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Perceived quality of interprofessional interactions between physicians and nurses in oncology outpatient clinics

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A B S T R A C T

Purpose: To evaluate the perceived quality of interactions between nurses and physicians in oncology outpatient clinics.
Methods: A cross-sectional, observational survey involving 250 physicians and nurses was conducted at oncology outpatient clinics at two regional cancer centres in the province of Ontario, Canada. Eligible participants were identified by administrators and invited to complete a one-time survey questionnaire. Quality of interactions was assessed using a seven-item survey of relational coordination, which measures two factors of interaction: supportive relationships and quality communication. Descriptive analyses and multivariate analyses of variance (MANOVA) were conducted to assess potential differences between the two study sites and the two professional groups.
Results: Overall, nurses and physicians at both study sites rated their interactions highly (mean = 4.32 and 4.51 out of 5 for supportive relationships and quality communication, respectively). No difference in either factor was reported between physicians and nurses at either study site, but the two study sites differed significantly in both factors [$F(2, 245) = 7.54$, $p < 0.001$].
Conclusions: Overall, oncology nurses and oncologists at outpatient clinics rated their levels of interprofessional interaction highly. Contextual factors may have contributed to the high interaction scores and different ratings between the two cancer centres. The finding that nurses and physicians reported similar levels of perceived interactions suggests that relationships in these outpatient cancer clinics are highly collaborative and collegial.

Introduction

Teamwork is essential in healthcare, with multiple providers involved in every phase of a patient's illness trajectory. The performance of healthcare teams is known to strongly affect the quality of patient care in all medical subspecialties, including oncology (Baggs et al., 1999; Manojlovich, 2010; Mukamel et al., 2006; Ponte et al., 2010; Friese and Manojlovich, 2012). As a result, more researchers have been focussing on various aspects of interprofessional teamwork and collaboration.

This study was motivated by the awareness that high-quality interactions and relationships among care providers are crucial to improving interprofessional practice. Merriam-Webster (2012) defines interactions as "mutual actions or influences." These include all types of contact among individuals (e.g., verbal communication, non-verbal communication, behavioural exchanges) and are manifestations of interpersonal relationships. Research about interpersonal relationships builds on findings from the fields of psychology and sociology. Scholars have used various theories to explain different aspects of interpersonal relationships, and these have been applied to research about actions and influences within healthcare teams. For example, social exchange theory helps clarify leader–member dynamics of a team (Brunetto

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et al., 2013), relational dialectics helps clarify role conflicts within teams (Apker et al., 2007), and sensitivity to equity appears to be positively correlated with an individual's agreeableness at work (Bing and Burroughs, 2001). With regard to teamwork, research involving these psychological or sociological theories suggests that an individual's mindset affects his/her actions, so positive interpersonal interactions (attitudes and behaviour) are vital to promote collaboration. However, few studies have focused on the attributes of interpersonal interactions among healthcare professionals.

We conducted a literature review to assess current knowledge about interpersonal relationships, teamwork theories, and their applications in healthcare work environments. Within the few relevant publications, two general frameworks were used to integrate the concepts of interpersonal relationships and teamwork theories in healthcare: the nursing practice environment framework (Fox, 2000; Lake, 2002); and the interprofessional practice framework (D'Amour and Oandasan, 2005; Interprofessional Education Collaborative Expert Panel, 2011). Although the nursing work environment framework does not focus mainly on provider relationships, it includes nurse–physician relationships as one contextual factor. Preliminary evidence suggests that positive work environmental factors, as measured by the Practice Environment Scale (PES, which includes a measure of provider interactions), are associated with a superior quality of care (Schmalenberg and Kramer, 2009). The interprofessional practice framework (D'Amour and Oandasan, 2005; Interprofessional Education Collaborative Expert Panel, 2011) helps clarify the factors associated with healthcare professionals' collaborative capacity at both pre- and post-licensure levels. This framework is based on interactions among professionals and patients, and these are expected to vary depending on the complexity of care. However, only a few studies have focused on provider relationships or interactions beyond communication and of these, only one was conducted in an oncology setting using a qualitative approach which limits generalizability (Hunt, 1998).

Our review of the available literature revealed several additional gaps and limitations. Most published studies that examine interprofessional interaction have been conducted in inpatient settings (Manojlovich, 2005; Nadolski et al., 2006; Reeves et al., 2009). Because collaborative attitudes and behaviours are influenced by professional culture and context (Hall, 2005), interactions among healthcare professionals likely vary between inpatient and outpatient settings because the structures and processes associated with these settings are different (e.g., staffing structure, patient schedule). It is important to study interprofessional interaction in oncology outpatient clinics because of the complexity of care and toxicity of treatment. Additionally, current resource constraints have meant that acutely ill cancer patients, who used to be admitted for disease management, are increasingly likely to be treated as outpatients. Increasing complexity of care, patient acuity, and patient volume make the functioning of an outpatient oncology team crucial in providing sensitive care and preventing errors and redundancy, which are key indicators of quality healthcare.

Beyond the lack of studies conducted in outpatient settings, studies about interprofessional interactions are limited by methodological issues. For example, very few quantitative studies have examined interprofessional interactions beyond verbal communication (Nadolski et al., 2006; Manojlovich, 2005). Quantitative techniques can help advance knowledge in this area by using replicable measurement tools and generalizable findings. Additionally, verbal communication is only one aspect of interpersonal interactions. Among the studies that have examined actions and influences beyond verbal communication, most have used a global measure of perceived collaboration (Lake, 2007; Schmalenberg and Kramer, 2009; Friese and Manojlovich, 2012). Although perceived collaboration is an integral element of quality interactions, global ratings cannot provide details about actions and influences among team members. Gittell et al.'s (2000) Relational Coordination Survey (used in the current study) is the only validated instrument that assesses measurements for interpersonal interactions. The authors proposed and validated the idea that quality communication and supportive relationships are key team attributes that lead to superior performance. Quality communication is characterised by the presence of timely, frequent, and problem-solving communication, while a supportive relationship is characterised by the presence of shared knowledge, shared goals, and mutual respect.

Finally, staff physicians are rarely included in surveys of interprofessional attitudes. This can hamper the validity of research, because physicians are a key healthcare provider group who may have different perceptions about interactions with other professionals due to different roles and expectations. Valid research about interprofessional perceptions should include more than one professional group. In summary, existing knowledge of provider interactions at outpatient oncology clinics is limited by: a) a lack of empirical data in the outpatient environment; b) a lack of research utilising quantitative methodology which limits comparison; and c) the inclusion of only one professional group.

The present study addressed some of these gaps by quantitatively evaluating the quality of interactions between nurses and physicians in two oncology outpatient clinics. Nurses and physicians were selected for inclusion because they are the healthcare professionals most often involved in providing care at outpatient clinics: other allied health professionals were not included because they are not involved in every patient visit.

The specific research questions addressed were: a) What are the levels of perceived interaction between nurses and physicians, as reflected by perceived levels of supportive relationships and quality communication, in oncology outpatient clinics? b) Do nurses and physicians in oncology outpatient clinics differ in their levels of perceived interaction, as reflected by the perceived levels of supportive relationships and quality communication?

Methods

Study design, setting, and sample

This study was nested within a larger dissertation study that was conducted to validate a theoretical framework related to nurse–physician interactions in outpatient clinics (Lee, 2012). To address the current research questions, a cross-sectional, observational survey was conducted at the outpatient departments within two comprehensive, university-affiliated cancer centres in the province of Ontario, Canada. Both centres are located within the same metropolitan boundaries within the governance of the same regional cancer program. Centre A is an older institution that opened in the 1950s and centre B opened approximately three decades later. At the time of the study, both offered all modalities of cancer treatment for all kinds of cancer. Centre A was larger than centre B, but they both housed 10–20 radiation treatment machines. Centre A administered more than 25,000 chemotherapy treatments annually, and centre B administered more than 17,000