.90	0.64	1 = 'Strongly disagree' to 5 = 'Strongly agree'
	Staff are encouraged to suggest new ideas for improving services.	0.82				
	On the whole, different parts of the organization communicate effectively with each other.	0.95				
	My Trust treats fairly staff who are involved in an error, near miss or incident.	0.75				
	My Trust takes effective action if staff are physically attacked by patients/clients, relatives or other members of the public.	0.56				
Engagement	I look forward to going to work	0.94	0.86	0.87	0.70	1 = 'Strongly disagree' to 5 = 'Strongly agree'
	I am enthusiastic about my job	0.90				
	I feel like time passes quickly when I am working	0.63				
Involvement	I am able to make suggestions to improve the work of my team/department	0.86	0.93	0.93	0.82	1 = 'Strongly disagree' to 5 = 'Strongly agree'
	There are frequent opportunities for me to show initiative in my role	0.95				
	I am able to make improvements happen in my area of work	0.91				

	Care of patients / service users is my Trust's top priority.	0.89				
Advocacy	I would recommend my Trust as a place to work	0.96	0.93	0.93	0.82	1 = 'Strongly disagree' to 5 = 'Strongly agree'
	If a friend or relative needed treatment, I would be happy to with the standard of care provided by my Trust.	0.86				
	From the time you arrived at the hospital, did you feel that you had to wait a long time to get to a bed on a ward? (REVERSED)	0.81				
	In your opinion, how clean was the hospital room or ward that you were in?	0.79				
	Were you involved as much as you wanted to be in decisions about your care and treatment?	0.95				
Patient experience	Did you find someone on the hospital staff to talk to about your worries and fears?	0.94	0.91	0.94	0.70	0 = 'Not at all' to 2 = 'Yes, definitely'
	Were you given enough privacy when being examined or treated?	0.78				
	Before you left hospital, were you given any written or printed information about what you should or should not do after leaving hospital?	0.58				
	Overall, did you feel you were treated with respect and dignity while you were in the hospital?	0.95				
<i>Sample size = 161 NHS Trusts (aggregated scores derived from employee and patient responses)</i>						

Table 2

Means, standard deviations (SD) and bivariate correlations among study variables

Variables	Mean	SD	1	2	3	4	5
1 Perceived supervisor support (PSS)	3.62	0.10	1				
2 Perceived organizational support (POS)	3.19	0.11	0.63***				
3 Engagement	3.81	0.09	0.40***	0.43***			
4 Involvement	3.54	0.10	0.64*	0.63***	0.55***		
5 Advocacy	3.54	0.24	0.56***	0.65***	0.58***	0.63***	
6 Patient experience	1.44	0.08	0.27**	0.38***	0.08	0.33***	0.59***

Sample size = 161 NHS Trusts (aggregated scores derived from employee and patient responses)

*Significance levels: *** = $p < .001$; ** = $p < .01$*

Table 3
Results showing all direct and indirect effects

Paths	Path estimates	Errors	95% Confidence intervals	
			Lower limit	Upper limit
<i>Direct relationships</i>				
PSS → POS	0.25***	0.03	0.20	0.30
PSS → Engagement	0.06**	0.02	0.02	0.10
PSS → Involvement	0.08***	0.02	0.05	0.12
PSS → Advocacy	0.04**	0.01	0.01	0.07
PSS → Patient experience	-0.00	0.01	-0.03	0.03
POS → Engagement	0.24***	0.05	0.14	0.34
POS → Involvement	0.20***	0.03	0.14	0.27
POS → Advocacy	0.43***	0.03	0.37	0.49
POS → Patient experience	-0.10*	0.04	-0.19	-0.02
Engagement → Patient experience	-0.15**	0.05	-0.25	-0.56
Involvement → Patient experience	0.09	0.07	-0.06	0.23
Advocacy → Patient experience	0.65***	0.04	0.57	0.74
<i>Indirect relationships</i>				
PSS → POS → Engagement → Patient experience	-0.01*	0.00	-0.02	-0.00
PSS → POS → Involvement → Patient experience	0.00	0.00	-0.00	0.01
PSS → POS → Advocacy → Patient experience	0.07***	0.01	0.05	0.09
<i>Sample size = 161 NHS Trusts (aggregated scores derived from employee and patient responses)</i>				
<i>Significance levels: *** = $p < .001$; ** = $p < .01$</i>				
<i>Proportion of variance explained: R^2 POS = 0.06; R^2 Engagement = 0.07; R^2 Involvement = 0.06; R^2 Advocacy = 0.19; R^2 Patient Experience = 0.41.</i>				
<i>Control variables: patients' length of stay in hospital; patients' age (four age bands, reference category is '66 years and above'); patients' gender (reference category is female); hours worked by employees (reference category is 'less than 30 hours'); extent of employee contact with patients (reference category is 'no contact'); and occupational group (ten categories, reference category is 'registered nurses and midwives').</i>				

Figure 1

Serial mediation model linking PSS to patient experience via POS alongside engagement, involvement, and advocacy

