Abstract

This study examines the relationship between a specific type of team climate for perceived organizational support; team perceived organizational support for teamwork training (team POS-TT); and its effects on the productivity and innovation of acute healthcare teams. Drawing on organizational support theory, we examine how this relationship emerges via the mediating mechanism of shared objectives. Using survey data from 88 teams based in 13 healthcare organizations across the United Kingdom, we found support for the indirect effects of team POS-TT via shared objectives, but not for the direct effect of team POS-TT, thus indicating a mediated relationship with team productivity and innovation. As predicted, through the satisfaction of important esteem and affiliation needs of team members, team POS-TT compelled teams to engage in the process of generating shared objectives, which, in turn, positively predicted team productivity and innovation. These findings contribute to the scant literature on POS as a form of team climate, and respond to recent calls to consider different types of POS by focusing on perceived support for teamwork training; an area which has particular relevance in the context of healthcare. Further, the study serves to extend understanding regarding exactly *how* team POS-TT impacts team outcomes via the specific process of shared objectives. We conclude with a discussion of these contributions to the literature and delineate several practical implications for leaders and managers in healthcare organizations.

Keywords: Perceived organizational support; team climate; teamwork training; shared objectives; team productivity; team innovation; healthcare.

Examining the Indirect Effects of Perceived Organizational Support for Teamwork Training on Acute Healthcare Team Productivity and Innovation: The Role of Shared Objectives

Given the rapidly growing body of research evidencing the critical importance of effective teamwork for the delivery of safe and high-quality health care (e.g., Lyubovnikova, West, Dawson, & Carter, 2015; Salas, DiazGranados, Weaver, & King, 2008a), teamwork training is now an integral and widely established practice in healthcare organizations across the world (Hughes et al., 2016). According to Salas and Cannon-Bowers (1997), teamwork training can be defined as *'a set of tools and methods that, in combination with required (team based) competencies and training objectives, form an instructional strategy'* (p. 254). Teamwork training tends to focus on the development of specific knowledge, skills and abilities (KSAs) for teamwork and typically includes training to improve team member cooperation, communication and coordination (Salas et al., 2008b), enhance decision making (Orasanu & Fischer, 1997), reduce errors (Wiener, Kanki, & Helmreich, 1993) and cope better with stress (Driskell, Salas, & Johnston, 1995). Consequently, a substantial amount of research now exists pointing to the positive impact of teamwork training on individual, team and organizational outcomes in the healthcare sector (e.g., Salas et al., 2008a; Weaver, Dy, & Rosen, 2014), with many studies focusing on the efficacy of specific training interventions in a variety of healthcare contexts (e.g., Buljac-Samardzic, Dekker-van Doorn, van Wijngaarden, & van Wijk, 2010; Salas et al., 2008a; Salas et al., 2008b).

However, it is increasingly accepted that teamwork training per se is not a panacea for team performance and that organizations must also clearly convey the importance and value that they place on teamwork training if such positive impacts are to be realized (Salas et al., 2008b). Nevertheless, despite a clear recognition regarding the role of a supportive organizational context for ensuring the efficacy of such training efforts (e.g., Salas, Tannenbaum, Kraiger, & Smith-Jentsch, 2012), scant empirical attention has so far been paid

to the influence that organizational support for teamwork training might have on subsequent team processes and performance. To address this gap in the literature, in this paper it is argued that the extent to which healthcare teams perceive their organization as generally supporting and advocating training for teamwork is likely to have a positive impact on important team outcomes via team processes.

Building on organizational support theory (OST; Eisenberger, Huntington, Hutchison, & Sowa, 1986; Kurtessis et al., 2017), and specifically the concept of perceived organizational support (POS; Eisenberger et al., 1986), we conceptualize this phenomenon as perceived organizational support for teamwork training (POS-TT), and operationalize this construct at the group level of analysis as a form of team climate (González-Romá, Fortes-Ferreira, & Peiro, 2009). While the literature on how POS yields positive consequences for organizations and employees is now well established (Rhoades & Eisenberger, 2002), specific gaps remain unaddressed regarding the examination of POS at the group level (Bashshur, Hernández, & González-Romá, 2011), as well as the consideration and differential impacts of specific types of support that organizations can choose to engage in (Kennedy, Loughry, Klammer, & Beyerlein, 2009). With the exception of just a handful of studies (Bashshur et al., 2011; Pearce & Herbik, 2004, González-Romá et al., 2009; Kennedy et al., 2009), little is known about if and how team climate for POS influences team performance outcomes, particularly so in the context of healthcare in which teams are arguably unique in terms of their structural characteristics and task demands (Hughes et al., 2016). Further, of the few studies that have examined POS as a form of team climate, none have considered the impact of POS-TT specifically, despite recognition in the literature that organizational support to teams can take a variety of forms (Kennedy et al., 2009).

In this paper, we draw upon the notions of social exchange theory (Blau, 1964), perceived organizational support (Eisenberger et al., 1986) and team climate (Parker et al.,

2003), to posit that team POS-TT will indirectly influence both the productivity and innovation of acute healthcare teams through shared objectives. The concept of shared objectives has been posited as a key characteristic of real teams (Hackman, 2002; West & Lyubovnikova, 2012), and has been frequently associated with improved patient safety and staff well-being in healthcare organizations (e.g., Lyubovnikova et al., 2015). Specifically, this study examines how team POS-TT might serve as a crucial socio-emotional resource for teams (Eisenberger et al., 1986), satisfying important esteem and affiliation needs of team members, which, in turn, facilitates the generation of shared objectives, thus enabling heightened team outcomes. In an era of unprecedented fiscal austerity, identifying such ways in which healthcare organizations enhance team productivity and innovation has never been of greater importance (Dixon-Woods et al., 2014; Karanikolos et al., 2013). The combination of the theoretical perspectives outlined above provides an integrative mediator model, which we tested using data obtained from a large sample of acute hospital teams in the English National Health Service (NHS). See figure 1 for our conceptual model.

Insert Figure 1 about here

Theoretical Background and Hypotheses

According to OST (Eisenberger et al., 1986), POS broadly captures the extent to which employees perceive that their organization supports and values their contribution and cares for their well-being. In such instances, employees personify their organization, assigning it human-like characteristics, and perceiving their favorable or unfavorable treatment as a crucial barometer for the extent to which the organization cares for them (Rhoades & Eisenbeger, 2002). When an organization conveys (both directly, and indirectly via its agents) that it values and favors employees, in exchange, employees feel obligated to

reciprocate through increasing positive outputs that are geared towards enabling the organization to achieve its goals (Eisenberger et al., 1986). Social exchange theory (Blau, 1964) has frequently been used to underpin research on POS, postulating that reciprocity norms form a basis for the relationships between organizations and their members (Gouldner, 1960). Accordingly, there is a substantial body of research demonstrating links between POS and favorable work-related outcomes. For instance, studies have found that POS is associated with in-role and extra-role performance (Armerli, Eisenberger, Fasolo, & Lynch, 1998; Kurtessis et al., 2017; Rhoades & Eisenberger, 2002), organizational commitment (Eisenberger, Fasolo, & Davis-LaMastro, 1990; Kim, Eisenberger, & Baik, 2016), job satisfaction and positive mood (Rhoades & Eisenberger, 2002), job engagement (Zhong, Wayne, & Liden, 2016), proactive behavior (Caesens, Marique, Hanin, & Stinglham, 2015), as well as reduced absenteeism and withdrawal behaviors (Eisenberger, et al., 1990; Rhodes & Eisenberger, 2002).

However, the effects of POS are not limited to individual level outcomes, and recent research has begun to explore how POS can emerge as a shared perception within teams to impact team performance (Bashshur et al., 2011; Pearce & Herbik, 2004, González-Romá et al., 2009; Kennedy et al., 2009). While individual perceptions of POS reside in the individual team member (i.e., psychological climate), they have been shown to integrate through frequent social interaction between team members to emerge as a group-level phenomenon (i.e., team climate; González-Romá, Peiró, & Tordera, 2002; Moran & Volkwein, 1992). The concept of team climate for organizational support captures collective perceptions of team members regarding the extent to which the organization provides support to the team, considers team members' needs and values their contribution, and has been shown to impact team processes and outcomes (González-Romá et al., 2009). Indeed, when one team member perceives the organization as being highly supportive of teamwork training, this perception is

likely to be shared by the team as a whole through processes of collective sense-making, shared experiences, exposure to the same leaders and organizations policies, as well as the attraction, selection, and attrition of team members over time (James & James, 1989; Parker et al., 2003; Schneider & Reichers, 1983). Therefore, based upon findings for the positive effects of POS at the individual level of analysis, recent team climate research has extrapolated these theoretical arguments to the team level, arguing that when the team believes that it is supported by the organization and is receiving the resources necessary for meeting its goals, then it will feel obliged to coordinate as necessary and strive to achieve those goals (Bashshur et al., 2011; Gonzalez-Roma et al., 2009); provided that team members POS perceptions are largely similar. Further, researchers acknowledge that team climate for organizational support can and does vary significantly between teams in the same organization (Bashshur et al., 2011; Cropanzano & Kacmar, 1995), and that these varying perceptions can have a substantial impact on team attitudes and behaviors (Howes, Cropanzano, Grandey, & Mohler, 2000). These assertions have been largely supported by team climate research (e.g., Kennedy et al., 2009; Naumann & Bennett, 2002). For instance, in a field study of 39 manufacturing and banking services teams, Kennedy et al. (2009) found that team perceptions of organizational support were indirectly related to team potency via effective team processes. Similarly, in a study of 71 change management teams, perceived team support was positively associated with team citizenship behavior (Pearce & Herbik, 2004). González-Romá et al. (2009) also found that team climate for organizational support predicted both self and manager-rated subsequent team performance in a large sample of banking teams. More recently, Bashshur et al., (2011) conducted a longitudinal study to examine levels of agreement between team climate for organizational support and manager's perceptions of the organizational support received by the team, finding positive effects of agreement on team performance and team positive affect.

Overall, the above studies give weight to the existence of a climate for organizational support at the team level and provide initial insight into how such a climate can impact team processes and outcomes. However, to date, team climate for organizational support has largely been treated as an all-encompassing construct and there have been calls to examine which specific types of POS have the strongest effects on team processes and outcomes (Kennedy et al., 2009). Indeed, there are many different ways in which an organization can be perceived as providing support to teams (Lawler, 1992). For instance, Hall (1998) identified nine types of organizational support relevant to team effectiveness, including group design, information systems, direct supervision, rewards and recognition and teamwork training. More recent research has also sought to better distinguish between different types and sources of POS (e.g., Lamm, Tosti-Kharas, & King, 2015; Zheng et al., 2016). However, research specifically conducted at the team level continues to operationalize POS as a latent construct and is yet to consider the differential effects of specific POS types. The extent to which team climate for POS predicts other key performance outcomes, such as team innovation, and through what mechanisms these effects are manifested, is also yet to be explored. Team innovation has been argued by some to be a key barometer of team effectiveness (West, 2002), meaning that a more thorough investigation of possible antecedents through the lens of OST could be of significant benefit to healthcare organizations striving to survive in an increasingly competitive environment (Anderson, Potočnik, & Zhou, 2014).

In this paper, we, therefore, seek to address these gaps in the literature and extend the POS construct to capture a particular type of POS; perceived organizational support for teamwork training (POS-TT; Hall, 1998). This type of POS is particularly relevant for healthcare organizations, not only given the prevalence of team working in general in this sector (Lyubovnikova et al., 2015), but also due to the wealth of training interventions that

have been designed to optimize teamwork in healthcare (Hughes et al., 2016; Salas et al., 2008b; Weaver et al., 2014). Researchers have suggested that providing favorable job conditions, such as training, job enrichment and promotions, constitute discretionary practices that organizations can choose to engage in (Rhoades & Eisenberger, 2002), and that when employees are given that opportunity to partake in such developmental opportunities, this signals that they are cared for, valued and invested in, thus predicting heightened POS (Wayne, Shore, & Liden, 1997). At the individual level, the same can be argued for POS-TT. In a healthcare context that relies heavily on the effectiveness of well-functioning teams, POS-TT signals to team members that how effectively their team works together is of vital importance for the organization to meet its goals. Being actively supported to develop team working skills thus suggests to individuals that their organization values their contribution and cares about their professional development as an effective team member.

Further, we propose that POS-TT also emerges in the form of team climate, whereby members of the same team develop a shared perception regarding the extent to which their organization supports teamwork training (Parker et al., 2003). In accordance with the team climate literature (Gonzalez-Roma et al., 2009), through processes such as socialization, social interaction and exposure to the same organizational policies, leadership perspectives, and workplace experiences regarding team training, team members develop a collective understanding regarding the degree to which their organization strongly believes in the importance of training for teamwork and encourages the development of team working skills (González-Romá et al., 2002). Team POS-TT thus captures a unique group-level phenomenon operationalized as the mean level of POS-TT in a given team (i.e., whether the group's average POS-TT rating is high or low; Lindell & Brandt, 2000).

POS-TT and Healthcare Team Productivity

Team productivity is widely regarded as a key dimension of team performance (Mathieu, Heffner, Goodwin, Salas, & Cannon-Bowers, 2000) capturing the extent to which a team is able to meet or exceed its goals in an efficient and timely manner (Kirkman & Rosen, 1999). Given the prevalence of team-based work in healthcare and the importance of team productivity for ensuring the delivery of safe and high-quality health care (Dixon-Woods et al., 2014) understanding the antecedents of team productivity in this sector remains a critically important research endeavor.

Organizations may convey their support for teamwork training through managers' emphasis on the importance of the development of KSAs for teamwork (Stevens & Campion, 1994), and the promotion of specific team training opportunities (Kennedy et al., 2009), for example. However, regardless of the actual level of support for teamwork training that is provided by the organization, it has been widely argued that what matters more is the extent to which this support is *perceived* as being high by teams themselves (Cropanzano & Kacmar, 1995; Ostroff, Shin, & Kinicki, 2005). OST (Eisenberger et al., 1986) would assume that when organizations create conditions in which high levels of team POS-TT are generated, teams will feel a sense of indebtedness and will thus seek to support the organization in achieving its objectives (Rhoades & Eisenberger, 2002). Indeed, the literature on organizational support is largely founded on the assumptions of social exchange theory (Blau, 1964), which would suggest that when teams have high team POS-TT, they are likely to believe that they are receiving the opportunities, support and developmental resources necessary to develop teamwork skills and help them perform more effectively (Pearce & Herbik, 2004). In turn, they will seek to strengthen their relationship with the organization and will thus reciprocate by coordinating their efforts and increasing productivity towards the attainment of organizational goals (Bashshur et al., 2011). As a consequence, and in

accordance with existing research findings (e.g., González-Romá et al., 2009), we would expect that team productivity will increase with increased team POS-TT.

Hypothesis 1: *Team POS-TT will be positively associated with team productivity*

POS-TT and Healthcare Team Innovation

Given that healthcare teams are typically composed of individuals with an array of demographic characteristics, professional backgrounds, KSAs, and experiences, this diverse pool of resources affords such teams with great potential for creativity and innovation (van Knippenberg & Schippers, 2007). Team innovation is defined as the generation of creative ideas and their implementation (Amabile, 1996; West & Farr, 1990), and is widely regarded as a crucial aspect of team effectiveness (West, 2002). In healthcare, in particular, the development and implementation of novel processes and procedures designed to benefit patients, staff, and the wider organization is a key priority (Dixon-Woods et al., 2014).

In accordance with OST, it seems reasonable to assume that team POS-TT will not only result in teams being more productive but will also encourage them to be more innovative. It has been argued that extra-role behaviors, such as coming up with innovative suggestions and finding creative solutions to problems, are crucial to the growth and success of organizations (Katz, 1964). Team innovation is therefore likely to be perceived by teams as a key mechanism (in addition to productivity) for enabling the wider organization to attain its goals. Further, social exchange theory would suggest that employees will be more willing to exert discretionary efforts, such as innovative behavior, to benefit those with whom they share a supportive relationship (Cropanzano, Anthony, Daniels, & Hall, 2017). Previous research has demonstrated a positive association between POS and employee innovation (Eisenberger et al., 1990). Extrapolated to the team level, when teams perceive high team POS-TT, they are likely to feel supported, valued and invested in as a team, and will therefore seek to strengthen their relationship with the organization by not only ensuring that

contractual obligations and core responsibilities are fulfilled (i.e., team productivity), but also by going beyond the call of duty and engaging in innovative behaviors for the benefit of the larger organization.

Further, not only will team POS-TT facilitate heightened reciprocity norms as discussed above (Gouldner, 1960), it is also likely to foster increased positive affect through meeting employees' socioemotional and belongingness needs (Rhoades & Eisenberger, 2002). Based on theories of shared affect and emotional contagion (e.g., George, 1996), team climate for organizational support has indeed been shown to be associated with team positive affect (Bashshur et al., 2011). Relatedly, there is increasing evidence to suggest that team positive affect can influence not only team performance (e.g., Barsade, Ward, Turner, & Sonnenfeld, 2000), but also team creativity and innovation (e.g., Peralta, Lopes, Gilson, Lourenço, & Pais, 2014). Based on the potential for team POS-TT to foster positive affect in teams, it is possible that this heightened affective response will enhance a team's cognitive flexibility and facilitate greater openness to the development of new ideas and implementation of novel procedures, thus resulting in increased team innovation. The arguments above, therefore, lead to our second hypothesis:

Hypothesis 2: *Team POS-TT will be positively associated with team innovation*

Shared Objectives as a Mediating Mechanism

The scant literature examining the POS construct at the group level currently offers very little insight into *how* the relationship between team POS and outcomes might emerge (for an exception see Kennedy et al., 2009). Based upon the Input-Process-Output (IPO) model of team effectiveness (Ilgen, Hollenbeck, Johnson, & Jundt, 2005), it is very likely that the direct relationships between team POS-TT and team productivity and innovation proposed above are more distal in nature, and therefore might be further explained through the indirect effects of how team members interact together (Marks, Mathieu, & Zaccaro,

2001). In this paper, we focus on the specific mediating mechanism of *shared objectives* (Anderson & West, 1998).

Shared objectives captures the process teams go through to develop a set of mutually agreed, clear, collective goals to which they are committed, and is therefore acknowledged as being a critical mechanism for leveraging team effectiveness (Guzzo & Shea, 1992). Consequently, shared objectives is theorized as being a key transition phase process in Marks et al.'s (2001) taxonomy of team processes, (referred to as goal specification), whereby teams identify and prioritize their shared goals and sub-goals for mission accomplishment between phases of action. In practice, the process of shared objectives is realized via communication between team members, often during reflexive team meetings, whereby team members collectively develop and assign objectives which clearly indicate what must be accomplished, by when, and to what standard (Marks et al., 2001). For example, a healthcare team might set an overall shared objective to provide high quality, compassionate, specialist care to all of its patients, which is likely to be underwritten by various more specific objectives, for instance, making better use of particular resources, improving links with other services, or a commitment to ensuring that patients are treated within a given timeframe. Such shared objectives might also be reviewed and amended during or after action phases, based on the need to adapt to emergent or anticipated circumstances (Marks et al., 2001). Overall, shared objectives enable teams to recognize their structural and goal interdependence, provide a referent point for self-regulation, and give team members a clear incentive to collaborate, combine efforts and sustain high performance (Kozlowski & Bell, 2003; Locke & Latham 2002).

With regards to the focus of the current study, the scarcity of research examining how team processes might mediate the team POS-TT - outcome pathway, coupled with the vast array of different team processes that could potentially be explored (Marks et al., 2001;

Mathieu, Maynard, Rapp, & Gilson, 2008), pointed us to concentrate on a team process that is fundamental to the very raison d'être of the team – the objectives it was designed to achieve (van Knippenberg, Dawson, & West, 2011). Shared objectives has frequently been posited as a defining feature of 'real teams', distinguishing them from less interdependent co-acting groups (Hackman, 2002). Indeed, the large majority of team research rests on the fundamental assumption that teams share a common overall objective (Kozlowski & Bell, 2003; Marks et al., 2001) when this is not necessarily the case (Lyubovnikova et al., 2015; Pearsall & Venkataramani, 2015). Differences in the extent to which teams have objectives that are clear and shared among team members will not only be determined by team design and composition, for example, but will also be dependent upon wider aspects relating to leadership and organizational climate, which may render team objectives more or less salient (van Knippenberg et al., 2011). Identifying the antecedents of shared objectives is therefore of particular value to healthcare organizations, given the importance that this team process has in predicting staff and patient outcomes (Lyubovnikova et al., 2015).

So how exactly might team POS-TT be related to the generation of shared objectives in teams? The theoretical rationale for this argument again rests on OST. In a recent meta-analysis on POS, Kurtessis et al. (2017) highlighted that while OST is often considered a social exchange theory, it also places great emphasis on self-enhancement processes. This has consequently been termed the socio-emotional approach in the POS literature (e.g., Armerli et al., 1998; Rhoades & Eisenberger, 2002), and posits that the impact of POS is realized through the satisfaction of socio-emotional needs, reflected, for example, in enhanced self-esteem and a heightened sense of self-worth of team members, rather than through felt obligation (Lee & Peccei, 2007). Accordingly, in the current study, team POS-TT is also assumed to fulfill the socio-emotional needs of team members, particularly esteem and affiliation needs (Armerli et al., 1998; Lee & Peccei, 2007). By creating an environment in

which teams feel valued and supported in the development of teamwork KSAs, which will ultimately impact team behaviors, cognitions and affect (Salas et al., 2008b), team members will experience both a sense of recognition (i.e., need for esteem), as well as cognitive stimulation and affection (i.e., need for affiliation) from the organization. Indeed, the fulfillment of such socio-emotional needs through POS has been shown to enhance attitudes such as organizational identification and affective commitment (Lee & Peccei, 2007), which, in turn, may promote stronger relational bonds between team members (Kurtessis et al., 2017), as well as the development of shared values (Meyer, Becker, & van Dick, 2006). It can, therefore, be argued that when an organization is perceived to be prioritizing teamwork and recognizing need for team training (i.e., high team POS-TT), this is likely to satisfy team member needs for esteem and affiliation, thus bolstering their self-esteem and affective commitment (Armerli et al., 1998; Lee & Peccei, 2007). In turn, this should compel the team as a whole to strengthen the organization's position via an increased commitment towards the achievement of local team-level objectives. Such teams will thus be motivated to clarify and agree on their collective objectives and will show heightened commitment towards these objectives as a means of strengthening their organization's position.

In turn, and in accordance with previous research findings, an increased focus on shared objectives is expected to improve team productivity (Klein et al., 2009). Clearly specified shared objectives set clear standards for team effectiveness and have been shown to facilitate the development of transactive memory and cooperative strategies (Kleingeld, van Mierlo, & Arends, 2011). We, therefore, hypothesize that shared objectives will mediate the relationship between team POS-TT and team productivity:

Hypothesis 3: *The relationship between team POS-TT and team productivity will be mediated by shared objectives*

Relatedly, we anticipate that the process of shared objectives will also help to explain the relationship between team POS-TT and team innovation. As already outlined, team climate for a supportive organizational context which emphasizes the importance of teamwork training is expected to be conducive to team innovation. We argue that this relationship is, in part, realized through the mechanism of shared objectives. In their theory of team innovation, West and Anderson (1996) specify that the team process variable of vision is crucial for promoting team innovation. Vision also referred to as '*clarity of and commitment to objectives*' (West & Anderson, 1996, p. 682), captures the extent to which team members have a common understanding of shared objectives, and remain dedicated to achieving them. A large body of research has suggested that vision provides meaningfulness and channels team member efforts towards enhancing their innovative performance (e.g., West & Anderson, 1996). Shared objectives are therefore deemed crucial for a team to be innovative (Gilson & Shalley, 2004; Hülsheger, Anderson, & Salgado, 2009).

Further, the indirect effects via shared objectives are not only explained through the increased self-enhancement that team POS-TT facilitates, but could also be further elucidated by the positive affect and heightened potency that teams with such a climate experience. Teams with high team POS-TT are likely to have a greater sense of collective efficacy regarding the achievement of their shared objectives (Kennedy et al., 2009), with this positive affect encouraging teams to consider novel alternatives and more creative solutions to problems, as well as transferring new skills gained through teamwork training to their actual work (Fredrickson, 2001). This leads to our final hypothesis:

Hypothesis 4: *The relationship between team POS-TT and team innovation will be mediated by shared objectives*

Method

Sample and Procedure

Data were collected in 2011 as part of a larger scale multi-study investigation of Quality and Safety in the NHS funded by the English Care Quality Commission (West et al., 2013). The sample for this particular study comprised 143 acute hospital teams made up of 1356 participants from 13 NHS organizations across England (57.5% response rate). The teams sampled in our study were largely medical and surgical teams, and can thus be described as action teams, characterized by coordinated workflow patterns, joint decision making, distinct roles, and highly structured tasks (Sundstrom, Mclntyre, Halfhill & Richards, 2000). Data were collected from each organization using the same procedure. Teams were identified, and team members were invited to participate via email, which contained a link to an online survey. In order to avoid potential common source bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), the team member survey contained measures for the independent and mediator variables, whereas data for the dependent variables were obtained from a separate survey. This survey was completed by external raters who were identified by local collaborators in each organization as people outside of the team, typically department managers or equivalent, who would be familiar enough with the team's work to accurately answer questions about team productivity and innovation.

Sixty-eight percent of the respondents were female; twelve percent were under 30 years old, 21 percent were 30-39 years old, 31 percent were 40-49 years old, 19 percent were 50-59 years old, and three percent were over 60. The average organizational tenure was seven years (SD = 6.7), average team tenure was six years (SD = 5.7), and 67 percent of the respondents were White British. Average team size was 13 members (SD = 9.98), with the mean response rate per team being 7.45 (SD = 3.74). Following Dawson's selection rate (2003), all 143 teams provided a sufficient group-level response rate to warrant aggregation. However, 55 teams were excluded from further analysis due to lack of external ratings of the dependent variables. The total number of teams included in our study was therefore 88.

Measures

Measures for the independent and mediating variables were derived from an established tool for assessing the effectiveness of healthcare teams; the Aston Team Performance Inventory (ATPI; West, Markiewicz, & Dawson, 2006). Based upon the IPO model of team effectiveness (Hackman, 1987), the ATPI comprises 18 dimensions of team inputs, team processes, leadership processes, and outputs measured across 100 questionnaire items, and has demonstrated acceptable reliability and validity in previous studies of healthcare teams (Callea et al., 2014).

Team POS-TT. Team POS-TT was measured using a three-item scale from the ATPI which used a five-point Likert rating scale (1 = *strongly disagree*, 5 = *strongly agree*). Sample items include: *'This organization strongly believes in the importance of training for team working'* and *'Team members are strongly encouraged to develop their team working skills in this organization'* ($\alpha = .75$).

Shared objectives. Shared objectives was measured using a three-item scale from the ATPI which used a five-point Likert rating scale (1 = *strongly disagree*, 5 = *strongly agree*). Sample items include: *'In this team we know what we are trying to achieve'* and *'Team members are committed to achieving the team's objectives'* ($\alpha = .86$). While these items capture the extent to which shared objectives are perceived to be present, they collectively imply that teams must have engaged in prior sense-making processes to enable such objectives to emerge, thus conveying the conceptualization discussed earlier.

Team productivity. Team productivity was measured using a six-item scale developed by Kirkman and Rosen (1999), which used a five-point Likert rating scale (1 = *strongly disagree*, 5 = *strongly agree*). Sample items include: *'The team completes its tasks on time'* and '*The team meets or exceeds its goals*' ($\alpha = .89$).

Team innovation. Team innovation was measured using an eight-item scale developed by Burpitt and Bigoness (1997), again using a five-point Likert rating scale (1 = *strongly disagree*, 5 = *strongly agree*). Where necessary, some of the original scale items were adapted slightly to reflect the healthcare context of the sample teams. Example items include: *'Using skills they already possess, this team learns new ways to apply those skills to develop new methods of delivering care that meet the needs of patients'*, and *'The team seeks out information about new methods of delivering care and providing treatment from sources outside the Trust'* ($\alpha = .96$).

Control variables. Based on previous research findings, we controlled for team size and the NHS Trust (i.e., organization) to which each team belonged in order to take account of any effects these variables might have on aspects of team productivity and innovation (Hülsheger et al., 2009).

Results

Measurement Evaluation

We performed confirmatory factor analyses (CFA) on the predictor and mediator variables in order to examine their underlying factor structure and discriminant validity. Both predictor and mediator variables were measured at the individual level to ensure a sufficient number of cases (at least ten per variable included in the model). The outcomes were measured by external raters and therefore could only be included at the team level where the number of cases was substantially fewer. Therefore only the predictor and mediator variables were included in the CFA as the fewer number of cases at the team level would not have allowed for testing the full model. This was done by comparing all items loading onto a model in which a single factor was postulated, and comparing these values against a model in which items loaded onto a two-factor model including separate latent constructs for team POS-TT and shared objectives. The two-factor model produced a significantly better fit (X^2 =

64.70, *df* = 8, *p* = <.001; CFI = .98; TLI = .96; SRMR = .03) compared to a single-factor solution (X^2 = 485.77, *df* =9, *p* = <.001; CFI = .84; TLI = .73; SRMR = .09), based on the results of a chi-squared difference test ($\Delta\ \chi^2$ = 421.07 (1)), which was significant at the .005 level. Additionally, the square root of the average variance extracted (AVE) was calculated (Fornell & Larcker, 1981) for team POS-TT and shared objectives. These calculations exceeded 0.5 which suggests that the overall construct was adequate as the measurement due to error is not larger than the variance captured by the construct (team POS-TT = .697; shared objectives = .818). Additionally, the AVE exceeded the squared correlation between constructs (.437; Fornell & Larcker, 1981).

In order to show that the outcome variables had discriminant validity, the same procedure was performed. Team productivity and innovation were assessed using CFA on a single loading factor and this was compared with a two factor model. The two factor model produced a significantly better fit (X^2 = 155.86, *df* = 76, *p* = <.001; CFI = .93; TLI = .91; SRMR = .05) compared to a single-factor solution (X^2 = 216.65, *df* =77, *p* = <.001; CFI = .88; TLI = .85; SRMR = .06), based on the results of a chi squared difference test ($\Delta\ \chi^2$ = 60.79 (1)), which was significant at the .005 level. AVE calculations exceeded 0.5 (productivity = .766, innovation = .865) and both calculations were larger than the squared correlation between constructs (.70; Fornell & Larcker, 1981).

Data Aggregation

In order to justify aggregation of individual-level data to the group level, interrater reliability coefficients were calculated to show consensual validity, as well as the *R*wg(j) calculation (James, Demaree, & Wolf, 1993). *R*wg(j) values above 0.70 are adequate for demonstrating acceptable consensual validity (Nunally & Bernstein, 1994). For team POS-TT, *R*wg(j) averaged .78 and .86 for shared objectives suggesting that aggregation to the group level was appropriate (Bliese, 2000). Further, intraclass correlations were tested with

ICC(1) and ICC(2) values to assess within-group agreement. With regards to ICC(1), all ANOVA F-values were above 1 (team POS-TT = 2.05, shared objectives = 3.15) with ICC(1) values of .12 for team POS-TT and .23 for shared objectives suggesting adequate agreement of within-group ratings. ICC(2) indices were .51 for team POS-TT and .68 for shared objectives suggesting that the teams were able to be adequately differentiated on these variables (Klein et al., 2000). Overall, these calculations provided sufficient statistical support for aggregation to the group level.

Hypotheses Testing

The means, standard deviations and Pearson's correlation coefficients of all the study variables are presented in Table 1.

Insert Table 1 about here

To test for any direct effect of team POS-TT on productivity and innovation, a regression analysis was performed, using team size and organization as control variables. The results of this analysis showed that team POS-TT did not have a significant direct relationship with team productivity ($\beta = .19$, $t(74) = 1.6$, $p = .11$, *ns*; $R^2 = .21$, $F(13,74) = 1.49$, $p = .14$, ns). Similarly team POS-TT did not directly predict team innovation ($\beta = .07$, $t(74) = 1.6$, $p = .58$, *ns*; $R^2 = .20$, $F(13,74) = 1.41$, $p = .17$, ns). Hypotheses 1 and 2 were therefore rejected.

Consequently, to test for the indirect effect of shared objectives on the relationship between team POS-TT and team outcomes, we used the PROCESS macro outlined by Preacher and Hayes (2004) and devised by Hayes (2012) in SPSS. Shared objectives was entered as the mediating variable and team size and organization were again controlled for. The results of these analyses are presented in tables 2 (team productivity) and 3 (team innovation).

Insert Table 2 about here

Insert Table 3 about here

There was evidence of a significant indirect (mediated) effect from team POS-TT to team productivity via shared objectives; the indirect effect (ab) had a value of 0.35 (95% confidence interval [0.10, 0.73]). Hypothesis 3 was therefore accepted. Teams that reported greater team POS-TT were also externally rated as being more productive, and this relationship was mediated by shared objectives. There was also evidence of a significant indirect (mediated) effect from team POS-TT to team innovation via shared objectives; the indirect effect (ab) had a value of 0.35 (95% confidence interval [0.05, 0.80]). Thus hypothesis 4 was also accepted. Teams that reported greater team POS-TT were also externally rated as being more innovative, and this relationship was again mediated by shared objectives.

Discussion

In the present study, we aimed to examine the relationship between team POS-TT and the outcomes of team productivity and innovation, and the extent to which these relationships were mediated by the mechanism of shared objectives. Our findings did not find support for a direct relationship between team POS-TT and team outcomes, and hypotheses 1 and 2 were therefore rejected. However, we did find evidence for an indirect effect via the mediating mechanism of shared objectives, suggesting that the relationship between team POS-TT and team outcomes is more distal than first thought (Kennedy et al., 2009). Acute healthcare teams with high team POS-TT were found to be more productive and innovative via the

process of shared objectives. Hypotheses 3 and 4 were therefore accepted. Overall, this research affords a number of contributions to theory and practice in healthcare and organizational behavior, particularly in the areas of team climate, perceived organizational support and team effectiveness.

Theoretical Implications

Firstly, the lack of support for direct relationships between team POS-TT and productivity and innovation was both interesting and unexpected, given prior literature that would support such hypotheses. For instance, based on norms of reciprocity (Wayne et al., 1997), team climate for organizational support has shown to be directly associated with aspects of team performance (González-Romá et al., 2009). However, in the same study, when only financial team performance was the criterion, no direct relationship was found; only an interaction between team climate and climate strength was related to financial team performance. Similarly, Naumann and Bennett (2002) found no direct relationship between team climate (for procedural justice) and financial team performance, suggesting that team climate and team outcomes may be more remotely acquainted. In line with the assumptions of the IPO model of team effectiveness (Hackman, 1987), whereby inputs (i.e., team POS-TT) are related to outputs (i.e., productivity and innovation) indirectly via team processes, Kennedy et al., (2009) found an indirect relationship between team perceptions of organizational support and team potency, mediated by effective team processes. With regards to the current study, is it also possible that although team POS-TT appears to be a key method of ensuring that teams develop shared objectives, it is undoubtedly not the only one. For instance, effective team leaders, particularly those with external experience, will be able to ensure that teams achieve this, even without wider organizational support for teamwork training. This might also partially explain why the direct relationships in our study were not significant. Finally, from a methodological standpoint, the external raters' perspectives of

team productivity and innovation will have certainly been affected by other 'noise' in the data that cannot be accounted for. For instance, if a team had recently dealt with a particular crisis, or faced exceptional difficulties with individual patients, this is likely to have skewed its rating on a given day. Collecting performance data longitudinally could help mitigate this possibility in future research. Further, while we did not include these variables in the study due to common method variance concerns, team POS-TT was directly related to self-reported ratings of team effectiveness and team innovation. Further research is, therefore, necessary to examine the precise nature of the direct relationship between team POS-TT and team performance outcomes, as well as potential boundary conditions that could be at play.

With regards to the accepted hypotheses (3 and 4), the results serve to add further support to the emerging literature positing self-enhancement processes as an underlying theoretical rationale for explaining the effects of POS (Kurtessis et al., 2017). As predicted, healthcare organizations which are perceived as providing support for teamwork training signal to teams that effective teamwork is a valued and integral means of delivering high-quality care to patients, whereby training to enhance team coordination and develop teamwork KSAs is seen as a priority. In doing so, organizations are able to meet the socio-emotional needs of team members, thus enhancing self-efficacy and affective commitment (Armerli et al., 1998). Our results suggest that this encourages teams to value and internalize their organization's goals, striving to achieve these via an increased focus on local team-level objectives. Thus, team POS-TT may help to create conditions in which teams become more mindful of their fundamental purpose and reason for being, compelling them to clarify and agree their core objectives and set clear performance standards during phases of transition (Marks et al., 2001). In turn, and in accordance with previous research (Klein et al., 2009), this focus on shared objectives may enable teams to develop collective strategies for

executing their interdependent tasks and forges increased commitment towards goal achievement, thus facilitating heightened levels of team productivity.

Our findings also support a similar theoretical explanation regarding the indirect effects of team POS-TT on team innovation. Drawing upon West and Anderson's theory of team innovation (1996), the focus on shared objectives that emerges under conditions of high team POS-TT affords teams with clarity and meaningfulness in their work, thus channeling innovative performance (Hülsheger et al., 2009). Although not directly tested in the current study, it also seems theoretically plausible that the heightened positive affect experienced by teams with high team POS-TT also triggers creative strategies and cognitive flexibility, meaning that the generation of shared objectives may not only prompt teams to be more productive, but also more innovative in the execution of their day-to-day work (Tsai, Chi, Grandey, & Fung, 2011). Indeed, this is the first study to demonstrate an empirical link between team climate for POS (of any type) and team innovation.

Secondly, this study adds weight to the small, yet emerging body of research that has examined POS as a group-level phenomenon, thus strengthening the legitimacy of team climate research. Indeed, while an exhaustive number of studies have sought to determine the effects of POS for individual employees, much less is known about how POS in general, and POS-TT in particular, emerges as a shared perception in teams and influences collective attitudes and behaviors. Our study supports the notion that through processes such as socialization and exposure to the same leaders and organizational policies, team members are able to develop a collective representation regarding the extent to which their organization supports teamwork training, thus enabling team members to assign shared meaning to the degree to which they are supported and developed as a team. Further, by examining a specific type of POS, we are not only able to contribute to a more fine-grained understanding of the POS construct (Hall, 1998; Kennedy et al., 2009), but also demonstrate that the positive

effects of teamwork training are not only realized through the delivery of team training events themselves (Kirkpatrick, 1994; Salas et al., 2008a), but also through the wider residual influence that the provision of such development opportunities has on team-level perceptions of POS-TT. We also tested this in a context in which training for teamwork holds particular significance for impacting patients and staff alike (Hughes et al., 2016).

Finally, our paper builds on existing studies (e.g., Kennedy et al., 2009; Pearce & Herbik, 2004), to more closely examine the role of a specific team process, shared objectives, in explaining the indirect relationship between team POS-TT and team-level outcomes. Based on Marks et al. (2001), shared objectives constitutes an important transition phase process in which teams identify and prioritize their key goals. Relatedly, OST posits that when teams socio-emotional needs are met, particularly esteem and affiliation needs in the case of team POS-TT (Armerli et al., 1998), teams reciprocate by ensuring the organization meets its wider objectives via a focus on generating their own shared objectives. This common thread, therefore, serves to integrate key principles from OST and theories of team effectiveness, and thus advances the nomological network of the team POS-TT construct.

Practical Implications

In the current economic climate faced by many healthcare organizations globally, budgets set aside for the delivery of formal training interventions, such as teamwork training programs, are inevitably being squeezed (van Schaik, Plant, Tsang, & O'Sullivan, 2011). However, the findings here suggest that there is a silver lining for those healthcare organizations under such strain. Indeed, while actual levels of support that an organization provides to teams can be expected to impact outcomes, some have argued that perceptions are *'more important and more closely related to attitudes and behaviors than an actual situation'* (Ostroff et al., 2005, p. 595). Healthcare managers, therefore, have an opportunity to help shape the perceptions of team POS-TT through the enactment of their own attitudes and

behaviors, thus acting as 'climate engineers' (Naumann & Bennett, 2000). Indeed, managers are widely considered as a crucial lens through which employees view their entire organization. A recent study by Bashshur et al. (2011) demonstrated that when team managers and members' perceptions of POS are aligned, team positive affect and team performance are maximized. Managers should, therefore, endeavor to facilitate clear communication channels with their healthcare teams, so that team members are fully informed as to the level of support that their organization places on teamwork and team training initiatives. Thus, even when training programs themselves may not be readily available, teams will still appreciate the value that the organization places on such skill development, and will, therefore, continue to reciprocate accordingly. In such times of financial austerity, it is possible that the development of high team POS-TT may help compensate for shortfalls in actual organizational support.

Finally, given that our findings highlight shared objectives as a key mediating mechanism in our model, practically speaking, healthcare organizations should ensure that teams have the opportunity and time to hold regular team meetings, in which team members are able to set and review shared objectives, and ensure that they are aligned to wider organizational goals (West, 1996). The managers facilitating such meetings should also use this opportunity to highlight any training programs, events or initiatives relevant to the team that are likely to enhance team POS-TT. Further, Upper Echelons Theory (Hambrick, 2007), would also suggest that senior managers and top management teams also play an influential role in shaping POS-TT through the messages they convey and role modeling behavior. Conscious efforts to ensure that these place a clear value on the importance of teamwork and teamwork training should, therefore, have downstream ramifications for perceptions at various organizational levels.

Limitations and Future Research Directions

This study has a number of inherent limitations which have implications for future research. Firstly, despite collecting data from multiple sources (both team members and external team raters), the study design still raises some concerns regarding common method variance. The cross-sectional research design also precludes us from making any inferences regarding causality (Podsakoff et al., 2003). Future research should consider the use of longitudinal or prospective designs so that a meaningful time-lag between measures of team POS-TT, team processes, and team outcomes can be captured. Alternative methods for measuring the dependent variables might also be considered. For instance, rather than using independent ratings, future research might instead rely on objective criteria to assess team innovation, such as the qualitative coding of innovation statements or counting the number of new methods or services provided by a healthcare team (Hülsheger et al., 2009).

The second limitation is related to the conceptualization and operationalization of POS as a form of team climate. In our study, we only examined one possible dimension or facet of team climate for POS, focusing on perceived support for teamwork training. Our rationale for doing so rested on the specific healthcare context of this study, and the well-documented prevalence and impact of teamwork training in this sector (Hughes et al., 2016; Weaver et al., 2014). However, as highlighted by Hall (1998), there are many other ways in which organizations can be perceived as providing support to teams, and therefore future research should expand its focus to the effects of different POS types on team processes and outcomes. Further, with regards to operationalization, we only considered the aggregated mean score of team POS-TT in each healthcare team. However, it is highly likely that there are differences in perceptions between team members who have more or less access to information about actual organizational support for teamwork training. Therefore, examining the extent of team member agreement on POS-TT (i.e., climate strength for POS-TT) as a

possible moderator of the relationships examined in this study provides a fruitful area for future research (see, for example, González-Romá et al., 2009).

Finally, we acknowledge that our study was limited in terms of only examining one mediating team process of shared objectives and that the results could be further extended through the consideration of other potential mediators. Given that members of healthcare teams are likely to be engaged in multiple team processes at the same time, it seems likely that team POS-TT will influence team productivity and innovation through a variety of team processes simultaneously. An examination of concurrent indirect effects of multiple team processes would thus provide a better assessment of the mediating role of any one process, and allow for a more rigorous test of competing theoretical explanations regarding exactly how team POS-TT influences team outcomes. For example, drawing upon Marks et al.'s (2001) taxonomy of team processes, the interpersonal phase process of team positive affect as an alternative mediator would be particularly relevant. Research shows that positive affect can facilitate favorable appraisals of the environment and broadens thought-action repertoires, triggering creative cognitive processes such as more divergent thinking and playfulness (Fredrickson, 2001; George & Zhou, 2007). Similarly, group positive affective tone has been shown to create conditions in which team members are more willing to share ideas, discuss alternatives and engage in more open information processing, thus enabling heightened team creativity (Tsai et al., 2011). While these theoretical assertions were alluded to in the current study, an empirical test of such a model would be welcomed. Further, with regards to action phase processes, team POS-TT might also trigger heightened team monitoring and backup behavior, whereby team members actively observe one another, providing support, feedback and assistance and checking for performance discrepancies (Marks et al., 2001), thus ultimately increasing the overall productivity of the team. In summary, exploring these alternative indirect effects would enable a more fine-grained

insight into the precise mechanisms through which team POS-TT can be leveraged to facilitate heightened performance and innovation in healthcare teams, thus further extending current theoretical understanding.

Conclusion

In conclusion, this study advances both theoretical and empirical understanding of how a specific type of team climate for POS, team perceived organization support for teamwork training, affects team productivity and innovation in acute healthcare teams. The results presented highlight the distal relationship between team POS-TT and team outcomes, and the key role that the transition phase process of shared objectives plays in transmitting the positive effects of team POS-TT on team outcomes.

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Table 1: Means, standard deviations, and correlations between study variables

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. POS-TT	3.36	.42	-																
2. Objectives	3.88	.47	.58**	-															
3.Productivity	4.02	.63	.13	.35**	-														
4. Innovation	3.81	.77	.05	.30**	.79**	-													
5. Team Size	13.48	10.40	-.12	-24**	-.15	-.12	-												
6. Org 1	.05	.22	-.07	-.03	.03	.04	-.08	-											
7. Org 2	.06	.24	.05	.12	-.07	.10	.02	-.06	-										
8. Org 3	.12	.32	.21*	.24**	-.15	-.18	-.18*	-.08	-.10	-									
9. Org 4	.17	.38	-.07	-.09	.16	.14	-.01	-.10	-.12	-.07	-								
10. Org 5	.08	.27	.04	.21*	.11	.12	-.09	-.07	-.08	-.11	-.13	-							
11. Org 6	.04	.18	.01	-.20*	-.25*	-26*	.33**	-.04	-.05	-.07	-.09	-.06	-						
12. Org 7	.02	.14	.20*	.09	.10	.10	-.10	-.03	-.04	-.05	-.07	-.04	-.03	-					
13. Org 8	.03	.17	-.03	.07	-.17	-.16	-.13	-.04	-.04	-.06	-.08	-.05	-.03	-.03	-				
14. Org 9	.07	.26	-.06	-.06	.12	.12	.05	-.06	-.07	-.10	-.13	-.08	-.05	-.04	-.05	-			
15. Org 10	.11	.32	-.05	-.19*	.03	.01	.07	-.08	-.09	-.13	-.16	-.10	-.07	-.05	-.06	-.10	-		
16. Org 11	.10	.31	.08	.07	-.03	-.03	-.13	-.08	-.09	-.13	-.16	-.10	-.07	-.05	-.06	-.09	-.12	-	
17. Org 12	.15	.36	-.19*	-.15	-.01	-.10	.22**	-.09	-.11	-.15	-.19	-.12	-.08	-.06	-.07	-.11	-.15	-.14	-

** $p < .01$, * $p < .05$ *n=143*

Table 2. Total, direct and indirect effects of team POS-TT on productivity

Antecedent		Consequent: Shared objectives (M_1), Coeff.	SE	p	LLCI	ULCI		Team productivity (Y), Coeff.	SE	p	LLCI	ULCI		Indirect effect: ab	SE	LLCI	UCLI
X (POS-TT)	a_1	.50	.10	<.001	.30	.70	c	.28	.18	.11	-.06	.64					
							c’	-.07	.19	.72	-.44	.31					
M_1 (objectives)		--	--	--	--	--	b_1	.70	.19	<.001	.33	1.08	a_1b_1	.35	.16	.10	.73
													$a_1b_1^*$	.23	.10	.07	.45
Team size		-.01	.00	.20	-.01	.00		-.00	.01	.77	-.02	.01		--	--	--	--
Org Dummy 1		.34	.36	.35	-.38	1.05		-.33	.58	.58	-1.49	.84		--	--	--	--
Org Dummy 2		.24	.14	.10	-.04	.53		-.54	.23	.03*	-1.01	-.07		--	--	--	--
Org Dummy 3		.16	.13	.24	-.11	.43		-.67	.22	.00*	-1.10	-.23		--	--	--	--
Org Dummy 4		.34	.16	.03*	.03	.65		-.27	.26	.30	-.80	.25		--	--	--	--
Org Dummy 5		-.33	.28	.25	-.88	.23		-.95	.45	.04*	-1.86	-.05		--	--	--	--
Org Dummy 6		.01	.27	.96	-.52	.55		-.05	.43	.91	-.92	.82		--	--	--	--
Org Dummy 7		.29	.26	.27	-.23	.81		-1.18	.43	.01*	-2.02	-.33		--	--	--	--
Org Dummy 8		.01	.15	.93	-.28	.31		.00	.24	.99	-.47	.48		--	--	--	--
Org Dummy 9		.08	.22	.72	-.36	.52		-.30	.36	.40	-1.01	.41		--	--	--	--
Org Dummy 10		.12	.14	.41	-.16	.39		-.38	.22	.10	-.83	.07		--	--	--	--
Org Dummy 11		-.08	.13	.55	-.33	.18		-.10	.20	.64	-.50	.31		--	--	--	--

Covariates: team size, organization. N=88. c = total effect, c’ = direct effect, $a_1b_1^*$ completely standardized indirect effect.

Table 3. Total, direct and indirect effects of team POS-TT on innovation

Antecedent		Consequent														
		Shared objectives (M_1),						Team innovation (Y)						Indirect effect			
		Coeff.	SE	p	LLCI	ULCI		Coeff.	SE	p	LLCI	ULCI		ab	SE	LLCI	UCLI
X (POS-TT)	a_1	.50	.10	<.001	.30	.70	c	.12	.22	.58	-.31	.55					
							c’	-.23	.24	.33	-.70	.24					
M_1 (objectives)		--	--	--	--	--	b_1	.70	.24	<.005	.23	1.17	a_1b_1	.35	.19	.05	.80
													$a_1b_1^*$	.19	.10	.03	.43
Team size		-.01	.00	.20	-.01	.00		-.00	.01	.92	-.02	.02		--	--	--	--
Org Dummy 1		.34	.36	.35	-.38	1.05		-.16	.74	.83	-1.63	1.31		--	--	--	--
Org Dummy 2		.24	.14	.10	-.04	.53		-.18	.30	.56	-.77	.42		--	--	--	--
Org Dummy 3		.16	.13	.24	-.11	.43		-.73	.28	.01*	-1.28	-.18		--	--	--	--
Org Dummy 4		.34	.16	.03*	.03	.65		-.17	.33	.60	-.83	.48		--	--	--	--
Org Dummy 5		-.33	.28	.25	-.88	.23		-1.22	.57	.04*	-2.37	-.09		--	--	--	--
Org Dummy 6		.01	.27	.96	-.52	.55		.17	.55	.76	-.92	1.26		--	--	--	--
Org Dummy 7		.29	.26	.27	-.23	.81		-1.28	.54	.02	-2.35	-.21		--	--	--	--
Org Dummy 8		.01	.15	.93	-.28	.31		.06	.30	.84	-.54	.66		--	--	--	--
Org Dummy 9		.08	.22	.72	-.36	.52		-.31	.45	.50	-1.20	.59		--	--	--	--
Org Dummy 10		.12	.14	.41	-.16	.39		-.39	.28	.17	-.96	.17		--	--	--	--
Org Dummy 11		-.08	.13	.55	-.33	.18		-.29	.26	.26	-.81	.22		--	--	--	--

Covariates: team size, organization. N=88. c = total effect, c’ = direct effect, $a_1b_1^*$ completely standardized indirect effect.

Figure 1

Conceptual Framework