

# Impact of Trust and Technology on Interprofessional Collaboration in Healthcare Settings: An Empirical Analysis

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## ABSTRACT

The increases in complexity of patient care, healthcare costs, and technological advancements shifted the healthcare delivery to interprofessional collaborative care. The study aims for identifying the factors influencing the quality of team collaboration. The study examines the impact of trust and technology orientation on collaboration with the mediating effects of communication, coordination and cooperation. A questionnaire survey was conducted to gather data from healthcare professionals (N=216). Statistical analysis conducted for this study include correlations, factor analysis with reliability and validity tests and Partial Least Squares (PLS) method. The results of the study validate that (i) collaboration has positive and significant relationship with coordination, and cooperation; (ii) trust has positive and significant relationship with communication, coordination, and cooperation; and (iii) technology orientation has positive and significant relationship with cooperation but not with communication and coordination. The research and managerial implications of these factors are given in discussion. As with most empirical studies, the subjectivity of the opinion of respondents present some limitations to generalization. Other limitations include the lack of availability and use of standard measures for various constructs in the research model. The results can be used by healthcare professionals and managers to advance their understanding on the impact of trust and technology on collaboration mediating communication, coordination and cooperation practices. The significant value of this study is the identification of the factors influencing the quality of team collaboration in healthcare industry.

## KEYWORDS

Communication, Cooperation, Coordination, Healthcare, Interprofessional Collaboration, PLS

## 1. INTRODUCTION

In the modern healthcare system, healthcare provision has shifted from that of autonomous practice to interprofessional team based approach which involves multiple professionals with different educational background, training and expertise, working on behalf of patients, sharing a common goal (Woods et al., 2011). Interprofessional team approach enhances healthcare access, efficiency of services, resource utilization, health knowledge, skills and more satisfaction for the patients (Barrett et al., 2007; Safran, 2003).

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Patients receive safer and higher-quality care when healthcare professionals work as a team and collaborate effectively while they practice. The increases in complexity of patient care, healthcare costs for medical specialization and technological advancements shifted the way the healthcare is delivered to interprofessional collaborative care (Gaboury et al., 2009; Smith et al., 2002; Welton et al., 1997). The increasing complexity of health problems inevitably makes professionals interdependent in a collaborative manner foregoing a competitive approach (D'Amour, 1999). In the complex healthcare environment, poor collaboration among health professionals significantly increases the possibilities of mistakes occurring in the delivery of patient-care, medication-error-related deaths, wrong-site surgeries and increased staff turnover (Woods et al., 2011). Interprofessional collaborative practice meets current demands of the healthcare system reducing errors and costs and thereby improving quality of patient care (Canadian Health Services Research Foundation, 2006; Lemieux-Charles & McGuire, 2006).

High degree of interprofessional collaboration is essential for team success. The task of improving interprofessional collaboration has received considerable attention as it is a key factor to increase the effectiveness of healthcare services. Nonetheless, effective team functioning in a collaborative manner is challenging and difficult to achieve (Bailey et al., 2006; Sicotte et al., 2002). The literature provides conceptual definitions and frameworks of interprofessional collaboration and indicates about limited knowledge of this complex phenomenon. Specifically, the vast majority of published work on the influence of determinants of interprofessional collaboration relies on conceptual approaches rather than empirical data (Rodri'Guez et al., 2005). The knowledge on the factors influencing quality of team collaboration and the linkages between the elements in the complex interprofessional relationships is limited (Gocan et al., 2014; Baerg et al., 2012; D'Amour et al., 2005; Zwarenstein, Reeves & Perrier, 2004). As effective collaboration does not emerge merely by grouping the professionals together, very few studies have investigated the influence of interactional determinants for effective collaboration.

Based on a qualitative study, communication, coordination, cooperation, and trust were found to be the factors for communication-based-collaborative practice (Palanisamy & Verville, 2015). In general, successful collaborative practice in healthcare requires coordination and cooperation (Williams et al., 2010; Apker et al., 2006; Way et al., 2000). Way et al. (2000) emphasize on communication and coordination mechanisms as they play a key role for developing collaborative relationship among team members. The complexity of healthcare problems could be addressed by different interprofessional cooperation types (Molleman et al., 2008). The collaboration of healthcare professionals requires mentoring and constantly communicating with team members to clarify the roles and responsibilities of team members, which is an important characteristic of cooperation (Apker et al., 2006). In providing high-quality care to patients, professionals have to interact and collaboratively work together with a number of other healthcare professionals cultivating relationships using best communication practices ensuring better patient outcomes (Haeuser & Preston, 2005; Thomas et al., 2004).

The professionals interact in a collaborative environment, which provides opportunities as well as constraints thereby increase in complexities for effective collaboration. In the complex environment, trust is another determinant of collaboration and enables communication, coordination and cooperation of healthcare professionals (Jacobsen, 1999; Mechanic, 1998; San Martin-Rodriguez et al., 2005). Trust enables communication and enhances the quality of interactions (Jacobsen, 1999); mutual trust is emphasized for coordinated behavior among the team members and using coordination mechanisms (San Martin-Rodriguez et al., 2005). Furthermore, trust is a facilitator for having smooth cooperative interprofessional relationships (Misztal, 1996). As patient care is provided by multidisciplinary healthcare professionals, the technology orientation facilitates communication among healthcare professionals by improving information flows, coordinates the common goal of enhanced health

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