Understanding Nursing Team Performance: The Power of Team Knowledge and Team Size

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ABSTRACT

As teams are becoming more popular in organizations, the urge for high team performance is also rising. Multiple studies have emerged to explore and further understand how teams can maximize their performance. Extant literature has suggested that there exist various factors that lead to team performance. Even though there are vast researches done on the impact of team knowledge towards team performance, deeper investigations are needed in this area particularly in the context of public hospitals’ nursing teams. Therefore, the purpose of this paper is to review available literature on team performance and subsequently propose a model linking team composition (team knowledge) with team performance in the context of Malaysian public hospitals’ nursing teams. In addition, team size is explored as a plausible moderator in the team composition-team performance linkage.

Keywords: team composition, team knowledge, team performance, nursing teams.

I. INTRODUCTION

Nurses are the frontliners of healthcare and they must possess sufficient relatable knowledge to promote task success. High performing nursing teams requires effective collaboration and significant knowledge among members in order to reduce medical mishaps (Miller, Riley, & Davis, 2009). There are 50,063 public nurses serving in over 3,000 government healthcare facilities in Malaysia (Ministry of Health Malaysia [MOHM], 2013) and they constitute 2 to 3% of female workforce and largely dominate the healthcare sector (Barnett, Namasivayam, & Narudin, 2010). Integrating such massive number of workforce is a challenge unless it is done systematically.

Due to the increasing number of ward admissions, medical staffs need to be effective and competent. For instance, there are 2.14 million inpatient admissions in 2011 alone (MOHM, 2013). Nurses face numerous challenges including increasing pressures on public healthcare system, increasing workload in government hospitals and higher expectations of public on the quality of healthcare (Economic Planning Unit, 2010). Medical staffs especially nurses, have been receiving constant pressures even though they are already expanded to their full capacity (Barnett et al., 2010). Therefore, there is an urge to increase the quality of human resources in healthcare in order to promote better service quality to the patients. This demands for a smart work system that can escalate the potential of nurses and their designated roles.

One of the many efficient work methods is through the establishment of teams. The utilization of teams, especially in healthcare sector is advantageous as tasks are becoming highly interdependent and unpredictable (Bleakley, 2013). The study of teams has caught the interest of many scholars as teams are becoming more demanded in task accomplishments. A team is referred to as a small number of people with complementary skills who are committed to a common purpose, performance goals and mutual accountability (Katzenbach, 1997). Members of a team will decide collectively on an issue or situation. Wageman, Gardner and Mortensen (2012) asserted that teams are interdependently changing the way they function, and becoming more contemporary. In the revolution of team memberships, teams tend to overlap, with members working in multiple teams at a time. Team revolution also includes teams’ structural interdependence, as technology allows members to decide on the mode and method of how tasks are going to be performed. Teams are useful in situations where tasks are complex and intricate. This is because they provide the energy and strategic means for individual members to work and engage in assigned projects in an effective manner (Salas, Cooke & Rosen, 2008). Nursing teams in particular, are active and they work based on specified knowledge on patient care delivery. That makes their tasks critical and important to the healthcare sector.

In enhancing team performance, team knowledge is important. Team knowledge is an important aspect of team performance and there is a continuous need.
to study the linkage between these two constructs (Wildman, Thayer, Pavlas, Salas, Sterwart & Howse, 2012). In the context of nursing teams, the urge to increase knowledge is continuous and it often involves the process of gathering and synthesizing information to become selected knowledge (Timmermans, Van Linge, Van Petegem, Elseviers & Denekens, 2011). Based on the abovementioned discussion, the purpose of this paper is to review extant literature and subsequently propose a linkage between team knowledge and team performance among nursing teams in Malaysian public hospitals. In addition, given the fact that smaller teams perform better as opposed to bigger teams (Salas, DiazGranados, Klein, Burke, Stagl, Goodwin & Halpin, 2008; Grutterink, Van der Vegt & Molleman, 2012; DeSanctis, Poole & Dickson, 2001), team size has been identified as a potential moderator in the proposed relationship.

II. LITERATURE REVIEW

A. Team performance

Team performance is an output that resulted from team’s collective effort and synergy (Salas, DiazGranados, Klein, et al., 2008). Katzenbach and Smith (1993) asserted that in building team performance, successful teams typically have three critical elements; established urgency, demanding performance standards, and direction. In addition, tasks and goals of successful teams are performance-oriented and the team is regularly challenged with fresh facts and information. For nursing teams, team performance is imperative since nurses are highly bonded to other nurses and their tasks demanded them to be effective through collective effort (Sherman & McLean, 2009). Nursing team performance is critical as nurses are required to work with other medical practitioners (Sherman & McLean, 2009). Nursing teams with high performance usually possess good leader-follower relationship, good task management and adaptive behaviours (Hunt, Shilkofski, Stavroudis & Nelson, 2007). In addition, high performance nursing teams also exhibit clear tasks roles, high adaptation to change alongside with high support and trust towards other members and towards the team as a whole. Miller et al. (2009) asserted that in order for nursing teams to effectively perform, they must also possess high degree of knowledge and skills reflected through shared mental models.

B. Factors of team performance

There are many factors that influence team performance including team purpose, team organization, team leadership, team climate, interpersonal relations, team communications and team composition (Senior & Swailes, 2004). A review of extant literature reveals that the predictors of team performance can generally be divided into three main aspects; team task (Ganesh & Gupta, 2010; Garg & Rastogi, 2006; Hackman, 1987; Katz-Navon & Erez, 2005), team context (Giammanco, Buchler, Moyers, & Handel, 2010; Tuuli, Rowlinson, Fellows, & Liu, 2012), and team composition (Schippers, Den Hartog, Koopman, & Wienk, 2003; Senior & Swailes, 2004; Hollenbeck, DeRue, & Guzzo, 2004; Savelbergh, van der Heijden, Radboud & Poell, 2010; Schilpzand, Herold & Shalley, 2011; Tannenbaum, Mathieu, Salas, & Cohen, 2012). Among these three aspects, team composition serves as the basis in cultivating team performance through team knowledge, team skills and team diversity (Wageman Hackman & Lehman, 2005; Griffith & Sawyer, 2010). As such, this paper will focus on the role of team composition (specifically team knowledge) to further understand nursing teams’ performance.

C. Team composition

Team composition has been frequently examined in team performance studies (Schipper et al., 2003; Hollenbeck et al., 2004; Senior & Swailes, 2004; Higgs, Plewnia & Ploch, 2005; Savelbergh et al., 2010; Schilpzand et al., 2011; Tannenbaum et al., 2012). Scholars have studied various elements of team composition such as demographic composites, personality traits, variability of knowledge and skills, and also as a blend of team members’ ability (Barrick, Stewart, Neubert & Mount, 1998; Hollenbeck et al., 2004; Halfhill, Sundstorm, Lahner, Calderone & Nielsen, 2005; Savelbergh et al., 2010).

One particular element of team composition has a major contribution to team performance is team knowledge (Griffith & Sawyer, 2010; Wildman et al., 2012; Espinosa & Clark, 2014). Team knowledge drives team performance as teams must have good knowledge system to learn, store and retrieve available knowledge (Gardner, Gino & Staats, 2012). Hollenbeck et al. (2004) asserted that the correct mixture of knowledge, skills and abilities in teams will assist team functioning, especially as task becomes more complex and interdependent. In the context of nursing teams,
critical team knowledge is demanded as nurses share expertise, ideas and insights that are vital to complete tasks (Huang & Cummings, 2011). Hence, bearing in mind the importance of team knowledge on team performance, the subsequent section of this paper will focus on the impact of team knowledge towards team performance in the context of nursing teams in Malaysia.

**Team knowledge.** Team knowledge is critical to team functioning. It is the combination of task and team related knowledge and members’ understanding of the current situation (Espinosa & Clark, 2014). It starts with individual knowledge as its base (Griffith & Sawyer, 2010) and it explains team performance by representing available individual knowledge in teams (Wildman et al., 2012; Griffith & Sawyer, 2010). Team knowledge arises from individual tacit and explicit knowledge where both tacit and explicit individual knowledge are transformed into available tacit and explicit knowledge for the team (Griffith & Sawyer, 2010). Tacit knowledge is personal knowledge learned by experience and enriched through socialization and discussion, while explicit knowledge is codified knowledge and supplemented through tools and technology (Tiwana, 2000; Griffith & Sawyer, 2010).

Team knowledge is often task-oriented (Espinosa & Clark, 2014). Huang and Cummings (2011) asserted that, in teams, members are tied by the knowledge they share. This knowledge is blended with members’ expertise and ideas, and will become vital to task accomplishment. In order for team knowledge to be effectively shared, it must be distributed evenly among members and this requires teamwork (Huang & Cummings, 2011). In implementing tasks, team members who possess high knowledge will compensate for others’ lack of knowledge (Griffith & Sawyer, 2010). Team members will compile individual knowledge, refine it and develop team knowledge.

Choi, Lee and Yoo (2010) professed that team knowledge is linked to team performance through knowledge sharing and knowledge application practices. During these practices, team members will contribute and share individual knowledge, and exercise their capability to apply the shared knowledge. When knowledge sharing happens, members will agree and affirm to each others’ expertise and they will become highly motivated if their contribution is recognized (Grutterink et al., 2012). On the same note, De Vries, Den Hooff and Ridder (2006) also stated that team knowledge sharing is highly influence by team members’ performance beliefs. Gardner et al. (2012) acknowledged that team must be able to utilize knowledge resources well in order to achieve sustainable team performance. Inefficient knowledge sharing will cause knowledge resources to be wasted. Gardner et al. (2012) also proposed that team knowledge and team performance will be linked when members have the right knowledge, and that members are aware of their team’s knowledge and that knowledge is distributed effectively within the. Hence, following the works of previous scholars (Choi et al., 2010; Gardner et al., 2012; Grutterink et al., 2012), team knowledge is anticipated to be positively related to team performance. Therefore, our first proposition is as the following:

P1: Team knowledge will be positively related to team performance.

**D. The Role of Team Size as a Moderator in the Team Knowledge - Team Performance Relationships.**

In the context of nursing teams, team size determines the success of task as an optimum number of team members will smoothen team functioning (DeSanctis, Poole & Dickson, 2000; Stock, 2004; Timmermans et al., 2011). As such, bigger teams will have greater number of ideas and skills but could face problem in terms of coordination and power dominance. Vidmar and Hackman (1971) established that, members in bigger teams reported higher competition that led to increased disagreement and insufficient time to complete assigned tasks. In addition, bigger teams will have more options to perform task division which may lead to multiplication of subtasks that can jeopardize performance (Grutterink et al., 2012). Smaller teams on the other hand, possess better prospects in achieving quality decisions as lesser number of members signify faster decision-making time with a higher chance of accuracy. A small number of members will avoid potential problems such as free-riding and slacking. In fact, small teams benefited the most in terms of affective and process outcomes (Salas et al., 2008). Solansky (2011) claimed that smaller teams allow better supervisions and there are increased circulation of message and greater delegations in smaller teams. Hence, with reference to the preceding argument that smaller teams perform better (Stock, 2004; DeSanctis et al., 2001; Grutterink et al., 2012; Salas
et al., 2008; Solansky, 2011; Vidmar & Hackman, 1971), team size may serve as a plausible moderator in the relationship between team knowledge and team performance. As such, our second proposition is as follows:

P2: The relationship between team knowledge and team performance would be stronger for smaller teams than bigger teams.

E. Conceptual framework

Based on the afore-mentioned review of the literature and consistent with the significant roles of team knowledge and team performance (Choi et al., 2010; Gardner et al., 2012 & Grutterink et al., 2012), our proposed framework is depicted in Figure 1. Team composition is represented via team knowledge and is viewed as a possible predictor of team performance. Along with that, team size is expected to moderate the link between team composition (team knowledge) and team performance.

Figure 1: Proposed conceptual framework

III. CONCLUSION

Team performance is undoubtedly essential to most work teams, including nursing teams. The passion for performance drives competency and guide members to achieve stipulated goals efficiently and effectively. Hence, the usage of teams in handling tasks is critical. Nursing teams in Malaysian public hospitals face numerous challenges particularly in terms of increasing workloads and staff shortages, and this makes teamwork even more essential. In order to improve team performance, nursing teams need to empower members with sufficient and updated team knowledge that is evenly distributed. A review of prior literature indicates that team knowledge will lead teams to achieve greater performance, if it is widely shared. With this in mind, a conceptual is established where team knowledge as a component of team composition is proposed as a significant predictor of team performance. In addition, since the size of teams play an important part in ensuring task success, team size is posited to have a moderating effect on the relationship between team knowledge and team performance.

REFERENCES


