Abstract: Physicians prefer virtually participating by sharing knowledge for making informed decisions: a theory with scant evidence. This study proposes a model which assesses the effect of physician Social Capital, via the Social Capital Theory (SCT)’s (identification, social interaction ties, and shared language), on knowledge sharing when moderated by trust for decision-making; to assure that knowledge management tools like physicians’ virtual communities certainly affect the current healthcare research topic: medical decision making. Theoretical and practical implications are also discussed.

Keywords: Medical Decision-Making; Quality; Knowledge Sharing; Social Capital Theory; Virtual Community; Knowledge Management.

Paper Type: Research paper

I. INTRODUCTION

Clinical decisions require evidenced and rational explanations from experience when sharing knowledge (Magnier-Watanabe et al., 2010; Lin & Chang, 2008; Nemati et al., 2002). In virtual environments, physicians participate in virtual communities, i.e., communities of practice like Weblogs and Facebook, to build their social capital of resources when sharing knowledge. However, research is unsure of the authenticity of such shared knowledge for clinical decisions, though it is rational to wonder if knowledge shared decisions reinforced during trusty interactions (Razzaque & Eldabi, 2018; Alsharo et al., 2017; Lin et al., 2016; Bate & Robert, 2002). This is since Alsharo et al. assessed virtual business collaborators on factors like trust, and knowledge sharing, among others, to comprehend the challenges that hamper virtual collaborations for group outcomes: revealing that trust is vital for synergistic outcomes since knowledge sharing produces trust, but insufficient for achieving effective outcomes. Lin’s et al. (2016) elicited the influential factors that inspire physicians to share knowledge within virtual medical forums; through the lens of the social exchange theory, as well as the factors pertaining to the intrinsic and extrinsic motivations. The findings of Lin’s et al. revealed that shared vision, among other factors, positively influences knowledge sharing behaviour. Findings of scholars like Alsharo et al. (2017) and Lin’s et al. (2016) were already assessed earlier, e.g. Chang et al. (2001) and Chiu et al. (2006). Scholars like Chang et al., and Chiu et al., confirmed the effect of social capital theory (SCT) on quality knowledge sharing behaviour; leading us to report that our review of literature identified one stream of research that confirmed that social capital, explained through the SCT, positively and significantly affects virtually shared knowledge (e.g., Alsharo et al., 2017; Lin et al., 2016; Chang et al., 2012; Fan and Wu, 2011; Chiu et al., 2006; Tsai & Ghoshal, 1998). Here, SCT’s dimensions: structural dimension expresses the bridging through the social interaction ties, the relational dimension expresses the bonding through trust, identification, and norms of reciprocity and the cognitive dimension expresses the linking through shared language and shared vision (Lin et al., 2016). Another stream of research confirmed the impact of shared quality knowledge regarding quality decision-making (e.g., Han et al., 2010; Lin & Chang, 2008). These two blended research streams shed new light on the scant evidence whether physicians’ virtual communities for sharing knowledge help make quality decisions. Section 2 critiques literature to explain the role of virtual community social capital on quality knowledge sharing behaviour, and the role of such a behaviour on quality decision making, as well as the moderation of trust to enhance social capital for quality knowledge sharing behaviour. Section 3 builds theory proposing six hypotheses depicted in Figure 1. Section 4 describes the research methodology pursued by this study, Section 5 details the data analysis to indicate the reliability and validity of our survey instrument, Section 6 discusses the findings and implications, and Section 7 is the study’s conclusions and recommendations.

II. THEORETICAL BACKGROUND

1.1 Social Capital Theory and Knowledge sharing

As per the applied theory of collective action; social capital influences knowledge sharing without immediate reciprocity within network ties (Widén-Wulff &Ginman, 2004). Many scholars, investigating shared knowledge through the lens of SCT (structural, relational and cognitive dimension), confirmed that it enables organizational gain (Nahapiet & Ghoshal, 1998). Chang et al. (2012) assessed SCT on virtually shared knowledge for improving patient safety, inferring that nurses’ trust and shared vision facilitate sharing of knowledge for improving patient safety. Fan’s and Wu’s (2011) meta-analysis assessing individuals' social...
capitalon the outcomes of the knowledge sharing behaviour indicated that reciprocity, identification, trust, and common-language influence the intent to share knowledge. Nov et al. (2012) re-assessed and confirmed the impact of social capitalon meta-knowledgeconfirming. Yu et al. (2013)’s assessed the role of team and individual social capitalmotivates group-knowledge-sharing. Choi (2016) assessed the impact of employees’ on/offline interactions for attaining norms-of-reciprocity, trust and outcomes expectations to motivate knowledgesharing at different levels of US-federal-agencies: revealing that interactions do not influence groupknowledge sharing in the presence of reciprocity and trust. Based on this this study proposes: (1) Proposition 1: Physicians’ identification affects their quality knowledge sharing in virtual environments, (2) Proposition 2: Physicians’ social interaction ties affect their quality knowledge sharing behaviour in virtual environments and (3) Proposition 3: Physicians’ shared language affects their quality knowledge sharing behaviour in virtual environments.

A. Knowledge sharing behaviour and Decision-making

Three types of decisionoccurs in patientcare: doctor decides, shareddecisionmaking: doctor and patient decide, and informedqualitydecisionmaking: patient decides on the treatment (Puschner et al. 2010). Scholars label decisionmaking as knowledgeshareddecisionmaking, treatment-decision-making, collaborative decisionmaking, participative decisionmaking or shareddecisionmaking (Puschner et al., 2010). Knowledgeshareddecisions are timeconsuming, and from shared knowledge (Roberts, 2006). Treatmentdecisionoccurs during problem-solving (Puschner et al., 2010). Alby et al. (2015) assessed how oncology doctors made diagnostic decisions through informed discussions; inferring that collaborative and informed decisionmaking is possible from collaborative knowledgesharing. García-Perez et al. (2015) explored the experts responsible for British railway safety to understand how effectively collaborate facilitates knowledgesharing and decisionmaking; confirming that collaboration inspires sharing of knowledgefor qualitydecisionmaking. Pinheiro’s, et al. (2016) assessment on the practise of health ISs for decisionmaking, suggested that the full potential of such ISs can recognize shared knowledge for decisionmaking by strengthening the culture for sharing knowledge to actualize decisionmaking. André’s et al. (2017) social network analysis comprehended how Swedish forest share knowledge for decisionmaking; revealed that sharing of knowledge is possible in low network ties, attesting that interactionties are vital for the sharing knowledge for decisionmaking.

B. Trust moderation between Social Capital and knowledge sharing to improve decisions

One stream of research assessed the role of SCT on the knowledge sharing. The other stream of research assessed the role of knowledge sharing on decisionmaking. Research did not considered how trust regulates participants’ identity, interactions, and common-language for virtually shared knowledge, and in-turn for qualitydecisionmaking, since interaction, common-language, trust and identification motivate the sharing of knowledge behaviour. Especially in environments where active decisionmaking occurs when individual shared knowledge is encouraged (Cabrera and Cabrera, 2005). Scant research assessed the inter-relations between interactionties, identification, and sharedlanguage to understand their effect in virtual environments and the extent to which they affect knowledge sharing (Lefebvre et al., 2016). Based on this argument, this study proposes Proposition 4: Physicians’ quality knowledge sharing behaviour affects their medical decision making in virtual environments. Based on this argument, the following proposition is proposed: Proposition 5: Physicians’ trust moderates between their social capital of resources and their knowledge sharing behaviour so that the relationship is stronger with the higher levels of trust than with the lower levels of trust.

C. Research Model

The Figure 1 model is driven by the critiqued research gaps, depicting virtual community physicians’ SCT’s identification, socialinteractionties and sharedlanguage → quality knowledge sharing behaviour, trust moderation between SCT factors → quality knowledge sharing behaviour, and (3) quality knowledge sharing behaviour → qualitymedical decisionmaking.

Figure 1. Research model.

III. METHODOLOGY

A deductive approach was followed to assure that this study in progress is a review and a critique of literature. This literature was predominantly studied from journal articles for assessing in the future the following relations: (1) identification, socialinteractionties and sharedlanguage → quality knowledge sharing behaviour, (2) the moderation of trust between, socialinteractionties, identification, and sharedlanguage → quality knowledge sharing behaviour, and (3) quality knowledge sharing behaviour → qualitydecisionmaking (another dependent variable). This study reviewed journal articles particularly to critique the previously mentioned research gap. The model which is proposed in the Figure 1 of this article bares theoretical and practical implications explained in the next section.
IV. CONCLUSION

As per Yousefi-Nooroozi et al. (2012) healthcare research scuffles with realizing the dynamics of knowledge exchange. While Yousefi-Nooroozi et al. narrowed this challenge by applying social network analysis to comprehend interactions when making financial decisions, Figure 1 model poses the mediation of knowledge sharing between virtual physicians’ social capital and decision making. SCT is of interest since SCT describes the role of virtual environments for physician when sharing knowledge for making decisions. We propose that future research assess the impact of physicians’ virtual environments on decisionmaking when they share knowledge. This study bares theoretical implications. This study recognizes the new role of physicians’ virtual communities, as knowledge management tools on quality decisionmaking when mediated by quality knowledge sharing behaviour and moderated by trust (between SCT and quality knowledge sharing behaviour). Research stresses on interconnected decisionmaking through evidence; making virtual communities one avenue for physicians’ virtual community shared knowledge decisionmaking (Postmes et al. 2001). This study’s model articulates how virtual community social capital influence sharing of knowledge and decision making, how the knowledge sharing behaviour mediates and trust moderates to utilize social capital for decisionmaking. Future research could investigate this model also on other patient-care stakeholders, preferably cross-sectionally as well as longitudinally.

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