EXPLORING DETERMINANTS OF REGISTERED NURSES’ TRUST IN THEIR MANAGERS

by

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A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy
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ABSTRACT
Exploring Determinants of Registered Nurses’ Trust in their Managers
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A nurse-manager relationship plays a key role in a nurse’s practice environment. A nurse’s trust in one’s manager is the foundation for a supportive nurse-manager relationship and has crucial bearing upon the professional and personal lives of the nurse. However due to health care restructuring, nurses expressed little trust towards their leaders. To develop and implement strategies to help build healthy nurse-manager relationships, research is needed to more fully understand the factors that establish and enhance a nurse’s trust in one’s manager. This study tested a theoretical model that examined potential individual, managerial, relational and environmental attributes that impact a nurse’s degree of managerial trust.

Employing a cross-sectional, descriptive design, a self-administered survey was completed by a random sample of 342 Registered Nurses employed in Ontario emergency departments. Structural equation modeling techniques tested and refined the hypothesized model. Final analysis showed adequate fit of data to theoretical model ($\chi^2 = 78.86$, df = 20, SRMR = .02, CFI = .98, RMSEA = .09). In the final model, a manager’s perceived ability, benevolence, integrity and procedural justice had a strong, direct impact on managerial trust. Trust in one’s manager was indirectly influenced by procedural justice and ability as well as a manager’s facilitation of team work, communication accuracy, emotional availability and interaction frequency. Attributes of the individual RN, specifically job tenure and propensity to trust as well as self-determination, access to support and resources and span of control did not affect trust in one’s manager. Study findings suggest that creation and preservation of a nurse’s managerial trust is a complex process affected by manager’s competence and character as well as a fair decision-making process. Education programs that contribute to a manager’s ability, benevolence, integrity and procedural justice may help build and sustain nurses’ trust and healthy nurse-manager relationships.
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CHAPTER I: INTRODUCTION AND STUDY PURPOSE

The Research Problem and its Significance

The majority of Canadians spend a significant portion of their lives at work (Lowe, Schellenberg & Davidman, 1999). In April 2012, almost 18 million Canadians over the age of 15 years, or 67% of the total population, were employed in the labour market with the majority working at least 30 hours each week (Statistics Canada, 2012). Currently, there are over 112,000 registered nurses (RN) in Ontario (College of Nurses of Ontario [CNO], 2011). Within the health care sector, the nature of an environment in which individuals work is shaped by a physical dimension, comprised of a specific job activities and tasks as well as a psychosocial dimension, consisting of relationships among organizational members (Koehoorn, Lowe, Rondeau, Schellenberg & Wagar, 2002). Influenced by human resource management practices, collective bargaining units, professional associations and government policy, physical and psychosocial dimensions interact to facilitate and augment positive outcomes for employees, patients, organizations and the overall health care system. When positive outcomes are generated, a healthy work environment is created, resulting in safe and effective patient care, enhancement of the health and well-being of RNs, and cost-effective organizational and system performance (Canadian Healthy Workplace Council, 2007; Canadian Nurses Association [CNA], 2007; Lowe & Schellenberg, 2001).

Within the physical dimension of a health care work environment, a RN participates in organizationally and legally determined work structures and processes of care to provide safe and effective nursing care (Lowe & Schellenberg, 2001). The planned structures and processes include job-required tasks and activities, available technology, workload and work schedules. Equally important, a RN’s relationships with other individuals in the workplace, such as a manager, co-worker or patient are embedded within these pre-arranged work structures and processes (Lowe & Schellenberg). Comprising the psychological and social dynamics between organizational members, a high-quality work, or employment relationship is a defining attribute of a healthy work environment (Gillespie & Mann, 2004).

Within an acute care hospital work environment, a work relationship arises from a RN and one’s manager. A front-line manager is primarily responsible for the management and support of RNs and their nursing care by continuously engaging in a systematic process of planning, organizing, leading and controlling resources (Kelly & Crawford, 2008). Specific managerial behaviors, which may include ensuring adequate physical resources and personnel, effective communication of organizational policies and staff performance appraisals, substantially influence a RN’s ability to provide safe and effective nursing care (Anthony et al., 2005). As a result, a RN-manager relationship is an important aspect of a RN’s work environment (Lowe & Schellenberg, 2001). A supportive RN-manager relationship has been significantly linked to RN outcomes, including increased job satisfaction (Cummings et al., 2008); stronger intent to remain employed (Taunton, Boyle, Woods, Hansen & Bott, 1997) and decreased job stress (Hall, 2007). A supportive work relationship is considered to be a key source of a RN’s overall job satisfaction and personal fulfillment (Guest, 2004) and consequently, has a crucial bearing upon the personal and professional lives of a RN (Lowe; Schellenberg & Davidman, 1999; Sluss & Ashforth,
Overall, a subordinate-supervisor relationship is considered to be the most central relationship within the employee’s realm of work and work experiences (Lowe, 2006).

Employment relationships, including RN-manager relationships, that are mutually satisfying and respectful of each individual’s rights, values and needs result in organizational social capital (Leana & van Buren, 1999). Broadly defined as a valuable asset or resource embedded in and derived from workplace relationships (Leana & van Buren), organizational social capital facilitates actions of each relationship party such as sharing of knowledge or collaboration (Coleman, 1988). Organizational social capital is similar to economic or human capital in that each capital type requires effort and investment to develop and may deteriorate over time if not maintained (Alder & Kwon, 2002). Organizations that are rich in social capital have demonstrated success through enhanced employee organizational commitment, improved job performance and decreased employee turnover (Shaw, Duffy, Johnson & Lockhart, 2005).

Identified as a valuable asset or resource that arises from a relationship within a healthy work environment (Coleman 1988), trust is a vital foundation upon which employment relationships are built and maintained (Rogers, 2005). Considered to be a necessary building block for a supportive RN-manager relationship (Lowe et al., 1999), trust arises from interactions between the two relationship parties. Based on expected, but not certain, future behaviors of a relationship partner, trust is influenced by characteristics of both a RN and one’s manager, their relationship and the work environment in which the relationship is located (Mayer, Davis & Schoorman, 1995).

Focusing on a RN’s trust in one’s manager, this study conceptualizes trust as a RN’s willingness to be vulnerable to future, uncertain behaviors of one’s manager that is based on the assumption that beneficial behaviors will be forthcoming without the ability to control or monitor the manager (Mayer et al., 1995; Rousseau, Sitkin, Burt & Camerer, 1998; Whitener, Brodt, Korsgaard & Werner, 1998). Although the RN expects that one’s manager will behave in a positive manner, there is an underlying sense of perceived risk and uncertainty that the expected behavior may or may not occur. The RN must be willing to be vulnerable to this uncertainty or risk sustaining a loss from either a non-beneficial or harmful managerial behavior (Payne & Clark, 2003). Trust in one’s manager, also referred to as managerial trust, is required to reduce the sense of risk and uncertainty within the relationship (Luhmann, 1988). If risk and uncertainty were absent, trust would not be necessary (Mayer et al.).

Recent empirical studies have consistently provided evidence for the critical importance of the role of trust within employee-employer relationships among individuals employed in a variety of both non-health care and health care work environments (Laschinger, Finegan & Shamian, 2001; Payne & Clark, 2003). In order to fully comprehend the role which trust plays within a RN-manager relationship, it is necessary to examine the impact of managerial trust upon work-related attitudes and behaviors. Evidence of the importance of trust has been found to be significantly correlated with numerous employee attitudinal and behavioral outcomes (Dirks & Ferrin, 2002).
Attitudinal Outcomes of Managerial Trust

Job Satisfaction

Job satisfaction is the feelings and attitudes individuals have about their work and work context, and an employee’s satisfaction with specific facets of one’s work and work environment (Locke, 1969). When employees trust their managers, they are more likely to describe positive feelings and attitudes regarding managers’ intentions and behaviors and therefore, are more likely to report greater job satisfaction. This theoretical argument has been empirically supported. Managerial trust has been found to be significantly related to an individual’s level of job satisfaction among telephone and automobile service workers (Cunningham & MacGregor, 2000); college faculty members (Driscoll, 1978); automobile salespersons (Flaherty & Pappas, 2000); Austrian energy company employees (Matzler & Renzl, 2006) and salespeople (Rich, 1997). Additionally, significant correlations have also been found between managerial trust and satisfaction with specific facets of the work environment, such as satisfaction with supervision among industrial sector employees (Goris, Vaught & Pettit, 2003) and utility company employees (Muchinsky, 1977). Brockner, Siegel, Daly, Tyler and Martin (1997) reported that trust in one’s manager explained more than half the variance in satisfaction with one’s supervisor. Furthermore, managerial trust has been significantly linked to satisfaction with co-workers (Goris et al.) and satisfaction with pay and promotion (Muchinsky).

Within health care work environments, a RN’s trust in one’s manager has also been found to be significantly associated with job satisfaction of acute care RNs (Laschinger & Finnegan, 2005) and RNs employed in home care (Simmons et al., 2001). Furthermore, a meta-analysis of 19 studies showed a moderately strong correlation between trust in one’s leader and job satisfaction (Dirks & Ferrin, 2002). Dirks and Ferrin also concluded that trust in one’s leader was significantly related to an employee’s satisfaction with one’s leader. In general, trust in one’s manager results in greater job satisfaction in health care and non-health care work environments. A significant relationship has also been found between managerial trust and an employee’s organizational commitment, in particular affective commitment (Dirks & Ferrin).

Organizational Commitment

Organizational commitment consisted of normative, affective and continuance categories of commitment (Meyer & Allen, 1991). Normative commitment reflects an individual’s sense of moral obligation to remain within an organization. An employee will stay with the current employer because they feel they should. Affective commitment refers to an individual’s emotional attachment to, identification with and involvement in a specific organization. Affective commitment influences people to stay with their current employer because they want to stay (Laschinger, Finegan, Shamian & Casier, 2000). A positive correlation exists between managerial trust and affective commitment because individuals are more likely to commit to a relationship and to the organization in which the relationship is located when the relationship is based on trust (Kramer, 1999). In contrast, continuance commitment is an individual’s perceived losses, such as benefits and seniority, if an individual leaves an organization. Through a lens of continuance commitment, individuals remain because they need to stay (Meyer &
Allen). A negative relationship is expected to exist between trust in one’s manager and continuous commitment because employees with a high continuous commitment may be disillusioned and cynical regarding one’s manager. Individuals tend to stay not because of a relationship based on trust, but because they may be financially obligated to remain (Laschinger et al.).

In Canadian health care work environments, managerial trust has been found to be a significant predictor of a RN’s affective commitment among acute care RNs (Laschinger et al., 2000; Gregory et al., 2007). Laschinger et al. also reported that trust in one’s manager had a significantly negative effect on continuance commitment. The authors concluded that RNs who reported a lower level of managerial trust, may become cynical and experience burnout, and perceive they are unable to leave their jobs and that they lack other job opportunities. Two recent meta-analyses have also found significant relationships between trust in one's leader and organizational commitment among marketing personnel, manufacturing plant employees and food service workers (Colquitt, Scott & LePine, 2007; Dirks & Ferrin, 2002). The third and final attitudinal outcome of managerial trust, an employee’s intent to remain employed, is now described.

Intent to Remain Employed

Referring to an individual’s likelihood of remaining within the organization or current job, intent to remain employed is directly related to retention (Steel, 2002). Employees who intend to remain within their current organization are more likely to actually remain within their organization (Tett & Meyer, 1993). When managerial trust is present, the employee is more likely to feel valued within the organization, and consequently, less likely to leave (Cunningham & MacGregor, 2000). Within non-health care work contexts, empirical studies have supported the theoretical relationship between managerial trust and intent to remain employed among telephone and automobile service workers (Cunningham & MacGregor); German food workers (Thau, Crossley, Bennett & Sczesny, 2007) and restaurant employees (Davis, Schoorman, Mayer & Tan, 2000). Within a health care setting, a RN’s trust in one’s manager was discovered to be a significant predictor of intent to remain employed among acute care RNs (Gregory et al., 2007). A meta-analysis reported a significant negative correlation between trust in one’s leader and intent to quit (Dirks & Ferrin, 2002).

Generally, trust in one’s manager has been found to be consistently and significantly related to work-related attitudes of job satisfaction, organizational commitment and intent to remain employed within non-health care and health care work environments. In addition, empirical evidence supports the significant relationships between managerial trust and employee workplace behaviors.

Behavioral Outcomes of Managerial Trust

Organizational Citizenship Behavior

Organizational citizenship behaviors (OCB) are individual, discretionary behaviors, not included in either formal job descriptions or performance evaluation systems that help promote effective functioning of the organization (Organ, 1997). Dimensions of OCB include altruism, civic virtue, conscientiousness, courtesy and sportsmanship. Examples of OCB may include attending non-mandatory meetings, providing orientation to a
recently hired nurse or volunteering to organize a charity drive. When employees report higher levels of managerial trust, they are more willing to engage in behaviors that put them at risk, such as volunteering to be a mentor (Mayer & Gavin, 2005). In addition, when the leader demonstrates trustworthy behaviors of care and concern, the employee is more willing to reciprocate in the form of OCB (Poon, 2006). Conversely, if employees do not trust their supervisor and perceive they will not be rewarded for extra-role behaviors (e.g. not having a decreased workload when orientating a new graduate nurse), employees are less likely to perform OCB (Coyle-Shapiro, 2002). When the level of managerial trust is low, employees protect themselves from potentially non-beneficial or harmful decisions and behaviors of the manager (Dirks & Ferrin, 2002). Employees have less cognitive energy and therefore are less motivated to engage in extra-work behaviors (Gambetta, 1998).

Within non-health care work environments, empirical studies have supported the existence of a relationship between managerial trust and OCB among financial sector employees (Korsgaard, Brodt & Whitener, 2002); university students (LaPierre, 2007) and manufacturing plant workers (Mayer & Gavin, 2005). In a study of acute care hospital employees, trust in one’s manager was also significantly correlated with OCB (Konovsky & Pugh, 1994). Recent meta-analytic studies discovered that significant relationships existed between managerial trust and OCB (Colquitt et al., 2007; Dirks & Ferrin, 2002).

**Job Performance**

Gambetta (1998) reported that trust in one’s leader facilitates cooperative behavior among organizational members, which results in improved job efficiency and performance. Studies have empirically supported the relationship between trust in one’s manager and job performance quality among managerial trainees (Earley, 1986) and salespersons (Rich, 1997). In two recent meta-analytic studies, managerial trust was found to be significantly associated with an employee’s job performance (Colquitt et al., 2007; Dirks & Ferrin, 2002).

Within health care work settings, nurse-assessed quality of care is an appropriate marker of a RN’s job performance (Arnetz & Arnetz, 2001). Because RNs spend a considerable amount of time with hospitalized patients (Tucker & Spear, 2006), nurse-perceived quality of care is a valid indicator of care patients receive in hospitals (Tourangeau & Cranley, 2006). When managers provide adequate equipment and staff to support nursing care and a professional care delivery work environment, a RN may perceive the manager is concerned with the RN’s ability to provide quality care (Anthony et al., 2005). The demonstration of concern may translate into a higher level of trust in one’s manager (Dirks & Ferrin, 2002). The significant relationship between managerial trust and participants’ perceived quality of nursing care has been empirically supported among acute care Canadian RNs (Laschinger, Shamian & Thomson, 2001) and American RNs (Simmons et al., 2001).

**Safe Workplace Behavior**

Regarding an employee-employer relationship, trust in one’s manager plays a vital role in an employee’s perception of workplace safety (Zacharatos, Barling & Iverson, 2005). Managerial trust reduces perceived psychological and physical risks associated with job-related activities and tasks (Conchie & Donald, 2008). Within non-health care work settings, recent empirical studies have discovered significant relationships between
managerial trust and safe work behaviors among steel production employees (Watson, Scott & Bishop, 2005); petroleum and telecommunication workers (Zacharatos et al.) and workers in the oil and gas industry (Conchie & Donald).

Across three Canadian Provinces, Baril et al. (2003) interviewed injured workers and their supervisors to identify factors that would potentially facilitate the injured employee’s return-to-work. The authors concluded that trust between individuals allowed clarification of goals, relevant knowledge sharing, in-depth search for solutions and greater commitment to the return-to-work process. Overall, trust between individuals substantially contributed to the injured party’s successful return-to-work.

Demands for Managerial Trust

Although trust in one’s manager has been widely recognized and accepted as a basic building block of a supportive RN-manager relationship, RNs across Canada have indicated a low level of trust or even a lack of trust in their managers, presumably due to ongoing, nation-wide health care reforms (Canadian Nurses Advisory Committee [CNAC], 2002). In an investigation of work relationships among Canadian workers (Lowe & Schellenberg, 2001), study participants described very little trust between themselves and management. Employees perceived that an organization’s management team was more focused on the organization’s financial status and less troubled about employees’ job-related needs and concerns. Furthermore, among twelve occupational groups, health care providers had the lowest level of trust within their employment relationships and as a result, were the least likely to report a healthy work environment.

Similarly, in an examination of the nature of British Columbia health care work environments, focus groups of health care participants also described low trust levels in front-line managers (Office of the Auditor General of British Columbia, 2004). The lack of trust was perceived to arise from a mismatch between a manager’s words and actions, lack of opportunities for staff to participate in decisions regarding planned organizational changes and excessive workloads that prevented face-to-face communication between nursing staff and the front-line manager, such as regularly scheduled staff meetings. Consequently, the lack of trust in one’s manager was a key contributor to the unhealthy, non-supportive nature of health care work environments.

Koehoorn et al. (2002) strongly asserted that the low level of managerial trust among health care providers is a result of previous and ongoing governmental emphasis on financial control of the health care system, necessitating cost-control strategies, health care downsizing and vast organizational changes. Within the restructuring context, fewer RNs are expected to provide safe and effective care with less financial and human resources in a highly demanding, fast-paced work environment in which they have very little autonomy (Koehoorn et al.). Governments and organizations have demanded that nurses do more work with less resources, while coping with incessant change, resulting in a perception that organizations view nurses and their care as costs to be controlled, rather than valuable resources to be supported. Uncertainty may arise from changes in job tasks and activities, organizational structures and job security (Gilson, 2006). The lack of respect and value regarding nurses and their nursing care has destroyed nurses’ trust in a health care organization and its representative
managers (Rogers, 2005).

In recognition of managerial trust’s valuable contribution to high-quality RN-manager work relationships and the paucity of trust in one’s manager, national and provincial professional nursing and health care associations have recently become aware of the need to create and establish managerial trust. The Canadian Nurses Association (CNA), Accreditation Canada, Canadian Health Care Association (CHA), Health Canada’s Office of Nursing Policy, Canadian Federation of Nurses Unions (CFNU) and Provincial Registered Nurses’ Associations have jointly called upon health care organizations, policy decision makers and other pertinent stakeholders for the urgent development of work environments to help establish, enhance and sustain trust between RNs and their leaders (CNA, 2002a, 2002b, 2006, 2007). Similar appeals for enhanced managerial trust in health care workplaces have also been advocated by The Canadian Health Services Research Foundation (CHSRF, 2002), Canadian Policy Research Networks (CPRN, 2002) and Canadian Institute of Health Information (CIHI, 2006). From a provincial perspective, Healthy Work Environments Best Practices Guidelines of the Registered Nurses Association of Ontario (RNAO; 2008), as well as the Provincial Health Services Authority of British Columbia (Lowe, 2006) and the Office of the Auditor General of British Columbia (2004) have also recommended that nurse leaders establish and build trust with nursing staff to create healthy employment relationships.

Demands for developing and sustaining trust within a RN-manager relationship extend beyond Canadian borders. International nursing and health care organizations have also recently pleaded for health care workplaces to build and support trust among nurses and other health care personnel (International Council of Nurses [ICN], 2008; National Institute for Occupational Safety and Health [NIOSH], 2002; World Health Organization [WHO], 2006). Similar to recommended Canadian strategies, the American Organization of Nurse Executives (AONE, 2011) has also called upon its members to build respectful, trusting relationships with staff nurses through effective communication, shared decision-making and ethical behavior.

Given the significant impacts of trust in one’s manager on employee attitudinal and behavioral outcomes, managerial trust is a fundamental building block of a supportive RN-manager employment relationship. A RN’s trust in one’s manager becomes an essential ingredient in creating and sustaining a healthy nursing practice environment. Moreover, a RN’s trust in one’s manager may help mitigate perceptions of chaos and uncertainty that have resulted from widespread organizational change and turbulence (Farrell, 2002). Within the context of health care organizational restructuring, a strong degree of managerial trust leads to a RN’s perception that management cares about employees’ well-being, is competent to carry out organizational change and communicates openly and honestly about the change (Lowe et al., 1999).

To develop and attain a high level of managerial trust, there is a critical need to more fully investigate the establishment of trust within a RN-manager relationship. Understanding potential individual, relational and environmental factors that influence a RN’s decision to trust one’s manager extends our knowledge of the development of trust within a RN-manager employment relationship. Moreover, although specific trust-building interventions are put forward by numerous professional and government bodies, empirical evidence is lacking
regarding the effectiveness of the recommended strategies (Koehoorn et al., 2002). By understanding factors that enhance a RN’s trust in one’s manager, effective strategies may be developed and implemented to help establish and enhance healthy RN-manager work relationships.

**Study Purpose**

The health care research literature has not previously investigated potential influential determinants on a RN’s trust in one’s manager within acute care hospital work environments (Rogers, 2005). This study aimed to test and refine a theoretical model of determinants of a RN’s trust in one’s manager. Chapter 2 presented a literature review of the related literature to introduce specific individual, managerial, relational and environmental determinants that were incorporated into the proposed model. The hypothesized theoretical model was also presented in Chapter 2. Chapter 3 described the study methodology, including study design, sample and sampling approach, measurement and data analysis. Results of the data analysis, including demographic information, descriptive statistics and analyses of the measurement models and hypothesized model, were discussed in chapter 4. Lastly, chapter 5 provided implications of the study findings, as well as study limitations and knowledge transfer plans.
CHAPTER II: REVIEW OF THE LITERATURE & THEORETICAL MODEL

This chapter presents the review of the related literature in order to develop the theoretical model for this study. The purposes of the literature review were to:

1. Examine formerly utilized conceptualizations of trust within an employee-employer relationship to adopt an appropriate conceptual definition of trust for this study.
2. Investigate previously examined and empirically supported determinants of trust in one’s manager, allowing the determination of current knowledge status of trust-related knowledge within work-affiliated subordinate-supervisor relationships.
3. Explore the research gap between what is currently known regarding trust-related research and what potentially influential factors have yet to be considered regarding the determinants of trust in a RN-manager relationship.

Scope of the Literature Review

The review of the related literature began by searching the nursing, health services research, educational administration, philosophy, psychology, sociology and organizational behavior database literatures indexed in OVID, PsycInfo, Scholars Portal, ERIC, Management and Organization Studies and Proquest Digital Dissertations from 1956 to March 2011, using the keywords ‘trust’, ‘interpersonal relationship’, ‘supervisor-subordinate relationship’, ‘manager relationship’ and ‘leader relationship’. The dates for the review were chosen because a theoretic perspective of trust was first published by Mellinger in 1956. Reference lists within the articles were also examined for other potential research studies. Initially, 1,992 peer-reviewed journal articles were retrieved and screened according to the following inclusion criteria:

1. Conceptualization of trust within an employee-employer relationship clearly defined and measured to ascertain most appropriate conceptual definition of trust for this study.
2. Theoretically-based and empirically supported determinants of an employee’s trust in one’s manager to elucidate current trust-related knowledge and to identify previously unexamined factors that may influence managerial trust.
3. Trust in one’s manager that resulted from face-to-face interactions, excluding interactions that occur within a computer-mediated, or virtual environment. Face-to-face interactions were chosen as they reflect the context in which RN-manager relationships occur. Furthermore, given that non-verbal indicators and other body language clues are more likely to be missing from interactions that occur within a virtual environment, face-to-face interactions tend to have a different nature than interactions mediated by information technology (Jarvenpaa, Shaw & Staples, 2004). These non-verbal indicators may affect an individual’s perception of the nature of an interaction with another person and as a result, influence a person’s attitude regarding another, such as trust. Consequently, trust within a virtual environment may depend on different determinants than trust within face-to-face interactions (Aubert & Kelsey, 2003).
4. Studies conducted within a North American, European or Australian work environment. Cultural norms and values influence individuals' beliefs and behaviors, ultimately affecting the nature and perceptions of interactions within a relationship (Doney, Cannon & Mullen, 1998). Consequently, the development of trust may be profoundly impacted by cultural values, norms and beliefs (Wasti, Tan, Brower & Onder, 2007). Workplace communities with Western cultural norms and values may have similar attributes that influence trust in one’s manager within an employee-employer relationship. Given the purpose of this study will examine determinants of RNs trust in their managers within Canadian health care environments, the review examined trust literature from work environments with comparable cultural norms and values found in North American, European or Australian organizations.

5. Sample size and participants’ occupations specified to evaluate the generalizability and applicability of the study’s findings to a RN-manager relationship within a Canadian health care work environment.

After reviewing the literature for inclusive study criteria, the literature review focused on 489 journal manuscripts, 3 meta-analytic studies of trust and 8 books. In addition, reference lists of the key articles and dissertations were reviewed for other pertinent published and unpublished literature, such as conference proceedings and working papers in progress. Ultimately, a total of 559 articles, 12 books, 1 working paper and 1 conference proceeding comprised the literature review.

The literature review consisted of two sections. The first section commenced with a conceptualization of an interpersonal relationship and the significance of a work-affiliated relationship, specifically a RN-manager relationship, in the development of trust in one’s manager. The review then examined individual, relational, environment and temporal factors that may either separately or collectively impact the nature of the interaction, resulting in a risk that the future behavior may be either non-reciprocated or non-beneficial for the individual. The review argued trust reduces this risk and those entities to whom trust may be directed: a social system, one’s work organization, co-worker, supervisor and, specifically for RNs, trust within a nurse-patient relationship.

The review of the related literature continued with four distinct conceptualizations of trust, including trust as a(n): (a) rational-choice behavior; (b) leader’s moral duty; (c) dispositional trait; and (d) individually-held attitude. Focused on the conceptualization of trust as an attitude, trust was defined as a RN’s willingness to be vulnerable to future, uncertain behaviors of one’s manager that are based on the assumption that beneficial behaviors will be forthcoming, without the ability to control or monitor the manager (Mayer et al., 1995; Rousseau et al., 1998; Whitener et al., 1998). Necessary trust conditions of risk perception, willingness to be vulnerable, reliance, context specificity and uncertainty were evaluated and presented in detail. Mayer’s et al. Integrative Model of Organizational Trust was then explored in detail, followed by a discussion of cognition and affective foundations of trust, as well as an examination of deterrence-, knowledge-, and identification-based forms of trust within the development and growth of a RN-manager relationship. This section of the literature
review concluded with explanations of trust violations, differentiation of trust from similar constructs, such as cooperation, confidence and distrust, and the dark side of trust.

Following the theoretical and conceptual examination of trust and its underlying dimensions, the second portion of the literature review focused on empirically-supported determinants of managerial trust within a RN-manager relationship. To facilitate understanding, antecedents of trust were separated into four categories of attributes: (a) the RN; (b) one’s manager; (c) the RN-manager relationship; and (d) the work environment. In addition, the author advocated that trust in one’s manager may also be influenced by other determinants that previously have not been empirically explored or tested.

The literature review summarized conceptual and empirically supported trust-related knowledge, recognizing and acknowledging research gaps between what is currently known about determinants of trust and what other influential factors have yet to be considered. Incorporating previous theoretical and empirical research and identified research gaps, the review of the related literature concluded with the hypothesized conceptual model as well as study purpose and hypotheses.

**Theoretical Perspectives of Trust**

**Interpersonal Relationships**

In modern society, people do not exist in isolation from others. Individuals’ relationships form the basis of human existence (Kelley et al., 1983). Maslow (1954) claimed that humans’ basic needs for love, affection and belonging are met through relationships with others, referred to as interpersonal relationships. Given the extensive literature that has examined relationships, relationships with others have a powerful and vast influence on all aspects of our lives.

Interactions that occur between two individuals comprise the fundamental nature of an interpersonal relationship (Reis, Collins & Berscheid, 2000). More than one initial interaction is required for a relationship to exist between two people. A single, brief interaction with a salesperson is unlikely to develop into a relationship, in contrast with a series of interactions with a family member, spouse or supervisor. A dyadic interpersonal relationship develops from a series of interactions that are unique to that relationship and do not exist in other types of relationships (Berscheid & Reis, 1998).

Within their lifetimes, individuals form three types of relationships with others, specifically family, social and work relationships (Kelley et al., 1983). Throughout an individual’s early years, family relationships are formed with parents, siblings and other family members. The strength and quality of relationships within one’s family are the foundation upon which other life relationships are built (Bowlby, 1977). Social relationships are developed with friends, acquaintances, neighbors, and other members of one’s community. Individuals also establish and maintain relationships with others in the work environment (Lowe et al., 1999).

Given that almost 18 million Canadians over the age of 15 years work at least 30 hours a week (Statistics Canada, 2012) and that the almost universal experience of work or employment that has, on average, increased 700 annual work hours over the past 20 years (NIOSH, 2002), individuals spend a significant portion of their lives...
at work (Lowe et al., 1999). In addition to the increased work time, individuals derive satisfaction from relationships with others in the workplace. In a survey of 2,500 Canadian employees, satisfaction with work relationships was shown to be a significant contributor to overall job satisfaction (Lowe & Schellenberg, 2001). Individuals’ interactions with other organizational members plays a significant role in the lives of employees (Shore & Coyle-Shapiro, 2003).

Effective work relationships give rise to organizational social capital, a significant source of organizational resources or assets (Portes, 1998). Organizational social capital is actual or potential assets or resources that may be derived from, or accessed through networks of relationships in which individuals are interacting with another relationship party (Leana & van Buren, 1999). A RN-manager relationship has been shown to significantly increase organizational social capital through individual, group and organizational outcomes (Kahn, 1998). Individually, RNs’ perceptions of supportive managerial relationships have been linked to decreased burnout and emotional exhaustion (Wong & Cummings, 2009), lower occupational psychological stress (Hall, 2007), higher levels of job satisfaction (Stuenkel, Nguyen & Cohen, 2007) and stronger organizational commitment (McGuire & Kennerly, 2006). From a group or team perspective, higher reported supportive manager relationships have been significantly associated with stronger group cohesion (Wong & Cummings) and lower group conflict (Andersen, Saribay & Thorpe, 2008). Supportive RN-manager relationships have also been correlated with organizational outcomes, including lower nurse turnover (Irvine & Evans, 1995) and greater self-rated job performance (Wong & Cummings).

To establish a supportive RN-manager relationship, each party is expected to follow a rule of reciprocity (Gouldner, 1960). After an individual voluntarily behaves in a beneficial manner, the other party is expected to reciprocate by bestowing a positive behavior in return. Individual’s A voluntary behavior leads to an expectation of individual B to reciprocate and return the behavior. In turn, individual A will then be expected to reciprocate individual’s B behavior. However, the exact nature of the reciprocated behavior is not specified in advance (Blau, 1964). It is not known what the exact return will be, or if or when the return will occur. The specific characteristics and timing of the return is left to the discretion of the person who may reciprocate. Because the expected behavior is voluntary, there is a risk that the benefits may not be reciprocated or may be non-beneficial or even harmful to the other relationship partner (Whitener et al., 1998). In addition to the unknown and uncertain nature of reciprocal actions, interactions between relationship parties may be influenced by individual, relational, and environmental factors (Atkinson, 2004). The influential factors may also interact with each other to further influence interactions (Reis et al., 2000).

Given the separate and collective influences of individual, relational and environmental influences well as the voluntary nature of interactions, there is a risk that the future behavior may not be reciprocated and may be perceived as beneficial, non-beneficial or even harmful. An individual is unable to predict the nature of a future interaction given the overwhelming complexity and uncertainty regarding potential future actions of the other relationship party (Lewis & Weigert, 1985). Interactions within a RN-manager relationship become complex and
unpredictable in nature (Wuthnow, 2004). Trust assists in the reduction of a RN’s perceptions of risk and uncertainty regarding the nature of possible future interactions with one’s manager (Luhmann, 1979).

**Need for Trust**

Given the complex and uncertain nature of interactions within a RN-manager relationship, trust plays a key role in reducing an individual’s perceptions of risk and uncertainty regarding future interactions with another (Luhmann, 1979). If trust were absent, the complexity of relationships would overwhelm individuals, and prevent interactions between individuals (Luhmann). Trust does not entirely eliminate risk and uncertainty but is believed to reduce risk to a level at which individuals may effectively cope with indeterminate behaviors of another individual. Trust allows an individual to feel safe and secure within a relationship with another (Bigley, McAllister & Tan, 2009). Individuals direct trust toward a variety of entities, known as a trust referent (Zaheer, McEvily & Perrone, 1998).

**Trust Referent**

The establishment and nature of trust will differ depending on to whom trust is directed (Burke, Sims, Lazzara & Salas, 2007). Trust may be directed toward a social system, such as the health care or education system, where the system is expected to function in a predictable way. Referred to as system trust, trust is placed in the efficient and effective functioning of the system (Luhmann, 1988). System trust allows individuals to trust specific individuals thought to be benevolent representatives of the system without having direct personal experience with the specific trusted representative, such as an individual trusting a nurse or a teacher (Zucker, 1986).

Organizational trust are the positive expectations employees have about their organization’s intent, behaviors and effectiveness and include an organization’s perceived competence, openness and honesty, concern for employees, reliability and identification (Shockley-Zalabak, Ellis & Winograd, 2000). Because trust is directed toward a particular organization, it is not directed toward any particular individual or group of individuals within the organization (Young & Wilkinson, 1989).

Within organizations, trust may be examined from various perspectives. Team trust or lateral trust exists between team or group members (Serva, Fuller & Mayer, 2005). This trust is also referred to as co-worker trust or trust in peers (Ferres, Connell & Travaglione, 2004). Trust is also present between an employee and one’s leader or supervisor, which is labeled trust in management, managerial trust or vertical trust (Dirks & Ferrin, 2002). A small number of studies have also examined the extent of the employees’ perception of the extent of trust placed in them by one’s manager, defined as subordinates’ felt trustworthiness or collective felt trust (Ferrin, Bligh & Kohles, 2007).

Within the nursing literature, trust has previously been examined from several perspectives. Several nurse scholars have argued that establishment of trust is necessary in the beginning of a nurse-patient relationship to allow a patient freedom to share thoughts, feelings and beliefs of the health care experience (Peters & Morgan, 2001; Sellman, 2006). Meize-Grochowski (1984) argued that trust was an attitude ‘bound to time and space in
which one relies with confidence on someone else’ (p. 565). Hams (1997) wrote that trust empowers both nurses and patients to allow a ‘willingness to engage oneself in a relationship that has reliance(s) upon either a person(s) or a thing(s), with an expectation that vulnerability may arise from either the trustee’s or truster’s performance.’ (p. 353). Johns (1996) expanded the concept of trust to include both nurse-patient and nurse-organizational relationships. Conceptualizing trust as a situation ‘where a person is willing to interact with another without coercion’ (p. 77), Johns’ theoretical framework for trust included perceptions of trustworthiness and nature of previous interactions as trust antecedents.

For a valid exploration of trust determinants within a dyadic work relationship, Mayer et al. (1995) argued that two specific parties, the trustor and the trustee must be clarified. The trustor is an individual who decides to either trust or not trust the other party of the relationship. The trustee is an individual who is expected to meet the other individual’s expectations regarding future behaviors (Driscoll, 1978). Given this study’s purpose, the review examines the determinants of a trustor’s, a RN, trust regarding a trustee, one’s manager.

Because the concept of trust has been investigated from a wide disciplinary scope, including economics, organizational science, philosophy, political science, psychology and sociology, conceptualizations of trust are varied and discipline-specific. Consequently, conceptualizations of trust are organized into four distinct categories: (a) trust as a rational-choice behavior; (b) trust as a moral duty; (c) trust as a dispositional trait; and (d) trust as an attitude. This literature review continues with a description and examination of each distinct trust conceptualization.

**Conceptualizations of Trust**

**Trust as a rational-choice behavior.** From an economic perspective, trust is identified as a rational calculation of costs and benefits regarding a principal/agent economic exchange (Williamson, 1993). Within this perspective, the terms ‘principal’ and ‘agent’ may refer to individuals, groups or firms. Interactions requiring trust may involve individuals, groups, firms or any combination of these entities. Economic exchanges assume individuals are not to be trusted and if given the chance, partners will act opportunistically, defined as self-interested behavior with guile (Hill, 1990). Williamson further asserted that trust within purely economic exchanges decreased both the probability of a trustor being taken advantage of and the likelihood of the trustee acting opportunistically. Barney and Hansen (1994) wrote that ‘trust is the mutual confidence that one’s vulnerability will not be exploited in an exchange.” (p. 177).

This perspective assumes people make rational choices, seen by cooperative behaviors driven by confidence and expectations of others (Deutsch, 1960). Trust will only occur when an individual rationally calculates the expectation another person will exhibit cooperative behavior. This rational choice and decision to trust may occur with very little interaction with another individual. Trust is present when cooperative behaviors are demonstrated and is absent when the other individual does not exhibit cooperative behaviors. In this approach, trust is assumed to be an individual’s rational decision to cooperate or to not cooperate (Flores & Solomon, 1998).

One limitation to this view is that trust is not always a rational, calculated decision as the decision to trust
may also depend on situational, emotional and dispositional factors (Kramer, 1999). Granovetter (1985) agreed and wrote that the conceptualization of trust as a rational choice behavior results in an undersocialized perspective of trust, ignoring the relationship and its environmental influences. In addition, the conceptualization of trust as a rational-choice behavior does not focus on the process of trust development. Consequently, trust is thought to be either completely present or entirely absent (Zucker, 1986). Cox (2004) argued that trust games may actually assess cooperation, altruism or reciprocity rather than trust. Besides trust, individuals may have other reasons to cooperate or to reciprocate in an altruistic manner with another individual, such as being organizationally mandated, meeting professional standards or having self-centered motives to cooperate (Mayer et al., 1995).

Trust as a leader’s moral duty. Hosmer (1995) asserted that leaders have a moral duty to take legitimate self-interests of the trusting parties into account. Trust is the reliance of ‘one person, group or firm upon the voluntarily accepted duty on the part of another person, group or firm to recognize and protect the rights and interests of all others engaged in a joint endeavor or economic exchange’ (Hosmer; p. 393). The trustee’s moral fulfillment of duty and trustor’s reliance upon the goodwill of the trustee facilitates cooperation and benefits. Trust occurs when individuals choose morally right beliefs, intentions and behaviors (Hosmer). Furthermore, trust arises from morally correct decisions or actions in which the rights and interests of an organization take precedence over the rights and interests of a single individual within an organization.

Baier (1986) further defined trust as an individual’s reliance on another’s ‘competence and willingness to look after, rather than harm, things one cares about which are entrusted to their care.’ (p. 259). A trusted individual, such as a manager, has a moral responsibility to realize what it is that matters to the trusting follower, such as a RN. When a leader is morally responsible to the matter of interests of a follower, trust is extended toward the leader. Hardin (2002) referred to trust as ‘encapsulated interest’ between individuals. The trustor believes the trustee is genuinely concerned with the trustor’s interests and has the relevant motivations to act in the best interests of the trustor. By taking into account and acting upon interests that are particular to the trustor, trust is built within the relationship. From this perspective, when a RN perceives that one’s manager encapsulates or takes into account the RN’s interests, the RN will then extend trust towards the manager. Moreover, ethical leaders ‘need the moral courage to transform their moral intentions into behaviors despite pressures to do otherwise’ (May, Chan, Hodges & Avolio, 2003, p. 255). When leaders consistently behave in a benevolent and fair manner over time, trust develops between an employee and one’s manager or leader.

The familiar self-serving motivation of human behavior is a limitation to the perspective of trust as moral actions. Individuals may know what intentions or behaviors they morally ought to do but because of self-centered reasons, may choose not to act in an ethical manner. Reasons for unethical behavior may include protecting scarce resources or a desire for power and influence within the organization. Individual differences between managers and their employees, such as dissimilar values or personality differences, may also prevent ethical behavior and subsequent trust development within the relationship (Loe, Ferrell & Mansfield, 2000). Although a manager believes they are demonstrating moral behavior, an employee may not perceive the behavior as morally right as
individuals tend to perceive their behavior as more ethical than others’ perceptions (Tyson, 1992). Organizational constraints, such as organizational goals or a work environment marred by conflict or restructuring, may also hamper a manager’s ability to act ethically.

**Trust as a dispositional trait.** In contrast to trust as a rational decision and as a leader’s moral duty, trust has also been conceptualized as a dispositional trait, described as an ‘individual’s consistent, generalized expectancy that the word, promise, verbal or written statement of another individual or group can be relied upon.’ (Rotter, 1967, p. 651). This perspective of trust focuses on a generalized trust of others, rather than trust of a specific party, and result in a overall expectation of the trustworthiness of people in general (Mayer et al., 1995).

Trust as a dispositional or stable personality trait has been variously referred to as dispositional trust (Kramer, 1999), trusting stance (Johnson-George & Swap, 1982), trust propensity (Payne & Clark, 2003), or social or generalized trust (Nannestad, 2008).

As a stable individual attribute, propensity to trust is determined by a person’s unique developmental experiences, innate personality type and cultural backgrounds (Erickson, 1963; Rotter, 1967). Consequently, an individual’s generalized willingness to trust is unaffected by relational, environmental and temporal influences and is asserted to be stable across situations and time (Mayer et al., 1995). Because developmental experiences, personality type and cultural background are individually unique, the degree of generalized willingness to trust will vary widely among individuals, allowing people to be placed on a continuum of high to low trust (Rotter).

An individual may be a ‘high-trustor’ and feel comfortable extending trust towards others, believing that overall people are honest and fair. In contrast, another individual may be less willing to trust others, referred to as a ‘low-trustor’ and judge others to be dishonest and deceitful (Gillespie, 2003).

Empirically, research has supported this theoretical argument between developmental and cultural backgrounds and generalized willingness to trust. Developmentally, individuals who reported less secure attachment to others, lower self-esteem and poorer self-concepts tended to trust others less (Bowlby, 1977). From a cultural perspective, Nannestad (2008) found that among 188 waves of the World/European Values Survey, high levels of generalized willingness to trust among countries varied from nearly 0 percent to almost 70 percent of respondents and concluded that differences in countries’ cultural and historical backgrounds may account for the wide range of generalized willingness to trust.

Dispositional trust is most applicable in situations where individuals are relatively unfamiliar with each other (Schoorman, Mayer & Davis, 2007). Within a new organizational relationship and with little history of interactions, employees may be unfamiliar with a manager’s possible behaviors. The individual may rely more on generalized propensity to trust than on the history of interactions and outcomes from a specific manager. Johnson-George and Swap (1982) concurred, writing an individual’s propensity to trust is more likely to predict trust when individuals are ‘new to each other in highly ambiguous, novel or unstructured situations.’ (p. 1307). Given this limitation, trust as an individually-held disposition is not influenced by the nature of a dyadic employee-employer relationship, such as history of interactions. In addition, attributes of the work environment, such as instability,
restructuring or conflict also have little or no influence on an individual’s propensity to trust (Mayer et al., 1995).

**Trust as an attitude.** The fourth perspective of trust identifies trust as an individually-centered attitude of the trustor, the RN, toward a specific trustee, the manager. As an attitude towards another, trust is comprised of cognitive, affective and intended behavioral dimensions (Butler, 1991; Mayer et al., 1995). Within the cognitive domain, a RN evaluates one’s beliefs regarding what is known about one’s manager, which influences a RN’s feelings and emotions towards one’s manager. The affective component influences future intended behaviors of the RN. For example, if the RN knows the manager has previously behaved with integrity, then the RN is more likely to have positive feelings towards the manager. Consequently, a RN is more likely to intend to engage in future trustworthy behavior towards one’s manager.

Given the study’s purpose of examining the antecedent of a RN’s trust in one’s manager, trust is conceptually defined as a RN’s willingness to be vulnerable to future, uncertain behaviors of one’s manager that is based on the assumption that beneficial behaviors will be forthcoming, without the ability to control or monitor the manager (Mayer et al., 1995; Rousseau et al., 1998; Whitener et al., 1998). This trust definition was chosen for two reasons. Primarily, this conceptualization refers to two specific people in a dyadic relationship, the trustor and the trustee, which is appropriate and applicable to the RN-manager relationship. In addition, the chosen conceptualization is one of the more commonly employed definitions to examine trust within a work relationship (Burke et al., 2007; Caldwell & Hayes, 2007) and has been cited over 360 times in the organizational literature (McEvily & Tortoriello, 2008).

The individual attitudinal conceptualization regards trust as a multi-dimensional concept. Each dimension is considered to be a necessary condition for trust to exist within a dyadic, work-affiliated RN-manager relationship (Gillespie, 2003; Mayer et al., 1995). Required trust dimensions encompass a RN’s perception of risk, a willingness to be vulnerable and reliance upon the manager, as well as the uncertain nature of future managerial behaviors and the context in which the actions occur (Mayer et al.). Each trust dimension is presented in closer detail.

**Necessary Trust Conditions**

**Perception of risk.** A trustor’s perception of risk within the work relationship has been identified as a critical theme common to economic, organizational, philosophical, psychological and sociological conceptualizations of trust (Deutsch, 1958; Rousseau et al., 1998). Johnson-George and Swap (1982) agreed with this position and wrote, “Willingness to take risks may be one of the few characteristics common to all trust situations.” (p. 1306). Gambetta (1988) concurred, arguing that, “for trust to be relevant, there must be the possibility and perceived risk of exit, betrayal, defection’ by the trustee (p. 218-219). An individual’s willingness to accept vulnerability is based on an assumption that is by nature, a risky action (Das & Teng, 2004). Interestingly, trust is needed only when risk is present and conversely, the perception of risk creates the opportunity for trust (Das & Teng).

The perceptual or subjective nature of risk is vital for complete understanding of trust (Das & Teng,
The RN determines the possibility of future intentions and behaviors occurring. A RN may expect beneficial outcomes resulting from managerial intentions and behaviors, but perceives a risk that non-beneficial or harmful behaviors may occur instead. For example, in the context of disclosing a medication error, the RN may expect the manager to be supportive of the RN, which may be demonstrated by the manager wanting to understand the possible reasons for the error in order to reduce the likelihood of future errors. However, there is also a risk the manager may not be supportive of the RN, such as blaming the nurse for the error. There is a distinct possibility that the RN’s expectations may be met, but there is also a risk that the disclosure may be used to disadvantage the RN (Kee & Knox, 1970). Closely linked with the perception of risk, a trustor’s willingness to accept vulnerability to assume the perceived risk is also a firmly entrenched dimension within the trust conceptualization as an individually-held attitude (Mayer et al., 1995).

**Willingness to be vulnerable.** As well as an individual’s perception of risk, vulnerability to another’s intentions and behaviors is central to the concept of trust (Gillespie, 2003; Mayer et al., 1995). Vulnerability within this context is defined as a subjective sense that future managerial intentions or behaviors may result in personal harm, criticism or attack (Gillespie). Mishra (1996) stressed that without a sense of vulnerability, trust of another is not necessary. As trust in another party increases, one’s subjective sense of vulnerability actually decreases (Gillespie). Mayer et al. emphasized that trust involves the willingness to be vulnerable and not actually being vulnerable to the possibility of non-beneficial or harmful managerial intentions and behaviors.

A RN’s willingness to accept vulnerability is a vital element within a RN-manager relationship and grows through beneficial and positive repeated interactions and reciprocated behaviors of both parties (Burke et al., 2007). However, although a RN may expect beneficial behaviors from the manager, a RN must be willing to be vulnerable to the possibility of harm or betrayal as a result of the manager’s intentions or behaviors (Kee & Knox, 1970). When trust in one’s manager is high, a RN perceives a situation of risk but is willing to be vulnerable to the possibility that future intentions or behaviors of the manager may be either positive or negative in nature (Baird & Thomas, 1985).

**Reliance.** Reliance or dependence upon the actions of another is asserted to be an additional facet of trust within a leader-follower relationship (Gillespie, 2003). Along with the underlying key dimensions of perceived risk and willingness to accept vulnerability, trust is only needed when an individual depends upon the future intentions and behaviors of another (Bigley & Pearce, 1998). The needs and interests of one party may only be met by dependence upon the actions of another party (Gillespie). Within a RN-manager relationship, a RN relies upon one’s manager to plan, organize and lead to help ensure safe and effective patient care (Kelly & Crawford, 2008). A manager is expected to interact with nursing staff to offer information, assistance, guidance or approval to meet organizational and unit-based goals. When a sense of dependence is prominent, a RN is required to trust one’s manager that expected managerial behaviors will be forthcoming. When a RN does not depend upon a manager for help or information, then there is no need for a RN to trust (Mishra, 1996).

**Context specificity.** Trust is based on the expectation that the manager will perform a specific action

2004).
which a RN perceives to be personally significant (Mayer et al., 1995). A RN determines the importance and personal meaning associated with the manager’s expected intentions and behaviors. The need for trust depends on the specific situation in which trust is required (Kramer & Cook, 2004). Hardin (2002) concurred with this facet of trust, asserting that trust is a three part relation, influenced by not only characteristics of the RN and one’s manager, but also by the specific context in which the relationship is located. Simply stated, A trusts B to do X under conditions of Y.

When a possible managerial behavior is personally relevant, the RN will then be concerned regarding the occurrence of the outcome. The RN perceives a risk and is required to be willing to be vulnerable to future actions of one’s manager. Managerial trust is required in this situation. However, when a possible managerial action is not personally significant, then the RN will presumably not care if the outcome occurs or not. The RN will not perceive a risky situation and is not required to be willing to be vulnerable to expectations of a managerial behavior. Managerial trust is not required in this situation.

Uncertainty. By trusting the manager, a RN makes him or herself vulnerable to the likelihood the manager’s future intentions and behaviors, which a RN perceives to be significant, may not materialize or may harm or take advantage of a RN (Kee & Knox, 1970). Situations requiring managerial trust, in which personally relevant future intentions and behaviors of one’s manager are expected, are steeped in uncertainty. Sitkin and Roth (1993) elaborated further, stating ‘uncertainty hinges upon the choices made by others.’ (p. 369). Trust is not required when an individual completely knows the probabilities of intentions and behaviors of the trustee (Luhmann, 1979). However, when a RN does not entirely know the exact nature of future intentions or behaviors of the manager, trust is required within the relationship (Weber & Carter, 2003). For example, if a RN is not entirely certain that the manager will provide an opportunity for a RN to attend a continual educational workshop, the RN is required to be willing to be vulnerable to the indeterminate nature of the manager’s future behavior. Possibly, the opportunity may be realized. However, there may also be a risk that the opportunity will not be supported. Due to the uncertain nature of the future action, the RN is required to trust the manager.

Although the literature supported the conceptualization of trust as an individually-held attitude, a limitation to the advancement of trust research was the lack of a theoretical model which differentiated between perceptions of the trustee’s trustworthiness, trust as a trustor’s individually-held attitude and associated behaviors of trust (Kee & Knox, 1970; Mayer et al., 1995). To address this conceptual limitation, Mayer et al. developed the Integrative Model of Organizational Trust, which is now explained in closer detail.

Integrative Model of Organizational Trust

To bridge the conceptual gap regarding the differentiation of perceived trustworthiness of a trustee, trust as a trustor’s individual attitude and specific behaviors associated with trust, Mayer et al. (1995) developed the Integrative Model of Organizational Trust, a theoretical framework explaining trust in an organizational setting between a trustor and a trustee (see Figure 1). Unlike other theoretical frameworks, the model was unique as it conceptually distinguished between determinants of trust, referred to as factors of perceived trustworthiness, trust
as an individually-held attitude, and behavioral outcomes of trust (Burke et al., 2007). The framework also incorporates a trustor’s perception of risk and behavioral outcomes of trust, considered to be key facets of trust within a dyadic relationship. A feedback mechanism within the model indicates that over time, behavioral outcomes will influence the level of the manager’s ability, benevolence and integrity and ultimately, the level of trust in one’s manager. A trustor’s propensity to trust was included as a determinant of trust.

Given the differentiation among determinants of trust, the concept of trust and consequences of trust, the model remains one of the better known and influential models in trust research (Burke et al., 2007; Colquitt et al., 2007; Dirks & Ferrin, 2002; Rousseau et al., 1998). Furthermore, Mayer’s et al. (1995) is perceived to be the authoritative theoretical source on interpersonal trustworthiness and the model has been recommended to theoretically guide future trust studies (Caldwell & Hayes, 2007).

Figure 1
Mayer’s et al. Integrative Model of Organizational Trust

Trust, an attribute of a relationship between relationship parties, has been differentiated from trustworthiness, an attribute of each individual partner within the relationship (Barney & Hansen, 1994). The concept of trustworthiness is vital to understand the establishment and maintenance of trust between two partners (Colquitt et al., 2007). Flores and Solomon (1998) asserted that “one trusts someone because another is trustworthy, and one’s trustworthiness inspires trust” (p. 209). Lewis and Weigert (1985) also supported the critical nature of trustworthiness, writing that humans “choose whom we will trust in which respects and under which circumstances, and we base the choice on what we take to be ‘good reasons’ constituting evidence of trustworthiness.” (p. 970). Evaluation of another’s trustworthiness lead to a decision to trust another or not.

Within Mayer’s et al. (1995) conceptualized framework, perceived ability, benevolence, and integrity of one’s manager, as well as an individual’s trust propensity, are asserted to be factors of perceived trustworthiness.
or determinants of trust. The three determinants of trust, as well as an individual’s propensity to trust, contribute to the shaping of the RN’s managerial trust level (Flores & Solomon, 1998; Mayer et al.). The first trust determinant, ability, refers to the knowledge, skills and competencies that enable one’s manager to have influence within a specific situation or domain (Butler, 1991; Mayer et al., 1995). Ability is domain or situation dependent because the manager may be perceived to be competent in one area, such as ability to understanding organizational policies regarding RN disclosing a medication error, but not be competent in another context, such as helping to resolve conflict between two staff members. If a manager is perceived to have the required skills and knowledge to help promote safe and effective patient care, then a RN is more likely to be trust the manager. In contrast, if the manager is perceived to be incompetent or lacking skills to help RN provide required nursing care, then a RN is less likely to trust the manager (Davis et al., 2000).

Other trust theorists have identified similar conceptualizations of ability as a determinant of trust (Butler, 1991; Cook & Wall, 1980). Similarly, Gabarro (1978) identified similar constructs including functional competence, interpersonal competence, business sense and judgment. Mayer et al. (1995) advocated for use of the term ability as they asserted it is more applicable to the context-specific nature of trust than a specific set of skills, denoted by interpersonal competence or business sense.

Benevolence is the second perceived determinant, reflecting the degree to which a manager consistently supports and safeguards the welfare of the RN (Mayer et al. 1995; Whitener et al., 1998). The manager has no ulterior motive or devious rationale when caring for the welfare of the RN. Rather, benevolence indicates the manager has some specific, personal attachment to the RN and cares for and is concerned with the RN’s interests, needs and desires. Other trust scholars have incorporated similar constructs, including motivations and loyalty (Cook & Wall, 1980; Kee & Knox, 1970). Benevolence was chosen to imply personal attachment to the other relationship party. Mayer et al. (1995) also asserted that although motivations and loyalty may indicate a specific personal attachment, they may also convey attachment to the organization.

The final trust determinant, integrity, is the manager’s consistent devotion and adherence to a set of shared, morally acceptable values (Mayer et al., 1995). Behavioral indicators of a manager’s perceived integrity may include consistency of past actions, perceptions of the manager’s sense of fairness and the extent to which actions and works of a manager’s are congruent (Mayer et al.). Integrity is a similar construct to other recognized important trust elements, including consistency, fairness (Butler, 1991) and value congruence (Sitkin & Roth, 1993). Although specific trust conditions are required for the development and maintenance of trust within a RN-manager relationship, several trust scholars (Lewis & Weigert, 1985; McAllister, 1995) supported the existence of cognition and affective foundations of trust.

**Cognition and Affective Foundations of Trust**

Lewis and Weigert (1985) differentiated between two distinct forms of trust, cognition trust and affective trust. The cognitive dimension of trust is based on evidence of the manager’s specific behaviors that are perceived to demonstrate competence, reliability and knowledge (Butler, 1991). Furthermore, McAllister (1995) asserted
that individuals engage in a cognitive process to determine the level of trust toward one’s manager. Cognitive evaluation of a manager’s perceived competence and reliability results in cognition-based trust, known as ‘trust from the head’ (McAllister).

Affective trust, or ‘trust from the heart’, refers to the bond between partners’ emotions, feelings and motives (McAllister, 1995). Affect-based trust develops when a manager demonstrates care and concern towards a RN, resulting in each relationship party being emotionally invested in the relationship. The emotional bonds between individuals in a relationship form the basis of affective trust. Both trust foundations may exist simultaneously although affective trust is thought to be more general and persistent than cognition trust (Lewis & Weigert, 1985).

However, cognitive and affective bases of trust have been argued to be conceptually equivalent to Mayer’s et al. (1995) perceived ability and benevolence, respectively (Dietz & den Hartog, 2006; Gillespie, 2003). The cognitive foundation of trust is believed to be exploring the competence, knowledge and ability of another, conceptually similar to ability, while the affective foundation of trust is asserted to examine the caring and concerned manner in which another behaves, theoretically indistinct from benevolence (Schoorman et al., 2007). The foundations do not encompass elements of risk, willingness to be vulnerable, reliance or uncertainty, and therefore, are not congruent with trust’s conceptualization and as a result, are considered to be dimensions of another’s perceived trustworthiness, rather than trust of another (Gillespie).

Moreover, Schoorman et al. (2007) wrote that trust is incrementally built over time between two people and is an active and dynamic entity, rather than static. Lewicki and Bunker (1996) also asserted that trust is generated and maintained through interactions that occur between people and is influenced by the nature of the parties’ prior interactions. The pattern and nature of previous interactions within the relationship allow trust to encompass a dynamic nature, in which trust may either be created and maintained, or conversely, violated and destroyed.

Dynamic Nature of Trust

Lewicki and Bunker (1996) asserted trust sequentially proceeds through three different phases within a work relationship and takes on different characteristics in the early, developing and mature forms of a work relationship. In the first phase, calculus- or deterrence-based trust, individuals will do what they say because they fear consequences of not doing what they say. A person will demonstrate trust because punishment or deterrence may occur if trust is not forthcoming. In this phase, an individual’s perceived threat of punishment is a greater motivator than the perceived promise of reward (Lewicki & Bunker). For example, within the context of an initial RN-manager relationship, one’s manager may act in a trustworthy manner to help prevent the formation of an untrustworthy reputation among subordinates and managerial peers. If one’s manager does not exhibit trustworthiness, then the violated party, the RN, can quickly inform other organizational members that the manager is not trustworthy. Within deterrence-based trust, the threat of loss of reputation tends to motivate one’s manager to demonstrate trustworthiness towards a RN.
As the relationship progresses, the RN has enough information about the predictability and likelihood of future behaviors of one’s manager (Lewicki & Bunker, 1996). Knowledge-based trust, the second phase of trust development, is predicated upon past interaction history. Regular, effective communication is needed to facilitate knowledge to accurately predict another party’s behaviors. In contrast, the lack of regular communication between a RN and one’s manager leads to the parties losing touch with each other and consequently, prevent accurate behavioral predictions.

The final form of trust, identification-based trust, is established through identification with the other’s goals, values, and intentions (Lewicki & Bunker, 1996). Through interactions that occur over time within the relationship, each party mutually understands and recognizes the other’s wants and desires. Self-identification with another’s goals and values will influence an individual’s social identity, a significant part of one’s sense of self (Tyler, 2001). As a result, individuals think, feel, and behave as though they are the other party and may be able to effectively act in place of the other. In addition, Lewicki and Bunker asserted this phase of trust involves the knowledge of how to sustain the trust within the relationship. This third phase of trust only occurs in mature relationships, as interactions have moved relationships through deterrence-based and knowledge-based trust to an identification-based trust phase.

Ideally, given the positive outcomes of a trustee’s intentions, attitudes, and behaviors over time, the degree of trust within a dyadic work relationship may become stronger and evolve into a phase of identification-based trust. However, Lewicki and Bunker (1996) cautioned trust within relationships may not completely evolve into the highest form. Specific relationships, such as work relationships, may not move out of the knowledge-based phase but may still be considered to be effective. The relationship parties may lack the time or opportunity to move out of the second phase or the parties have no need or desire to attain the identification-based form. In addition, trust may not be necessary when expected behavior is regulated through other means, such as collective agreements, or individuals may have gathered sufficient information about each other, rendering additional information for the growth of trust unnecessary (Jones & George, 1998).

Furthermore, trust scholars have also argued that the occurrence of one or more trust violations may prevent the relationship from moving beyond deterrence- or knowledge-based trust (Jones & George, 1998; Lewicki & Bunker, 1996). Trust violations, in which a RN’s positive expectations regarding future intentions and behaviors of one’s manager are unmet, are common occurrences within a work relationship (Ferrin et al., 2007).

**Trust Violations**

Trust violations occur when a context-specific positive expectation of a manager’s intentions, attitudes, or behaviors is either not forthcoming or is perceived to be non-beneficial or even harmful (Lewicki, Tomlinson & Gillespie, 2006; Sitkin & Roth, 1993). The RN will then judge whether the trust violation is an isolated event, such as cancellation of a staff meeting due to a manager’s episodic illness, or is typical of manager’s expected behavior within a specific context, such as habitual lack of open communication. If the trust violation is assessed to be an isolated event, then it is unlikely the RN will attribute the violation to perceived trustworthiness of the
manager and degree of trust toward a manager will be unaffected. However, if the violation is attributed to a manager’s expected behavior, then the RN will perceive the manager to be less trustworthy and the degree of trust will decline (Sitkin & Roth). The presence of risk, vulnerability, reliance, context specificity and uncertainty differentiates trust from similar constructs, such as cooperation, confidence and distrust (Seligman, 1998).

Differentiation from Similar Constructs

Cooperation. Gambetta (1988) differentiated between trust and cooperation when he stated that we trust another individual when we ‘consider engaging in some form of cooperation’ with another individual (p. 217). However, Mayer et al. (1995) posited that although trust may lead to cooperation between individuals, individuals may cooperate with each other because of legal and organizational constraints, lack of available alternatives or expectations of professional standards. Cooperation generally does not involve situations of perceived risk or willingness to become vulnerable regarding another’s future, uncertain intentions and behaviors. The absence of perceived risk and vulnerability differentiates cooperation from trust.

Confidence. Confidence refers to being able to predict with certainty another’s future intentions and actions. In an early examination of trust, Deutsch (1958) argued that trust exists when the trustor has ‘confidence that the other individual has the ability and intention to produce’ a beneficial outcome (p. 166). In their development of a trust instrument, Cook and Wall (1980) also conceptualized trust as ‘confidence in the words and actions of other people.’ (p. 39). Noted trust researchers Carnevale and Wechsler (1992) and Giffin (1967) have also declared confidence to be conceptually equivalent to trust.

However, other scholars have argued that the concepts of confidence and trust are theoretically distinct. Seligman (1998) became one of the strongest proponents of this perspective when he posited that confidence arises from complete knowledge of another’s future actions. When the knowledge is absent or incomplete, trust is required within the relationship. When behavior can be predicted, either through organizational policies or collective agreements, then confidence in a manager’s future behavior exists. Trust is not necessary in this situation. When there is no basis for confidence, that is, when organizational policies, legal requirements or collective agreements do not give rise to knowledge of another person’s future intentions and behaviors, trust is required (Das & Teng, 2004). Lewis and Weigert (1985) also argued that trust results from incomplete or imperfect information regarding possible future intentions and behaviors of another. Given the necessary trust conditions of perceived risk and willingness to become vulnerable, confidence is conceptually separate from trust.

Distrust. There is widespread recognition that distrust of others is common within many public and private organizations (Kramer, 1999). Furthermore, several studies have shown that society’s trust in its social institutions, such as government and health care, has been declining for a considerable amount of time (Putnam, 1995). Substantial debate currently exists within the trust literature with respect to the differentiation between trust and distrust. Earlier trust scholars advocated that trust and distrust are poles of a trust-distrust continuum which varies from low trust to high trust (Deutsch, 1960; Mellinger, 1956; Rotter, 1971). A low level of trust indicates a high level of distrust. The opposite of trust is argued to be distrust.
However, recent theoretical work has asserted that trust and distrust are distinct concepts (Lewicki, McAllister & Bies, 1998). The concepts are not considered to be opposite poles of a continuum from low trust to high trust. Low or lack of trust regarding a specific person does not automatically indicate high distrust (Sitkin & Roth, 1993). Consequently, the opposite of trust is not distrust. For example, Sitkin and Roth asserted that trust is a ‘belief in a person’s competence to perform a specific task under specific circumstances’ and distrust is conceptualized as ‘belief that a person’s values or motives will lead them to approach all situations in an unacceptable manner.’ (p. 373). Furthermore, Lewicki et al. differentiated between the two constructs by positing that trust is ‘positive expectations regarding another’s conduct’ while distrust is ‘negative expectations regarding another’s conduct.’ (p. 439). Given that parties of a relationship are challenged to act consistently across numerous circumstances and situations, Lewicki et al. also asserted that relationships simultaneously involve both elements of trust and distrust. Support for this theoretical viewpoint was found in a qualitative study, in which trust and distrust played key roles in safe work behavior among oil and gas employees (Conchie & Donald, 2008).

Managerial trust has been vigorously promoted as a universal panacea to produce organizational social capital, specifically the reduction of risk in work relationships, improvement of employee work-related attitudes and behaviors, enhancement of cooperation among organizational members and facilitation of organizational success. However, there is also a dark side to trust, which has been infrequently mentioned and theoretically and empirically unexplored (Anderson & Jap, 2005; Flores & Solomon, 1998).

**Dark Side of Trust**

Deutsch (1960) postulated that excessive trust may result from naivety or ignorance on the part of the trusting party. As a result, the trustor does not develop a threshold of trust, which when exceeded, forces the individual to change attitudes or beliefs regarding another’s perceived trustworthiness. The apparent lack of a trust threshold indicates that a RN may not change attitudes or beliefs even when a trust violation has occurred. Flores and Solomon (1998) differentiated between ‘simple trust’, which is naive and unquestioning assumption of another individual’s trustworthiness, and ‘blind trust’, which is stubborn and possibly self-delusional perceptions of another’s trustworthiness, even when a trustor has experienced trust betrayal or violation. In situations of blind trust, a RN may ignore evidence that contradicts a manager’s trustworthiness in order to maintain balance and consistency within the relationship (Nootboom, 2002). Opportunities for the manager to exploit an RN tend to thrive in an atmosphere of either simple or blind trust (Baier, 1986). For example, if an RN naively trusts a manager, there is a risk the manager will exploit or take advantage of the situation. A RN who relies on blind trust of a manager may also be at risk of being exploited or betrayed. Within organizations, over-reliance on managerial trust may stifle creativity and innovation for work-related problems and could potentially result in lack of objectivity regarding the RN’s perceived quality of the manager’s behaviors (Anderson & Jap, 2005). Moreover, blind trust of a manager may lead to higher expectations of a trusted manager’s behaviors. When the high expectations are not forthcoming, disappointment and dissatisfaction may be created within the relationship.

Up to this point, the review of the related literature clarified and described multiple theoretical and
conceptual dimensions and perspectives of trust in one’s manager, including trust referent, conceptualizations of trust, necessary trust conditions, Mayer’s et al. (1995) Integrative Model of Organizational Trust, cognition and affective foundations of trust, dynamic nature of trust, trust violations, differentiation between trust and other similar constructs and the dark side of trust. Next, evidence of empirically-supported determinants of trust in one’s manager is presented and categorized into attributes related to the RN, one’s manager, the RN-manager relationship and the work environment.

**Empirical Determinants of Managerial Trust**

Specific individual, relational and organization attributes influence the level of trust in one’s manager (Butler, 1991; Dirks & Ferrin, 2002; Lewicki et al., 2006; Mayer et al., 1995; Payne & Clark, 2003). The literature review explored previous empirical studies that have identified individual, relational and organizational determinants of trust in one’s manager.

**Attributes of the RN**

**Propensity to trust.** Among 398 UK bank and health care employees, Payne and Clark (2003) found that an individual’s propensity to trust was a modest predictor of intention to trust one’s manager ($\beta = .14; p < .01$). Propensity to trust along with job satisfaction and organizational characteristics accounted for 16% of the overall variance in intention to trust one’s manager ($R^2 = .16; p < .001$). In a meta-analysis of seven studies examining the relationship between propensity to trust and trust in leadership, Dirks and Ferrin (2002) discovered a modest but small significant relationship ($r = .16; p < .01$). In a second meta-analysis of 5 studies examining the association between trust propensity and trust in one’s leader, Colquitt et al. (2007) found propensity to trust had a slightly stronger correlation ($r = .20; p < .05$) and in a model examining antecedents and consequences of trust in manager, propensity to trust had a direct predictive effect on trust in manager (standardized pathway = .12; $p < .05$).

Propensity to trust as a determinant of trust is a more valid predictor when the relationship dyad is relatively unfamiliar with each other (Bigley & Pearce, 1998; Mayer et al., 1995; Schoorman et al., 2007). As interactions occur between the individuals and each party has opportunities to evaluate specific characteristics of the other party’s trustworthiness, such as ability, benevolence or integrity, propensity to trust plays a less important role (McKnight, Cummings & Chervany, 1998). An empirical study supported this theoretical perspective. Over a period of 14 months, Mayer and Davis (1999) administered three waves of surveys to 166, 170 and 193 production employees, respectively. For survey time 2, the authors found that an individual’s propensity to trust was significantly correlated with trust in one’s manager ($r = .21; p < .01$). However, for survey time 3, the authors found no significant relationship between propensity to trust and trust in one’s manager. This non-significant correlation between propensity to trust and trust in one’s manager supported the theoretical argument that propensity to trust is most applicable when the relationship dyad is relatively unfamiliar with each other (McKnight et al.). An individual’s propensity to trust plays a small, but significant role in the development of trust within a new relationship. However, propensity to trust becomes a less valid predictor in the development of trust as interactions occur in the relationship over time.
Job tenure. Presumably, individuals who have remained in their current occupation for a longer time period would trust both their previous and current managers less, perhaps due to previous trust violations. However, Costigan, Ilter and Berman (1998) in their study of 35 employee-employer dyads reported that job tenure was positively and significantly associated with trust in the manager. The correlation coefficient between job tenure and trust in one’s manager was not reported. Consequently, the strength of the relationship between the two variables is not known. In contrast, Flaherty and Pappas (2000) reported that job tenure was not significantly related to trust in one’s manager (r = -.05; ns). Overall, there is conflicting evidence of the existence and nature of the relationship between an employee’s trust in one’s manager and job tenure.

Based upon the review of empirical evidence regarding the role of attributes of a RN on managerial trust, an individual’s propensity to trust is hypothesized to directly influence trust in one’s manager. However, the nature of the relationship between managerial trust and job tenure remains inconsistent (see Figure 2).

Figure 2
Influence of Attributes of RN on Trust in Manager

Attributes of Manager

Ability, benevolence and integrity. Ability refers to the knowledge, skills and competencies that enable one’s manager to have influence within a specific situation or domain (Butler, 1991; Mayer et al., 1995). Benevolence is the second perceived attribute, referring to the degree to which a manager consistently supports and safeguards the welfare of the RN (Mayer et al.; Whitener et al., 1998), while integrity is the manager’s consistent devotion and adherence to a set of shared, morally acceptable values (Mayer et al.; Sitkin & Roth, 1993). Empirical evidence has shown that perceived benevolence and integrity are consistently significant predictors of trust. Mixed results have been found for the relationship between perceived ability and trust in one’s manager.

In a study of 220 friends and colleagues, Tan and Tan (2000) found that ability (β = .17; p < .01), benevolence (β = .38; p < .01) and integrity (β = .40; p < .01) were all significant predictors of trust. In addition, ability, benevolence and integrity accounted for almost half of the variance of trust in supervisor ($R^2 = .49; p < .001$). Similarly, Mayer and Gavin (2005) tested Mayer’s et al. (1995) model of organizational trust among 288 manufacturing employees and reported that trust in one’s manager was significantly influenced by ability (standardized estimates = .38; p < .05), benevolence (standardized estimates = .22; p < .05) and integrity (standardized estimates = .39; p < .05).

To determine the impact of a newly-implemented performance appraisal system on trust in one’s manager, Mayer and Davis (1999) administered three waves of surveys over a 14-month time period to 166, 170
and 193 production employees, respectively. In the final model for trust in one’s manager, significant effects were found for ability (standardized path coefficient = .15; p < .01), benevolence (standardized path coefficient = .23; p < .01) and integrity (standardized path coefficient = .30; p < .01). Similarly, Davis et al. (2000) investigated trust in restaurant managers among 371 restaurant employees and found that trust in one’s manager was significantly related to perceived manager ability (r = .56; p < .001), benevolence (r = .60; p < .001) and integrity (r = .66; p < .001). The three determinants were found to be strongly correlated with each other. Ability was interrelated with benevolence (r = .68; p < .001) and with integrity (r = .75; p < .001). Benevolence was interrelated with integrity (r = .74; p < .001). To determine the predictive power of each factor, multiple regression analysis was completed and determined that benevolence (β = .22; p < .05) and integrity (β = .43; p < .05) were significant predictors of trust in the manager. The two factors accounted for 46 percent in overall variance in trust in one’s manager. The authors argued that perceived ability failed to be a significant predictor because of multicollinearity among the three variables.

LaPierre (2007) observed 62 Canadian university students in a laboratory situation in which scenarios manipulated perceived ability of the supervisor and perceived benevolence towards the subordinate and towards the subordinate’s peers. LaPierre found that perceived benevolence towards the subordinate (F = 156.05; p < .001) had the strongest effect on trust of the supervisor, followed by perceived benevolence towards the subordinate’s peer (F = 45.64; p < .001). Perceptions of supervisor ability (F = 12.25; p < .01) had a significant, but weaker effect on trust of the supervisor. A significant interaction was reported between benevolence toward the subordinate and benevolence towards the peer. The positive effect of perceived benevolence towards the subordinate was weakened when perceived benevolence towards the subordinate’s peer was not demonstrated. A subordinate’s perceptions of how a manager interacts with the subordinate’s peer or co-worker may influence the subordinate’s perceptions of how a manager interacts with the subordinate (Colquitt, 2004). A manager, who is caring and concerned towards a co-worker, is more likely to be perceived as benevolent. As a result, the level of trust in the manager who demonstrates benevolence towards all employees will be higher than a manager who acts benevolently towards some, but not all, subordinates.

Bews and Rossouw (2002) examined benevolence and integrity from Mayer’s et al. (1995) model as well as competence, openness, personality characteristics and history of interactions to assess trust of one’s supervisor among 897 South African insurance employees. Competence referred to technical ability in addition to an ability to provide a satisfactory work experience for the employees. The authors concluded that the six variables explained 89% in the variance of trust. Benevolence was found to be the strongest predictor of trust followed by competency, integrity, history of interactions, personality factors and openness. However, neither specific regression nor correlation results were available.

Colquitt et al. (2007) conducted a meta-analysis of 119 studies to determine the separate effects of ability, benevolence and integrity on trust in the leader. Ability had the strongest direct effect on trust (β = .39; p < .05), followed by benevolence (β = .26; p < .05) and integrity (β = .15; p < .05). In addition, propensity to trust
was significantly correlated with ability ($r = .15; p < .05$), benevolence ($r = .20; p < .05$) and integrity ($r = .29; p < .05$). Overall, empirical studies have consistently lent support to an employee’s perceptions of a manager’s benevolence and integrity as significant determinants to trust in one’s manager. With the exception of one study (Davis et al., 2000), perceived ability of one’s manager has also been found to have a consistently strong predictive effect on managerial trust.

**Behaviors of the manager.** From the examination of previous literature regarding organizational, relational and individual influences on a manager’s action, Whitener et al. (1998) asserted that five specific behaviors may partially determine a RN’s level of trust regarding one’s manager: a) behavior consistency, referring to a manager’s ability to act in a positive, consistent manner across time and situations; b) behavioral integrity reflects a manager’s consistency between what managers say and their actions; c) sharing control refers to a manager’s shared decision-making with subordinates; d) open communication style reflects a manager communicating accurate information and adequate and honest explanations for decisions; and e) demonstration of concern for the welfare of others refers to a manager’s consideration and sensitivity to employees’ needs and interests, protection of employees’ interests and avoidance of exploitation of employees for self-interested promotion.

Korsgaard, Brodt et al. (2002) tested a portion of Whitener’s et al. (1998) theoretical framework by asking 112 credit union employees to describe a disagreement with their managers. Communicating in an open manner and demonstration of concern for employees, summarily conceptualized as a manager’s trustworthy behaviors, were significant predictors of trust in manager ($\beta = .53; p < .05$). Along with employees’ perceived fairness of human resource policies, trustworthy behavior of the manager explained 49% of the overall variance in trust in the manager ($R^2 = .49; p < .05$). The authors also investigated employees’ beliefs and attitudes regarding the manager’s role in the disagreement. When disagreements between employees and managers occurred, managers were less likely to be held responsible when they communicated openly and in a concerned manner. A manager’s open communication style and caring behaviors resulted in a higher level of managerial trust. However, when employees reported less managerial trust, responsibility for the disagreement was more likely to be attributed to one’s manager.

**Leadership style.** As opposed to the influence of perceived ability, benevolence and integrity of one’s manager and demonstrations of open communication and caring behaviors, conflicting results have been found for the relationship between managerial trust and a manager’s leadership styles, in particular transformational and transactional leadership practices and their associated behaviors. Transformational leadership style, defined as a multidimensional, charismatic leadership practice is currently considered to be the dominant model of effective leadership (Gillespie & Mann, 2004; Jung & Avolio, 2000; Pillai, Schriesheim & Williams, 1999). Through trust and respect for their followers, transformational leaders are believed to inspire and motivate their followers to attain and go beyond organizational goals (Gillespie & Mann; Yukl, 1989). Employees perceive that effective transformational leaders charismatically change, or transform, followers’ values, beliefs and attitudes to
encourage individuals to perform beyond the organizationally-determined minimum job requirements (Conger & Kanungo, 1987; Podsakoff, MacKenzie, Moorman & Fetter, 1990).

From an extensive review of transformational literature (Bass, 1985; Conger & Kanungo, 1987), Podsakoff et al. (1990) asserted that a transformational leader demonstrates six key behaviors:

1. Inspiring followers to successfully accomplish and attain an idealized, insightful future vision for the organization and its members.
2. Providing an appropriate role model for others to emulate.
3. Facilitating the achievement of group goals through the promotion of cooperation among followers.
4. Demonstrating expectations of excellence and quality regarding followers’ performances.
5. Providing individualized but equitable support to indicate respect and concern for the followers’ needs and personal feelings.
6. Intellectually stimulating and challenging followers to critically examine and possibly modify work-related activities and expectations.

Empirically, two distinct methods of operationalizing transformational leadership style have occurred. In the first mode, transformational leadership style has been measured by an overall score which incorporates Podsakoff’s et al. (1990) six key transformational behaviors, referred to as a global variable (Dirks & Ferrin, 2002). The score for each specific behavior is summed together to given an overall transformational leadership style score. Each specific behavior is not examined separately and consequently, it is not known the influence of specific managerial behaviors on managerial trust. In contrast, measurement of transformational leadership style has also been examined by a facet variable (Dirks & Ferrin), in which each specific key behavior is measured and examined separately in order to understand its unique influence on managerial trust. The type of variable that is reported in the studies tends to influence findings regarding the relationship between transformational leadership style and trust in one’s manager (Dirks & Ferrin).

When a global variable is incorporated and reported, empirical studies have found that transformational leadership style is a significant predictor of managerial trust. However, conflicting results have been established regarding the strength of the relationship between the two concepts. In two investigations of the impact of transformational leadership style among 192 and 155 leader-follower dyads, Pillai et al. (1999) found that transformational leadership style was a significant and strong predictor of managerial trust ($\beta = .75; p < .01$). Similarly, in a simulated laboratory situation with 194 students, Jung and Avolio (2000) concluded that transformational leadership style was a significant predictor of managerial trust ($\beta = .51; p < .01$). Bartram and Casimir (2006) also found that a transformational leadership style was a strong significant predictor of trust in the leader among 109 customer service operators ($\beta = .72; p < .01$). In an investigation of the relationships among leadership style, managerial trust and perceptions of fairness among 203 working adults, Holtz and Harold (2008) reported that there was a significant relationship between transformational leadership style and trust in one’s manager (estimated parameter = .83; $p < .001$). In addition, Holtz and Harold found that managerial trust mediated
the relationship between transformational leadership style and employees’ perceptions of justice. In their meta-analysis of 13 empirical studies that incorporated a global variable, Dirks and Ferrin (2002) found that transformational leadership style was significantly associated with trust in one’s leader ($r = .72; p < .01$).

However, transformational leadership style was found to have a weak predictive effect on leader trust in an investigation of 988 employees of a petrochemical company (Podsakoff et al., 1990). After controlling for common method bias, Podsakoff et al. found that a leader’s overall transformational leadership style only had a small effect on trust in the leader (unstandardized parameter estimate = .11; $p < .05$).

In contrast, empirical studies that have incorporated a transformational leadership style facet variable to assess each specific managerial behavior have found mixed results regarding the relationship between specific transformational leadership behaviors and managerial trust. Not all six key transformational behaviors have been found to significantly and positively impact the level of managerial trust. Podsakoff et al. (1990) studied 988 employees of a petrochemical company to examine the relationship between transformational leadership behaviors and trust in the manager and reported that only individualized support had a significant, but weak predictive effect on leader trust (unstandardized parameter estimate = .11; $p < .01$) while high performance expectations was not a significant predictor. Other specific transformational leadership behaviors were not reported. Podsakoff et al. explained the small effects of transformational leadership behaviors on trust in one’s leader by asserting other antecedents, such as the nature of an interaction between an employee and leader may have a stronger influence on the development of trust than specific behaviors.

Similarly, Podsakoff, MacKenzie and Bommer (1996) found that among 1,539 employees from a variety of organizations, three transformational leadership behaviors significantly predicted managerial trust. Specific actions were providing an appropriate role model ($\beta = .33; p < .01$); facilitating the acceptance of group goals ($\beta = .06; p < .05$) and individualized support ($\beta = .28; p < .01$). Moreover, MacKenzie, Podsakoff and Rich (2001) surveyed 477 insurance salespeople and also found that individualized support had a significant effect on trust in one’s manager ($\beta = .25; p < .01$) Surprisingly, intellectual stimulation was found to be a negative, significant predictor of leader trust ($\beta = -.23; p < .01$). The authors explained this unexpected finding by positing that leaders who continually search for new and improved ways for followers to perform may be creating ambiguity regarding a leader’s expectations. When employees are unsure about the leader’s expectations, the leader may be perceived to be unpredictable and consequently, trust in one’s leader will subsequently decrease (Simmons et al., 2001).

Furthermore, MacKenzie et al. cautioned that the influence of intellectual stimulation may be more complex than originally conceived. Likewise, Gillespie and Mann (2004) examined the impact of a range of leadership practices and trust in leader among 83 research and development team members. Only one specific transformational behavior, providing an appropriate role model significantly, but weakly predicted trust in one’s manager ($\beta = .06; p < .05$).

Overall, conflicting and inconsistent results have been found for the influence of specific transformational leadership behaviors on managerial trust. Articulation of a future vision and expectations of
performance excellence were consistently not found to be significant predictors of trust in one’s leader (Gillespie & Mann, 2004; MacKenzie et al., 2001; Podsakoff et al., 1990, 1996) whereas providing an appropriate role model was determined to be have a strong predictive effect (Podsakoff et al., 1996), a weak effect (Gillespie & Mann) or no effect on managerial trust (MacKenzie et al.). Mixed results were also found for individualized support, which was determined to have either a strong influence on managerial trust (MacKenzie et al.; Podsakoff et al., 1996) or no influence (Gillespie & Mann). In terms of facilitating achievement of group goals, only Podsakoff et al. (1996) established that a weak relationship existed between this leadership practice and managerial trust. Other empirical studies have not found a significant relationship between fostering attainment of group goals and managerial trust (Gillespie & Mann; MacKenzie et al.; Podsakoff et al., 1996). Similarly, conflicting results have also been determined for the effect of intellectual stimulation on trust in one’s manager. Gillespie and Mann and Podsakoff et al. (1996) determined that challenging followers had no effect on managerial trust, whereas MacKenzie et al. determined that intellectual stimulation had a negative effect on managerial trust.

In contrast to transformational leadership behaviors, transactional leadership practices involve an interaction between leader and follower, specifically the leader provides rewards in exchange for the employee’s efforts (Gillespie & Mann, 2004). Bass (1985) argued there are two main types of transactional leadership behavior. Contingent reward behavior is a specific type of transactional behavior in which a manager’s provides positive feedback in the form of praise and recognition of an employee’s performance. The second type of transactional behavior consists of a variety of negative feedback forms, such as criticism, correction and other forms of punishment the leader may demonstrate regarding an employee’s poor performance (Podsakoff, Todor, Grover & Huber, 1984). Transactional leadership practices are asserted to be the building blocks of a transformational leadership style. Through identifying and articulating a vision, and by fundamentally changing followers’ values, attitudes and beliefs to attain visionary goals, a transformational leadership style augments the influence of transactional leadership behaviors (MacKenzie et al., 2001). The two leadership styles are not mutually exclusive and as a result, most effective leaders demonstrate both transformational and transactional leadership style behaviors (Bass & Avolio, 1993; Holtz & Harold, 2008).

Empirical studies have examined the role of transactional leadership style on trust in one’s manager. In a study of 477 insurance salespeople, MacKenzie et al. (2001) reported that a leadership style of contingent reward transactional style significantly but weakly predicted managerial trust (standardized estimates = .15; p < .05). Similarly, Jung and Avolio (2000) surveyed 194 undergraduate students and determined that transactional behaviors were also significant, but weak predictors of trust in management (standardized path coefficient = .14; p < .01). In contrast, in a study of 192 manpower service agency employees, Pillai et al. (1999) concluded that transactional leadership behaviors did not significantly affect leader trust. In comparison with transformational leadership behaviors, Dirks and Ferrin (2002) found that transactional leadership behaviors had a significant, but weaker association with trust in leadership (r = .59; p < .01) in a meta-analysis of 9 empirical studies.

**Communication accuracy.** To provide effective and safe patient care, RNs require their managers to
communicate accurate information (Maltz & Kohli, 1996). The extent to which the receiver perceives the information to be correct has been found to have a strong influence on managerial trust (Thomas, Zolin & Hartman, 2009; Roberts & O’Reilly, 1974a, 1974b; Whitener et al., 1998). Managers who effectively communicate accurate job-related information may be perceived as being more credible and having greater knowledge regarding a RN’s job requirements (Giffin, 1967; Thomas et al., 2009). Perceptions of improved credibility may result in stronger perceptions of the manager’s ability, leading to enhanced trust in one’s manager. Furthermore, the accuracy of information from one’s manager may signal to the RN that one’s manager is concerned with the RN’s job-related needs. The manager may be seen as more benevolent. Additionally, a RN may perceive that accurate managerial communication reflects shared values between the relationship dyad. The manager may be perceived as having greater integrity. By consistently communicating accurate information, the enhancement of ability, benevolence and integrity may result in greater managerial trust.

Several empirical studies have supported this theoretical argument. In an investigation among 1,200 workers from a variety of industries, Roberts and O’Reilly (1974a) found that trust in one’s manager is significantly correlated with perceived accuracy of the communication ($r = .20; p < .05$). Similarly, in an examination of the relationship between organizational communication and trust in one’s superior among 101 employees in four distinct organizations, Roberts and O’Reilly (1974b) found that there were significant correlations between estimated accuracy of information received from the supervisor and trust in one’s supervisor, with correlation coefficients ranging from .26 ($p < .05$) to .50 ($p < .001$). Folger and Konovsky (1989) surveyed 217 manufacturing plant employees and concluded that openly and accurately communicating timely feedback regarding job performance prior to pay raise decisions significantly predicted managerial trust ($\beta = .47; p < .05$). Likewise, in an examination of the relationship between communication style and managerial trust among 112 credit union employees, Korsgaard, Brodt et al. (2002) concluded that an open, accurate and concerned communication style significantly predicted trust in one’s manager ($\beta = .53; p < .05$). Korsgaard, Brodt et al. also asked study participants to describe their beliefs and attitudes regarding a disagreement with their managers. When conflict occurred, managers were less likely to be held responsible when they communicated openly and in a concerned manner, resulting in a higher degree of managerial trust. In an recent examination of 218 American employees of an oil services company, Thomas et al. (2009) also concluded that accuracy along with timeliness and usefulness of communication received from one’s supervisor was a significant predictor of supervisory trust (standardized estimated parameter = .41; $p < .001$).

Overall, numerous perceived characteristics of one’s manager were found to directly affect a RN’s degree of managerial trust:

1. Ability
2. Benevolence towards RN
3. Benevolence towards co-workers of RN
4. Integrity
5. Demonstration of concerned behaviors
6. Transformational leadership style
7. Providing an appropriate role model
8. Facilitates group goals
9. Individualized support
10. Transactional leadership style
11. Communication accuracy

Upon closer examination of the empirically-supported determinants of managerial trust identified through the literature review, several determinants may be argued to be conceptually similar to each other. Consequently, three constructs, individualized support, demonstration of concern for others, and providing an appropriate role model have not been integrated into the proposed conceptual model for this specific section of the literature review. Additionally, transformational and transactional leadership styles are also excluded from the hypothesized conceptual model. Rationale for omission of the selected determinants is described in more detail.

A manager’s demonstration of concern for others, a manager’s individualized support and benevolence towards the RN all refer to managerial actions that exhibit care and concern for the welfare of others (Mayer et al., 1995; Conchie & Donald, 2008; Podsakoff et al., 1990; Whitener et al., 1998). Trust scholars argued the existence of conceptual congruence among perceived benevolence, individualized support and demonstration of care and concern (Conchie & Donald, Whitener et al.). Furthermore, perceived managerial benevolence has been consistently found to be a strong predictor of managerial trust across several studies (e.g. Davis et al., 2000), whereas mixed, inconsistent results have been determined for the relationship between individualized support and trust in one’s manager (Gillespie & Mann, 2004; Podsakoff et al., 1996). Demonstration of care and concern has been empirically verified in only one study (Whitener et al.). Given the conceptual equivalence among the constructs and the absence of consistent, significantly strong empirical support for individualized support and demonstration of care and concern, the two specific transformational leadership practices, individualized support and demonstration of care and concern, have been excluded from the proposed conceptual model. As a consequence of established conceptual similarity and consistently, strong empirical confirmation, perceived benevolence of one’s manager has been incorporated into the hypothesized model.

In addition, providing an appropriate role model has also been excluded from the proposed model. Referring to a manager’s behavior that is an example of other to emulate, specific role-modeling actions reflect the manager’s personal values (Podsakoff et al., 1990). From a theoretical perspective, providing an appropriate role model is conceptually similar to the construct of integrity, reflecting the manager’s consistent devotion and adherence to a set of values, which the RN morally shares and accepts (Mayer et al., 1995). Both constructs speak to the manager’s values (Conchie & Donald, 2008). The construct of integrity has been found to be a significant managerial trust antecedent across many empirical studies, whereas conflicting results have been found regarding the relationship between providing an appropriate model and trust in one’s manager. Consequently, perceived
managerial integrity has been incorporated into the study’s theoretical model as a managerial trust determinant, while providing an appropriate role model has been excluded.

Given that the study will examine specific attributes or characteristics of one’s manager, transformational and transactional leadership styles have not been incorporated into the proposed conceptual model. Both leadership styles reflect an generalized employee perception of the manner in which a leader exhibits a variety of specific leadership actions (Gillespie & Mann, 2004; Podsakoff et al., 1990). Although worthwhile empirical findings regarding the significant association between perceived overall leadership style and trust in one’s manager have been established (e.g. Jung & Avolio, 2000), the examination of a generalized leadership manner is not in keeping with the purpose of the study. As a result, transformational and transactional leadership styles have not been included in the hypothesized conceptual model.

Based on the empirical review of the related literature, benevolence towards an employee and towards co-workers of the employee, perceptions of integrity and communication accuracy have been found to consistently be significant predictors of trust in one’s manager. In contrast, empirical research findings have determined that perceived ability of one’s manager as well as facilitation of achievement of group goals were not consistent determinants of managerial trust.

Moreover, it is conceivable that accuracy of a manager’s communication as well as promotion of achievement of group goals may influence perceptions of a manager’s ability, benevolence and integrity. A manager who communicates accurate information may be perceived to have greater ability, benevolence and integrity, which in turn would positively affect a RN’s trust in one’s manager. Communication accuracy is therefore argued to have an indirect effect on managerial trust through its influences on ability, benevolence and integrity. Furthermore, it is plausible that a manager who is able to effectively facilitate group goals has the specific knowledge and skills to do so. From this perspective, facilitation of group goals may directly affect a RN’s perception of the manager’s ability, which in turn would directly influence managerial trust. Therefore, facilitation of attaining group goals is also argued to indirectly effect a RN’s managerial trust.

In summary, the following empirically-supported managerial trust determinants are incorporated into the model for this section of the literature review (see Figure 3).

1. Ability
2. Benevolence towards RN
3. Benevolence towards co-workers of RN
4. Integrity
5. Facilitation of achievement of group goals
6. Communication accuracy
Influence of Attributes of Manager on Trust in Manager

Attributes of RN-Manager Relationship

Interaction frequency. Presumably, when an increased number of interactions have occurred between two individuals, a greater number of opportunities to evaluate attributes of one’s manager exists. Conceivably, the increased number of interactions could influence the level of trust in one’s manager. Given that relationship tenure between two individuals is a measure of the extent of interactions (Lewicki & Bunker, 1996), frequency of RN-manager interactions is considered to be a proxy measure for relationship tenure (Dirks & Ferrin, 2002).

Empirical studies have shown conflicting results regarding the relationship between frequency of interactions and managerial trust. In an examination of 267 subordinates in a variety of industries, Wells and Kipnis (2001) found a weak correlation between frequency of interactions with their managers and trust of their managers ($r = .17; p < .01$). In contrast, Korsgaard, Brodt et al. (2002) did not find length of relationship with the manager predicted trust in one’s manager among 112 credit union employees. As well, Dirks and Ferrin (2002) found no significant correlation between length of relationship and trust in leader ($r = -.01$) in a meta-analysis of 5 studies.

However, Perry and Mankin (2004) found that among 71 manufacturing employees, years under a supervisor was a significant predictor of trust in one’s supervisor ($\beta = .44; p < .05$). Together with perceived credibility of the supervisor, layoffs and management turnover, relationships tenure accounted for 69% of the overall variance of trust in one’s supervisor ($R^2 = .69; p < .001$). Perry and Mankin also concluded that among 100 firefighters, relationship tenure significantly predicted trust in one’s supervisor ($\beta = .38; p < .05$). Together with expertise and credibility of the supervisor, length of time with the supervisor accounted for 83% of the overall variance of trust in one’s supervisor ($R^2 = .83; p < .001$).

These mixed findings suggested that trust may not necessarily develop or be maintained with increased
frequency of interactions with one’s manager over time. Given the conflicting findings regarding the influence of RN-manager interaction frequency, managerial trust may be determined less by the length of the relationship and frequency of interactions and more by the nature or quality of the managerial behaviors demonstrated during an interaction, such as exhibiting fair and respectful behavior. The quality of the RN-manager interaction and its demonstrated behaviors may have a stronger impact on trust in one’s manager than the length of time a relationship has existed (Levin, Whitener & Cross, 2006; Lewicki & Bunker, 1996).

**Interactional justice.** Interactional justice refers to the perceived fairness of the interpersonal treatment an employee receives from one’s manager (Bies & Moag, 1986; Moorman, 1991). When the RN perceives an interaction with one’s manager to be fair and just, a higher level of interactional justice exists within the relationship and is more likely to result in a higher level of managerial trust. Moorman further elaborated by writing that perceptions of interactional justice, also known as interactive justice, focus on interpersonal behavior of the supervisor, such as demonstration of kindness, consideration of the employee’s rights, being truthful with the employee and providing adequate explanation of decisions.

However, empirical studies have found mixed results regarding the relationship between interactional justice and trust in one’s manager. Among 212 telecommunication employees, Stinglhamber et al. (2006) reported that interactional justice directly affected trust in one’s supervisor (standardized path coefficient = .40; p < .001). Within health care practice environments, Laschinger and Finegan (2005) surveyed 273 medical-surgical and critical care RNs across Ontario hospitals and also found that a RN’s perception of interactional justice was a significant predictor of trust in one’s manager (standardized path estimate = .27, p not reported). Along with structural empowerment and respect, the final model accounted for 44% of the variance of the data for job satisfaction and organizational commitment outcomes. In a meta-analysis in 5 empirical studies, Dirks and Ferrin (2002) found a significant association between interactional justice and trust in leadership (r = .77; p < .01).

However, in an investigation of the influence of interactional justice on managerial trust among 181 adults, Hubbell and Chory-Assad (2005) found that interactional justice failed to be a significant predictor. This was an unexpected finding, as interactional justice refers to the quality of interactions individuals may receive from their supervisors and theoretically, higher levels of perceived fairness of interactions between subordinates and their supervisors should translate to higher levels of trust between the two parties. The authors explained the unexpected findings by concluding that perhaps the measurement of interactional justice was actually assessing perceptions of procedural justice. The instrument for interactional justice focused on perceptions of specific management behaviors (e.g. ‘I believe my manager tries to help me when he/she can.’) instead of focusing on affective component of trust (e.g. ‘I like my manager’) which is thought to be more closely linked to interactional justice.

Based on the preceding review, frequency of RN-manager interactions and a RN’s perception of interactional justice were not found to be consistent determinants of managerial trust. Conceivably, greater interaction frequency may indirectly affect managerial trust through more opportunities to evaluate a manager’s...
ability, benevolence, integrity and accuracy of communication, and thereby indirectly affecting managerial trust. Figure 4 depicts the hypothesized relationships.

Figure 4
Influence of Attributes of RN-Manager Relationship on Trust in Manager

![Diagram showing the influence of attributes on trust]

Attributes of the Work Environment

Procedural justice. Evolved from equity theory (Adams, 1965), organizational justice theories assert that employees are concerned not with an actual outcome, but whether an outcome and its associated decision-making processes are fair (Greenberg, 1987). One way individuals determine fairness is to calculate the ratio of individual input, such as experience or education, to one’s outcome, such as opportunities for career development, to another’s individual’s ratio (Colquitt, Conlon, Wesson, Porter & Ng, 2001). If the individual perceives the two ratios are equitable in both inputs and outcomes, the individual will perceive a fair situation. If, however, the individual perceives the two ratios are not equitable, the individual will perceive an unfair situation. Procedural justice refers to the perceived fairness of the process used to determine an outcome (Folger & Konovsky, 1989). Individuals are less concerned with the actual outcome and are more interested in the fairness of the decision-making process. Perceptions of procedural fairness have been found to impact an individual’s attitudes and potential interactions with another individual (Stinglhamber et al., 2006). A decision-making process is more likely to be perceived as fair when specific criteria are met: a) consistent application of process across people and time; b) collection and use of accurate information; c) availability of an appeal mechanism to correct a flawed or erroneous decision; d) correspondence with personal ethical or moral standards; e) free from bias to ensure a third party has no vested interest in a particular decision; and f) opportunities for affected parties to participate in the decision-making process, also referred to as employee voice (Colquitt et al.).

By implementing fair policies, procedures and decisions, employees perceive that managers respect their rights and value the employee-employer relationship. Fair actions indicate the manager is interested in the employee’s well-being and is more likely to fulfill future expectations of the employee (Dirks & Ferrin, 2002). The perception of being valued will result in the RN being more willing to be vulnerable to indeterminate future behaviors of one’s nurse manager. Consequently, trust is built and sustained through implementing fair procedures.
and policies (Konovsky & Pugh, 1994; Whitener, 1997).

Empirically, consistently significant relationships have been found between procedural justice and trust in one’s manager. In one of the earlier empirical studies, Driscoll (1978) found that among 109 college faculty members, a significant association was found between trust in the college leadership and members’ perceptions of employee voice, a specific criteria of procedural justice (r = .27; p < .01). Folger and Konovsky (1989) surveyed 217 manufacturing plant employees and concluded that providing an adequate appeals process for pay raise decisions significantly predicted managerial trust (β = .18; p < .05). Similarly, Mishra and Morrissey (1990) surveyed 143 employees from a variety of industries and found that 90% of employees agreed that trust in one’s supervisor was linked to having more opportunities to participate in decision-making process. Among 630 hospital employees, Konovsky and Pugh (1994) found that perceptions of procedural justice in supervisor decisions was a significant predictor of trust in one’s supervisor (standardized path estimates = .52; p < .05). Pillai et al. (1999) studied 192 manpower service agency employees and also reported that procedural justice predicted trust in leader (standardized structural coefficients = .34; p < .01). Likewise, in a study of 129 automobile salespeople, Flaherty and Pappas (2000) also determined that the manager’s use of fair supervisory practices was a significant predictor of trust in the manager (β = .72; p < .01) and accounted for 60% of the overall variance of trust in one’s manager (R² = .60; p < .01).

Within the context of an announced deregulation of the energy industry, Korsgaard, Sapienza and Schwieger (2002) found that among 115 electrical generation plant employees’ perceptions of procedural justice aspects, specifically employee voice and organization’s justification for change, were reported to significantly correlate with trust in management at time 1 (r = .50; p < .05) and 45 days later (r = .83; p < .05). The authors also found that when procedural justice was reported to be low, trust in one’s manager remained unchanged during deregulation. However, Korsgaard, Sapienza et al. also found that trust in one’s manager actually increased when procedural justice was high in the context of organizational change. The authors concluded that strong perceptions of procedural justice during organizational change may be one way of increasing trust in one’s manager. Likewise, in an examination of the relationship between fairness perceptions and managerial trust among 112 credit union employees, Korsgaard, Sapienza et al. concluded that procedural justice was a significant predictor of trust in one’s manager (β = .17; p < .05). Along with communication accuracy of one’s manager, employees’ perceived fairness of human resource policies explained 49% of the overall variance in trust in the manager (R² = .49; p < .05). In a meta-analysis of antecedents for trust in leadership, Dirks and Ferrin (2002) found a statistically significant and strong association between procedural justice and trust in leadership among 17 studies (r = .66; p < .01).

Access to support. Considered to be an underlying subconstruct of structural empowerment (Laschinger, Finegan, Shamian & Wilk, 2001), access to support from one’s manager occurs when a nurse receives positive feedback, guidance and helpful problem-solving advice from one’s manager. A manager who appears to be supportive and provides effective feedback and guidance for the RN is seen as valuing the RN, thereby increasing
a RN’s trust in one’s manager. In addition, the nurse is less likely to feel vulnerable and uncertain in terms of providing safe and high-quality nursing care (Chan, Taylor & Markham, 2008; Laschinger, 1996).

The conceptual relationship between access to support and managerial trust has been empirically supported in non-health care and health care work environments. In a recent study of 374 health care and non-health care employees, Chan et al. (2008) concluded that social support from one’s supervisor was a significant determinant of trust in one’s supervisor (std. path coefficient = .18; p ≤ .05). Similarly, in an examination of trust determinants among 404 acute care Canadian RNs, Laschinger et al. (2000) concluded that a significant relationship was found between access to support and trust in manager (r = .32; p < .001). Similarly, in an investigation of the relationship between workplace empowerment conditions and trust in management among 412 acute care Canadian nurses, Laschinger, Finegan and Shamian (2001) reported that access to support was significantly correlated with managerial trust (r = .46; p < .001).

Access to resources. Also considered to be an underlying dimension of structural empowerment, access to resources refers to a job-related empowering condition in which nurses have necessary and adequate physical, financial, time and personnel resources to provide high-quality, safe patient care. Sufficient and satisfactory resources provided by one’s manager contribute to less uncertainty regarding ability to accomplish job requirements, resulting in a higher degree of managerial trust (Chan et al., 2008). Conversely, if a manager is unable to secure sufficient resources due to fiscal constraints, staff shortages or inadequate or broken equipment, then nurses are more likely to be uncertain regarding their ability to provide high-quality nursing care and less likely to place trust in one’s manager (Laschinger, Finegan & Shamian, 2001).

The conceptual relationship between access to resources and managerial trust has been empirically supported in health care and non-health care work environments. Among 374 health care and non-health care employees, Chan et al. (2008) concluded that adequate resources from one’s manager significantly predicted managerial trust (standardized path coefficient = .20; p ≤ .05). Similarly, in an examination of trust determinants among 404 acute care Canadian RNs, Laschinger et al. (2000) concluded that a significant relationship was found between access to resources and trust in manager (r = .41; p < .001). Likewise, in an investigation of the relationship between workplace empowerment conditions and trust in management among 412 acute care Canadian nurses, Laschinger, Finegan and Shamian (2001) reported that access to resources was significantly correlated with trust in one’s manager (r = .33; p < .001). Work environments that provide adequate and necessary physical, human and financial resources enable a nurse to effectively provide nursing care and as a result, enhance and sustain the degree of trust in one’s manager.

Self-determination. Considered to be an underlying subconstruct of psychological empowerment, self-determination reflects an individual’s perception of one’s sense of power and control regarding his/her job role (Spreitzer, 1995). With a sense of control over work activities and the process by which care is provided, the RN is more likely to feel valued and respected by one’s manager (Spreitzer), resulting in greater trust in one’s manager (Laschinger, Finegan, & Shamian, 2001).
The theoretical perspective between self-determination and trust in one’s manager has been empirically supported in non-health care work environments. In a survey of 184 American public sector employees, Nyhan (2000) concluded that employee control over work activities was a significant predictor of trust in the supervisor in a final model linking trust in the manager, productivity and organizational commitment (standardized path estimate = .49; p < .001). Similarly, in a survey of 539 teachers (Moye, Henkin & Egley, 2005) self-determination significantly predicted trust in their principals (β = .21; p ≤ .05). In addition, Moye and Henkin (2006) discovered that among 1,436 public sector employees, trust in one’s manager was significantly determined by perceptions of self-determination (β = .57; p < .05).

In an exploration of the relationships among access to support, access to resources and self-determination in a study of 404 Ontario RNs, Laschinger, Finegan and Shamian (2001) concluded that access to support and access to resources had a significant predictive effect on underlying dimensions of psychological empowerment, including self-determination (standardized estimated parameter = .85; p not reported). The findings lend empirical confirmation to the claim that self-determination is a nurse’s response to workplace empowering structures, such as access to support and access to resources.

Empirical evidence has consistently supported the significant influences of procedural justice, access to support, access to resources and self-determination on a RN’s trust in one’s manager. However, given the theoretical perspective and empirical support that self-determination is an individual’s response to workplace empowerment, it is quite conceivable that the effects of access to support and access to resources on managerial trust are completely dependent on personal perceptions of self-determination. Therefore, access to support and access to resources indirectly influence a RN’s trust in one’s manager through self-determination (Laschinger, Finegan, Shamian & Wilk, 2001). Based on the preceding review of the literature, Figure 5 depicts the linkages among procedural justice, access to support, access to resources, self-determination and trust in one’s manager.

Figure 5
Influence of Attributes of Work Environment on Trust in Manager
Summary of Empirical Evidence

An extensive review of the related trust literature has uncovered numerous constructs that have been empirically supported as determinants of trust in one’s manager. To facilitate understanding of the empirically confirmed managerial trust antecedents, the determinants have been grouped into four categories of attributes:

1. Attributes of RN
   (a) Propensity to trust
   (b) Job tenure

2. Attributes of Manager
   (a) Ability
   (b) Benevolence towards RN
   (c) Benevolence towards co-workers of RN
   (d) Integrity
   (e) Facilitation of achievement of group goals
   (f) Communication accuracy

3. Attributes of the RN-Manager Relationship
   (a) Interaction frequency
   (b) Interactional justice

4. Attributes of the work environment
   (a) Procedural justice
   (b) Access to support
   (c) Access to resources
   (d) Self-determination

However, other empirically unexplored concepts that may also influence a RN’s trust in one’s manager. The review continues with the description and illumination of theoretically-based potential determinants of managerial trust, specifically manager emotional availability and manager span of control.

Potential Determinants

Emotional Availability

To further expand the theoretical constructs that motivate employees, Kahn (1990, 1993) drew on psychological and organizational accessibility theories to conceptualize the experiential state of psychological presence, or availability. Within the context of a job role, emotional availability refers to a manager’s complete state of emotional engagement whose thoughts, feelings and beliefs are readily accessible to allow interaction and connection in particular moments and situations (Kahn, 1990; 1993). Kahn (1990) asserted that individuals reflect presence through emotional means or dimensions. These dimensions underlie and collectively define a person who is present. Within their work role, managers who are emotionally focused and connected to others will be fully present and accessible. An individual who is entirely emotionally available demonstrates specific personally
engaging behaviors, such as remaining in another’s vicinity, not allowing external interruptions when interacting and making time to talk and listen to the other individual (Kahn, 1993). The demonstration of engaging behaviors will reflect the extent to which an individual is present within a job-related role (Kahn, 1990).

Kahn (1993) further articulated the concept in a qualitative study of relationships and interactions among 11 social service workers and their supervisors. Presence, also referred to as accessibility, was an identified pattern of care giving behaviors observed during the interactions. Specific behaviors reflecting emotional availability included welcoming the other, not allowing external interruptions and other distractions, focusing on the other person, and making time to talk and listen. According to Kahn, when the behaviors were clearly demonstrated during worker-supervisor interactions, the supervisor was considered to be emotionally present and available.

Within a health care context, a qualitative study examined ten RN’s conceptions of effective nursing leadership of a Swedish intensive care unit (Rosengren, Athlin & Segesten, 2007). From the perceptions of a RN, the authors found that an effective nursing leader is one who is emotionally present and available in the daily work of nurses. However, no empirical quantitative study has tested the influence of a manager’s perceived emotional presence on managerial trust within a North American health care work environment.

Emotional availability is hypothesized to indirectly impact a RN’s trust in one’s manager. Within a RN-manager work relationship, a manager who is emotionally present and available in the daily work of RNs provides opportunities for a RN to evaluate the manager’s personally engaging behaviors. When the frequency of interactions between a RN and one’s manager is increased, there may be more opportunities for one’s manager to be accessible and available to listen to a RN’s concerns, thereby resulting in more solid perceptions of a manager being emotionally available. Fewer RN-manager interactions will presumably translate to fewer opportunities for the RN to assess emotional presence of one’s manager.

Additionally, when a manager is emotionally available to actively focus on a RN’s concerns, the manager will appear to act more benevolently towards the RN. The stronger perceptions of benevolence will directly result in greater degree of a RN’s trust in one’s manager. However, if a manager exhibits emotionally disengaging behaviors, such as appearing to be in a hurry when interacting or allowing interruptions during a RN-manager interaction, the RN may perceive the manager is not caring or concerned, resulting in a lower level of managerial trust. The relationships among emotional availability, interaction frequency, benevolence towards RN and trust in one’s manager are illustrated in Figure 6.
Figure 6
Hypothesized Influence of Emotional Availability on Trust in Manager

Span of Control

Span of control refers to the number of employees directly supervised by one manager, also known as number of direct reports (Doran et al., 2004). Health care organizational restructuring and a focus on cost-effectiveness has resulted in a reduction in the number of management positions. Consequently, nurse leaders have become responsible for interacting, motivating and evaluating a large number of staff, usually across more than one clinical unit (McCutcheon, 2005; Lucas, Laschinger & Wong, 2008). Furthermore, managers may supervise staff from a variety of job roles and not be limited to supervision of only RNs. As a result, managers may be required to have knowledge of numerous professional and legal standards and collective bargaining agreements (McCutcheon).

Up to a certain number of subordinates, span of control has been linked to better job performance (Gittell, 2001); greater job satisfaction (Doran et al., 2004); and improved school performance (Meier & Bohte, 2000). However, if span of control is extended to involve a large number of subordinates, adverse outcomes may ensue. In an investigation of 51 clinical units in 7 Canadian hospitals, Doran et al. determined that 41 managers had a median span of control of 67 direct reports, with a range from 36 to 258 direct reports. Doran et al. also discovered that the large spans of control decreased the positive effects of transformational and transactional leadership styles on nurses’ job satisfaction and was significantly correlated with greater nurse turnover and lower patient satisfaction. Furthermore, Gittell found that for every 10 person increase in the size of span of control, there was a corresponding 1.6 percent increase in unit turnover. Therefore, a span of control of 100 is predicted to have a unit turnover rate of 16 percent.

Span of control is hypothesized to indirectly impact a RN’s managerial trust. Span of control is considered to be a useful indicator of the degree of closeness within the RN-manager relationship (McCutcheon, 2005). When a manager supervises a large number of personnel, there are less opportunities for the RN and manager to interact. When interaction does occur, time and job pressures may make the manager appear less focused on the RN. Consequently, the RN is more likely to perceive that one’s manager is less emotionally available. A manager may also be perceived as being uncaring or unconcerned towards the RN and not acting in a benevolent manner, which may directly decrease the degree of the RN’s managerial trust. Decreased frequency of
RN-manager interactions and weaker perceptions of a manager’s emotional availability are hypothesized to indirectly influence the degree of a RN’s trust in one’s manager, through their direct effects on benevolence towards the RN. However, no empirical study to date has examined the relationships between span of control, frequency of RN-manager interactions, emotional availability and trust in one’s manager. Figure 7 depicts hypothesized relationships among span of control, interaction frequency, emotional availability, benevolence towards RN and trust in one’s manager.

Figure 7
Hypothesized Influence of Span of Control on Trust in Manager

Summary of Literature Review

Understanding determinants of trust in one’s manager facilitates development and maintenance of a RN’s trust in one’s manager, a key ingredient in supportive RN-manager relationships. A relationship is a pattern of interactions, marked by uncertainty that another’s reciprocated behavior will be beneficial and forthcoming. Trust reduces this uncertainty. Within this study, the RN is the trustor, the individual who decides to trust one’s manager, and one’s manager is the trustee, the target of the RN’s trust. Trust is a quality of a RN, whereas trustworthiness is a perceived quality of one’s manager.

A number of disciplines have examined trust, resulting in multiple conceptualizations of trust, including trust as a rational-choice behavior, a leader’s moral duty, a dispositional trait, and an attitude. For this study, trust is a RN’s willingness to be vulnerable to future, uncertain behaviors of one’s manager that is based on the assumption that beneficial behaviors will be forthcoming, without the ability to control or monitor the manager. Perceived risk, willingness to be vulnerable, reliance, context specificity and uncertainty are necessary trust conditions which differentiate trust from cooperation, confidence and distrust.

Mayer’s et al. (1995) Integrative Model of Organizational Trust explains the conceptual gap that
differentiates between trust and trustworthiness. Trust determinants, a trustee’s perceived ability, benevolence and integrity and a trustor’s propensity to trust, leads to a willingness to take a risk in a relationship, resulting in a behavior that demonstrates trust. Cognitive and affective foundations of trust are argued to tap dimensions of trustworthiness, rather than trust. Trust may progress through deterrence-, knowledge- and identification-based phases. However, identification-based trust may not be achieved, likely due to a previous trust violation which may destroy or reduce trust. Trust’s dark side reflects a naivety or overabundance of trust.

From the empirical trust literature, trust in one’s manager is influenced by individual, managerial, relational and environmental characteristics. Consistent and moderately strong empirical support has been found for specific managerial trust determinants:

1. Benevolence towards employee
2. Integrity
3. Communication accuracy
4. Procedural justice
5. Access to support
6. Access to resources
7. Self-determination

A weak, but consistently significant relationship was confirmed between propensity to trust and trust in one’s manager. In addition, a moderately strong relationship was reported between benevolence towards co-workers of employee and managerial trust. However, this association was evident in only one study.

Conflicting or mixed results have been found for the following managerial trust determinants:

1. Job tenure of employee
2. Ability
3. Facilitation of group goals
4. Leader/follower interaction frequency
5. Interactional justice

Other managerial trust antecedents which have yet to be empirically tested are hypothesized to be:

1. Emotional availability
2. Manager’s span of control

To establish and sustain healthy professional practice environments which support nurse, patient, organizational and system outcomes, numerous nursing, policy and other health care professional stakeholders have advocated for the establishment and maintenance of a RN’s trust in one’s manager. Although the theoretical and empirically supported value of trust appeared to be appropriate and timely for current health care work contexts, few empirical studies have investigated determinants of a RN’s trust in one’s manager. Understanding factors that influence the development and growth of a RN’s managerial trust will facilitate creation of effective, evidence-based professional, organizational and systemic trust-enhancing strategies. To bridge the significant
knowledge gap between the urgent call to build and sustain a RN’s trust in one’s manager and the lack of understanding of the impact of numerous entities on a RN’s managerial trust, the study explored the influence of individual, managerial, relational and environmental antecedents of a RN’s trust in one’s manager.

**Theoretical Model**

Guided by a review of the related theoretical and empirical literature, the study’s hypothesized theoretical model, Determinants of Registered Nurses’ Trust in their Managers, integrated relationships among previously known and unknown managerial trust determinants within a RN-manager relationship (see Figure 8). The conceptual model delineated hypothesized relationships among the concepts and integrated characteristics of the individual RN and of one’s manager, aspects of the RN-manager relationship and qualities of the workplace as identified by the review of related theoretical and empirical managerial trust literature.

The hypothesized conceptual model depicted direct and indirect effects of empirically confirmed managerial trust antecedents (see Figures 2 - 5) as well as hypothesized indirect influences of empirically untested determinants on a RN’s trust in one’s manager (see Figures 6 and 7). The following empirically verified constructs were asserted to have a direct effect on the level of managerial trust:

1. A RN’s propensity to trust
2. A RN’s job tenure
3. Managerial ability
4. Managerial benevolence towards the RN
5. Managerial benevolence towards co-workers of the RN
6. Managerial integrity
7. Interactional justice
8. Procedural justice
9. Self-determination

In addition, other empirically supported constructs were hypothesized to indirectly impact on a RN’s level of managerial trust:

1. Manager’s facilitation of group goals
2. Manager’s communication accuracy
3. RN-manager interaction frequency
4. Access to support
5. Access to resources
6. Manager’s emotional availability
7. Manager’s span of control

To promote understanding regarding the effects of individual, managerial, relational and environmental antecedents on managerial trust, the determinants were grouped into four distinct categories. The first group, attributes of the RN, examined antecedents that were considered to be elements of a RN’s individual personality
and life experiences that may impact trust of another individual. Specific attributes in this category included the RN’s propensity to trust and job tenure. The second category, attributes of one’s manager, were behaviors of one’s manager directed towards a variety of individuals and not necessarily towards the RN in particular. A RN’s perception of a manager’s ability, benevolence towards one’s co-workers, integrity, facilitation of achievement of group goals and communication accuracy comprised this class of characteristics. The third group, attributes of a RN-manager relationship, consisted of actions that may occur during an RN-manager interaction. Given that the attributes were evident when the interaction was focused on the RN, this group of characteristics included benevolence towards the RN, RN-manager interaction frequency, interactional justice and emotional availability. The final category, attributes of the work environment, were aspects of the RN’s practice environment that may influence trust in one’s manager. Specific determinants of this category included procedural justice, access to support, access to resources, self-determination and manager’s span of control.

The study explored attributes of the nurse’s clinical unit as the work environment rather than the overall health care organization in which the nurse is employed. Within an acute care hospital, health care delivery is geographically organized according to a patient’s medical diagnosis or specialized health care needs (Kelly & Crawford, 2008). Each geographic area within a hospital is referred to as a clinical unit (Kelly & Crawford). For example, patients may be placed in a locality that specializes in the provision of oncology or cardiology health care. The division of patients results in improved quality of care as a continual group of nurses consistently apply the same care protocols and procedures to all patients in a particular geographic location within the hospital (Kelly & Crawford; Tourangeau & Cranley, 2006). As a result, nurses provide care for a particular group of patients that are situated in a specific clinical unit. Although nurses are employees of the overall organization, nurses usually remain with a particular clinical unit to provide specialized nursing care that is focused on the particular needs of the unit’s patient population (Anthony, Casey, Chau & Brennan, 2000). Given that nursing care delivery occurs on a clinical unit and that a nurse works on one specific unit, a nurse perceived that one’s clinical unit, rather than the overall organization, comprised the work environment. The hypothesized conceptual model therefore examined environmental attributes of a RN’s clinical unit rather than the entire health care organization.

**Study Purpose and Objectives**

In this study, a theoretical model was tested and refined that explored the impact of attributes of the individual RN, the manager, the RN-manager relationship and the work environment on a RN’s trust in one’s manager among RNs providing direct patient care in Ontario acute care hospitals (see Figure 8). Objectives of the study were to:

1. Survey nurses to obtain data to test the model.
2. Test the hypothesized model using nurse survey data.
3. Refine the model based on analyses of the data.
4. Disseminate knowledge acquired from the data analysis.
Research Question and Hypotheses

The research question addressed in the study is what were the determinants of a RN’s trust in one’s manager among RNs providing direct care to patients in Ontario acute care hospitals?

Hypotheses Testing

In the following section, each pathway in the hypothesized model is stated according to groups of attributes.

Attributes of RN:
H1. Job tenure will be positively related to trust.
H2. Propensity to trust will be positively related to trust.

Attributes of manager:
H3. Ability will be positively related to trust.
H4. Integrity will be positively related to trust.
H5. Goal facilitation will be positively related to ability.
H6. Communication accuracy will be positively related to ability.
H7. Communication accuracy will be positively related to benevolence towards the RN.
H8. Communication accuracy will be positively related to integrity.
H9. Benevolence towards co-workers of RN will be positively related to trust.

Attributes of RN-manager relationship:
H10. Benevolence towards RN will be positively related to trust.
H11. Interaction frequency will be positively related to ability.
H12. Interaction frequency will be positively related to benevolence towards RN.
H13. Interaction frequency will be positively related to integrity.
H14. Interaction frequency will be positively related to emotional availability.
H15. Interaction frequency will be positively related to communication accuracy.
H16. Interactional justice will be positively related to trust.
H17. Emotional availability will be positively related to benevolence towards RN.

Attributes of work environment:
H18. Procedural justice will be positively related to trust.
H19. Self-determination will be positively related to trust.
H20. Access to support will be positively related to self-determination.
H21. Access to resources will be positively related to self-determination.
H22. Span of control will be negatively related to interaction frequency.
H23. Span of control will be negatively related to emotional availability.
Hypothesized Theoretical Model of Determinants of Registered Nurses’ Trust in their Managers.
CHAPTER III: METHODS & PROCEDURES

This chapter describes the research methods and procedures that were used to implement the study. The research design, sample and sampling approach, selected instruments with operational definitions of variables, data collection methods and data management and analyses are presented. In addition, ethical considerations, risks and benefits are also described.

Research Design

The study employed a descriptive, cross-sectional survey design. The mailed, self-administered survey collected data from each participant at one single point in time and allowed identification of significant relationships between the concurrently measured variables. Although the primary purpose of the study was to test and refine a theoretical model that explained determinants of managerial trust, the overall purpose of the research design was to generalize research findings from randomly selected study participants to the population of interest, specifically RNs providing direct patient care in emergency departments in Ontario acute care hospitals (Dillman, Smyth & Christian, 2009).

Sample and Sampling Approach

The unit of analysis in this study was the individual registered nurse. To promote sample homogeneity, only acute care staff RNs who had identified their primary area of nursing practice as an emergency department in the current College of Nurses of Ontario registry were considered for inclusion in the study. The sample of emergency room staff nurses was chosen for three reasons. First, RNs who provided direct patient care in an emergency department were easily identifiable on the 2009 CNO database. Furthermore, emergency room staff nurses have not been over-surveyed within health systems research. Finally, a homogeneous sample was required to conduct structural equation modeling for the study’s statistical analysis (Kline, 2005). The study did not include registered nurses employed by specialty hospitals, such as addiction mental health centres, psychiatric, complex continuing care, rehabilitation or pediatric hospitals.

The sample of potential participants was drawn from the College of Nurses of Ontario (CNO) 2009 registration list. The CNO registrant database maintains current records of categories of each registrant’s nursing employer for whom they work the most hours, their position in nursing, their primary area of practice, and their home mailing addresses. Nurses were chosen from the population of 5 711 registered nurses registered with the CNO who had reported they were employed as a staff nurse within a emergency department in an Ontario acute care hospital (CNO, 2009). The CNO completed random sampling to ensure each emergency department RN had an equal probability of being selected for the study (Creswell, 2001). The inclusion criteria for potential participants were that the RN provided direct patient care to patients in an emergency department in an Ontario acute care hospital and had at least six months experience as a RN.

The time frame was chosen as there is evidence that within the first six months of commencing employment as an emergency room staff nurse, beginner nurses were focused on learning their new work roles and the units’ policies and procedures (Patterson, Bayley, Burnell & Rhoads, 2010). During the transition period
from graduation to RN employment, novice nurses reported high levels of stress due to rapid pace of the emergency department, high patient acuity, complexity of care, fear of failure and lack of self-confidence. Beginner nurses were consequently less able to fully interact with work colleagues. However after six months, beginner nurses became more skillful and confident with their care and were able to form meaningful relationships with their patients, co-workers and supervisors (Ferguson & Day, 2007; Patterson et al.). Given the anxiety and stress associated with a six month transition period, newly graduated nurses may be less able to critically examine their degree of trust in their managers and as a result were excluded from the study (Patterson et al.).

**Sample Size**

The CNO selected a random sample of RNs who reported they provided direct patient care within an emergency department of an Ontario acute care hospital. Given the complexity of the hypothesized conceptual model, data analysis required structural equation modeling (SEM) analytic techniques. To test and refine the proposed relationships within the conceptual model, SEM examined direct and indirect effects of predictors on the criterion variable, managerial trust (MacCallum & Austin, 2000). Identifying the number of participants needed for effective SEM analysis depended on many factors, including the size of the proposed model, distribution and reliability of the measured variables, amount of missing data and strength of the relationships among the variables (Muthen & Muthen, 2002). In general, although specific guidelines regarding sample size for SEM are conflicting and not well established (Muthen & Muthen; Weston, Gore, Chan & Catalano, 2008), a recommended sample size of at least 200 participants ensured there was adequate power to detect an important effect in the model (Hayduk, 1987; Kline, 2005; Weston et al., 2008). Specifically, Weston et al. advocated for at least 10 to 20 participants per indicator to reduce the likelihood of insufficient statistical power.

The hypothesized theoretical model required 64 indicators to accurately measure the constructs, necessitating a sample size of at least 640 participants. As this was cost-prohibitive, the decision was made that each latent variable would be measured by one indicator with a score that consisted of a ‘parceled’ set of items (Bandalos, 2002). The mean of the total score of the items was used as an indicator for each latent variable and replaced the scores of individual indicators in this study’s hypothesized model. Given that each of the 17 constructs in the hypothesized model required one ‘parceled’ indicator, a sample size of 340 was desired.

Given that a low response rate may have lead to a non-response bias, or error, it was desirable to achieve the highest response rate as possible (Dillman et al., 2009). When self-administered, mailed questionnaires were appropriately designed and implemented to encourage all sample participants to respond, Dillman et al. found that response rates ranged from 50 to 70%. Previously, response rates for Ontario hospital nurses who completed a 10-12 page, self-administered, mailed survey have ranged from 36% to 65% (Tourangeau et al., 2007). For a 36% planned survey response rate, surveys were mailed to 900 participants for a desired sample size of 320 nurses.

**Data Collection Procedures**

From the CNO 2009 registrant database, the CNO randomly selected 900 potential nurse participants on
the basis of their indication of current employment as a staff nurse providing direct patient care in a emergency department in an acute care Ontario hospital. Given that the CNO database is unable to screen for potential participants with at least six months RN experience, study participants with less than six months experience as a RN were asked to exclude themselves from the study. Once the randomized list of potential participants was received from CNO, each participant was assigned a participant number. Each survey package was marked with the participant number so that respondents who returned their surveys were tracked and reminder letters were only sent to non-responders. Participants were assured that their responses were confidential and that participant numbers were only used for follow-up.

Using a modified Dillman approach (Dillman et al, 2009), surveys were mailed to home addresses of 900 randomly selected potential participants (see Appendix A for survey). Potential respondents received a maximum of 5 mailings that consisted of 1 prenotice letter, maximum of 2 survey packets and maximum of 2 thank you/reminder letters over a 10-12 week period (see Appendix B for letters of information). A prenotice letter, sent 3-7 days prior to initial survey mailing, informed potential participants that an important survey will be arriving in a few days and that their response will be greatly appreciated. Dillman et al. asserted that a prenotice letter provides a positive and timely request to help with an important study and help improve response rates 3% to 6%. A general mail-out of the survey packet was then mailed out a few days later (week 1). Each survey packet included a 10 page self-administered (pencil-and-paper), 144 response item survey booklet, postage-paid return envelope and an information letter describing the study and assurance of anonymity and confidentiality. Potential participants were informed there is no obligation to participate. A contact number and email address were provided if participants had any questions or concerns.

Two weeks after the initial survey mail out (week 3), a thank you/reminder letter was mailed to all potential participants to thank respondents who had already completed a survey and to remind participants who had not completed the survey to do so right away. A second round of survey packets to non-responders was then mailed 4 weeks later (week 7). The second survey packet included an information cover letter, survey booklet and return envelope. A thank you/reminder follow-up letter was mailed to non-responders in week 9.

To thank participants for their valuable contributions, participants had an opportunity to select one of three non-profit, charitable organizations among which a total of $500 was proportionately donated on their behalf upon return of a completed survey. At the end of the survey, participants chose one of the following three charitable organizations: 1) Canadian Breast Cancer Foundation; 2) Ovarian Cancer Canada; or 3) Heart and Stroke Foundation of Ontario. Upon return of a completed survey, each charitable organization received a portion of $500 which corresponded with each organization’s proportion as selected by respondents. Attention is now turned toward operationalizations of the study’s predictor and outcome variables, beginning with attributes of an RN and followed by attributes of manager, attributes of a RN-manager relationship, attributes of a RN’s work environment and managerial trust.
Study Measures

Attributes of RN

Propensity to trust. Conceptually defined as a RN’s dispositional trait regarding the overall trustworthiness of others, the six item Social Trust Scale (Valenzuela, Park & Kee, 2009) was used to measure the construct (e.g. ‘Generally speaking, would you say that people can be trusted?’). Using a five choice response scale (1 = Never to 5 = Always), item scores were summed and then averaged to create a total score, with a higher score reflecting a RN’s greater propensity to trust. Three items were reverse-coded so that higher scores reflected greater propensity to trust. In initial psychometric testing among American college students, Valenzuela et al. concluded that the scale demonstrated acceptable internal consistency reliability ($\alpha = .74$). However, results regarding the scale’s validity were not reported. Given that the scale has not been incorporated into subsequent studies, additional knowledge of psychometric properties is unknown.

The Social Trust Scale was adapted from Rosenberg’s (1956) Faith in People Scale which consisted of two forced choice and three agree/disagree statements. Positive responses to the statements reflected an absence of faith in people, whereas negative responses indicated high degree of faith in people (e.g. ‘If you don’t watch yourself, people will take advantage of you.’ 1 = Agree; 0 = Disagree). Originally tested with American college students, Rosenberg reported a coefficient of reproducibility of .92. Rosenberg asserted the relationship between an individual’s faith of others and occupation choice was evidence of validity, given that students with high faith scores tended to choose people-focused occupations, such as nursing or education, whereas students with low faith scores tended to choose occupations that may be considered less people-focused, such as business or finance. This relationship existed even when gender differences were controlled.

From the above description, two problems were evident regarding the Faith in People Scale (Valenzuela et al., 2009). First, two items were double-barreled in that each item was actually two separate questions (e.g. ‘Some people say that most people can be trusted. Others say you can’t be too careful in your dealings with people. How do you feel about it?’). The use of double-barreled questions is not recommended as a respondent may feel differently about each part of the question and be unsure regarding the proper way to respond (Dillman et al., 2009). In addition, the researcher may not know to which component the respondent is referring if they answer ‘yes’ or ‘no’. Second, conceptualizing dispositional trust as a dichotomy (i.e. Agree/Disagree) prevents participants from selecting a more precise measurement regarding propensity to trust and consequently, may prevent understanding the potentially wide range of participants’ trust propensities (Valenzuela et al.). To address the limitations, Valenzuela et al. split each original statement into six separate items and incorporated a five choice response scale, resulting in the Social Trust Scale.

Job tenure. Referring to the length of time an employee has worked as a staff RN in the current emergency department, a single item was used to measure job tenure: (‘Years you have worked as a Registered Nurse in your current unit/role ____________________ ’).
Attributes of Manager

Ability. Conceptually defined as the knowledge, skills and competencies that enable one’s manager to accomplish a task that affects the work life of a staff RN (Mayer et al., 1995), the six item Ability Scale (Mayer & Davis, 1999) was used to measure the construct (e.g. ‘My nurse manager/immediate supervisor has much knowledge about the work that needs to be done.’). Using a five choice response scale (1 = Strongly Disagree to 5 = Strongly Agree), item scores were summed and then averaged to create a total score with a higher score indicating greater perceived ability of one’s manager.

Based upon Mayer’s et al. Integrative Model of Organizational Trust, Mayer and Davis (1999) developed the scale to measure perceptions of managerial ability among plastics plant employees. Over the study’s two data collection time periods, the scale showed good internal consistency reliability (α = .85 and .88, respectively). Subsequent studies have also provided evidence of good to very good internal consistency reliability for the scale among insurance workers (α = .84; Bews & Roussouw, 2002); manufacturing plant employees (α = .91; Mayer & Gavin, 2005) and restaurant employees (α = .94; Wasti et al., 2007). In terms of the scale’s validity, Mayer and Davis confirmed that items significantly loaded onto the hypothesized construct. There was an absence of cross-loading. Similar findings of validity were also demonstrated in subsequent studies (Davis et al., 2000; Mayer & Gavin; Wasti et al.). Further evidence of psychometric properties has not been reported.

Benevolence towards co-workers of a RN. Conceptualized as the extent to which a manager consistently supports and safeguards the welfare of co-workers of the RN (LaPierre, 2007), the five item Benevolence Scale towards Co-workers was used to measure the construct. Adapted from the Benevolence Scale towards RN Scale (Mayer & Davis, 1999), items were changed to reflect the target of the manager’s actions. ‘My nurse manager/immediate supervisor shows concern for what is important to me.’ was changed to ‘My nurse manager/immediate supervisor shows concern for what is important to my co-workers.’ Using a five choice response scale (1 = Strongly Disagree to 5 = Strongly Agree), item scores were summed and then averaged to create a total score with a higher score reflecting greater perceived benevolence of one’s manager towards a RN’s co-workers. Given that the scale has not been used in previous studies, psychometric properties of the scale have not been reported.

Integrity. Referring to the manager’s consistent application of moral and ethical principles that are shared by a staff RN and one’s manager (Mayer et al., 1995), the six item Integrity Scale (Mayer & Davis, 1999) was used to measure the concept (e.g. ‘My nurse manager/immediate supervisor takes actions that are consistent with his/her words.’). Employing a five choice response scale (1 = Strongly Disagree to 5 = Strongly Agree), item scores were summed and then averaged to create a total score with a higher score indicating greater perceived integrity of one’s manager.

Based upon Mayer’s et al. Integrative Model of Organizational Trust, Mayer and Davis (1999) established the scale to measure managerial integrity among plastics plant workers. Over the study’s two data collection time periods, the scale showed good internal consistency reliability (α = .82 and .88, respectively).
Other studies have also reported good to very good internal consistency reliability for the scale among insurance workers (α = .93; Bews & Roussouw, 2002); firefighters (α = .81; Colquitt & Rodell, 2011); two studies involving call centre workers (α = .88 and .92; Grant & Sumanth, 2009); manufacturing plant employees (α = .85; Mayer & Gavin, 2005) and restaurant employees (α = .87; Wasti et al., 2007). Regarding validity, Mayer and Davis verified that items significantly loaded onto the hypothesized construct. There were no cross-loadings. Similar findings of validity were also confirmed in subsequent studies (Davis et al., 2000; Grant & Sumanth; Mayer & Gavin; Wasti et al.). Additional evidence of the scale’s validity has not been reported.

**Facilitation of achievement of group goal.** Although a staff RN is directly responsible for nursing care of a particular patient, a RN may work with and depend on a variety of health care providers, such as other RNs, Registered Practical Nurses (RPN) or unlicensed assistant personnel (UAP), to provide care (Anthony et al., 2000). A key role of a manager is to ensure that the health care team successfully cooperates in order to provide safe and effective patient care (Kelly & Crawford, 2008). Consequently, achievement of a group goal reflected a manager’s ability to successfully foster effective teamwork among care providers of an emergency department. Adapted from a national study of occupational stress (Muntaner, Tien, Eaton & Garrison, 1991), a single item was used to measure the concept (‘My nurse manager/immediate supervisor is successful at getting people to work together.’). Using a five choice response scale (1 = Strongly Disagree; 5 = Strongly Agree), scores ranged from 1 to 5 with a higher score reflecting greater managerial facilitation of effective team work.

**Communication accuracy.** Referring to the degree to which a manager’s communication is accurate and valid, the 4 item subscale of the 13 item Perceived Information Quality (PIQ) Scale (Maltz & Kohli, 1996) was used to measure the concept (e.g. ‘Over the previous three months, my nurse manager/immediate supervisor provided me with accurate information.’). Using a five choice response scale, (1 = Strongly Disagree; 5 = Strongly Agree), item scores were summed and then averaged to create a total subscale score with a higher score implying greater accuracy of communication. Two items of the subscale were reverse-coded so that higher scores suggested greater communication accuracy.

Originally developed to evaluate quality of information within a marketing context (Maltz & Kohli, 1996), the PIQ is comprised of four dimensions which are believed to shape information quality. In addition to accuracy, the other subscales measure relevance (e.g. ‘Over the previous three months, my nurse manager/immediate supervisor provided me with relevant information.’), clarity (e.g. ‘Over the previous three months, my nurse manager/immediate supervisor provided me with clear ideas.’) and timeliness (e.g. ‘Over the previous three months, my nurse manager/immediate supervisor provided me with information in a timely manner.’). Cronbach’s alpha was calculated based on the means of the four subscales and showed good internal consistency (α = .86). Internal reliability consistency was not reported for each subscale. Although only communication accuracy was examined in the study as a hypothesized trust determinant, the survey included the entire 13 item scale as prior research incorporated PIQ in its entirety (Maltz & Kohli).
After the items were pre-tested with 24 managers and 5 academic experts, pilot testing of the resulting scale was completed with 77 MBA students, who reported little difficulty in completing the PIQ. In an investigation of information dissemination processes, results from confirmatory factor analysis indicated that four distinct factors were evident and items loaded as hypothesized on the appropriate construct. There were no cross-loadings. As the PIQ has not been employed in subsequent studies, further psychometric properties of the scale are unknown.

Attributes of RN-Manager Relationship

Benevolence towards the RN. Reflecting the degree to which a manager consistently supports and safeguards the RN’s welfare, the five item Benevolence Scale (Mayer & Davis, 1999) was used to measure the construct (e.g. ‘My nurse manager/immediate supervisor is very concerned about my welfare.’). Employing a five choice response scale (1 = Strongly Disagree to 5 = Strongly Agree), item scores were summed and then averaged to create a total score with a higher score reflecting greater perceived benevolence of one’s manager towards the RN.

Based upon Mayer’s et al. (1995) Integrative Model of Organizational Trust, Mayer and Davis (1999) established the scale to measure managerial benevolence towards plastics plant workers. Over the study’s two data collection time periods, the scale showed good internal consistency reliability (α = .87 and .89, respectively). Good to very good internal consistency reliabilities have been reported for studies involving insurance workers (α = .84; Bews & Roussouw, 2002); call centre workers (α = .85; Grant & Sumanth, 2009); manufacturing plant employees (α = .89; Mayer & Gavin, 2005) and restaurant employees (α = .92; Wasti et al., 2007). Regarding validity, Mayer and Davis verified that items significantly loaded onto the hypothesized construct. There was an absence of cross-loading. Subsequent studies verified similar findings of validity (Davis et al., 2000; Grant & Sumanth; Mayer & Gavin; Wasti et al.). Additional evidence of psychometric properties of the scale has not been reported.

Interaction frequency. Reflecting the frequency of RN-manager interactions, McAllister’s (1995) four item Interaction Frequency Scale was used to measure the construct (e.g. ‘How frequently does your nurse manager/immediate supervisor initiate work-related interaction with you?’). Using a five choice response scale (1 = Never to 5 = Very often), item scores were summed and then averaged to create a total score with a higher score indicating greater frequency of interaction with one’s manager.

Initially developed to investigate the relationship between interaction frequency and affect-based trust among 194 manager-peer dyads, McAllister (1995) found that the instrument demonstrated very good internal consistency reliability (α = .91). Through confirmatory factor analysis, the four items loaded significantly onto the hypothesized latent variable with no evidence of cross-loading. Furthermore, in a study of private sector workers, Kacmar, Witt, Zivnuska and Gully (2003) also concluded that the instrument showed good internal consistency reliability (α = .85) but did not provide results of validity testing. Further evidence of psychometric properties has not been demonstrated.
**Interactional justice.** Conceptualized as a RN’s perceived fairness of the interpersonal treatment received from one’s manager, the six item Interactive Justice Scale (Moorman, 1991) was used to measure the concept (e.g. ‘Your nurse manager/immediate supervisor considers your viewpoint.’). Employing a five choice response scale (1 = Strongly Disagree; 5 = Strongly Agree), item scores were summed and then averaged to create a total score with a higher score suggesting a greater perception of interactional justice.

Guided by previous theoretical work (Bies, 1987; Bies & Moag, 1986), Moorman (1991) developed the Interactive Justice Scale to investigate justice perceptions among manufacturing employees. Initial psychometric testing demonstrated very good internal consistency reliability ($\alpha = .94$), while results from confirmatory factor analysis indicated that the items significantly loaded onto their respective latent variable. No significant cross loadings were evident. Similar results of internal consistency reliability and confirmatory factor analysis were found among steelworkers’ union members ($\alpha = .92$; Fuller & Hester, 2001). Additional confirmation of psychometric properties has not been reported.

**Emotional availability.** Conceptually defined as a manager’s complete state of emotional engagement whose thoughts, feelings and beliefs are readily accessible to a RN to allow connection in a particular moment (Kahn, 1990, 1993), a three item Emotional Availability subscale was developed for the study to measure the concept (e.g. ‘My nurse manager/immediate supervisor pays attention to what I’m saying when we interact.’). Using a five choice response (1 = Strongly Disagree to 5 = Strongly Agree), item scores were summed and then averaged to create a total subscale score with a higher score reflecting greater perceived emotional availability of one’s manager.

The instrument was guided by findings of a qualitative study of interaction patterns among summer camp counsellors and members of an architecture firm in which study participants were observed to emotionally, physically and cognitively express themselves in their job roles and work context (Kahn, 1990). Similar patterns of behaviors were also observed among social service employees, their co-workers and supervisors (Kahn, 1993). In keeping with findings of the two studies, the survey also included a three item Physical Availability subscale (e.g. ‘My nurse manager/immediate supervisor is physically present in my emergency department at regular intervals.’) as well as a three item Cognitive Availability subscale (e.g. ‘My nurse manager/immediate supervisor understands the work that I do.’), creating a nine item Availability Scale. Given that the scale was created specifically for this study, psychometric properties are not known.

**Attributes of Work Environment**

**Procedural justice.** Reflecting the extent of perceived fairness of policies and procedures used to make decisions pertinent to the emergency department, regardless of the actual decision-making outcome, the seven item Procedural Justice Scale was used to measure the construct (Moorman, 1991) (e.g. ‘On my unit, when my nurse manager/immediate supervisor makes a decision about employees, all sides affected by the decision are represented.’). Employing a five choice response scale (1 = Strongly Disagree to 5 = Strongly Agree), item scores were summed and then averaged to create a total score with a higher scale score suggesting a greater perception of
procedural fairness.

Based upon previous theoretical work (Folger & Konovsky, 1989), Moorman (1991) developed the scale to examine the relationship between justice perceptions and organizational citizenship behavior among manufacturing employees. Initial psychometric testing indicated very good internal consistency reliability ($\alpha = .95$). Results of confirmatory factor analysis indicated that the items significantly loaded on their respective latent variable. There was no significant cross-loading. Similar findings of internal consistency reliability and factor analysis were found in an investigation of justice perceptions among steelworker’s union members ($\alpha = .94$; Fuller & Hester, 2001) and among transportation employees ($\alpha = .94$; Hopkins & Weathington, 2006). Additional evidence of the scale’s psychometric properties has not been reported.

**Access to support.** Reflecting a workplace empowerment structure that facilitates access to guidance from one’s manager, the 3 item Access to Support subscale of the 19 item Conditions of Work Effectiveness Questionnaire (CWEQ-II; Laschinger, 1996) was used to measure the construct (e.g. ‘How much access to specific comments about things you could do to improve do you have in your present job?’). Employing a five choice response scale (1 = None; 5 = A lot), item scores were summed and then averaged to create a total score with a higher score reflecting greater access to support from one’s manager. Among staff nurses, researchers have concluded the Access to Support subscale demonstrated adequate ($\alpha = .73$; Upenieks, 2003) to very good ($\alpha = .90$; Armstrong & Laschinger, 2006) internal consistency reliability.

Based on Kanter’s (1977) theory of organizational empowerment, Laschinger (1996) modified the original 31 item CWEQ and integrated items from the Job Activities Scale (JAS) and Organizational Relationships Scale (ORS) to develop the CWEQ-II. Access to Support subscale was one of six subscales of the CWEQ-II which also measured access to opportunity (e.g. ‘How much opportunity to gain new skills and knowledge do you have in your present job?’), information (e.g. ‘How much to information about the values of top management do you have in your present job?’), resources (e.g. ‘How much time to do necessary paperwork do you have in your present job?’), as well as formal power (e.g. ‘How much flexibility do you have in your present job?’) and informal power (e.g. ‘How much opportunity do you have for collaborating on patient care with physicians in your present job?’). Although the study specifically explored access to support as a hypothesized trust antecedent, the complete 19 item CWEQ-II was included in the survey in keeping with previous research (e.g. Armstrong & Laschinger, 2006; DeCicco, Laschinger & Kerr, 2006; Faulkner & Laschinger, 2008).

The CWEQ-II also contained two items that measure global empowerment in order to assess construct validation (e.g. ‘Overall, I consider my workplace to be an empowering environment’; 1 = Strongly Disagree; 5 = Strongly Agree’). The scores from the two items were summed and averaged to determine a global empowerment score. The global empowerment score was not incorporated into the total empowerment score, but rather examined the correlation between the total empowerment score and the global empowerment score in order to verify construct validity of the CWEQ-II. Studies have provided evidence of construct validity with correlations between the total and global empowerment scores ranging from $r = .74$ (Laschinger, Almost, Purdy & Kim, 2004).
to $r = .95$ (DeCicco et al., 2006). In addition, Laschinger, Finegan, Shamian and Wilk (2001) demonstrated that the items significantly loaded on their hypothesized factor. Subsequent confirmation of the scale’s validity has not been reported.

**Access to resources.** Referring to a workplace empowerment structure that facilitated access to adequate time and personnel in order to provide effective and safe nursing care, the 3 item Access to Resources subscale of the the 19 item Conditions of Work Effectiveness Questionnaire (CWEQ-II; Laschinger, 1996) was used to measure the construct (e.g. ‘How much time to do necessary paperwork do you have in your present job?’). Employing a five choice response scale ($1 = $None; $5 = A lot$), item scores were summed and then averaged to create a total score with a higher score reflecting greater access to resources. Among staff nurses, researchers have found that the Access to Resources subscale demonstrated adequate ($\alpha = .71$; Laschinger et al., 2004) to very good ($\alpha = .88$; Upenieks, 2003) internal consistency reliability.

Based on Kanter’s (1977) theory of organizational empowerment, Laschinger (1996) modified the original 31 item CWEQ and integrated items from the Job Activities Scale (JAS) and Organizational Relationships Scale (ORS) to develop CWEQ-II. Access to Resources subscale was one of six subscales of the CWEQ-II which also measured access to opportunity (e.g. ‘How much opportunity to gain new skills and knowledge do you have in your present job?’), information (e.g. ‘How much to information about the values of top management do you have in your present job?’), support (e.g. ‘How much access to specific comments about things you could do to improve do you have in your present job?’) as well as formal power (e.g. ‘How much flexibility do you have in your present job?’) and informal power (e.g. ‘How much opportunity do you have for collaborating on patient care with physicians in your present job?’). Although the study specifically examined access to resources as a hypothesized trust determinant, the whole 19 item CEWQ-II was retained for the survey as previous research has incorporated CWEQ-II in its entirety (e.g. Armstrong & Laschinger, 2006; DeCicco et al., 2006; Faulkner & Laschinger, 2008).

The CWEQ-II also contains two items that measure global empowerment to evaluate construct validation (e.g. ‘Overall, I consider my workplace to be an empowering environment’; $1 =$ Strongly Disagree; $5 =$ Strongly Agree’). The scores from the two items were summed and averaged to determine a global empowerment score. The global empowerment score was not incorporated into the total empowerment score, but rather examined the correlation between the total empowerment score and the global empowerment score in order to verify construct validity of the CWEQ-II. Studies have shown a strong correlation between the total and global empowerment scores which ranged from $r = .74$ (Laschinger et al., 2004) to $r = .95$ (DeCicco et al., 2006), providing evidence of construct validity. In addition, Laschinger, Finegan, Shamian and Wilk (2001) demonstrated that the items significantly loaded on their hypothesized factor. Further examination of the scale’s validity has not been demonstrated.

**Self-determination.** Referring to an individual’s sense of control and autonomy over work behaviors and processes, the 3 item Self-determination subscale of the 12 item Psychological Empowerment Instrument
(Spreitzer, 1995) was used to measure the construct (e.g. ‘I can decide on my own how to go about doing my own work.’). Employing a five choice response scale (1 = None; 5 = A lot), item scores were summed and then averaged to create a total score with a higher score representing a greater perception of self-determination. Among insurance employees, Spreitzer found that the Self-determination subscale demonstrated good test-retest reliability for initial and subsequent testing five months after initial testing (α = .80 and .79, respectively).

The Self-determination subscale was one of four subscales of the 12 item Psychological Empowerment Instrument (Spreitzer, 1995), which also measured impact (e.g. ‘I have a great deal of control over what happens in my department.’), competence (e.g. ‘I have mastered the skills necessary for my job.’) and meaningfulness (e.g. ‘The work I do is meaningful to me.’). Although the study specifically investigated self-determination as a hypothesized trust determinant, the entire 12 item Psychological Empowerment Instrument was retained for the survey as previous research has incorporated the entire instrument (e.g. Spreitzer, 1995, 1996; Laschinger, Finegan, Shamian & Wilk, 2001; Bartram & Casimir, 2007).

In terms of validity, Spreitzer (1995) reported that each item loaded on the appropriate factor and the four factors were significantly correlated with each other, suggesting the presence of convergent and discriminant validities. Similarly, additional evidence of validity was found in later studies (Bartram & Casimir, 2007; Chan et al., 2008). Further support for the scale’s psychometric properties has not been reported.

**Span of control.** Reflecting the number of employees directly supervised by a RN’s manager, one item was used to measure span of control (Squires, Tourangeau, Spence Laschinger & Doran, 2010) (‘Including nursing staff, approximately how many people report to your nurse manager/immediate supervisor?_________ (Enter number of people).’).

**Trust.** Conceptualized as a RN’s willingness to be vulnerable to future uncertain actions of one’s manager that are based on the assumption that behaviors will be beneficial to the nurse, without the ability to control or monitor the manager (Mayer et al., 1995; Rousseau et al., 1998), a single item was used to measure the construct (e.g. ‘I trust my nurse manager/immediate supervisor.’). Using a five choice response scale (1 = Strongly Disagree; 5 = Strongly Agree), scores ranged from 1 to 5 with a higher score reflecting greater trust in one’s manager.

**Demographic Information**

Demographic information included: description of organization (e.g. teaching/non-teaching), annual number of patient visits, patient population served by the emergency department, professional, organizational and job tenures, current and preferred employment status (full-time, part-time, casual/occasional), usual length of shift (8/10/12 hours), union membership, manager’s educational background (RN/non-RN), assistive personnel for manager (charge nurse without a patient assignment, clinical nurse educator/instructor/clinical nurse specialist/advanced practice nurse, coordinator/clerk(s)/secretary), current marital status, gender, year of birth, educational preparation completed, current enrollment in formal education program, completion of specialty certificate and rating of self-perceived health.
**Data Preparation and Screening**

Upon return of a completed survey, survey data was entered into SPSS 17.0® software program. Data coding and entry were double checked by a second coder with corrective action for discrepancies found. Data was also exported to The Analysis of Moment Structures, or AMOS 17.0® software program to test the measurement model and the hypothesized structural model. After coding and double entry of survey data, data were prepared and screened for missing data, univariate and multivariate outliers, distribution normality and multicollinearity.

**Missing Data**

To avoid bias in standard errors and parameter estimates, (Allison, 2003), the amount and pattern of missing data was examined. Evaluation of frequencies and percentages of variables indicated that missing data ranged from 0 % for ability to 8.5 % for educational background of manager and appeared to have a non-systemic pattern of missingness. As educational background of one’s manager was used to describe the sample and was not included in the hypothesized model, further management of the missing data for this particular variable was not warranted. For model concepts, 29 (6.7%) participants had missing data for the variables of job tenure and span of control.

Regression imputation was used to replace missing values. Variables with missing data were regressed on other variables with nonmissing data. The estimated regression equation was then employed to generate predicted values for the missing data (Allison, 2003). Given that the dataset had less than 10% missing data, this strategy was an appropriate approach to missing data management (Kline, 2005). Deletion, simple mean imputation, maximum likelihood estimation (MLE) and regression imputation are other possible approaches to missing data management (Allison, 2003; Kline, 2005). Listwise deletion was not employed as this strategy may result in a substantially smaller sample size than originally planned and consequently diminished the available analytic power. Pairwise deletion was not implemented given that it may have resulted in a variable sample size from one analysis to the next. Simple mean imputation was not used as it may have distorted distribution of the data. Data distribution may become more peaked at the mean, decreasing a score’s variance and covariance (Kline). Alternatively, MLE estimates missing values from the available data to create models for the complete data set and the incomplete data set (Kline). This strategy then selects parameter estimates which have the maximum likelihood of reproducing the observed data (Squires & Tourangeau, 2009). As missing data is not replaced and the database remains incomplete, MLE would not have enabled the use of modification indices during structural modelling techniques to revise the hypothesized model. Therefore, MLE was not selected to manage missing data.

**Outliers**

Taking into consideration that extreme scores artificially inflate chi-square values and may have lead to false rejection of a model as well as underestimation of standard errors of parameters (Kline, 2005), SPSS Box Plots for each variable were examined to identify the presence of univariate outliers. No extreme scores were
found for any of the individual items, ruling out the presence of univariate outliers.

During analysis of the hypothesized model, Mahalanobis distance ($D^2$) test was used to determine the presence of multivariate outliers. Referring to the squared distance from a set of scores for an individual case (vector) and multidimensional mean for the data set (centroids), an outlying case will have a distinctive $D^2$ from all other cases (Kline, 2005). Additionally, AMOS provides two additional statistics, $p1$ and $p2$. $P1$ refers to the probability of any score exceeding the squared Mahalanobis distance of a specific case and is expected to have a small value. $P2$ is the probability that the largest squared distance of any score would be greater than $D^2$ (Bollen, 1987). Assuming normality, large values for $D^2$ and small values for $p2$ indicate that a case is improbably far from the centroid and is likely an outlier. During analysis of the hypothesized structural model with a recommended conservative level of significance ($p < .001$; Kline, 2005), 5 cases were initially considered to be outliers with a high $D^2$ value and a $p2$ value less than .001. However upon closer inspection, the observations were found to have valid responses. All cases were therefore retained in the database to produce a final sample size of 342 participants.

**Distribution Normality**

After identification of multivariate outliers, study variables were examined for skewness and kurtosis. Skewness and kurtosis are two ways in which data distribution may be non-normal (Kline, 2005). Normality is assumed when absolute values of skewness index less than or greater to 3 and kurtosis values less than or equal to 7 (Kline, 2005). The values of skewness for the items ranged from -0.60 to 0.41 while kurtosis values ranged from -1.29 to 0.28, reflecting normal data distribution.

**Multicollinearity**

In terms of SEM analysis, multicollinearity may lead to inaccurate coefficient estimates and standard errors, as well as large confidence intervals, low power and unacceptably high Type II error rates (Kline, 2005). To avoid these outcomes, pairwise correlations among study variables were evaluated to identify multicollinearity. Correlation coefficient values .20 and below were considered very weak or non-existent, those between .20 and .40 to be weak, those between .40 and .70 to be moderately strong, those between .70 and .85 to be high or strong and those greater than .85 to be very high (Munro, 2005). Correlation coefficient values were greater than .85 was used to demonstrate evidence of multicollinearity (Kline, 2005). Results of pairwise correlations are presented in Chapter 4.

**Descriptive Analyses**

Following data preparation and screening, several statistical techniques were employed to answer the research question. First, descriptive analyses were completed to understand mean scores, standard deviations, ranges of responses as well as frequencies and percentages for categorical variables. Total scores were computed for each multi-item measure. Each variable score was standardized to be out of 100 to facilitate ease of understanding with a scale ranging from 0 to 100. Internal consistency coefficients (Cronbach’s alpha) were calculated for multi-item instruments before and after confirmatory factor analysis (CFA) of measurement models.
Structural Equation Modeling

Given the complexity of the study’s hypothesized model, SEM was performed to test the hypotheses and revise the proposed relationships between concepts in the hypothesized model. Guided by the literature review, the study’s hypothesized model (see Figure 8) illustrated a theorized pattern of linear relationships among an arrangement of latent variables (LV), hypothesized constructs that were not directly measured and measured variables (MV) that functioned as indicators of theoretical constructs (Kline, 2005; Weston et al., 2008).

Compared to other analytic techniques, SEM was chosen as it has numerous unique advantages and benefits. Firstly, SEM is a multivariate technique used in the testing and revision of hypothesized models. Direct and indirect relationships among constructs were simultaneously tested, as opposed to other statistical tests which examine only separate individual effects represented in the model (Hayduk, 1987; Kline, 2005). By creating a higher-level of analysis, SEM facilitated understanding of a model’s theoretical implications within the real world (Kline). Secondly, SEM used CFA to confirm validity of measurement models. Furthermore, SEM addressed how constructs correlated with other variables and gave a more complete account of their variance within the specified model (Kline). In addition, SEM depicted measurement error associated with indicators and dependent latent variables, thereby controlling for error in the analysis (Weston et al., 2008). Other statistical analysis tests, such as regression, examine all variables without considering either measurement error or disturbance error associated with each construct. In the study, model estimation was completed by AMOS 17.0 ® software program as it was more readily available and cost-effective than other established SEM programs.

Following data preparation and descriptive analyses, a two-step approach was implemented for analysis and modification of the hypothesized model. Firstly, CFA of the measurement model underlying a full structural equation model was completed to ensure that each instrument was a valid measure of its construct. When fit of the measurement model was acceptable, then the second step proceeded to test the structural equation model by comparing its fit with that of the study data.

Measurement Model

Items within each instrument underwent CFA to determine the extent to which items measure a specific construct (Byrne, 2010). Validation of measurement model allowed evaluation of the model fit through goodness-of-fit indices and consideration of possible modifications to the model. Although various estimation procedures exist, analyses of measurement models employed maximum likelihood estimation (MLE) as it selected estimates which had the greatest chance of reproducing the observed data (Kline, 2005). Several fit indices were used to report and interpret the goodness of fit between the hypothesized model and observed data (Kline, 2005). These specific indices were chosen as they have been found to be the most accurate reflection of model fit (Kline). Chi-square ($\chi^2$) was used to assess the discrepancy between the sample covariance matrix and the hypothesized model. Ideally, a non-significant difference with probability greater than .05 was evidence of good fit. Standardized Root Mean Square Residual (SRMR) referred to the average discrepancy between observed and hypothesized correlation matrices. Values less than .05 were desired. Evaluation of the Comparative Fit Index (CFI) represented
a comparison between the hypothesized model and the independence (null) model. Taking sample size into account, CFI values greater than .95 represented good fit. Lastly, Root Mean Square Error of Approximation (RMSEA) examined the error of approximation in the population and reported a 90% confidence interval for the RMSEA. Considered to be the most informative criterion in SEM (Byrne, 2010), RMSEA was used in conjunction with pCLOSE which reflected closeness of fit. RMSEA values of less than .05 and pCLOSE values greater than .50 provided evidence of good fit.

Any subsequent modification to the measurement model was primarily guided by theoretical knowledge. Although statistically-derived modification indices (MI), specifically measurement error covariance values, provided evidence of model misspecification, the decision to retain and/or delete an item was primarily based on theoretical reflection rather than fit statistics. Representing random error, measurement error covariances arose from items cross-loading on an omitted construct or a significant degree of content overlap with another item (Byrne, 2010). Items were examined individually from highest to lowest MI, and if removed, the modified model was reassessed for fit. Before any item was deleted, the content was examined to make certain that the meaning and item intent were still captured by remaining indicators. Associated with each MI was a parameter change statistic (Par change) which represented the predicted estimated change in the new path coefficient (Kline, 2005).

Given that the hypothesized model consisted of 64 indicators and required a sample size of at least 640 participants, the decision was made that each latent variable was measured by one indicator with a score that consisted of a ‘parceled’ set of items that were retained as a result of CFA (Bandolos, 2002). The mean of the total score of the retained items was used as the indicator for each latent variable. Item parceling involved averaging item scores from the retained items of a measuring instrument and replaced the scores of individual indicators (Little, Cunningham, Shahar & Widaman, 2002). For unidimensional constructs, such as constructs examined in this study, item parceling was found to result in better fitting models, as determined by chi-square, CFI and RMSEA, as well as less bias in estimation of structural pathways (Bandolos).

Prior to structural equation modeling, job tenure and span of control were divided into quartiles to better test their relationships with managerial trust. Job tenure and span of control were each measured by one indicator, consisting of four quartiles (see Chapter 4 for more information). Table 1 contains an outline of the number of indicators for each latent variable if non-parceled items were used. Figure 9 depicts one item parcel for each latent variable.
<table>
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<tr>
<th>Category</th>
<th>Latent Variable</th>
<th># of Indicators</th>
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<tr>
<td>Attributes of RN</td>
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</tr>
<tr>
<td></td>
<td>Job tenure</td>
<td>1</td>
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<tr>
<td>Attributes of Manager</td>
<td>Ability</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Benevolence towards co-workers</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Integrity</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Facilitation of group goal</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Communication accuracy</td>
<td>3</td>
</tr>
<tr>
<td>Attributes of RN-Manager Relationship</td>
<td>Benevolence towards RN</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Interaction frequency</td>
<td>4</td>
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<td>Attributes of Work Environment</td>
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<td>Total</td>
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<td>64</td>
</tr>
</tbody>
</table>
Figure 9
Hypothesized Structural Equation Model of Determinants of Registered Nurses’ Trust in their Managers
Guided by examination of how accurately item parcels measured their underlying constructs as well as previous health services research (Cummings et al., 2007, 2008), each parcel was assigned 3% to 20% of its variance as measurement error (see Table 2). Representing the amount of unexplained variance, measurement error allowed compensation for lack of clarity in items, awkward wording and other measurement difficulties (Kline, 2005).

Table 2
Measurement Error Percentage of Item Parcels

<table>
<thead>
<tr>
<th>Category</th>
<th>Item Parcel for Latent Variable</th>
<th>% Assessed as Measurement Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributes of RN</td>
<td>Propensity to trust</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Job tenure</td>
<td>3</td>
</tr>
<tr>
<td>Attributes of Manager</td>
<td>Ability</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Benevolence towards co-workers</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Integrity</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Communication accuracy</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Goal facilitation</td>
<td>5</td>
</tr>
<tr>
<td>Attributes of RN-Manager</td>
<td>Interaction frequency</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Interactional justice</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Emotional availability</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Benevolence towards RN</td>
<td>5</td>
</tr>
<tr>
<td>Attributes of Work Environment</td>
<td>Access to support</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Access to resources</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Procedural justice</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Self-determination</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Span of control</td>
<td>20</td>
</tr>
<tr>
<td>Outcome</td>
<td>Trust in manager</td>
<td>5</td>
</tr>
</tbody>
</table>

After CFA and possible measurement model modification, the full hypothesized structural model underwent maximum likelihood estimation (MLE) to evaluate model fit through goodness of fit indices and consideration of possible modifications to the model. Several fit indices were used to report and interpret the goodness of fit between the hypothesized model and observed data (Kline, 2005). These specific indices were chosen as they have been found to be the most accurate reflection of model fit (Kline). Chi-square ($\chi^2$) was used to assess the discrepancy between the sample covariance matrix and the hypothesized model. Ideally, a non-significant difference with probability greater than .05 provided evidence of good fit. Standardized Root Mean Square Residual (SRMR) referred to the average discrepancy between observed and hypothesized correlation matrices. Values less than .05 were desired. Evaluation of the Comparative Fit Index (CFI) represented a comparison between the hypothesized model and the independence (null) model. Taking sample size into account, CFI values greater than .95 represented good fit. Lastly, Root Mean Square Error of Approximation (RMSEA)
examined the error of approximation in the population and reported a 90% confidence interval for the RMSEA. Considered to be the most informative criterion in SEM (Byrne, 2010), RMSEA was used in conjunction with pCLOSE which reflected closeness of fit. RMSEA values of less than .05 and pCLOSE values greater than .50 provided evidence of good fit.

A review of MI for each model suggested additional pathways be included or excluded from the model. Incorporation of further pathways was primarily based on theoretical reasoning, with suggested MI and parameter change values employed only as statistical guidelines. Modification indices also specified potential correlations between error terms, believed to arise from an unknown, common cause shared by both indicators or item content overlap (Byrne, 2010). Given that there were no strong theoretical reasons for expecting such error correlations, error covariance arrows were not added to simply enhance model fit (Byrne). Associated with each MI is a parameter change statistic (Par change) which represented the predicted estimated change in the new path coefficient (Byrne).

**Ethical Considerations**

Prior to implementation of this study, ethical approval was received from Health Science Research Ethics Board from the University of Toronto, which was sufficient approval to obtain a randomized sample of Ontario emergency department staff nurses registered with the CNO. Provincial, national and international policies and procedures related to privacy of information were strictly adhered to throughout the study. Successful completion of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (Canadian Institutes of Health Research, 1998) provided additional assurance that participants were treated in an ethical manner.

Nurses were invited to complete a survey mailed to their home addresses. An information letter was included with the survey and provided specific information about study purposes, procedure to complete the survey, consent to participate, potential risks and benefits, confidentiality, and investigators’ contact information. Return of a completed survey implied respondent’s informed consent. To maintain confidentiality, surveys did not include any names or personal identifiers. Participants were only identified through a unique participant number to ensure that thank you/reminder letters were only sent to non-responders. Nurse survey data was currently securely double locked in the research office of the investigator at the University of Toronto for a period of two years. The surveys have been securely destroyed. Survey data is retained in SPSS 17.0® software program files for analyses. These electronic files are password protected. Only group data will be presented and reported.

There was a minimal risk that some questions may have created emotional distress or discomfort. Participants may have chosen to skip any particular question and to also stop filling out the survey altogether. Nurses may have chosen to voluntarily withdraw from the study without providing a reason. There were no known direct benefits from participating in this study, although participants may have found the survey provided an opportunity to reflect upon their practice. Benefits of the study have been an increased understanding of the factors that influence the development of a RN’s trust in one’s manager. This enhanced knowledge will assist in the development of appropriate and effective strategies to establish and maintain a RN’s trust of one’s manager.
CHAPTER IV: RESULTS

In this chapter, study findings are presented. First, response rate and timing of returned surveys are examined. Demographic information of participants and characteristics of their hospitals are then described, followed by presentation of descriptive statistics for exogenous and endogenous latent variables and identification of multicollinearity among study variables. Results of measurement models are reported, including modifications suggested and undertaken, followed by findings regarding testing the hypothesized structural model and alternative hypothesized structural model. Lastly, support for study hypotheses is examined on the basis of the final model.

Survey Response Rate

Of the 900 mailed surveys, 403 were returned. Of the returned surveys, 61 were not included in the analysis. Eight surveys were returned unopened with an unknown address, thirty-two respondents reported they did not provide direct patient care in an Ontario acute care hospital emergency department, four respondents did not meet the inclusion criteria with having less than six months RN experience, and seventeen blank surveys were returned, indicating the participants refused to participate. The final sample was 342 out of 856 contacted potential participants for a response rate of 40%.

A progressive decrease of returned surveys occurred during the data collection time period. The mail-out of the first survey package resulted in 179 returned surveys (19.9%), whereas 126 surveys (14%) were returned after the first reminder letter/thank you. The second survey package/reminder letter produced 74 surveys (8.2%) and 24 surveys (2.7%) were received after the third reminder/thank you letter.

Upon return of a completed survey and to thank participants for their valuable contributions, each survey respondent selected one of three non-profit, charitable organizations among which a total of $500 was proportionately donated on their behalf. Heart and Stroke Foundation of Ontario was chosen by 164 participants (48%), 105 nurses (31%) chose the Canadian Breast Cancer Foundation and 67 respondents (20%) chose Ovarian Cancer Canada for donations of $250, $150 and $100, respectively.

Sample Demographics

Descriptive data analyses were completed using SPSS 17.0 ® software program to summarize demographic characteristics about survey respondents: employment status, length of most frequently worked shift, education level, gender, marital status and self-rated overall health, age and length of professional, organizational and job tenures.

Employment Status

Among 342 respondents, 292 participants (85.4 %) reported regularly working 12 hour shifts, whereas 43 participants (12.6 %) reported regularly working 8 hour shifts and only 3 participants (0.9 %) reported regularly working 10 hour shifts. Additionally, only 1 nurse (0.3 %) reported regularly working 4 hour shifts while another nurse (0.3 %) reported working both 12 and 8 hours shifts. In terms of current employment status, 200 study participants (58.5 %) reported working full-time, 107 reported working part-time (31.3 %), and 33 (9.6 %)
reported regularly working on a casual or occasional basis. Similarly, more than half of respondents (194; 56.7 %) preferred to work full-time, 105 nurses (31.3 %) wanted to work part-time and only 33 participants (9.6 %) preferred to work on a casual basis. Almost all respondents (310; 90.6 %) were employed in an unionized role. Table 3 contains a summary of respondents’ employment demographics.

Table 3
Summary of Employment Demographics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Sample Frequency</th>
<th>Sample Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>200</td>
<td>58.5</td>
</tr>
<tr>
<td>Part-Time</td>
<td>107</td>
<td>31.3</td>
</tr>
<tr>
<td>Casual/Occasional</td>
<td>33</td>
<td>9.6</td>
</tr>
<tr>
<td>Preferred</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>195</td>
<td>56.7</td>
</tr>
<tr>
<td>Part-Time</td>
<td>105</td>
<td>30.7</td>
</tr>
<tr>
<td>Casual/Occasional</td>
<td>40</td>
<td>11.7</td>
</tr>
<tr>
<td>Most Frequent Shift Length</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 hours</td>
<td>292</td>
<td>85.4</td>
</tr>
<tr>
<td>10 hours</td>
<td>43</td>
<td>12.6</td>
</tr>
<tr>
<td>8 hours or less</td>
<td>3</td>
<td>0.9</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>0.6</td>
</tr>
<tr>
<td>Unionized Job</td>
<td>310</td>
<td>90.6</td>
</tr>
</tbody>
</table>

Note. Results may not add to 100 due to rounding and/or missing data.

Nursing Education

In terms of nursing education, 233 participants (68.1 %) earned a RN diploma, 111 nurses (32.5 %) received a nursing baccalaureate degree, 7 nurses (2.0 %) graduated from a RN Extended Class Program and 10 participants (2.9 %) earned a masters in nursing degree. Eight nurses (2.3 %) reported having another form of nursing education. For non-nursing education, 48 nurses (14 %) received a diploma or certificate, 35 respondents (10.2 %) earned a bachelor degree and 2 respondents (0.6 %) received a masters degree. Six nurses (1.8 %) reported having another form of non-nursing education, such as accounting, physics or dental assistant. Only 81 nurses (23.6 %) attained a specialty nursing certificate, including Emergency Nursing Core Curriculum (ENCC), Trauma Nursing Core Course (TNCC), Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS). As well, 64 respondents (18.7 %) were currently enrolled in an university or college course. Table 4 provides an outline of participants’ education.
Table 4  
Summary of Participants’ Education

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Sample Frequency</th>
<th>Sample Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest Education Level Nursing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RN Diploma</td>
<td>233</td>
<td>68.1</td>
</tr>
<tr>
<td>RN Baccalaureate Degree</td>
<td>111</td>
<td>32.5</td>
</tr>
<tr>
<td>RN(EC) Program</td>
<td>7</td>
<td>2.0</td>
</tr>
<tr>
<td>Masters Degree</td>
<td>10</td>
<td>2.9</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>2.3</td>
</tr>
<tr>
<td>Non-nursing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma/Certificate</td>
<td>48</td>
<td>14.0</td>
</tr>
<tr>
<td>Bachelor Degree</td>
<td>35</td>
<td>10.2</td>
</tr>
<tr>
<td>Masters Degree</td>
<td>2</td>
<td>0.6</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>1.8</td>
</tr>
<tr>
<td>Specialty Nursing Certificate</td>
<td>81</td>
<td>23.7</td>
</tr>
<tr>
<td>Enrolled in University/College Course</td>
<td>64</td>
<td>18.7</td>
</tr>
</tbody>
</table>

Note. Results may not add to 100 due to rounding and/or missing data.
RN = Registered Nurse
RN(EC) = Registered Nurse Extended Class

Gender, Marital Status and Self-rated Overall Health

The majority of nurses (310; 90.6 %) were female with 264 (77.2 %) married or living common-law. Of the remaining participants, 45 respondents (13.2 %) were single and 28 participants (8.2 %) were separated, divorced or widowed. For self-rated overall health, only 2 respondents reported their health as poor (0.6%) and 11 nurses (3.2 %) rated their health as fair. Ninety respondents (26.3 %) reported good overall health, 130 nurses (38 %) indicated very good health status and 106 participants (31 %) reported excellent overall health. Table 5 contains a summary of respondents’ gender, marital status and self-rated overall health.

Table 5  
Summary of Gender, Marital Status and Self-rated Overall Health

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Sample Frequency</th>
<th>Sample Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>310</td>
<td>90.6</td>
</tr>
<tr>
<td>Male</td>
<td>28</td>
<td>8.3</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/Common-law</td>
<td>264</td>
<td>77.2</td>
</tr>
<tr>
<td>Single/Never Married</td>
<td>45</td>
<td>13.2</td>
</tr>
<tr>
<td>Separated/Divorced/Widowed</td>
<td>28</td>
<td>8.2</td>
</tr>
<tr>
<td>Self-rated Overall Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>2</td>
<td>0.6</td>
</tr>
<tr>
<td>Fair</td>
<td>11</td>
<td>3.2</td>
</tr>
<tr>
<td>Good</td>
<td>90</td>
<td>26.3</td>
</tr>
<tr>
<td>Very Good</td>
<td>130</td>
<td>38.0</td>
</tr>
<tr>
<td>Excellent</td>
<td>106</td>
<td>31.0</td>
</tr>
</tbody>
</table>

Note. Results may not add to 100 due to rounding and/or missing data.
Age and Tenures

The age of participants ranged from 25 to 72 years, with an average age of 44.2 years (SD = 11.7). Regarding average professional tenure, participants had been a RN for 18.3 years (SD = 11.7) with a range from 1 to 48 years. Organizational tenure ranged from 1 to 42 years with an average of 12.9 years (SD = 10.0). In terms of job tenure, respondents had an average of 10.7 years (SD = 8.8) with a range from 1 to 40 years. Table 6 provides an outline of age and tenure information.

Table 6
Means and Ranges of Age and Tenures

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Mean in years (SD)</th>
<th>Range (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>44.2 (11.7)</td>
<td>25– 72</td>
</tr>
<tr>
<td>Professional Tenure</td>
<td>18.3 (11.7)</td>
<td>1– 48</td>
</tr>
<tr>
<td>Organizational Tenure</td>
<td>12.9 (10.0)</td>
<td>1– 42</td>
</tr>
<tr>
<td>Job Tenure</td>
<td>10.7 (8.8)</td>
<td>1– 40</td>
</tr>
</tbody>
</table>

Note. SD = Standard Deviation

To further understand the influence of job tenure on managerial trust and to facilitate testing of the structural equation model, job tenure was categorized into quartiles. Among respondents, 91 nurses (27.6 %) had 4 years or less in their current job, 86 participants (26.1 %) reported 5 to 8 years, 67 respondents (20.6 %) declared 9 to 14 years and 85 nurses (25.8 %) reported at least 15 years of job tenure. Frequencies and distributions of job tenure quartiles are outlined in Table 7 and Figure 10.

Table 7
Summary of Job Tenure Quartiles

<table>
<thead>
<tr>
<th>Job Tenure Quartile</th>
<th>Quartile Frequency</th>
<th>Quartile Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 4 years</td>
<td>91</td>
<td>27.6</td>
</tr>
<tr>
<td>5– 8 years</td>
<td>86</td>
<td>26.1</td>
</tr>
<tr>
<td>9– 14 years</td>
<td>68</td>
<td>20.6</td>
</tr>
<tr>
<td>≥ 15 years</td>
<td>85</td>
<td>25.8</td>
</tr>
</tbody>
</table>

Note. Results may not add to 100 due to rounding and/or missing data.
Analyses were completed using SPSS 17.0 ® software program to summarize characteristics of participants’ work settings: health care organizations, emergency departments, educational backgrounds of managers, managers’ spans of control and assistive personnel for managers.

Health Care Organization

Slightly more than half of respondents (182; 53.2 %) worked at health care organizations that were located in urban areas with populations greater than 100 000 whereas 90 participants (26.3 %) were employed at hospitals in urban areas with populations less than 100 000. Only 63 nurses (18.4 %) worked at rural or remote hospitals and a third of participants (115; 33.6 %) considered their organizations to be a teaching hospital. However, 148 participants (43.3 %) reported that their hospital was not a teaching hospital but did have learners from at least two different health professions. Only 13 respondents (3.8 %) described their hospitals as strictly non-teaching. Moreover, 128 participants (37.4 %) declared their hospitals were located on more than one site and 107 nurses (31.3 %) indicated that their hospital had more than one critical care unit. Table 8 contains a summary...
of characteristics of nurses’ health care organizations.

Table 8
Summary of Characteristics of Health Care Organizations

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Sample Frequency</th>
<th>Sample Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Care Organization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Located in urban area &gt; 100 000</td>
<td>182</td>
<td>53.2</td>
</tr>
<tr>
<td>Located in urban area &lt; 100 000</td>
<td>90</td>
<td>26.3</td>
</tr>
<tr>
<td>Located in rural/remote area</td>
<td>63</td>
<td>18.4</td>
</tr>
<tr>
<td>Considered teaching hospital</td>
<td>115</td>
<td>33.6</td>
</tr>
<tr>
<td>Non-teaching hospital with learners from ≥ 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>different disciplines</td>
<td>148</td>
<td>43.3</td>
</tr>
<tr>
<td>Non-teaching hospital</td>
<td>13</td>
<td>3.8</td>
</tr>
<tr>
<td>More than 1 site</td>
<td>128</td>
<td>37.4</td>
</tr>
<tr>
<td>More than 1 critical care unit</td>
<td>107</td>
<td>31.3</td>
</tr>
</tbody>
</table>

Note. Results may not add to 100 due to rounding and/or missing data.

Emergency Department

Regarding patient volumes in the emergency department in which they worked, more than half of nurses (201; 58.8 %) reported that their emergency department had high volume (more than 30 000 annual patient visits), whereas 98 participants (28.7 %) declared their emergency departments experienced a medium volume (15 000 to 30 000 annual visits) and only 16 respondents (4.7 %) indicated their emergency departments experienced low volume (less than 15 000 annual patient visits). Most nurses (308; 90.1 %) reported their emergency departments treated patients 17 years and younger and 333 respondents (97.4 %) indicated their emergency departments cared for patients 18 years and older. Table 9 presents a summary of characteristics of respondents’ emergency departments.

Table 9
Summary of Characteristics of Emergency Departments

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Sample Frequency</th>
<th>Sample Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Number of Patient Visits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 15 000</td>
<td>16</td>
<td>4.7</td>
</tr>
<tr>
<td>15 000 to 30 000</td>
<td>98</td>
<td>28.7</td>
</tr>
<tr>
<td>Greater than 30 000</td>
<td>201</td>
<td>58.8</td>
</tr>
<tr>
<td>Patient Population Served</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 years and younger</td>
<td>308</td>
<td>90.1</td>
</tr>
<tr>
<td>18 years and older</td>
<td>333</td>
<td>97.4</td>
</tr>
</tbody>
</table>

Note. Results may not add to 100 due to rounding and/or missing data.

Manager’s Educational Background

Regarding educational background of respondents’ managers, 298 participants (87.1 %) conveyed their manager was a RN, while only 11 nurses (3.2 %) reported that their manager was not a RN. Among non-RN managers, 9 nurses (2.6 %) revealed their manager did have a health care background, whereas 2 participants (0.6 %) reported that their non-RN manager did not have a health care background. Table 10 contains a summary of educational background of manager.
Table 10
Summary of Educational Background of Manager

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Sample Frequency</th>
<th>Sample Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational Background of Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RN</td>
<td>298</td>
<td>87.7</td>
</tr>
<tr>
<td>Non-RN</td>
<td>11</td>
<td>3.2</td>
</tr>
<tr>
<td>Health care</td>
<td>9</td>
<td>9.7</td>
</tr>
<tr>
<td>Non-health care</td>
<td>2</td>
<td>0.6</td>
</tr>
<tr>
<td>Don’t know</td>
<td>4</td>
<td>1.2</td>
</tr>
</tbody>
</table>

Note. Results may not add to 100 due to rounding and/or missing data.
RN = Registered Nurse

Span of Control and Assistive Personnel

Referring to the number of employees that directly report to the manager, participants reported that their managers’ spans of control ranged from 9 to 200 direct reports, with an average of 70.5 (SD = 38.9). In spite of the large span of control, managers were assisted by a variety of personnel, such as a charge nurse without a patient assignment (262; 76.6%), a clinical educator (262; 76.6%) and a clinical nurse specialist or advanced practice nurse (63; 18.4%). In addition, the nurses also reported that 137 managers (40.1%) were assisted by a coordinator, 278 managers (81.3%) had at least one clerk or secretary and 43 managers (12.6%) were assisted by others, such as a resource nurse. Table 11 provides a summary of managers’ spans of control and assistive personnel.

Table 11
Summary of Span of Control and Assistive Personnel

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Range (direct report)</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Span of Control</td>
<td>9 – 200</td>
<td>70.5 (38.9)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Sample Frequency</th>
<th>Sample Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistive Personnel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charge nurse without assignment</td>
<td>262</td>
<td>76.6</td>
</tr>
<tr>
<td>Clinical Nurse Educator/Instructor</td>
<td>262</td>
<td>76.6</td>
</tr>
<tr>
<td>CNS/APN</td>
<td>63</td>
<td>18.4</td>
</tr>
<tr>
<td>Coordinator</td>
<td>137</td>
<td>40.1</td>
</tr>
<tr>
<td>Clerk(s)/Secretary</td>
<td>278</td>
<td>81.3</td>
</tr>
<tr>
<td>Other</td>
<td>43</td>
<td>12.6</td>
</tr>
</tbody>
</table>

Note. Results may not add to 100 due to rounding and/or missing data; SD = Standard Deviation; RN = Registered Nurse; CNS = Clinical Nurse Specialist; APN = Advanced Practice Nurse

To further understand the influence of span of control on managerial trust and to facilitate testing of the hypothesized model, span of control was categorized into quartiles. Among respondents, 86 nurses (26.1%) indicated their manager had 40 or fewer direct reports, 73 participants (25.2%) reported to a manager with a span of control from 41 to 65 employees, 78 respondents (24.6%) stated their manager supervised from 66 to 90 direct reports, and 83 nurses (25.2%) reported more than 90 employees reported directly to their manager. Frequencies
and distributions of span of control quartiles are outlined in Table 12 and Figure 11.

**Table 12**
Frequencies and Distributions of Span of Control Quartiles

<table>
<thead>
<tr>
<th>Span of Control Quartile</th>
<th>Quartile Frequency</th>
<th>Quartile Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 40 direct reports</td>
<td>86</td>
<td>26.1</td>
</tr>
<tr>
<td>41 – 65 direct reports</td>
<td>73</td>
<td>25.2</td>
</tr>
<tr>
<td>66 – 90 direct reports</td>
<td>78</td>
<td>24.6</td>
</tr>
<tr>
<td>&gt; 90 direct reports</td>
<td>83</td>
<td>25.2</td>
</tr>
</tbody>
</table>

Note. Results may not add to 100 due to rounding and/or missing data.

**Figure 11**

*Distribution of Span of Control Quartiles*

Following investigation of demographic information, mean scores and standard deviations were examined to better understand determinants of trust. In addition, each variable score was standardized to be out of 100 to facilitate understanding. Theoretically, the range for each scale is 0 to 100. Cronbach’s alpha (α) was calculated to evaluate internal consistency reliability for scales prior to validity confirmation of measurement models. Descriptive results for
individual trust determinant are first presented, followed by findings regarding trust antecedents of one’s manager and RN-manager relational determinants. The section concludes with an examination of descriptive results for environmental determinants as well as the dependent variable, managerial trust.

Attribute of the Individual RN

This section presents descriptive results for propensity of trust, an attribute of the individual RN. Table 13 presents a summary of descriptive findings for this study variable.

Table 13
Descriptive Results of Propensity to Trust

<table>
<thead>
<tr>
<th>Attribute of Individual RN</th>
<th>Mean (SD)</th>
<th>Mean of Standardized Score out of 100 (SD)</th>
<th>(\alpha^{b})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propensity to trust</td>
<td>3.14 (0.35)</td>
<td>57.85 (8.37)</td>
<td>.73</td>
</tr>
</tbody>
</table>

Note. SD = Standard Deviation. \(a = \) Variable mean scores standardized out of 100 with theoretical range 0-100. \(b = \) Cronbach’s Alpha before measurement model evaluation.

Propensity to trust. Propensity to trust, an RN’s dispositional trait regarding trustworthiness of others, was measured using the six item Social Trust Scale (Valenzuela et al., 2009). Three items were reverse coded prior to calculation of the total scale score. Consisting of a five choice response scale of one (‘Never’) to five (‘Always’), the items were summed and averaged to calculate the mean scale score with higher scores indicating a greater willingness to trust others. The mean score out of 5 was 3.14 (SD = 0.35). The standardized mean score out of 100 was 57.85 (SD = 8.37). The scale was found to have an acceptable internal consistency reliability (\(\alpha = .73\)) before measurement model evaluation.

Attributes of Manager

This section presents descriptive results for attributes of manager: ability, integrity, communication accuracy, facilitation of achievement of group goal and benevolence towards co-workers. Table 14 presents a summary of descriptive findings for these study variables.
Table 14
Descriptive Results for Attributes of Manager

<table>
<thead>
<tr>
<th>Attributes of Manager</th>
<th>Mean (SD)</th>
<th>Mean of Standardized Score out of 100 (SD)</th>
<th>αb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability</td>
<td>3.37 (1.05)</td>
<td>59.10 (26.18)</td>
<td>.96</td>
</tr>
<tr>
<td>Integrity</td>
<td>3.20 (1.09)</td>
<td>55.08 (27.28)</td>
<td>.96</td>
</tr>
<tr>
<td>Communication accuracy</td>
<td>3.33 (0.83)</td>
<td>58.20 (20.72)</td>
<td>.75</td>
</tr>
<tr>
<td>Facilitation of achievement of group goal</td>
<td>2.97 (1.14)</td>
<td>49.18 (28.61)</td>
<td>--</td>
</tr>
<tr>
<td>Benevolence towards co-workers</td>
<td>3.19 (1.05)</td>
<td>54.54 (26.20)</td>
<td>.96</td>
</tr>
</tbody>
</table>

Note. SD = Standard Deviation. a = Variable mean scores standardized out of 100 with theoretical range 0-100. b = Cronbach’s Alpha before measurement model

**Ability.** Ability, a manager’s knowledge and skills, was measured using the six item Ability Scale (Mayer & Davis, 1999). Consisting of a five choice response scale of one (‘Strongly Disagree’) to five (‘Strongly Agree’), the items were summed and averaged to calculate the mean scale score with higher scores indicating a greater ability. The mean score out of 5 was 3.37 (SD = 1.05). The standardized mean score out of 100 was 59.10 (SD = 26.18). The scale was found to have a high internal consistency reliability (α = .96) before measurement model evaluation.

**Integrity.** Integrity, a manager’s consistent adherence to a set of shared values, was measured by the six item Integrity Scale (Mayer & Davis, 1999). Consisting of a five choice response scale of one (‘Strongly Disagree’) to five (‘Strongly Agree’), the items were summed and averaged to calculate the mean scale score with higher scores indicating greater integrity. The mean score out of 5 was 3.20 (SD = 1.09). The standardized mean score out of 100 was 55.08 (SD = 27.28). The scale was found to have a high internal consistency reliability (α = .96) prior to measurement model evaluation.

**Communication accuracy.** Communication accuracy, the extent that the manager communicates accurate information, was measured by the four item accuracy subscale of Perceived Information Quality Scale (Maltz & Kohli, 1996). Two items were reverse coded prior to total score calculation. Consisting of a five choice response scale of one (‘Strongly Disagree’) to five (‘Strongly Agree’), the items were summed and averaged to calculate the mean scale score with higher scores indicating a higher degree of communication accuracy. The mean score out of 5 was 3.33 (SD = 0.83). The standardized mean score out of 100 was 58.20 (SD = 20.72). The scale was found to have an acceptable internal consistency reliability (α = .75) prior to measurement model evaluation.

**Facilitation of achievement of a group goal.** One item was used to measure facilitation of a group goal, specifically a manager’s ability to facilitate effective team work. Consisting of a five choice response scale of one
(‘Strongly Disagree’) to five (‘Strongly Agree’), a higher score indicated greater ability to facilitate team work. The mean score out of 5 was 2.97 (SD = 1.14). The standardized mean score out of 100 was 49.18 (SD = 28.61).

**Benevolence towards co-workers.** The five item Benevolence Scale (Mayer & Davis, 1999) was used to measure benevolence towards co-workers, the extent to which a manager consistently supports the welfare of the RN’s co-workers. Consisting of a five choice response scale of one (‘Strongly Disagree’) to five (‘Strongly Agree’), the items were summed and averaged to calculate the mean scale score with higher scores indicating a higher degree of benevolence towards co-workers. The mean score out of 5 was 3.19 (SD = 1.05). The standardized mean score out of 100 was 54.54 (SD = 26.20). The scale was found to have a high internal consistency reliability (α = .96) prior to measurement model evaluation.

**Attributes of RN-Manager Relationship**

Descriptive findings for attributes of the RN-manager relationship are outlined in this section: interaction frequency, interactional justice, emotional availability and benevolence towards RN. Table 15 contains a summary of descriptive findings for these study variables.

<table>
<thead>
<tr>
<th>Attributes of RN-Manager Relationship</th>
<th>Mean (SD)</th>
<th>Mean of Standardized Score out of 100 (SD)a</th>
<th>αb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interaction frequency</td>
<td>3.01 (0.88)</td>
<td>50.20 (21.98)</td>
<td>.87</td>
</tr>
<tr>
<td>Interactional justice</td>
<td>3.42 (1.00)</td>
<td>60.61 (25.09)</td>
<td>.94</td>
</tr>
<tr>
<td>Emotional availability</td>
<td>3.68 (1.14)</td>
<td>67.06 (28.45)</td>
<td>.93</td>
</tr>
<tr>
<td>Benevolence towards RN</td>
<td>3.22 (1.09)</td>
<td>55.29 (27.30)</td>
<td>.95</td>
</tr>
</tbody>
</table>

Note. SD = Standard Deviation. a = Variable mean scores standardized out of 100 with theoretical range 0-100. b = Cronbach’s Alpha before evaluation of measurement model

**Interaction frequency.** The four item Interaction Frequency scale was used to measure RN-manager interaction frequency (McAllister, 1995). Consisting of a five choice response scale of one (‘Never’) to five (‘Very Often’), the items were summed and averaged to calculate the mean scale score with higher scores indicating a greater frequency of interactions. The mean score out of 5 was 3.02 (SD = 0.88). The standardized mean score out of 100 was 50.20 (SD = 21.98). The scale was found to have a high internal consistency reliability (α = .87) prior to measurement model evaluation.

**Interactional justice.** Interactional justice, fairness of the interpersonal treatment from one’s manager, was measured by the six item Interactive Justice Scale (Moorman, 1991). With a five choice response scale of one (‘Strongly Disagree’) to five (‘Strongly Agree’), the items were summed and averaged to calculate the mean scale score with higher scores indicating greater interactional justice. The mean score out of 5 was 3.42 (SD = 1.00). The standardized mean score out of 100 was 60.61 (SD = 25.09). The scale was found to have a high internal
consistency reliability ($\alpha = .94$) prior to measurement model evaluation.

**Emotional availability.** Three items were used to measure emotional availability, the degree of a manager’s emotional engagement during RN-manager interactions. Employing a five choice response scale of one (‘Strongly Disagree’) to five (‘Strongly Agree’), the items were summed and averaged to calculate the mean scale score with higher scores indicating greater emotional availability. The mean score out of 5 was 3.68 (SD = 1.14). The standardized mean score out of 100 was 67.06 (SD = 28.5). The scale was found to have a high internal consistency reliability ($\alpha = .93$) before measurement model evaluation.

**Benevolence towards RN.** Benevolence towards RN, the extent to which a manager consistently supports the welfare of the RN, was measured by the five item Benevolence Scale (Mayer & Davis, 1999). Consisting of a five choice response scale of one (‘Strongly Disagree’) to five (‘Strongly Agree’), the items were summed and averaged to calculate the mean scale score with higher scores indicating greater benevolence. The mean score out of 5 was 3.22 (SD = 1.09). The standardized mean score out of 100 was 55.29 (SD = 27.30). The scale was found to have a high internal consistency reliability ($\alpha = .95$) prior to measurement model evaluation.

**Attributes of Work Environment and Managerial Trust**

This section presents a discussion of descriptive findings for attributes of the work environment: procedural justice, access to support, access to resources and self-determination. Descriptive results for the dependent variable, trust in manager, are also presented. Table 16 contains a summary of descriptive findings for these study variables.

**Table 16**
Descriptive Results for Attributes of Work Environment and Managerial Trust

<table>
<thead>
<tr>
<th>Attributes of Work Environment and Trust in Manager</th>
<th>Mean (SD)</th>
<th>Mean of Standardized Score out of 100 (SD)$^a$</th>
<th>$\alpha^b$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedural justice</td>
<td>2.99 (0.97)</td>
<td>49.72 (24.17)</td>
<td>.95</td>
</tr>
<tr>
<td>Access to support</td>
<td>2.75 (0.95)</td>
<td>43.62 (23.68)</td>
<td>.90</td>
</tr>
<tr>
<td>Access to resources</td>
<td>2.78 (0.77)</td>
<td>44.39 (19.15)</td>
<td>.82</td>
</tr>
<tr>
<td>Self-determination</td>
<td>3.86 (0.77)</td>
<td>71.40 (19.18)</td>
<td>.80</td>
</tr>
<tr>
<td>Trust in Manager</td>
<td>3.14 (1.31)</td>
<td>53.38 (32.64)</td>
<td>--</td>
</tr>
</tbody>
</table>

Note. SD = Standard Deviation. $^a$= Variable mean scores standardized out of 100 with theoretical range 0-100. $^b$= Cronbach’s Alpha before measurement model

**Procedural justice.** Procedural justice, the extent to which a manager’s decisions are fair, was measured by Moorman’s (1991) seven item scale. Consisting of a five choice response scale of one (‘Strongly Disagree’) to five (‘Strongly Agree’), the items were summed and averaged to calculate the mean scale score with higher scores indicating fairness in decision making. The mean score out of 5 was 2.99 (SD = 0.97). The standardized mean score out of 100 was 49.72 (SD = 24.17). The scale was found to have a high internal consistency reliability ($\alpha =$
.95) prior to measurement model evaluation.

Access to support. The three item Access to Support subscale of the Conditions of Work Effectiveness Questionnaire-II (Laschinger, Finegan, Shamian & Wilk, 2001) was used to measure access to support, the degree to which a manager provides support. Consisting of a five choice response scale of one (‘Strongly Disagree’) to five (‘Strongly Agree’), the items were summed and averaged to calculate the mean scale score with higher scores indicating greater access to support. The mean score out of 5 was 2.75 (SD = 0.95). The standardized mean score out of 100 was 43.62 (SD = 23.68). The scale was found to have a high internal consistency reliability (α = .90) prior to measurement model evaluation.

Access to resources. Access to resources, having adequate time and personnel to perform one’s job, was measured by a three item Access to Resources subscale of the Conditions of Work Effectiveness Questionnaire-II (Laschinger, Finegan, Shamian & Wilk, 2001). Consisting of a five choice response scale of one (‘Strongly Disagree’) to five (‘Strongly Agree’), the items were summed and averaged to calculate the mean scale score with higher scores indicating greater resource access. The mean score out of 5 was 2.78 (SD = 0.77). The standardized mean score out of 100 was 44.39 (SD = 19.15). The scale was found to have a high internal consistency reliability (α = .82) prior to measurement model evaluation.

Self-determination. Self-determination, reflecting autonomy over work processes and behaviors, was measured by the three item self-determination subscale of the Psychological Empowerment Scale (Spreitzer, 1995). Consisting of a five choice response scale of one (‘Strongly Disagree’) to five (‘Strongly Agree’), the items were summed and averaged to calculate the mean scale score with higher scores indicating greater autonomy. The mean score out of 5 was 3.86 (SD = 0.77). The standardized mean score out of 100 was 71.40 (SD = 19.18). The scale was found to have a high internal consistency reliability (α = .80) before measurement model evaluation.

Trust. One item was used to measure trust in one’s manager, the RN’s willingness to be vulnerable to future, uncertain behaviors of one’s manager. Consisting of a five choice response scale of one (‘Strongly Disagree’) to five (‘Strongly Agree’), a higher score indicated greater degree of trust in one’s manager. The mean score out of 5 was 3.14 (SD = 1.31). The standardized mean score out of 100 was 53.38 (SD = 32.64).

Data Preparation and Screening

Multicollinearity

In terms of SEM analysis, multicollinearity may lead to inaccurate coefficient estimates and standard errors, as well as large confidence intervals, low power and unacceptably high Type II error rates (Kline, 2005). To avoid these outcomes, pairwise correlations among study variables were evaluated to identify multicollinearity (see Table 17). Correlation coefficient values .20 and below were considered very weak or non-existent, those between .20 and .40 to be weak, those between .40 and .70 to be moderately strong, those between .70 and .85 to be high or strong and those greater than .85 to be very high (Munro, 2005). Correlation coefficient values were greater than .85 was used to demonstrate evidence of multicollinearity (Kline, 2005).

Trust had a strong and positive correlation with several study variables, namely ability (r = .81; p < .01),
integrity ($r = .85; p < .01$), goal facilitation ($r = .76; p < .01$), benevolence towards co-worker ($r = .82; p < .01$), interactional justice ($r = .83; p < .01$), emotional availability ($r = .80; p < .01$), benevolence towards the RN ($r = .85; p < .01$) and procedural justice ($r = .75; p < .01$). Moreover, managerial trust showed a moderately strong, positive correlation with communication accuracy ($r = .68; p < .01$), interaction frequency ($r = .61; p < .01$) and access to workplace support ($r = .46; p < .01$). Furthermore, trust in one’s manager was found to have a low but significant correlation with propensity to trust ($r = .25; p < .01$), self-determination ($r = .24; p < .01$) and access to resources ($r = .38; p < .01$). A very weak association was demonstrated between managerial trust and job tenure ($r = .15; p < .01$), while no significant relationship was found between trust and span of control. Furthermore, all study variables were found to have significant correlations with each other, with the exception of span of control and job tenure. Similarly, job tenure did not demonstrate a significant relationship with either access to support or access to resources. Span of control was determined to have a negative, significant relationship with only job tenure ($r = -.14; p < .05$).

Multicollinearity was a cause for concern between benevolence towards RN and benevolence towards co-workers ($r = .89; p < .01$). Although benevolence towards the employee had been found to be a significant trust determinant in multiple studies (e.g. Bews & Rossouw, 2002; Mayer & Davis, 1999), only LaPierre (2007) reported that benevolence towards one’s co-workers was a significant predictor of trust. As a result of less empirical support for benevolence towards co-workers, this concept was excluded from the hypothesized model because of its very high correlation with benevolence towards RN.

Very high correlation coefficients were also demonstrated between interactional justice and integrity ($r = .87; p < .01$) as well as between interactional justice and emotional availability of one’s manager ($r = .87; p < .01$). Given that the three instruments’ items similarly assessed respectful behaviors of the supervisor and that empirical studies have found mixed results regarding the interactional justice-trust relationship, (e.g. Hubbell & Chory-Assad, 2005), interactional justice was omitted from further analyses. Figure 12 illustrates the revised hypothesized model with deletion of benevolence towards co-workers and interactional justice.
Table 17
Pairwise Correlations Among Study Variables before Measurement Model Analyses

| Measure                        | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  |
|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1. Propensity to trust        | –   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 2. Job Tenure                 | .13*| –   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 3. Ability                    | .24 | .12*| –   |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 4. Integrity                  | .23 | .18 | .83 | –   |     |     |     |     |     |     |     |     |     |     |     |     |
| 5. Communication accuracy     | .16 | .13*| .63 | .70 | –   |     |     |     |     |     |     |     |     |     |     |     |
| 6. Goal facilitation          | .24 | .15 | .74 | .79 | .65 | –   |     |     |     |     |     |     |     |     |     |     |
| 7. Benevolence co-worker      | .26 | .18 | .77 | .85 | .65 | .77 | –   |     |     |     |     |     |     |     |     |     |
| 8. Interaction frequency      | .13 | .24 | .52 | .58 | .44 | .53 | .58 | –   |     |     |     |     |     |     |     |     |
| 9. Interactional justice      | .23 | .19 | .77 | .87 | .72 | .81 | .82 | .59 | –   |     |     |     |     |     |     |     |
| 10. Emotional availability    | .19 | .13*| .75 | .81 | .64 | .74 | .77 | .60 | .87 | –   |     |     |     |     |     |     |
| 11. Benevolence RN            | .24 | .16 | .76 | .83 | .63 | .76 | .89 | .62 | .84 | .82 | –   |     |     |     |     |     |
| 12. Span of Control           | NS  | -.14| NS  | NS  | NS  | NS  | NS  | NS  | NS  | NS  | NS  | –   |     |     |     |     |
| 13. Procedural justice        | .20 | .14 | .70 | .77 | .69 | .72 | .76 | .52 | .76 | .70 | .75 | NS  | –   |     |     |     |
| 14. Self-determination        | .18 | .18 | .25 | .25 | .27 | .30 | .26 | .29 | .23 | .26 | NS  | .31 | –   |     |     |     |
| 15. Access to resources       | .23 | NS  | .37 | .38 | .40 | .40 | .39 | .28 | .37 | .38 | .39 | NS  | .39 | .32 | –   |     |
| 16. Access to support         | .14 | NS  | .42 | .45 | .42 | .45 | .42 | .48 | .41 | .40 | NS  | .49 | .26 | .36 | –   |     |
| 17. Trust in Manager          | .25 | .15 | .81 | .85 | .68 | .76 | .82 | .61 | .83 | .80 | .85 | NS  | .75 | .24 | .38 | .46 | –   |

Note. All correlations significant at 0.01 level except as noted. *p < .05. NS = not significant. Shaded areas indicate deleted variables due to multicollinearity.
Figure 12
Revised Hypothesized Theoretical Model of Determinants of Registered Nurses’ Trust in their Managers with Deletion of Benevolence towards Co-workers and Interactional Justice from the Model.
Outliers

Taking into consideration that extreme scores artificially inflate chi-square values and may lead to false rejection of a model as well as underestimation of standard errors of parameters (Kline, 2005), SPSS Box Plots for each variable were examined to identify the presence of univariate outliers. No extreme scores were found for any of the individual items, ruling out the presence of univariate outliers.

Mahalanobis distance ($D^2$) test was used to determine the presence of multivariate outliers. Referring to the distance in standard deviation units between a set of scores for an individual case (vector) and multidimensional mean for all variables (centroids), an outlying case will have a higher $D^2$ from all other cases (Byrne, 2010). Additionally, AMOS provides two additional statistics, p1 and p2. P1 refers to the probability of any score exceeding the squared Mahalanobis distance of a specific case and is expected to have a small value. P2 is the probability that the largest squared distance of any score would be greater than $D^2$. Assuming normality, small values for p2 indicate that a case is improbably far from the centroid and is likely an outlier (Kline, 2005).

Prior to analysis of the hypothesized structural model with a recommended conservative level of significance ($p < .001$; Kline, 2005), five cases were initially identified as outliers with a high $D^2$ value and a p2 value less than .001. However, closer examination revealed that five respondents answered with a low total score of ‘1’ for the trust item. The low total scores for trust were valid and did not merit removal from the database. The final sample size was 342 participants.

Measurement Model

Following deletion of interactional justice and benevolence towards co-workers, a two-step approach was implemented for testing and modification of the revised hypothesized structural equation model (SEM; see Figure 12). Firstly, confirmatory factor analyses (CFA) of the measurement model was completed to ensure that each instrument was a valid measure of its construct. A priori theoretical knowledge guided modification of the measurement model. Based on valid measurement models resulting from the first step, the second step consisted of structural equation modeling analysis and modification of the revised hypothesized model. This section details findings regarding CFA of the measurement model.

Items within each instrument underwent CFA to determine the extent to which items measure a specific construct (Byrne, 2010). Chi-square ($\chi^2$) was used to assess the discrepancy between the sample covariance matrix and the hypothesized model. Ideally, a non-significant difference with a probability greater than .05 provided evidence of good fit. Given that a non-significant chi-square value was difficult to achieve (Kline, 2005) other fit indices were also used to determine the quality of each model’s fit. Standard Root Mean Square Residual (SRMR) referred to the average discrepancy between observed and hypothesized correlation matrices with desired values less than .05. Evaluation of the Comparative Fit Index (CFI) represented a comparison between the hypothesized model and the independence (null) model. Taking sample size into account, CFI values greater than .95 represented good fit. Lastly, Root Mean Square Error of Approximation (RMSEA) was used to examine the error of approximation in the population and reported a 90% confidence interval for the RMSEA. Considered to be the
most informative criterion in SEM (Byrne), RMSEA was used in conjunction with pCLOSE which represented the closeness of fit. RMSEA values of less than .05 and pCLOSE values greater than .50 provided evidence of good fit.

Any subsequent modification to the measurement model was based primarily on theoretical knowledge. Although statistically-derived modification indices (MI), specifically measurement error covariances, provided evidence of model misspecification, the decision to retain and/or delete an item was primarily based on theoretical reflection rather than sole reliance on goodness-of-fit statistics. Representing random error, measurement error covariance values arose from items cross-loading on an omitted construct or a significant degree of content overlap with another item (Byrne, 2010). Items were removed individually from highest to lowest MI, and if removed, reassessed for model fit. Before any item was deleted, the content was examined to make certain that the meaning and item intent were still captured by remaining indicators. Associated with each MI is a parameter change statistic (Par change) which represented the predicted estimated change in the new path coefficient (Byrne, 2010).

Attribute of RN

Propensity to trust. Items believed to be caused by propensity to trust were subjected to CFA (Valenzuela et al., 2008). The initial measurement model indicated inadequate fit \[\chi^2 = 76.5, p = .000; \text{df} = 9; \text{SRMR} = .082; \text{CFI} = .823; \text{RMSEA} = .151 \left( .121 - .183 \right); \text{pCLOSE} = .000\]. A review of MI revealed a covariance between the error terms of items 2 and 6 (err2 ↔ err6; MI = 20.777; Par change = .140), suggesting that indicators 2 and 6 were caused by propensity to trust and an unknown, omitted construct. Consequently, indicator 2 was deleted. The revised measurement model was then subjected to CFA. Examination of the resulting fit statistics indicated that although a better fit was attained, further modification was suggested \[\chi^2 = 39.0, p = .000; \text{df} = 5; \text{SRMR} = .069; \text{CFI} = .885; \text{RMSEA} = .144 \left( .104 - .197 \right); \text{pCLOSE} = .000\]. A review of the modification indices provided evidence of an error covariance between items 4 and 6 (err4 ↔ err6; MI = 25.669; Par change = .196), indicating indicators shared an unknown construct. Indicator 4 was deleted from the model as it appeared more difficult to understand than indicator 6.

After removal of indicator 4, the fit was substantially improved (\[\chi^2 = .013, p = .983; \text{df} = 2; \text{SRMR} = .004; \text{CFI} = 1.000; \text{RMSEA} = .000 \left( .000 - .026 \right); \text{pCLOSE} = .993\]). No further modification was necessary. The revised measurement model showed acceptable internal consistency reliability (\(\alpha = .70\)). Figure 13 presents the initial measurement model for propensity to trust. Figure 14 illustrates the final measurement model. Table 18 provides an outline of items and model labels. Fit statistics and modification indices for the measurement model are summarized in Table 19.
Figure 13
Initial Measurement Model for Propensity to Trust

Table 18
Survey Items and Model Labels for Propensity to Trust

<table>
<thead>
<tr>
<th>Generally speaking, would you say that…</th>
<th>Model Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. People can be trusted?</td>
<td>Bprop1</td>
</tr>
<tr>
<td>2. People try to take advantage of you if they get the chance? (R) (DELETED)</td>
<td>Bprop2R</td>
</tr>
<tr>
<td>3. People try to be fair?</td>
<td>Bprop3</td>
</tr>
<tr>
<td>4. You can’t be too careful in dealing with people? (R) (DELETED?)</td>
<td>Bprop4R</td>
</tr>
<tr>
<td>5. People try to be helpful?</td>
<td>Bprop5</td>
</tr>
<tr>
<td>6. People are just looking out for themselves? (R)</td>
<td>Bprop6R</td>
</tr>
</tbody>
</table>

Note. Deleted items are in bold.
Table 19
Fit Statistics and Modification Indices for Propensity to Trust

<table>
<thead>
<tr>
<th>Item deleted</th>
<th>$\chi^2$ (df)</th>
<th>p value</th>
<th>SRMR</th>
<th>CFI</th>
<th>RMSEA (CI)</th>
<th>pCLOSE</th>
<th>MI (Par change)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>76.5 (9)</td>
<td>.000</td>
<td>.082</td>
<td>.823</td>
<td>.151 (.121 -.183)</td>
<td>.000</td>
<td>err2 ↔ err6 20.777 (.140)</td>
</tr>
<tr>
<td>#2</td>
<td>39.0 (5)</td>
<td>.000</td>
<td>.069</td>
<td>.885</td>
<td>.144 (.104 -.187)</td>
<td>.000</td>
<td>err4 ↔ err6 25.669 (.196)</td>
</tr>
<tr>
<td>#4</td>
<td>.013 (2)</td>
<td>.983</td>
<td>.004</td>
<td>1.000</td>
<td>.000 (.000 -.026)</td>
<td>.972</td>
<td>None</td>
</tr>
</tbody>
</table>

Note. Good fit is indicated by SRMR < .05, CFI > .95 and RMSEA < .05; SRMR = Standard Mean Root Residual; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; CI = Confidence Interval; MI = Modification Index.

Figure 14
Final Measurement Model for Propensity to Trust

Attributes of Manager

Ability. Items believed to be caused by ability were subjected to CFA (Mayer & Davis, 1999). The initial measurement model indicated inadequate fit of the measurement model [$\chi^2 = 65.1$ p = .000; df = 9; SRMR = .026; CFI = .973; RMSEA = .138 (.107 -.170); pCLOSE = .000]. A review of modification indices revealed a covariance between the error terms of items 4 and 3 (err4 ↔ err3; MI = 20.190; Par change = .084), suggesting that indicator 4 and indicator 3 are caused by an unknown, common construct. Consequently, due to the possibility of cross-loading and that the wording of indicator 4 was less understandable, indicator 4 was deleted.

The revised measurement model of ability with the remaining five items was then subjected to CFA. Examination of the fit statistics indicated that although better fit was attained, further modification was suggested [$\chi^2 = 31.1$ p = .000; df = 5; SRMR = .018; CFI = .984; RMSEA = .126 (.086 -.170); pCLOSE = .001]. A review of the modification indices provided evidence of an error covariance between items 3 and 6 (err3 ↔ err6; MI =
21.976; Par change = .106), indicating a common, unknown construct caused both indicators. Indicator 3 was deleted as focused less on perception of the RN than did indicator 6. After removal, measurement model fit improved and required no further modification \(\chi^2 = 3.7 \ p = .158; \text{df} = 2; \ \text{SRMR} = .008; \ \text{CFI} = .999; \ \text{RMSEA} = .057 (.000 - .131); \ \text{pCLOSE} = .385\). The revised measurement model showed high internal consistency reliability \((\alpha = .94)\). Figure 15 presents the initial measurement model. The revised four item measurement model (see Figure 16) was included in analysis of revised hypothesized structural model. Table 20 provides an outline of items and model labels. Fit statistics and modification indices are summarized in Table 21.

**Figure 15**
Initial Measurement Model for Ability
Table 20
Survey Items and Model Labels for Ability

<table>
<thead>
<tr>
<th>My nurse manager/immediate supervisor...</th>
<th>Model Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is very capable of performing his/her job.</td>
<td>Babil1</td>
</tr>
<tr>
<td>2. Is known for be successful at the things he/she tries to do.</td>
<td>Babil2</td>
</tr>
<tr>
<td>3. Has much knowledge about the work that needs to be done. (DELETED)</td>
<td>Babil3</td>
</tr>
<tr>
<td>4. Has specialized capabilities that can improve our patient care. (DELETED)</td>
<td>Babil4</td>
</tr>
<tr>
<td>5. Is well qualified.</td>
<td>Babil5</td>
</tr>
<tr>
<td>6. I feel confident about my nurse manager’s/immediate supervisor’s work-related knowledge.</td>
<td>Habil6</td>
</tr>
</tbody>
</table>

Note. Deleted items are in bold.

Table 21
Fit statistics and Modification Indices for Ability

<table>
<thead>
<tr>
<th>Item deleted</th>
<th>$\chi^2$ (df)</th>
<th>p value</th>
<th>SRMR</th>
<th>CFI</th>
<th>RMSEA (CI)</th>
<th>pCLOSE</th>
<th>MI (Par change)</th>
</tr>
</thead>
<tbody>
<tr>
<td>65.1 (9)</td>
<td>.000</td>
<td>.026</td>
<td>.973</td>
<td>.138 (.107 - .170)</td>
<td>.000</td>
<td>err4 ↔ err3 20.190 (.084)</td>
<td></td>
</tr>
<tr>
<td>#4</td>
<td>31.1 (5)</td>
<td>.000</td>
<td>.018</td>
<td>.984</td>
<td>.126 (.086 - .170)</td>
<td>.001</td>
<td>err3 ↔ err6 21.976 (.106)</td>
</tr>
<tr>
<td>#3</td>
<td>3.7 (2)</td>
<td>.158</td>
<td>.008</td>
<td>.999</td>
<td>.057 (.000 - .131)</td>
<td>.385</td>
<td>None</td>
</tr>
</tbody>
</table>

Note. Good fit is indicated by SRMR < .05, CFI > .95 and RMSEA < .05; SRMR = Standard Mean Root Residual; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; CI = Confidence Interval; MI = Modification Index

Figure 16
Final Measurement Model for Ability
**Integrity.** Items believed to be caused by integrity underwent CFA (Mayer & Davis, 1999). The initial measurement model indicated poor fit \(\chi^2 = 65.5\ p = .000;\ \text{df} = 9;\ \text{SRMR} = .020;\ \text{CFI} = .975;\ \text{RMSEA} = .138\.108 - .170);\ \text{pCLOSE} = .000]. A review of modification indices revealed a covariance between the error terms of indicators 5 and 6 (err5 ↔ err6; \(\text{MI} = 29.302;\ \text{Par change} = .101)), suggesting that the indicators could be caused by unknown, common construct, such as cultural background of one’s manager. As well as the possibility of cross-loading, integrity speaks more to ethical behavior of the manager, as examined in indicator 6 and less to the manager’s values, as measured in indicator 5. Indicator 5 was then deleted.

Examination of the fit statistics for the revised model indicated that although fit had improved, further modifications were suggested \(\chi^2 = 22.2\ p = .000;\ \text{df} = 5;\ \text{SRMR} = .014;\ \text{CFI} = .988;\ \text{RMSEA} = .117\.076 - .161);\ \text{pCLOSE} = .005] with error covariances between items 4 and 2 (err4 ↔ err2; \(\text{MI} = 16.914;\ \text{Par change} = .061) and between items 6 and 1 (err6 ↔ err1; \(\text{MI} = 8.873;\ \text{Par change} = .052)). Although the measurement error covariance between indicators 4 and 2 have a higher modification index, both items were retained as integrity is argued to encompass promise keeping (item 2) and consistency between actions and words (item 4; Mayer & Davis, 1999). The covariance provided evidence that an unknown, uncommon construct caused indicators 1 and 6. Indicator 1 was deleted because integrity emphasizes the moral behavior of another (indicator 6) rather than another’s sense of justice (indictor 1). The fit of the revised measurement model improved substantially and further modification was not recommended \(\chi^2 = 12.4\ p = .004;\ \text{df} = 2;\ \text{SRMR} = .011;\ \text{CFI} = .992;\ \text{RMSEA} = .126\.065 - .197);\ \text{pCLOSE} = .022]. The revised measurement model showed acceptable internal consistency reliability (\(\alpha = .95\)). Figure 17 presents the initial measurement model. The revised four item integrity measurement model (see Figure 18) was subsequently used in analysis of the full structural equation model. Table 22 outlines survey items and model labels. Fit statistics and modification indices are summarized in Table 23.
Figure 17
Initial Measurement Model for Integrity

![Diagram of the Initial Measurement Model for Integrity]

Table 22
Survey Items and Model Labels for Integrity

<table>
<thead>
<tr>
<th>My nurse manager/immediate supervisor…</th>
<th>Model Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Has a strong sense of justice. (DELETED)</td>
<td>Cint1</td>
</tr>
<tr>
<td>2. Keeps his/her word.</td>
<td>Cint2</td>
</tr>
<tr>
<td>3. Tries hard to be fair in dealings with others.</td>
<td>Cint3</td>
</tr>
<tr>
<td>4. Takes actions that are consistent with his/her words.</td>
<td>Cint4</td>
</tr>
<tr>
<td>5. Has similar values to me. (DELETED)</td>
<td>Cint5</td>
</tr>
<tr>
<td>6. Shows behavior that is guided by sound principles.</td>
<td>Cint6</td>
</tr>
</tbody>
</table>

Note. Deleted items are in bold.
Table 23
Fit Statistics and Modification Indices for Integrity

<table>
<thead>
<tr>
<th>Item deleted</th>
<th>$\chi^2$(df)</th>
<th>p value</th>
<th>SRMR</th>
<th>CFI</th>
<th>RMSEA (CI)</th>
<th>pCLOSE</th>
<th>MI (Par change)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>65.5 (9)</td>
<td>.000</td>
<td>.020</td>
<td>.975</td>
<td>.138 (.108 -.170)</td>
<td>.000</td>
<td>err5 ↔ err6 29.302 (.101)</td>
</tr>
<tr>
<td>#5</td>
<td>22.4 (5)</td>
<td>.000</td>
<td>.014</td>
<td>.988</td>
<td>.117 (.076 -.161)</td>
<td>.005</td>
<td>err4 ↔ err2 16.914 (.061) err6 ↔ err1 8.873 (.052)</td>
</tr>
<tr>
<td>#1</td>
<td>12.4 (2)</td>
<td>.002</td>
<td>.011</td>
<td>.992</td>
<td>.126 (.065 -.197)</td>
<td>.022</td>
<td>None</td>
</tr>
</tbody>
</table>

Note. Good fit is indicated by SRMR < .05, CFI > .95 and RMSEA < .05; SRMR = Standard Mean Root Residual; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; CI = Confidence Interval; MI = Modification Index

Figure 18
Final Measurement Model for Integrity

Communication accuracy. The items believed to be caused by communication accuracy underwent CFA (Maltz & Kohli, 1996). The initial measurement model showed inadequate fit [$\chi^2 = 45.7$ p = .000; df = 2; SRMR = .075; CFI = .879; RMSEA = .258 (.196 -.325); pCLOSE = .000], suggesting a measurement error covariance between items 4 and 1 (err4 ↔ err1; MI = 36.602; Par change = .335). Given that indicator 4 may also have been influenced by a change in organizational strategy as well as communication accuracy, indicator 4 was deleted. The revised measurement model demonstrated adequate fit [$\chi^2 = 11.0$ p = .011; df = 1; SRMR = .043; CFI = .947; RMSEA = .175 (.093 -.274); pCLOSE = .008]. Further modification of the model was not necessary. The revised measurement model demonstrated low internal consistency reliability ($\alpha = .65$). Figures 19 and 20 present the initial and final measurement models, respectively. Table 24 outlines survey items and model labels. Fit statistics and modification indices are summarized in Table 25.
Table 24
Survey Items and Model Labels for Communication Accuracy

<table>
<thead>
<tr>
<th>Item Deleted</th>
<th>Over the previous 3 months, my nurse manager/immediate supervisor provided me with…</th>
<th>Model Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Biased information. (R)</td>
<td>Ecomm1R</td>
<td></td>
</tr>
<tr>
<td>2. Valid estimates of resources I needed to care for my patients.</td>
<td>Ecomm2</td>
<td></td>
</tr>
<tr>
<td>4. <strong>Conflicting messages. (R) (DELETED)</strong></td>
<td>Ecomm4R</td>
<td></td>
</tr>
<tr>
<td>12. Accurate Information.</td>
<td>Ecomm12</td>
<td></td>
</tr>
</tbody>
</table>

Note. Deleted item is in bold.

Table 25
Fit Statistics and Modification Indices for Communication Accuracy

<table>
<thead>
<tr>
<th>Item Deleted</th>
<th>(\chi^2) (df)</th>
<th>p value</th>
<th>SRMR</th>
<th>CFI</th>
<th>RMSEA (CI)</th>
<th>pCLOSE</th>
<th>MI (Par change)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>45.7 (2)</td>
<td>.000</td>
<td>.075</td>
<td>.879</td>
<td>.258 (.196 - .325)</td>
<td>.000</td>
<td>err4 (\leftrightarrow) err1</td>
</tr>
<tr>
<td>#4</td>
<td>11.0 (1)</td>
<td>.011</td>
<td>.043</td>
<td>.947</td>
<td>.175 (.093 - .274)</td>
<td>.008</td>
<td>None</td>
</tr>
</tbody>
</table>

Note. Good fit is indicated by SRMR < .05, CFI > .95 and RMSEA < .05; SRMR = Standard Mean Root Residual; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; CI = Confidence Interval; MI = Modification Index.
Attributes of the RN-Manager Relationship

Interaction frequency. Items argued to be caused by interaction frequency were subjected to CFA (McAllister, 1995). Initial measurement modeled showed evidence of good fit \[ \chi^2 = .50 \ p = .777; \ df = 2; \ SRMR = .005; \ CFI = 1.000; \ RMSEA = .000 (.000 - .072); \ pCLOSE = .892 \]. No modification indices were suggested. Model revision was not required. Figures 21 and 22 present the initial and final measurement models, respectively. Table 26 outlines survey items and model labels. Table 27 provides a summary of fit statistics and modification indices.
Table 26
Survey Items and Model Labels for Interaction Frequency

<table>
<thead>
<tr>
<th>How often….</th>
<th>Model Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does your nurse manager/immediate supervisor initiate work-related interaction with you?</td>
<td>Hintfr1</td>
</tr>
<tr>
<td>2. Do you initiate work-related interaction with your nurse manager/immediate supervisor?</td>
<td>Hintfr2</td>
</tr>
<tr>
<td>3. Do you interact with your nurse manager/immediate supervisor formally at work?</td>
<td>Hintfr3</td>
</tr>
<tr>
<td>4. Do you interact with your nurse manager/immediate supervisor informally or socially at work?</td>
<td>Hintf4</td>
</tr>
</tbody>
</table>

Note. All items retained.

Table 27
Fit Statistics and Modification Indices for Interaction Frequency

<table>
<thead>
<tr>
<th>Item Deleted</th>
<th>χ² (df)</th>
<th>p value</th>
<th>SRMR</th>
<th>CFI</th>
<th>RMSEA (CI)</th>
<th>pCLOSE</th>
<th>MI (Par change)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.504 (2)</td>
<td>.777</td>
<td>.005</td>
<td>1.000</td>
<td>0.000 (.000 - .072)</td>
<td>.892</td>
<td>None</td>
</tr>
</tbody>
</table>

Note. Good fit is indicated by SRMR < .05, CFI > .95 and RMSEA < .05; SRMR = Standard Mean Root Residual; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; CI = Confidence Interval; MI = Modification Index

Figure 22
Final Measurement Model for Interaction Frequency

Emotional availability. Items argued to be caused by the construct were subjected to CFA (Kahn, 1990). Initial measurement moded showed evidence of good fit [χ² = .84  p = .360; df = 1; SRMR = .003; CFI = 1.000; RMSEA = .000 (.000 - .139); pCLOSE = .536]. No modification indices were suggested. Model revision was not required. Figures 23 and 24 present the initial and final measurement models, respectively. Table 28 outlines survey items and model labels. Table 29 provides a summary of fit statistics and modification indices.
Figure 23
Initial Measurement Model for Emotional Availability

Table 28
Survey Items and Model Labels for Emotional Availability

<table>
<thead>
<tr>
<th>My nurse manager/immediate supervisor…</th>
<th>Model Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is approachable.</td>
<td>Davail7_1</td>
</tr>
<tr>
<td>2. Pays attention to what I’m saying when we interact.</td>
<td>Davail8_1</td>
</tr>
<tr>
<td>3. Makes time to listen to me and my concerns.</td>
<td>Davail9_1</td>
</tr>
</tbody>
</table>

Note. All items retained.

Table 29
Fit Statistics and Modification Indices for Emotional Availability

<table>
<thead>
<tr>
<th>Item Deleted</th>
<th>$\chi^2$ (df)</th>
<th>p value</th>
<th>SRMR</th>
<th>CFI</th>
<th>RMSEA (CI)</th>
<th>pCLOSE</th>
<th>MI (Par change)</th>
</tr>
</thead>
<tbody>
<tr>
<td>.84 (1)</td>
<td>.360</td>
<td>.003</td>
<td>1.000</td>
<td>.000</td>
<td>(.000 -.139)</td>
<td>.536</td>
<td>None</td>
</tr>
</tbody>
</table>

Note. Good fit is indicated by SRMR < .05, CFI > .95 and RMSEA < .05; SRMR = Standard Mean Root Residual; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; CI = Confidence Interval; MI = Modification Index

Figure 24
Final Measurement Model for Emotional Availability

**Benevolence towards RN.** Items believed to be caused by benevolence towards the RN underwent CFA (Mayer & Davis, 1999). The initial model demonstrated inadequate fit ($\chi^2 = 93.3$  p = .000; df = 5; SRMR = .035;
CFI = .952; RMSEA = .232 (.192 - .227); pCLOSE = .000, suggesting a measurement error covariance between indicators 5 and 4 (err5 ↔ err4; MI = 45.695; Par change = .124). Given that indicator 4 addressed advocacy rather than benevolence, indicator 4 was deleted. Although fit was enhanced for the revised model [$\chi^2 = 21.3$ $p = .000; df = 2; SRMR = .028; CFI = .985; RMSEA = .171 (.110 - .240); pCLOSE = .001$], modification indices reported measurement error covariance between indicators 5 and 3 (err5 ↔ err3; MI = 18.020; Par change $= .136$). In spite of the modification indices, indicator 5 was retained as it examines one’s manager making an unusual effort to assist the RN, a key aspect of benevolence (Mayer & Davis). Indicator 3 was also retained as it addresses the absence of intentional, harmful behavior, a fundamental quality of benevolence. The revised measurement model demonstrated high internal consistency reliability ($\alpha = .93$). Figures 25 and 26 illustrate the initial and final measurement models, respectively. Table 30 provides an outline of survey items and model labels. Table 31 contains a summary of fit statistics and modification indices.

Figure 25
Initial Measurement Model for Benevolence towards RN

<table>
<thead>
<tr>
<th>My nurse manager/immediate supervisor…</th>
<th>Model Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is very concerned about my welfare.</td>
<td>Bbenern1</td>
</tr>
<tr>
<td>2. Cares a lot about my needs and desires.</td>
<td>Bbenern2</td>
</tr>
<tr>
<td>3. Would not knowingly do anything to hurt me.</td>
<td>Bbenern3</td>
</tr>
<tr>
<td>4. Really looks out for what is important to me. (DELETED)</td>
<td>Bbenern4</td>
</tr>
<tr>
<td>5. Will go out of his/her way to help me.</td>
<td>Bbenern5</td>
</tr>
</tbody>
</table>

Note. Deleted item is in bold.
Table 31
Fit Statistics and Modification Indices for Benevolence towards RN

<table>
<thead>
<tr>
<th>Item deleted</th>
<th>$\chi^2$(df)</th>
<th>p value</th>
<th>SRMR</th>
<th>CFI</th>
<th>RMSEA (CI)</th>
<th>pCLOSE</th>
<th>MI (Par change)</th>
</tr>
</thead>
<tbody>
<tr>
<td>#4</td>
<td>93.3 (5)</td>
<td>.000</td>
<td>.035</td>
<td>.952</td>
<td>.232 (.192 -.274)</td>
<td>.000</td>
<td>err5 ↔ err4 45.695 (.124)</td>
</tr>
<tr>
<td>#4</td>
<td>21.3 (2)</td>
<td>.000</td>
<td>.028</td>
<td>.985</td>
<td>.171 (.110 -.240)</td>
<td>.001</td>
<td>err5 ↔ err3 18.020 (.136)</td>
</tr>
</tbody>
</table>

Note. Good fit is indicated by SRMR < .05, CFI > .95 and RMSEA < .05; SRMR = Standard Mean Root Residual; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; CI = Confidence Interval; MI = Modification Index

Figure 26
Final Measurement Model for Benevolence towards RN

Attributes of the Work Environment

Procedural justice. Items argued to be caused by procedural justice were subjected to CFA (Moorman, 1991). The initial measurement model demonstrated inadequate fit [$\chi^2 = 92.8$; $p = .000$; df = 14; SRMR = .023; CFI = .963; RMSEA = .131 (.106 -.157); pCLOSE = .000]. A measurement error covariance was reported between indicators 2 and 3 (err2 ↔ err3; MI = 34.273; Par change = .125), suggesting the indicators are caused by an unknown, shared construct. Both indicators were retained as they focus on crucial aspects of procedural justice, opportunities to appeal the decision and representation of all parties in decision making. A measurement error covariance was also reported between items 7 and 6 (err7 ↔ err6; MI = 29.199; Par change = .091). Given that the content of item 7 overlaps with items 6 and 2, item 7 was deleted. The revised measurement model showed improved but not good fit [$\chi^2 = 47.0$; $p = .000$; df = 9; SRMR = .021; CFI = .978; RMSEA = .113 (.061 -.192); pCLOSE = .001], suggesting an error covariance between indicators 6 and 5 (err6 ↔ err5; MI = 18.822; Par change = .072). As well as item 5, items 2, 3 and 6 also examined employees’ right to be heard and to have input regarding a decision. Consequently, indicator 5 was retained and the revised five item model showed acceptable fit [$\chi^2 = 19.5$; $p = .002$; df = 5; SRMR = .017; CFI = .989; RMSEA = .094 (.052 -.140); pCLOSE = .042]. Although a modification index was present (err6 ↔ err4; MI = 9.259; Par change = .053), both indicators
are fundamental qualities of procedural justice and were consequently retained. The revised measurement model demonstrated high internal consistency reliability ($\alpha = .93$). Figures 27 and 28 illustrate the initial and final measurement models, respectively. Survey items and model labels are outlined in Table 32. Table 33 provides a summary of fit statistics and modification indices.

Figure 27
Initial Measurement Model for Procedural Justice
Table 32
Survey Items and Model Labels for Procedural Justice

<table>
<thead>
<tr>
<th>Item</th>
<th>Model Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Accurate information necessary for making the decision is collected.</td>
<td>Fprocj1</td>
</tr>
<tr>
<td>2. Opportunities to appeal or challenge the decision are provided.</td>
<td>Fprocj2</td>
</tr>
<tr>
<td>3. All sides affected by the decision are represented.</td>
<td>Fprocj3</td>
</tr>
<tr>
<td>4. Standards are created so that decisions are made with consistency.</td>
<td>Fprocj4</td>
</tr>
<tr>
<td>5. Concerns of all those affected by the decision are heard. (DELETED)</td>
<td>Fprocj5</td>
</tr>
<tr>
<td>6. Useful feedback regarding the decision and its implementation is allowed.</td>
<td>Fprocj6</td>
</tr>
<tr>
<td>7. Requests for clarification or additional information about the decision are allowed. (DELETED)</td>
<td>Fprocj7</td>
</tr>
</tbody>
</table>

Note. Deleted items are in bold.

Table 33
Fit Statistics and Modification Indices for Procedural Justice

<table>
<thead>
<tr>
<th>Item deleted</th>
<th>$\chi^2$ (df)</th>
<th>p value</th>
<th>SRMR</th>
<th>CFI</th>
<th>RMSEA (CI)</th>
<th>pCLOSE</th>
<th>MI (Par change)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>92.8 (14)</td>
<td>.000</td>
<td>.023</td>
<td>.963</td>
<td>.131 (.106 - .157)</td>
<td>.000</td>
<td>err2 ↔ err3 34.273 (.125) err7 ↔ err6 29.199 (.091)</td>
</tr>
<tr>
<td>#7</td>
<td>47.0 (9)</td>
<td>.000</td>
<td>.021</td>
<td>.978</td>
<td>.113 (.061 - .192)</td>
<td>.001</td>
<td>err6 ↔ err5 18.822 (.072)</td>
</tr>
<tr>
<td>#5</td>
<td>19.5 (5)</td>
<td>.002</td>
<td>.017</td>
<td>.989</td>
<td>.094 (.052 - .140)</td>
<td>.042</td>
<td>err6 ↔ err4 9.259 (.053)</td>
</tr>
</tbody>
</table>

Note. Good fit is indicated by SRMR < .05, CFI > .95 and RMSEA < .05; SRMR = Standard Mean Root Residual; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; CI = Confidence Interval; MI = Modification Index
Access to support. Items argued to be caused by access to support were subjected to CFA (Laschinger, Finegan, Shamian & Wilk, 2001). Initial measurement model demonstrated good fit [$\chi^2 = .03; \ p = .854; \ df = 1; \ SRMR = .001; \ CFI = 1.000; \ RMSEA = .000 (0.000 - .081); \ pCLOSET = .903$]. Model modification was not necessary. Figures 29 and 30 illustrate the initial and final measurement models, respectively. Survey items and model labels are outlined in Table 34. Table 35 provides a summary of fit statistics and modification indices.

Table 34
Survey Items and Model Labels for Access to Support

<table>
<thead>
<tr>
<th>How much access to support do you have in your present job?</th>
<th>Model Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Specific information about things you do well.</td>
<td>Ksemp7</td>
</tr>
<tr>
<td>8. Specific comments about things you could improve.</td>
<td>Ksemp8</td>
</tr>
<tr>
<td>9. Helpful hints or problem solving advice.</td>
<td>Ksemp9</td>
</tr>
</tbody>
</table>

Note. All items retained.
Table 35
Fit Statistics and Modification Indices for Access to Support

<table>
<thead>
<tr>
<th>Item Deleted</th>
<th>$\chi^2$(df)</th>
<th>p value</th>
<th>SRMR</th>
<th>CFI</th>
<th>RMSEA (CI)</th>
<th>pCLOSE</th>
<th>MI (Par change)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.03 (1)</td>
<td>.854</td>
<td>.001</td>
<td>1.000</td>
<td>.000 (.000 - .081)</td>
<td>.903</td>
<td>None</td>
</tr>
</tbody>
</table>

Note. Good fit is indicated by SRMR < .05, CFI > .95 and RMSEA < .05; SRMR = Standard Mean Root Residual; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; CI = Confidence Interval; MI = Modification Index

Figure 30
Final Measurement Model for Access to Support

Access to resources. Fit statistics for the three item access to resources measurement model also showed good fit [$\chi^2 = .61; p = .436; df = 1; SRMR = .006; CFI = 1.000; RMSEA = .000 (.000 - .133); pCLOSE = .597]$. Model modification was not required. Figures 31 and 32 illustrate the initial and final measurement models, respectively. Survey items and model labels are outlined in Table 36. Table 37 provides a summary of fit statistics and modification indices.

Figure 31
Initial Measurement Model for Access to Resources
Table 36
Survey Items and Model Labels for Access to Resources

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Model Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Time available to do necessary paperwork.</td>
<td>Ksemp10</td>
</tr>
<tr>
<td>11. Time available to accomplish job requirements.</td>
<td>Ksemp11</td>
</tr>
<tr>
<td>12. Acquiring temporary help when needed.</td>
<td>Ksemp12</td>
</tr>
</tbody>
</table>

Note. All items retained.

Table 37
Fit Statistics and Modification Indices for Access to Resources

<table>
<thead>
<tr>
<th>Item Deleted</th>
<th>$\chi^2$(df)</th>
<th>p value</th>
<th>SRMR</th>
<th>CFI</th>
<th>RMSEA (CI)</th>
<th>pCLOSE</th>
<th>MI (Par change)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.61 (1)</td>
<td>.436</td>
<td>.006</td>
<td>1.000</td>
<td>.000 (.000 - .133)</td>
<td>.597</td>
<td>None</td>
</tr>
</tbody>
</table>

Note. Good fit is indicated by SRMR < .05, CFI > .95 and RMSEA < .05; SRMR = Standard Mean Root Residual; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; CI = Confidence Interval; MI = Modification Index

Figure 32
Final Measurement Model for Access to Resources

Self-determination. Items believed to be caused by self-determination underwent CFA (Spreitzer, 1995). Initial measurement model provided evidence of good fit [$\chi^2 = 3.8; \ p = .050; \ df = 1; \ SRMR = .018; \ CFI = .992; \ RMSEA = .093 (.000 - .199); \ pCLOSE = .149$]. Model modification was not required. Figures 33 and 34 illustrate the initial and final measurement models, respectively. Survey items and model labels are outlined in Table 38. Table 39 provides a summary of fit statistics and modification indices.
Figure 33
Initial Measurement Model for Self-determination

![Diagram showing initial measurement model for self-determination]

Table 38
Survey Items and Model Labels for Self-determination

<table>
<thead>
<tr>
<th>Item Deleted</th>
<th>$\chi^2$ (df)</th>
<th>p value</th>
<th>SRMR</th>
<th>CFI</th>
<th>RMSEA (CI)</th>
<th>pCLOSE</th>
<th>MI (Par change)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. I have significant autonomy in determining how I do my job.</td>
<td>3.8 (1)</td>
<td>.050</td>
<td>.018</td>
<td>.992</td>
<td>.093 (.000 - .199)</td>
<td>.149</td>
<td>None</td>
</tr>
<tr>
<td>7. I can decide on my own how to go about doing my own work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. I have considerable opportunity for independence and freedom in how I do my job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. All items retained.

Table 39
Fit Statistics and Modification Indices for Self-determination

Note. Good fit is indicated by SRMR < .05, CFI > .95 and RMSEA < .05; SRMR = Standard Mean Root Residual; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; CI = Confidence Interval; MI = Modification Index

Figure 34
Final Measurement Model for Self-determination

![Diagram showing final measurement model for self-determination]
Reliability of Revised Measurement Models

Internal consistency coefficients (Cronbach’s alpha) were calculated for instruments before and after CFA of measurement models. Prior to measurement model evaluation, internal consistency coefficients ranged from 0.73 to 0.96, indicating that the instruments were reliable. The revised instruments also demonstrated acceptable or high internal consistency coefficients, ranging from 0.65 to 0.95. However, the revised communication accuracy measurement model showed low internal consistency reliability (α = .65) possibly due to reduction in the number of items (Cortina, 1993). Table 40 provides a comparison of Cronbach’s alpha before and after CFA of measurement models.

Table 40
Internal Consistency Coefficients Before and After CFA of Measurement Models

<table>
<thead>
<tr>
<th>Measurement Model</th>
<th>α before measurement model</th>
<th>α after measurement model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attribute of RN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propensity to trust</td>
<td>.73</td>
<td>.70</td>
</tr>
<tr>
<td>Attributes of Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ability</td>
<td>.96</td>
<td>.94</td>
</tr>
<tr>
<td>Integrity</td>
<td>.96</td>
<td>.95</td>
</tr>
<tr>
<td>Communication accuracy</td>
<td>.75</td>
<td>.65</td>
</tr>
<tr>
<td>Attribute of RN-Manager Relationship</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benevolence towards RN</td>
<td>.95</td>
<td>.93</td>
</tr>
<tr>
<td>Attribute of Work Environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procedural justice</td>
<td>.95</td>
<td>.93</td>
</tr>
</tbody>
</table>

Hypothesized Structural Model

Based on CFA and revision of instruments, the mean of the total score of the items was used as an indicator for each latent variable. Referred to as item parceling, a ‘parcelled’ score replaced the scores of individual indicators in the SEM analysis. Each latent construct was therefore measured by one indicator with a score that consisted of ‘parcelled’ scores of items that were retained as a result of CFA (Bandalos, 2002).

Prior to structural equation modeling (SEM) analysis, interactional justice and benevolence towards co-workers were deleted due to high multicollinearity with other study variables (see Chapter 4, Multicollinearity). Using the AMOS 17.0 © software program, the full hypothesized structural model (see Figure 12) underwent maximum likelihood estimation (MLE) to evaluate model fit. Several fit indices were used to report and interpret the goodness of fit between the hypothesized model and observed data (Kline, 2005). These specific indices were chosen as they have been found to be the most accurate reflection of model fit (Kline). Chi-square (χ²) was used to...
assess the discrepancy between the sample covariance matrix and the hypothesized model. Ideally, a non-significant difference with probability greater than .05 provided evidence of good fit. Standardized Root Mean Square Residual (SRMR) referred to the average discrepancy between observed and hypothesized correlation matrices. Values less than .05 were desired. Evaluation of the Comparative Fit Index (CFI) represented a comparison between the hypothesized model and the independence (null) model. Taking sample size into account, CFI values greater than .95 represented good fit. Lastly, Root Mean Square Error of Approximation (RMSEA) examined the error of approximation in the population and reported a 90% confidence interval for the RMSEA. Considered to be the most informative criterion in SEM (Byrne, 2010), RMSEA was used in conjunction with pCLOSE which reflected closeness of fit. RMSEA values of less than .05 and pCLOSE values greater than .50 provided evidence of good fit.

A review of MI for each model suggested additional pathways be included in the model. The inclusion of additional pathways was primarily based on strong theoretical and empirical reasoning, with suggested MI and parameter change values employed only as statistical guidelines. Modification indices also specified potential correlations between error terms, believed to arise from an excluded cause shared by two indicators (Byrne, 2010). Given that there were no strong theoretical reasons for expecting such error correlations, error covariance arrows were not added to simply enhance model fit.

Figure 35 illustrates hypothesized structural equation model with disturbance terms (D), reflecting the unexplained variance of endogenous latent variables due to unmeasured causes (Kline, 2005).
Figure 35
Structural Model of Revised Hypothesized Theoretical Model of Determinants of Registered Nurses’ Trust in their Managers

Note. D = Disturbance of endogenous variables
The initial hypothesized model demonstrated inadequate fit with a significantly high chi-square ($\chi^2 = 929.151; p = .000; df = 63$), high SRMR (.267), a low CFI (.727) and a high RMSEA [.201 (.189 - .212) pCLOSE = .000]. Examination of the MI suggested that an additional path from procedural justice to interaction frequency be added (MI = 183.210; Par change = .737). Theoretically, the modification makes sense as it is conceivable that the more opportunities a RN has to appeal, challenge or voice a concern regarding a decision, the more often the RN and manager will interact. The pathway was added to the model, resulting in modified model 1.

With inclusion of the new path, modified model 1 showed evidence of a better fitting model with a lower chi-square ($\chi^2 = 615.831; p = .000; df = 62$), a lower SRMR (.068), a higher CFI (.825) and a lower RMSEA [.162 (.150 - .174); pCLOSE = .000]. However, examination of MI recommended a further pathway from ability to integrity (MI = 20.611; Par change = .155). From a conceptual viewpoint, when a manager is seen to be knowledgeable and competent, the RN would value the manager’s aptitude and plausibly perceive that the two parties share morally acceptable principles. The RN would therefore attribute integrity to the manager (Mayer et al., 1995). The modification is empirically supported by a previous study in which professional education resulted in greater moral reasoning and integrity among real estate salespeople (Izzo & Vitell, 2003). As a result, this pathway was added to the model to produce modified model 2.

Modified model 2 demonstrated improved fit with the study data with a lower chi-square ($\chi^2 = 488.911; p = .000; df = 61$), a higher CFI (.865) and a lower RMSEA [.143 (.132 - .155); pCLOSE = .000]. However, a higher value or SRMR was demonstrated (.080). A review of MI advised an additional path from ability to emotional availability (MI = 56.131; Par change = .317). From an empirical perspective, this modification is consistent with previous studies which reported that leaders utilized their knowledge to be perceived as more emotionally engaged and available (Bakker & Demerouti, 2008; Schaufeli & Bakker, 2004). This pathway was consequently added to the model, establishing modified model 3.

Modified model 3 was found to be a better fitting model with a lower chi-square ($\chi^2 = 298.761; p = .000; df = 60$), a substantially lower SRMR (.067), a higher CFI (.925) and a lower RMSEA [.108 (.096 - .120); pCLOSE = .000]. Evaluation of MI suggested an additional pathway from procedural justice to communication accuracy (MI = 26.250; Par change = .233). Given that fair decision making incorporates use of accurate information (Moorman, 1991), this pathway was added to the model to produce modified model 4.

Although modified model 4 demonstrated improved fit with a lower chi-square ($\chi^2 = 224.219; p = .000; df = 59$), a lower SRMR (.044), a higher CFI (.948) as well as a lower RMSEA [.091 (.078 - .103); pCLOSE = .000], assessment of MI suggested a further pathway from procedural justice to benevolence towards the RN (MI = 5.159; Par change = .083). Consistent application of fair decisions in an equitable fashion speaks to the manager’s concern for the well-being of the RN (Konovsky & Pugh, 1994). Given that the manager is perceived to behave benevolently when fair decisions are implemented, the pathway was added to the model to result in modified model 5.
Examination maximum likelihood estimates of modified model 5 revealed a better fit with a lower chi-square ($\chi^2 = 193.789$; $p = .000$; $df = 58$), a slightly lower SRMR (.043), a higher CFI (.957) in addition to a lower RMSEA [.083 (.070 - .096); $pCLOSE = .000$]. Evaluation of MI advised a further pathway from procedural justice to integrity (MI = 7.181; Par change = .093). When a manager consistently applies decisions in a fair and equitable manner with opportunities for staff feedback, nurses recognize shared values and perceive integrity (Frazier, Johnson, Gavin, Gooty & Snow, 2010). The pathway was therefore added to the model to produce modified model 6. Fit statistics for modified model 6 provided evidence of improved fit with a reduced chi-square ($\chi^2 = 147.845$; $p = .000$; $df = 57$), an improved SRMR (.041), an increased CFI (.971) as well as a reduced RMSEA [.068 (.055 - .082); $pCLOSE = .013$]. An examination of MI suggested no additional pathways that could be theoretically or empirically supported. Incorporation of further pathways did not result in improved fit indices. Therefore, model modification was brought to a close. The final structural model with significant and non-significant hypothesized pathways is presented in Figure 36.

When non-significant pathways were deleted from the final structural model, fit statistics demonstrated a better fit with a lower chi-square ($\chi^2 = 78.855$; $p = .000$; $df = 20$), an improved SRMR (.024) and a higher CFI (.978). However, a higher RMSEA was evident [.093 (.072 - .115); $pCLOSE = .001$]. Although access to resources and access to support were found to be significant predictors of self-determination, self-determination failed to be a direct predictor of managerial trust. As a result, access to resources, access to support and self-determination were omitted from the final model.

Table 41 contains a summary of goodness-of-fit statistics and modification indices (MI) for the initial revised hypothesized model as well as for subsequent modified models. Figure 36 depicts the final conceptual model with significant and non-significant hypothesized pathways. Figure 37 illustrates the final theoretical model with standardized path coefficients and deletion of non-significant pathways.
Table 41
Fit Statistics & Modifications Indices for Revised Hypothesized Structural Model

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$ (df)</th>
<th>p value</th>
<th>SRMR</th>
<th>CFI</th>
<th>RMSEA (CI)</th>
<th>p close</th>
<th>MI (Par change)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Model</td>
<td>929.151 (63)</td>
<td>.000</td>
<td>.267</td>
<td>.727</td>
<td>.210 (.189 -.212)</td>
<td>.000</td>
<td>Procedural justice $\rightarrow$ int. frequency 183.210 (.737)</td>
</tr>
<tr>
<td>Modified Model 1</td>
<td>615.831 (62)</td>
<td>.000</td>
<td>.068</td>
<td>.825</td>
<td>.162 (.150 -.174)</td>
<td>.000</td>
<td>Ability $\rightarrow$ Integrity 20.611 (.156)</td>
</tr>
<tr>
<td>Modified Model 2</td>
<td>488.911 (61)</td>
<td>.000</td>
<td>.080</td>
<td>.865</td>
<td>.143 (.132 -.155)</td>
<td>.000</td>
<td>Ability $\rightarrow$ Emotional availability 56.131 (.317)</td>
</tr>
<tr>
<td>Modified Model 3</td>
<td>298.970 (60)</td>
<td>.000</td>
<td>.067</td>
<td>.925</td>
<td>.108 (.096 -.120)</td>
<td>.000</td>
<td>Procedural justice $\rightarrow$ Comm. accuracy 26.250 (.283)</td>
</tr>
<tr>
<td>Modified Model 4</td>
<td>224.219 (59)</td>
<td>.000</td>
<td>.044</td>
<td>.948</td>
<td>.091 (.078 -.103)</td>
<td>.000</td>
<td>Procedural justice $\rightarrow$ Benevolence RN 5.159 (.083)</td>
</tr>
<tr>
<td>Modified Model 5</td>
<td>193.789 (58)</td>
<td>.000</td>
<td>.041</td>
<td>.957</td>
<td>.083 (.070 -.096)</td>
<td>.000</td>
<td>Procedural justice $\rightarrow$ Integrity 7.181 (.093)</td>
</tr>
<tr>
<td>Final Model$^a$ (Modified Model 6)</td>
<td>147.845 (57)</td>
<td>.000</td>
<td>.039</td>
<td>.971</td>
<td>.068 (.055 -.082)</td>
<td>.013</td>
<td>None with theoretical or empirical support</td>
</tr>
<tr>
<td>Final Model$^b$</td>
<td>78.855 (20)</td>
<td>.000</td>
<td>.024</td>
<td>.980</td>
<td>.093 (.072 -.115)</td>
<td>.001</td>
<td>None with theoretical or empirical support</td>
</tr>
</tbody>
</table>

Note. a = Includes all hypothesized pathways. b = Non-significant pathways deleted. SRMR = Standard Mean Root Residual; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; CI = Confidence Interval; MI = Modification Index; Good fit is indicated by SRMR < .05, CFI > .95 and RMSEA < .05.
Figure 36
Final Structural Model of Determinants of Registered Nurses’ Trust in their Managers with all Hypothesized Pathways

Note. Dashed lines indicate non-significant hypothesized pathways.
* p < .05. ** p < .01. All other pathways significant at p < .001.
Figure 37
Final Structural Model of Determinants of Registered Nurses' Trust in their Managers with Standardized Path Coefficients and Deletion of Non-significant Pathways

Note. $\chi^2 = 78.86$ (20); SRMR = .02; CFI = .98; RMSEA = .09; pCLOSE = .001.

*p < .05. p** < .01. All other pathways significant at p < .001.
**Alternative Hypothesized Structural Model**

After a final model is selected, Kline (2005) suggests that at least one plausible alternative model be considered, particularly when a final model has less than ideal fit. Inversion in the causal order of two adjacent constructs will result in an alternative model, which generates the same covariance matrix as the original model but offers a unique theoretical perspective (Stelzl, 1986). For the hypothesized model in this study, the pathway from communication accuracy to ability was reversed. The alternative hypothesized model illustrates that ability has a direct effect on communication accuracy, rather than communication accuracy having a direct relationship on ability as depicted in the original hypothesized model. From a theoretical perspective, ability may influence the specific perception that communication from one’s manager is accurate and speaks to the manager’s expertise and knowledge. When a manager is seen to be competent and skillful in all aspects of the managerial role, specific enactment of behaviors associated with the role, such as communicating information, may also be seen as accurate. The alternative hypothesized structural model is presented in Figure 38.
Figure 38
Structural Model of Alternative Hypothesized Model of Determinants of Registered Nurses' Trust in their Managers

Note. D = Disturbance of endogenous variables
Examination of maximum likelihood estimates for the alternative initial model showed poor fit with a high chi-square ($\chi^2 = 891.454; \ p = .000; \ df = 63$) and SRMR (.250), a low CFI (.732) and a large RMSEA [.200 (.188 - .212); pCLOSE = .000]. Modification indices suggested an additional pathway from procedural justice to interaction frequency (MI = 164.194; Par change = .733). The modification is theoretically supported as it is conceivable that the more opportunities a RN has to appeal, challenge or voice a concern regarding a decision, the more often the RN and manager will interact. The pathway was included in the model to establish alternative modified model 1.

Fit statistics for the alternative modified model 1 provided evidence for an improved fit with a lowered chi-square ($\chi^2 = 616.829; \ p = .000; \ df = 62$) and SRMR (.069), a greater CFI (.821) as well as a reduced RMSEA [.165 (.153 - .177); pCLOSE = .000]. Modification indices suggested an additional pathway from ability to integrity (MI = 26.042; Par change = .177). From a conceptual viewpoint, when a manager is perceived to be knowledgeable and competent, the RN would value the manager’s aptitude and believe that the two parties share morally acceptable principles, therefore attributing integrity to the manager (Mayer et al., 1995). The modification is empirically supported by a previous study in which professional education resulted in greater moral reasoning and integrity among real estate salespeople (Izzo & Vitell, 2003). As a result, this pathway was added to the model to produce alternative modified model 2.

Evaluation of fit statistics for alternative modified model 2 revealed a better fit with a lower chi-square ($\chi^2 = 458.499; \ p = .000; \ df = 61$), a larger CFI (.871) in addition to a lower RMSEA [.141 (.129 - .153); pCLOSE = .000]. However, a higher SRMR indicated worse fit (.081). Modification indices suggested an additional pathway from ability to emotional availability (MI = 66.223; Par change = .351). From an empirical perspective, this modification is consistent with previous studies which reported that leaders utilized their knowledge to be perceived as more emotionally engaged and available (Bakker & Demerouti, 2008; Schaufeli & Bakker, 2004). This pathway was consequently added to the alternative modified model 2 to establish alternative modified model 3.

Alternative modified model 3 provided evidence of improved fit with the study data with a lower chi-square ($\chi^2 = 247.866; \ p = .000; \ df = 60$) and SRMR (.051), a higher CFI (.939) in addition to a lower RMSEA [.098 (.085 - .110); pCLOSE = .000]. Modification indices suggested an additional pathway from ability to emotional availability (MI = 4.810; Par change = .091). Given that fair decision making incorporates use of accurate information (Moorman, 1991), this pathway was included in alternative modified model 4.

Examination of maximum likelihood estimates of alternative modified model 4 revealed a better fit with a slightly reduced chi-square ($\chi^2 = 220.830; \ p = .000; \ df = 59$) and SRMR (.045), a higher CFI (.948) in addition to a lower RMSEA [.091 (.079 - .104); pCLOSE = .000]. However, there was no improvement in SRMR (.043). An examination of the modification indices advised a further pathway from procedural justice to ability (MI = 6.503; Par change = .102). Consistent implementation of fair decisions regarding policies and procedures opportunities for staff feedback and concerns could possibly shape ability and expertise perceptions of one’s
manager (Frazier et al., 2010). The pathway was therefore added to the model to produce alternative modified model 5.

Goodness-of-fit statistics demonstrated that alternative modified model 5 had enhanced fit with the study data with a lower chi-square ($\chi^2 = 177.763$; $p = .000$; df = 58) and SRMR (.037), a higher CFI (.961) in addition to a lower RMSEA [.079 (.066 - .093); pCLOSE = .000]. An examination of modification indices suggested no additional theoretically or empirically supported pathways. Therefore, further model modification ceased.

When non-significant pathways were deleted from the alternative final model, fit statistics demonstrated a better fit with a lower chi-square ($\chi^2 = 119.292$; $p = .000$; df = 21) and an improved SRMR (.025). However, higher values were present for CFI (.965) and RMSEA [.119 (.099 - .140); pCLOSE = .000]. Although access to resources and access to support were found to be significant predictors of self-determination, self-determination failed to be a direct predictor of managerial trust. As a result, access to resources, access to support and self-determination were omitted from the final model.

Table 42 provides an outline of fit indices and modification indices of the alternative hypothesized structural model. Figure 39 depicts the alternative final structural model with all hypothesized pathways. Figure 40 illustrates the alternative final structural model with standardized path coefficients and deletion of non-significant hypothesized pathways.
Table 42

Fit Statistics & Modifications Indices for Alternative Hypothesized Structural Model

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$ (df)</th>
<th>p value</th>
<th>SRMR</th>
<th>CFI</th>
<th>RMSEA (CI)</th>
<th>P close</th>
<th>MI (Par change)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative Initial Model</td>
<td>891.454 (63)</td>
<td>.000</td>
<td>.250</td>
<td>.732</td>
<td>.200 (.188 -.212)</td>
<td>.000</td>
<td>Procedural justice $\rightarrow$ int.frequency 164.194 (.733)</td>
</tr>
<tr>
<td>Alternative Modified Model 1</td>
<td>616.829 (62)</td>
<td>.000</td>
<td>.069</td>
<td>.821</td>
<td>.165 (.153 -.177)</td>
<td>.000</td>
<td>Ability $\rightarrow$ Integrity 26.042 (.177)</td>
</tr>
<tr>
<td>Alternative Modified Model 2</td>
<td>458.499 (61)</td>
<td>.000</td>
<td>.081</td>
<td>.871</td>
<td>.141 (.129 -.153)</td>
<td>.000</td>
<td>Ability $\rightarrow$ Emotional availability 66.223 (.351)</td>
</tr>
<tr>
<td>Alternative Modified Model 3</td>
<td>247.866 (60)</td>
<td>.000</td>
<td>.051</td>
<td>.939</td>
<td>.098 (.085 -.110)</td>
<td>.000</td>
<td>Procedural justice $\rightarrow$ Comm. accuracy 4.810 (.116)</td>
</tr>
<tr>
<td>Alternative Modified Model 4</td>
<td>220.830 (59)</td>
<td>.000</td>
<td>.045</td>
<td>.948</td>
<td>.091 (.079 -.104)</td>
<td>.000</td>
<td>Procedural justice $\rightarrow$ Ability 6.503 (.102)</td>
</tr>
<tr>
<td>Alternative Final Model$^a$</td>
<td>177.763 (58)</td>
<td>.000</td>
<td>.037</td>
<td>.961</td>
<td>.079 (.066 -.093)</td>
<td>.000</td>
<td>None with theoretical or empirical support</td>
</tr>
<tr>
<td>(Alternative Modified)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative Final Model$^b$</td>
<td>119.292 (21)</td>
<td>.000</td>
<td>.025</td>
<td>.965</td>
<td>.119 (.099 -.140)</td>
<td>.000</td>
<td>None with theoretical or empirical support</td>
</tr>
</tbody>
</table>

Note. $a =$ Includes all hypothesized pathways. $b =$ Non-significant pathways deleted. SRMR = Standard Mean Root Residual; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; CI = Confidence Interval; MI = Modification Index; Good fit is indicated by SRMR < .05, CFI > .95 and RMSEA < .05.
Figure 39
Alternative Final Structural Model of Determinants of Registered Nurses’ Trust in their Managers with all Hypothesized Pathways

Note. Dashed lines indicate non-significant hypothesized pathways.

* p < .05. **p < .01. All other pathways significant at  p < .001.
Figure 40
Alternative Final Structural Model of Determinants of Registered Nurses’ Trust in their Managers with Standardized Path Coefficients and Deletion of Non-significant Pathways

Note. $\chi^2 = 119.29$ (21); $p < .001$; CFI = .97; RMSEA = .12.
*p < .05; **p < .01. All other pathways significant at $p < .001$. 
Comparison of Models

In comparison to the alternative final hypothesized model, the original final hypothesized structural model is the preferred model for several reasons. Firstly, the final alternative hypothesized structural model proposes that procedural justice has a large, indirect influence on trust though a relationship with ability. In contrast, the final hypothesized structural model suggests that procedural justice directly influences managerial integrity, which in turn directly impacts managerial trust. Given that procedural justice consists of giving staff a voice in decision-making and providing opportunities for feedback, it is more likely that a nurse will perceive the manager is acting in an ethical manner rather than behaving competently. In addition, procedural justice directly affects benevolence towards the RN, which then influences trust in one’s manager. Given that the manager is seen to demonstrate benevolence when fair decisions are implemented, the pathway from procedural justice to benevolence towards the RN is plausible. From an empirical standpoint, Frazier et al. (2010) recently reported that procedural justice did indirectly impact trust though integrity. In addition, the fit statistics for both models indicate that the final hypothesized structural model has better fit with the data as evidenced by a lower chi-square (78.855 versus 119.292), a lower SRMR (.024 versus .025), a higher CFI (.980 versus .965) and a lower RMSEA (.093 versus .119). As a result, the final hypothesized structural model is the preferred model. Table 43 presents a comparison of fit statistics for the models.

Table 43
Comparison of Final Theoretical Model and Alternative Final Theoretical Model

<table>
<thead>
<tr>
<th>Model</th>
<th>χ² (df)</th>
<th>p value</th>
<th>SRMR</th>
<th>CFI</th>
<th>RMSEA (CI)</th>
<th>pclose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Theoretical Model (Figure 37)</td>
<td>78.855</td>
<td>.000</td>
<td>.024</td>
<td>.980</td>
<td>.093 (.072 - .114)</td>
<td>.001</td>
</tr>
<tr>
<td>Alternative Final Theoretical Model (Figure 40)</td>
<td>119.292</td>
<td>.000</td>
<td>.025</td>
<td>.965</td>
<td>.119 (.099 - .140)</td>
<td>.000</td>
</tr>
</tbody>
</table>

Note. a= Non-significant pathways deleted. SRMR = Standard Mean Root Residual; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; CI = Confidence Interval. Good fit is indicated by SRMR < .05, CFI > .95 and RMSEA < .05.

Effects of Final Model

Direct effect, also known as a standardized estimate, is the immediate relation between two variables. An indirect effect reflects the effect of a prior, independent variable on a subsequent dependent variable and is the product of the particular direct path coefficient. Total effect is the sum of the indirect and direct effects of one variable on another (Kline, 2005). Standardized path coefficients with absolute values greater than 0.50 are considered to have a ‘large’ effect, values between 0.30 to 0.50 have a ‘medium’ effect, those between 0.20 to 0.30 have a ‘small’ effect and standardized path coefficients with values less than 0.20 have a ‘weak’ or non-existent effect (Chin, 1998).

In the final model, procedural justice had large total effects on communication accuracy (.79); interaction
frequency (.66); integrity (.62); benevolence towards the RN (.63) and managerial trust (.58) as well as medium strength effects on ability (.31) and emotional availability (.40). Goal facilitation had a strong total effect on ability (.56) and medium effects on emotional availability (.40); integrity (.30) and managerial trust (.31). Additionally, goal facilitation also had a small effect on benevolence towards the RN (.24). Although communication accuracy had a medium effect on ability (.26), the independent variable maintained weak effects on emotional availability (.19); integrity (.14); benevolence towards the RN (.11); and trust in one’s manager (.17).

Interaction frequency had a medium strength total effect on emotional availability (.39) and a small effect on benevolence towards the RN (.23). In addition, interaction frequency maintained weak effects on ability (.16); integrity (.09) and trust in one’s manager (.13). Ability maintained large, strong effects on emotional availability (.72); integrity (.54) and managerial trust (.56) as well as a medium effect on benevolence towards the RN (.43). Emotional availability had a large effect on benevolence towards the RN (.59) but only a weak effect on trust in one’s manager (.16). Lastly, integrity demonstrated a weak effect on trust in one’s manager (.18) whereas benevolence towards the RN had a small effect on managerial trust (.27). Table 44 provides a summary of standardized effects for the final model.
<table>
<thead>
<tr>
<th>Variables</th>
<th>Procedural justice</th>
<th>Facilitation of team work</th>
<th>Communication accuracy</th>
<th>Interaction frequency</th>
<th>Ability</th>
<th>Emotional availability</th>
<th>Integrity</th>
<th>Benevolence RN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication accuracy</td>
<td>0.79 (.79/--)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction frequency</td>
<td>0.66 (.66/--)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ability</td>
<td>0.31 (--/0.31)</td>
<td>0.56 (.56/--)</td>
<td>0.26 (.26/--)</td>
<td>16 (.16/--)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional availability</td>
<td>0.40 (--/0.40)</td>
<td>0.40 (--/0.40)</td>
<td>0.19 (--/0.19)</td>
<td>0.39 (.27/.12)</td>
<td>0.72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrity</td>
<td>0.62 (.45/.17)</td>
<td>0.30 (--/0.30)</td>
<td>0.14 (--/0.14)</td>
<td>0.09 (--/0.09)</td>
<td>0.54</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benevolence RN</td>
<td>0.63 (.39/.24)</td>
<td>0.24 (--/0.24)</td>
<td>0.11 (--/0.11)</td>
<td>0.23 (--/0.23)</td>
<td>0.43</td>
<td>0.59 (0.59/-)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust in Manager</td>
<td>0.58 (.19/.39)</td>
<td>0.31 (--/0.31)</td>
<td>0.17 (--/0.17)</td>
<td>0.13 (--/0.13)</td>
<td>0.56</td>
<td>0.16 (0.16/-)</td>
<td>0.18</td>
<td>0.27 (-/0.27)</td>
</tr>
</tbody>
</table>

Note. Direct and indirect effects are identified in parentheses (direct/indirect) below the total effects value.
Hypotheses Testing

In the following section, each pathway in the hypothesized model is restated according to groups of attributes. Hypotheses H9 and H16 have been deleted due to multicollinearity of benevolence towards co-workers of RN and interactional justice.

Attributes of RN:

H1. Job tenure will be positively related to trust.
H2. Propensity to trust will be positively related to trust.

Attributes of manager:

H3. Ability will be positively related to trust.
H4. Integrity will be positively related to trust.
H5. Goal facilitation will be positively related to ability.
H6. Communication accuracy will be positively related to ability.
H7. Communication accuracy will be positively related to benevolence towards the RN.
H8. Communication accuracy will be positively related to integrity.

Attributes of RN-manager relationship:

H10. Benevolence towards RN will be positively related to trust.
H11. Interaction frequency will be positively related to ability.
H12. Interaction frequency will be positively related to benevolence towards RN.
H13. Interaction frequency will be positively related to integrity.
H14. Interaction frequency will be positively related to emotional availability.
H15. Interaction frequency will be positively related to communication accuracy.
H17. Emotional availability will be positively related to benevolence towards RN.

Attributes of work environment:

H18. Procedural justice will be positively related to trust.
H19. Self-determination will be positively related to trust.
H20. Access to support will be positively related to self-determination.
H21. Access to resources will be positively related to self-determination.
H22. Span of control will be negatively related to interaction frequency.
H23. Span of control will be negatively related to emotional availability.

On the basis of the final model (see Figure 37), the hypotheses were tested by examining the standardized regression weights and the critical ratio (> ± 1.96). Hypotheses 3, 4, 5, 6, 10, 11, 14, 17, 18, 20 and 21 were supported. The remaining hypotheses were not supported. As hypothesized, managerial trust was directly determined by ability, benevolence, integrity and procedural justice. Job tenure, propensity to trust and self-determination failed to have any direct effect on trust (see Table 45). As well, additional pathways in the final model are presented. These findings will be discussed in greater detail in the next chapter.
Table 45
Hypotheses Testing Summary and Parameter Estimates of Final Model

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Estimate</th>
<th>Standard Error</th>
<th>Critical Ratio Value</th>
<th>Standard Regression Weights</th>
<th>Hypothesis Supported by</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attributes of RN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1. Job tenure will be positively related to trust.</td>
<td>-.02</td>
<td>.03</td>
<td>-.56</td>
<td>-.01</td>
<td>No</td>
</tr>
<tr>
<td>H2. Propensity to trust will be positively related to trust.</td>
<td>.09</td>
<td>.08</td>
<td>1.11</td>
<td>.03</td>
<td>No</td>
</tr>
<tr>
<td><strong>Attributes of Manager</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3. Ability will be positively related to trust.</td>
<td>.42</td>
<td>.09</td>
<td>4.69</td>
<td>.34</td>
<td>Yes</td>
</tr>
<tr>
<td>H4. Integrity will be positively related to trust.</td>
<td>.25</td>
<td>.10</td>
<td>2.48</td>
<td>.18</td>
<td>Yes</td>
</tr>
<tr>
<td>H5. Goal facilitation will be positively related to ability.</td>
<td>.60</td>
<td>.04</td>
<td>14.17</td>
<td>.56</td>
<td>Yes</td>
</tr>
<tr>
<td>H6. Communication accuracy will be positively related to ability.</td>
<td>.13</td>
<td>.05</td>
<td>2.64</td>
<td>.26</td>
<td>Yes</td>
</tr>
<tr>
<td>H7. Communication accuracy will be positively related to benevolence towards RN.</td>
<td>-.09</td>
<td>.05</td>
<td>1.91</td>
<td>-.08</td>
<td>No</td>
</tr>
<tr>
<td>H8. Communication accuracy will be positively related to integrity.</td>
<td>-.06</td>
<td>.04</td>
<td>-1.25</td>
<td>-.05</td>
<td>No</td>
</tr>
<tr>
<td><strong>Attributes of RN-manager relationship</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H10. Benevolence towards RN will be positively related to trust.</td>
<td>.33</td>
<td>.07</td>
<td>4.76</td>
<td>.27</td>
<td>Yes</td>
</tr>
<tr>
<td>H11. Interaction frequency will be positively related to ability.</td>
<td>.20</td>
<td>.06</td>
<td>3.40</td>
<td>.16</td>
<td>Yes</td>
</tr>
<tr>
<td>H12. Interaction frequency will be positively related to benevolence towards RN.</td>
<td>.05</td>
<td>.06</td>
<td>.83</td>
<td>.04</td>
<td>No</td>
</tr>
<tr>
<td>H13. Interaction frequency will be positively related to integrity.</td>
<td>.06</td>
<td>.06</td>
<td>1.02</td>
<td>.04</td>
<td>No</td>
</tr>
<tr>
<td>H14. Interaction frequency will be positively related to emotional availability.</td>
<td>.38</td>
<td>.06</td>
<td>6.23</td>
<td>.27</td>
<td>Yes</td>
</tr>
<tr>
<td>H15. Interaction frequency will be positively related to communication accuracy.</td>
<td>.06</td>
<td>.08</td>
<td>.80</td>
<td>.06</td>
<td>No</td>
</tr>
<tr>
<td>H17. Emotional availability will be positively related to benevolence towards RN.</td>
<td>.57</td>
<td>.05</td>
<td>10.79</td>
<td>.59</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Attributes of work environment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H18. Procedural justice will be positively related to trust.</td>
<td>.25</td>
<td>.10</td>
<td>2.41</td>
<td>.19</td>
<td>Yes</td>
</tr>
<tr>
<td>H19. Self-determination will be positively related to trust.</td>
<td>-.06</td>
<td>.05</td>
<td>-1.33</td>
<td>-.04</td>
<td>No</td>
</tr>
<tr>
<td>H20. Access to support will be positively related to self-determination.</td>
<td>.12</td>
<td>.05</td>
<td>2.42</td>
<td>.15</td>
<td>Yes^*</td>
</tr>
<tr>
<td>H21. Access to resources will be positively related to self-determination.</td>
<td>.35</td>
<td>.07</td>
<td>5.18</td>
<td>.33</td>
<td>Yes^*</td>
</tr>
<tr>
<td>H22. Span of control will be negatively related to interaction frequency.</td>
<td>-.07</td>
<td>.04</td>
<td>-1.80</td>
<td>-.09</td>
<td>No</td>
</tr>
<tr>
<td>H23. Span of control will be negatively related to emotional availability.</td>
<td>.07</td>
<td>.04</td>
<td>1.60</td>
<td>.06</td>
<td>No</td>
</tr>
</tbody>
</table>
## Additional Pathways in Final Model

<table>
<thead>
<tr>
<th>Pathway Description</th>
<th>Coefficient</th>
<th>p Value</th>
<th>t Value</th>
<th>Standardized Coefficient</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Procedural justice to interaction frequency.</td>
<td>.66</td>
<td>.05</td>
<td>13.12</td>
<td>.66</td>
<td>N/A</td>
</tr>
<tr>
<td>2. Ability to integrity.</td>
<td>.60</td>
<td>.05</td>
<td>12.10</td>
<td>.54</td>
<td>N/A</td>
</tr>
<tr>
<td>3. Ability to emotional availability.</td>
<td>.75</td>
<td>.05</td>
<td>15.70</td>
<td>.72</td>
<td>N/A</td>
</tr>
<tr>
<td>4. Procedural justice to communication accuracy.</td>
<td>.68</td>
<td>.08</td>
<td>9.08</td>
<td>.79</td>
<td>N/A</td>
</tr>
<tr>
<td>5. Procedural justice to benevolence towards RN.</td>
<td>.55</td>
<td>.07</td>
<td>7.78</td>
<td>.39</td>
<td>N/A</td>
</tr>
<tr>
<td>6. Procedural justice to integrity.</td>
<td>.55</td>
<td>.07</td>
<td>7.63</td>
<td>.45</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Note. a = Deleted from final model as not an indirect or direct determinant of trust; H9 and H16 deleted due to multicollinearity of interactional justice and benevolence towards co-workers of RN
Summary of Results

In this chapter, results of statistical analyses were presented. Based on a 40% survey response rate, the average study participant was a 44 year old, married female who worked 12 hour shifts on a full-time basis in an Ontario emergency department and had a RN diploma. The majority of emergency departments were located in urban areas and cared for more than 30 000 children and adults annually. Most managers were RNs, and supervised, on average, 71 employees with at least one assistant.

Descriptive statistics of study variables were completed, followed by evaluation of missing data, outliers, normality and multicollinearity. With less than 10% missing data, regression imputation produced predicted values for the missing data. All cases were retained for a final sample size of 342 participants. Data were normally distributed. Due to high multicollinearity as well as empirical considerations, interactional justice and benevolence towards co-workers were deleted from the original hypothesized model.

Prior to testing the hypothesized model, CFA was used to validate the measurement model. Initial measurement models for propensity to trust, ability, benevolence towards RN, integrity, communication accuracy and procedural justice were revised. Modification of other measurement models was not required. The instruments demonstrated acceptable internal consistency coefficients before and after measurement model evaluation, with the exception of the revised communication accuracy instrument.

Model fit was assessed using $\chi^2$, SRMR, CFI, RMSEA and pCLOSE indices. Path coefficients were examined for critical ratio values greater than ± 1.96 and probabilities less than 0.05. In keeping with prior theoretical and empirical suggestions, the model incorporated additional pathways to improve fit and to more fully understand determinants of managerial trust. The final model showed adequate, but not good, fit with support of 11 study hypotheses. With poorer fit statistics and lack of empirical support, an alternative hypothesized structural model was rejected in favour of the final revised hypothesized model.

Ability, benevolence towards RN, integrity and procedural justice were each found to directly impact trust in one’s manager. Procedural justice and ability each had the largest effect on managerial trust whereas benevolence towards the RN and integrity each had a smaller influence. In contrast, job tenure, propensity to trust, span of control and self-determination were found to have no direct or indirect prediction on managerial trust. As illustrated in the final theoretical model, ability was predicted by goal facilitation, communication accuracy and interaction frequency, while procedural justice and emotional availability influenced benevolence towards RN. Integrity was determined by ability and procedural justice.
CHAPTER V: DISCUSSION, IMPLICATIONS & CONCLUSIONS

Trust is the foundation upon which a high quality RN-manager relationship is established and maintained and consequently, has substantial influence on numerous work outcomes for employees, patients and organizations. The purpose of this study was to test and refine a theoretical model of determinants of trust in one’s manager. This research is the first to investigate predictors of managerial trust in a health care work environment. This chapter provides an interpretation of study findings and their relationships with previously developed knowledge. First, an overview of managerial trust is provided, followed by a discussion of the final theoretical model. Next, interpretation of research findings for demographic information and work setting characteristics are presented, followed by practical implications for nursing education, leadership and research. The chapter concludes with a description of knowledge transfer plans, study limitations and a summary of final conclusions.

Overview of Trust in One’s Manager

In the present study, trust in one’s manager referred to the RN’s willingness to be vulnerable to future uncertain actions of one’s manager that are based on the assumption that behaviors will be beneficial to the nurse (Mayer et al., 1995; Rousseau et al., 1998). The nurse is unable to control or monitor the manager to ensure that beneficial behaviors are forthcoming. Necessary underlying conditions of managerial trust encompass a RN’s perception of risk, a willingness to be vulnerable to future and intended managerial behaviors, reliance, uncertainty and context specificity.

In the present study, survey respondents reported a relatively low average score of managerial trust, located in the middle third of the score range. In comparison to previous research that involved non-health care workers, study findings were slightly lower than managerial trust scores for university students (Frazier et al., 2010); manufacturing employees (Mayer et al., 2011; Mayer & Gavin, 2005); restaurant workers (Davis et al., 2000) and individuals employed in law, hospitality and retail work environments (Colquitt & Rodell). Results for the present study were substantially higher than previous studies involving Ontario acute care staff nurses (Laschinger & Finegan, 2005; Laschinger et al., 2000; Laschinger, Shamian & Thomson, 2001; Wong, Laschinger & Cummings, 2010). Lower trust scores may have resulted from extensive reform of the health care system that started across Canada in the 1990s. As organizations restructured to achieve government and administrative mandated cost efficiencies, nurse leadership positions were eliminated and nurses were victims of downsizing and layoffs. They became uncertain of their place within a transformed health care system as well as experiencing decreased or withheld communication from managers, less opportunity to participate in decision-making and limited respect and support from administration. The lack of quality communication, reduced benevolent behavior towards the RN and perceptions of incongruent ethical values between a RN and nurse leaders diminished the degree of a RN’s trust in one’s manager. Paradoxically, at a time when system-wide changes substantially reduced the degree of managerial trust, managerial trust was essential for nurses to cope with those changes (Laschinger et al., 2000). Low scores of managerial trust found in previous studies may have reflected organizational restructuring and upheaval.
After substantial restructuring of the health care system in the 1990s, national and provincial professional nursing and health care associations called for creation of healthy, positive nursing work environments to optimize outcomes for patients, nurses, organizations and the overall health care system (CNA, 2007). A slightly higher managerial trust score for the current study may be evidence of implementation of strategies that aim to improve the work environment of staff nurses, including more workplace empowerment structures, educational preparation for current and future nurse leaders and providing opportunities for meaningful participation in decision-making at unit, organization and government levels (Laschinger & Finegan, 2005; MacPhee & Suryaprakhash, 2012). The next section presents an overview of the final theoretical model as well as categories of managerial trust determinants, specifically direct, indirect, non-significant and deleted determinants. An overview of the final theoretical model commences the discussion.

**Overview of Final Theoretical Model**

The final theoretical model provided evidence that trust in one’s manager is determined by a complex interplay among attributes of one’s manager, the RN-manager relationship and the work environment in the emergency department. Given that trust in this study specifically referred to one’s manager, determination of trust involves evaluation of managerial behaviors and values as well as quality and frequency of interactions with one’s manager.

The results of the AMOS analysis of the original hypothesized model demonstrated poor fit between the study data and the hypothesized model. Supported by conceptual or previous empirical findings, six additional pathways were added to the model. The final model indicated adequate, but not good, fit. Overall, 11 out of 23 hypotheses were supported. Before SEM analysis, benevolence towards co-workers was deleted from the hypothesized model due to multicollinearity with benevolence towards the RN. Interactional justice was also deleted as it reflected conceptual overlap with emotional availability and integrity.

In the final model, procedural justice was found to have the strongest total effect on managerial trust, followed by ability, facilitation of team work and benevolence towards the RN. Integrity, communication accuracy, emotional availability and interaction frequency was found to have only a weak total influence on trust in one’s manager. Regarding direct predictors, ability, benevolence towards RN, procedural justice and integrity were determined to have the strongest direct impact on managerial trust. Facilitation of team work, communication accuracy, interaction frequency and emotional availability were found to have no direct impact on trust in one’s manager. In terms of indirect impact, procedural justice was determined to have the strongest indirect effect on managerial trust, followed by facilitation of team work and ability. Communication accuracy, emotional availability and interaction frequency were found to have only a weak indirect effect on trust in one’s manager. Integrity and benevolence towards RN failed to have an indirect impact on managerial trust. Attributes of the individual RN, specifically job tenure and propensity to trust as well as self-determination, access to support, access to resources and span of control were not significant predictors of trust in one’s manager.
Direct Determinants of Trust in One’s Manager

Ability

Ability reflects the knowledge, skills and competencies that enable one’s manager to accomplish tasks affecting the work life of a staff RN (Mayer et al., 1995). Study participants reported a relatively average score, positioned in the upper third of the score range. Previous research has reported that managers were rated higher among restaurant workers (Davis et al., 2000; Mayer & Davis, 1999; Wasti et al., 2007); manufacturing employees (Mayer & Gavin, 2005); university students (Frazier et al., 2010) and individuals employed in law, retail and hospitality industries (Colquitt & Rodell, 2011). Perceptions of managerial ability has not been previously examined among nurses. When compared to study results for non-health care employees, the lower score may indicate that staff RNs perceive that their managers are not sufficiently knowledgeable and competent in a manager role. Traditionally, a nurse manager of a clinical unit focused on daily operational activities, such as resource allocation and staffing, and was considered to have clinical expertise (Kleinman, 2003). Since health care restructuring in the 1990s, first-line managers’ role and responsibilities have become multifaceted and dramatically diverse and include key roles in change management, staff empowerment, promotion of effective care teams and achievement of optimal patient outcomes (MacPhee & Suryaprakash, 2012). Upon entering a first-line manager role, McCallin and Frankson (2010) stated that staff nurses are expected to immediately become experts in financial and strategic planning, human resources, quality assurance and clinical nursing care. Furthermore, activities are performed with a large span of control and under conditions of financial and time constraints (Currie & Procter, 2005; Laschinger & Wong, 2007). Unfortunately, first-line unit managers described feeling incompetent and unprepared regarding these business-focused role activities and were likely to attain knowledge by ‘trial and error’ or ‘on-the-job’ training (MacPhee, 2007; MacPhee & Suryaprakash; Mathena, 2002).

In the final model, ability of one’s manager had the strongest direct effect on trust in one’s manager. The H3 hypothesis was supported. When one’s manager is perceived to be knowledgeable and competent in their management role, the nurse is more willing to be vulnerable to future managerial behaviors and trust is enhanced. However, if a manager is perceived to be incompetent, the nurse is reluctant to be vulnerable to future or intended behaviors of one’s manager. These study findings are consistent with previous research (Colquitt et al., 2007; Colquitt & Rodell, 2011; Mayer & Davis, 1999; Mayer & Gavin, 2005; Tan & Tan, 2000). However, Frazier et al. (2010) found that ability was not a significant predictor of trust, concluding that the relative importance of ability depends on the specific context. In some situations, a manager’s ability may be more important than other trust determinants. For example, the ability of one’s manager to effectively lead a team meeting may be a skill that is salient in a staff nurse’s mind in that particular situation. In the present study, when a manager accomplishes a task, such as constructively resolving a conflict between staff, a RN perceives one’s manager as competent and feels less vulnerable to any intended future managerial actions. The manager is more likely to be trusted than one who is perceived to be incompetent.
In addition, perceived ability was also found to have a significant, positive relationship with integrity. Ability was found to be an indirect managerial trust antecedent with integrity mediating the relationship between ability and managerial trust. To practice safely in an emergency department, a staff RN is expected to be knowledgeable about a broad range of patient conditions and be able to competently perform certain clinical skills. Based on the final model, when a manager appears clinically competent and knowledgeable about the work of a staff nurse, a RN may believe that sound professional ethical standards are shared with one’s manager. A knowledgeable manager may therefore be perceived to support and adhere to ethical behavior, leading to greater integrity. Previous research has also reported that professional education resulted in greater moral reasoning and integrity among real estate salespeople (Izzo & Vitell, 2003).

In the final model, ability was also significantly and positively correlated with a manager’s emotional availability. A competent manager supports and engages staff to collaboratively develop and achieve a positive work environment for nurses (French, 2004; Werbel & Henriques, 2009). Being available and accessible to staff has been identified as a supportive behavior of a manager (Rosengren et al., 2007; Schmaelenberg & Kramer, 2009). Managers who appear knowledgeable and competent in their role are more likely to be seen as supportive and therefore more emotionally present when interacting with a staff RN. Previous research has also reported that leaders utilized their knowledge to be perceived as more emotionally engaged and available (Bakker & Demerouti, 2008; Schaufeli & Bakker, 2004). The next section provides an overview of the influence of benevolence towards the RN on managerial trust. Benevolence towards the RN

Benevolence towards a RN is the extent to which a manager consistently supports and safeguards the RN’s welfare (Mayer et al., 1995). Study participants reported a moderate average score, positioned in the middle third of the score range. Study findings were similar to previous studies in which perceived respect, a key aspect of benevolence, was examined among Ontario acute care nurses employed in medical, surgical and critical care units (Faulkner & Laschinger, 2008; Laschinger & Finegan, 2005). Given the similarity of scores between emergency departments and other hospital units, perceptions of benevolence emanate from behaviors and attitudes of one’s manager rather than from aspects of a specific clinical area. Nurse focus group findings identified disrespectful behavior of one’s manager as a hallmark of an unsupportive and ineffective manager (CHSRF, 2006). Perhaps managers may be perceived to be unkind or uncaring due to stress or role conflict regarding their broad performance expectations, including financial and operational tasks, growing organizational complexity and a large span of control with financial and time limitations (Currie & Procter, 2005; Laschinger & Wong, 2007).

In the final model, benevolence towards the RN was positively and significantly related to trust in one’s manager. The H10 hypothesis was supported. After ability, benevolence towards a RN had the strongest direct effect on managerial trust. Previous studies also reported that benevolence towards an employee influenced managerial trust (Colquitt & Rodell, 2011; Davis et al., 2000; Mayer et al., 1995; Mayer & Davis, 1999; Mayer & Gavin, 2005). When one’s manager demonstrates respect and concern, a RN perceives that the manager is benevolent and cares about the RN. A RN may feel less vulnerable and uncertain regarding the intended and
future actions of one’s manager and may be more likely to engage in risk-taking behavior, resulting in a greater
degree of trust in one’s manager.

**Procedural Justice**

Procedural justice reflects the extent of perceived fairness of implemented policies and procedures used
to make decisions pertinent to the emergency department, regardless of the actual decision-making outcome
(Moorman, 1991). Survey respondents reported a relatively low average score of procedural justice, located in the
middle third of the score range. In contrast, higher average scores of procedural justice have been reported among
university students (Colquitt & Rodell, 2011; Holtz & Harold, 2008); public sector employees (Korsgaard,
Sapienza et al., 2002) and retail workers (Ambrose & Schminke, 2003). As well, acute care nurses employed
outside Ontario also described a greater degree of procedural justice (Heponiemi et al., 2011; Keepnews, Brewer,
Kovner & Shin, 2010). Perhaps survey respondents believed that the decision making process is incongruent with
professional values and goals. For example, a staff RN with little or no formal opportunity to provide input for an
unit-based policy may perceive an unfair decision-making process which violates professional nursing values of
promoting and respecting informed decision-making. With current emphasis on reducing emergency department
wait times, if a staff RN perceives a lack of procedural justice, the nurse may be less committed to the change or
may attempt to block the change process. Development of a fairness climate is the foundation for effective and
trusting RN-manager relationships (Persaud & Narine, 2000).

In the final model, procedural justice was positively and significantly related to trust in one’s manager.
The H18 hypothesis was supported. These findings echo numerous studies which also reported a positively
significant relationship between procedural justice and managerial trust (Flaherty & Pappas, 2000; Frazier et al.,
2010; Holtz & Harold, 2008; Korsgard, Sapienza et al., 2002). Nurses who perceive they have a voice in
operational affairs have an increased sense of fairness and honesty in making decisions that affect their nursing
care. Consequently, a nurse believes that fairness and honesty will permeate future interactions with one’s
manager and is willing to accept risk in the RN-manager relationship. Trust in one’s manager is therefore
enhanced and sustained.

Four other significant pathways were also found between procedural justice and other trust
determinants, including interaction frequency, communication accuracy, benevolence towards the RN and
integrity. First, procedural justice was positively and significantly related to interaction frequency. It is
conceivable that the more opportunities a RN has to appeal, challenge or voice a concern during the decision-
making process, the more often the RN and manager will interact. A greater sense of participation in the decision
making process may lead to greater opportunities for the RN to contribute. Even when a staff nurse may be less
able to influence a decision, such as a government mandated strategy to reduce overcrowding in the emergency
department, an opportunity to voice an opinion allows employees to feel more fairly treated (Persaud & Narine,
2000). Because the relationship between procedural justice and interaction frequency has not been explored in
previous research, comparison to other pertinent studies cannot be made.
Procedural justice was also found to be positively and significantly related to accuracy of communication from one’s manager. Correct and credible information are the foundations for a fair decision-making process. By basing the decision on accurate information, a staff RN believes that a manager communicates accurate messages about the decision and the decision-making process. A staff nurse may recognize that accurate information for a fair decision extends to accuracy of all communication from one’s manager. Given that this relationship has not been previously investigated, comparison to relevant research cannot be made.

In addition, procedural justice was also determined to be positively and significantly associated with benevolence towards a RN. Perceptions of fair procedures and decisions signify a manager’s respect and concern for the well-being of a staff RN (Mayer et al., 1995). If a staff RN perceives that a decision is based on accurate information and is consistently implemented for all nurses with opportunities to voice concerns and feedback, the manager appears to sincerely care for a staff RN’s well-being. A fair decision-making process demonstrates that one’s manager is behaving in a benevolent manner towards the nurse (Frazier et al., 2010). However, previous studies did not find significant relationships between procedural justice and benevolence towards the RN (Colquitt & Rodell, 2011; Frazier et al.).

In the final model, procedural justice was also determined to have a positive, significant effect on integrity. These results indicate support for previous studies in which procedural justice was found to be positively related to integrity (Colquitt & Rodell, 2011; Frazier et al., 2010). A fair decision making process requires an evaluation of the use of sound values and ethical standards (Colquitt & Rodell). When a manager consistently develops fair policies and procedures, a staff nurse perceives that ethical standards are shared with one’s manager. The manager appears to have greater integrity and a staff RN may be more willing to be vulnerable to be future behavior or intentions of one’s manager. Trust in one’s manager consequently improves.

The present study identifies procedural justice as a direct and indirect managerial trust determinant. Interaction frequency, communication accuracy, benevolence towards the RN and integrity mediated the indirect relationships between procedural justice and trust in one’s manager. The importance of procedural justice demonstrates the value of a fair decision-making process using credible information, frequent RN-manager interactions and formal opportunities for nurses to provide concerns and feedback.

Integrity

Integrity refers to the manager’s consistent application of moral and ethical principles that are shared by a staff RN and one’s manager (Mayer et al., 1995). Study participants reported a moderate average score of managerial integrity, positioned in the middle third of the score range. In contrast, previous studies have reported that supervisors’ integrity was rated higher among manufacturing employees (Mayer et al., 2011; Mayer & Gavin, 2005); restaurant workers (Davis et al., 2000; Mayer & Davis, 1999) and individuals employed in law, retail and hospitality industries (Colquitt & Rodell, 2011). Perceptions of shared ethical standards with one’s manager has not been previously investigated among nurses. The lower score of integrity indicates that a RN and one’s
manager may not share ethical standards. Possibly, a staff RN may perceive that one’s manager values administrative emphasis on cost effectiveness and achievement of organizational goals rather than attainment of adequate personnel and equipment. Given the perceived differences in values, a staff RN believes that ethical principles are not shared with one’s manager. As a result, one’s manager may be seen to have a lower degree of integrity.

In the final model, integrity was positively and significantly related to trust in one’s manager. The H4 hypothesis was supported. Integrity was found to have the weakest direct effect on managerial trust. These results are consistent with numerous other studies which have also identified integrity as a managerial trust determinant (Colquitt & Rodell, 2011; Mayer et al., 2011; Mayer & Gavin, 2005; Tan & Tan, 2000). When a staff RN perceives that sound ethical values are shared with one’s manager, such as honesty, fairness or promise fulfillment, the nurse is willing to be exposed to intended, future actions of one’s manager. Trust in one’s manager will subsequently improve.

**Indirect Determinants of Trust in One’s Manager**

**Facilitation of Effective Teamwork**

Goal facilitation reflects a manager’s ability to successfully foster effective teamwork among care providers of an emergency department. Survey respondents reported a low average score of facilitation of effective teamwork that was located in the middle third of the score range. In previous research among non health-care managers, higher scores were reported (Mackenzie et al., 2001; Podsakoff et al., 1996). Although acute care staff RNs identified promotion of team cohesiveness as a key behavior of a supportive manager (Schmalenberg & Kramer, 2009), the low score suggests that a nurse manager may be unable to or unaware of how to facilitate a cohesive health care team. Effective collaboration among health care providers has been identified as a feature of a healthy, quality work environment for nurses (CNA, 2006). However, development and maintenance of effective health care teams are lacking from most acute care work environments particularly in high-stress, high-acuity environments such as emergency departments (Weingarten, 2009).

In the final model, facilitation of an effective team was positively and significantly related to ability. The H5 hypothesis was supported. Presumably, a manager who understands and is familiar with the nature of a multidisciplinary team, including team roles and effective team communication, may apply leadership knowledge and expertise to promote and support a cohesive health care team. Upon facilitation of an effective team, one’s manager appears knowledgeable and competent. Because the relationship between facilitation of an effective team and ability has not been previously explored, comparison of study results to relevant studies cannot be made.

Although Podsakoff et al. (1996) determined that promotion of an effective team directly affects managerial trust, the present study is the first to report an indirect relationship between facilitation of an effective team and managerial trust with ability as a mediator. This suggests that leadership knowledge and skills, specifically promotion of an effective, collaborative health care team, may be needed for knowledgeable and competent first-line nurse managers and ultimately for development of a RN’s trust in one’s manager.
Communication Accuracy

Communication accuracy refers to the degree to which a manager’s communication is accurate and valid. Study participants reported a relatively average score of communication accuracy, located in the middle third of the score range. Previous research reported similar scores among oil service workers (Thomas et al., 2009) and manufacturing employees (Maltz & Kohli, 1996). Although accurate, quality communication of a manager has been identified as crucial to effective unit functioning (Anthony et al., 2005; Vivian, Marais, McLaughlin, Falkenstein & Argent, 2009), communication accuracy of one’s manager has not been empirically explored among nurses.

In the final model, communication accuracy was shown to be positively and significantly related to ability. The H6 hypothesis was supported. As a representative of the organization, a manager is expected to communicate non-task related information, specifically organizational goals, values and policy (Ridder, 2004). Managers who consistently communicate credible information about the organization may be perceived as being knowledgeable and competent in their roles (Chung & Fink, 2008). A greater sense of managerial ability reduces uncertainty and vulnerability for a RN. As a result, the RN is more likely to trust one’s manager. Given that the relationship between interaction frequency and ability has not been previously examined in the enhancement of managerial trust, comparison of study results to appropriate studies cannot be made.

Communication accuracy was hypothesized to be positively related to benevolence towards a RN and integrity. The hypotheses were not supported in the final model (H7 and H8). When accurate information is communicated by one’s manager, a RN may be more focused on assessment of managerial ability or knowledge and less focused on the evaluation of the interpersonal treatment during communication or determination of a manager’s values. Assessment of managerial knowledge and competence may be more salient in a staff nurse’s mind when accurate information is communicated (Blair, Levine & Shaw, 2010). Given that the relationships between communication accuracy and benevolence towards the RN as well as between communication accuracy and integrity have not been previously investigated, comparison of study findings to pertinent studies cannot be made.

Although Thomas et al. (2009) and Whitener et al. (1998) determined that quality of communication directly affects managerial trust, the present study is the first to report an indirect relationship between communication accuracy and managerial trust with ability as a mediator. This suggests that accurate, quality communication from one’s manager may be a key leadership skill that affects perceptions of overall knowledge of one’s manager and subsequently helps to build trust in one’s manager.

Interaction Frequency

Interaction frequency is the frequency of RN-manager interactions. Survey respondents described a moderate average score, located in the middle third of the score range. A higher score was reported among private sector workers (Kacmar et al., 2003; McAllister, 1995). Among Ontario acute care staff nurses, Meyer et al. (2011) reported that managers spent on average, slightly more than 3 hours per day in contact with staff with a
range of 1.4 to 7.2 hours. Wide ranging role expectations for one’s manager, growing organizational complexity and a large span of control may partly explain the lower interaction frequency among study participants (Laschinger & Wong, 2007).

In the final model, interaction frequency was found to be positively and significantly related to ability. The H11 hypothesis was supported. During an interaction with one’s manager, a staff nurse may focus on assessment of behaviors that speak to knowledge of the manager. Perception of ability is salient in a nurse’s mind when a staff nurse is likely to be directly affected by a manager’s knowledge and competence, such as attainment of sufficient personnel and equipment (Frazier et al., 2010). The more opportunities there are available for a RN to interact with one’s manager, the more likely a RN perceives that a manager is knowledgeable and competent. Because the relationship between interaction frequency and ability has not been previously examined, comparison of study findings to appropriate studies cannot be made.

In the final model, interaction frequency was not significantly related to benevolence towards the RN. As well, a significant relationship between interaction frequency and integrity was not found in the final model. The H12 and H13 hypotheses were not supported. According to Frazier et al. (2010), when a staff nurse is directly affected by a manager’s knowledge and expertise, a staff nurse focuses on perceptions of ability rather than other trust determinants, such as benevolence or integrity. During an interaction with one’s manager, the nurse is more likely to assess the manager’s ability and less likely to assess benevolence towards a RN or shared ethical principles with one’s manager. Given that the relationships between interaction frequency and benevolence towards RN as well as the relationship between interaction frequency and integrity have not been previously investigated, comparison of study findings to pertinent studies cannot be made.

In the final model, interactional frequency was positively and significantly related to emotional availability. The H14 hypothesis was supported. The more opportunities that existed for a RN and manager to interact, the more opportunities for a manager to be accessible and to listen to a RN’s concerns. By frequently interacting with a manager, a RN may believe that one’s manager is more emotionally engaged and available. If a RN and one’s manager never or rarely interact, there are fewer opportunities for a manager to be emotionally available and the staff RN may perceive that the manager is emotionally absent and unavailable. Given that the relationship between interaction frequency and emotional availability has not been previously explored, comparison of study findings to pertinent studies cannot be made.

In the final model, interaction frequency was not found to be significantly related to communication accuracy. The H15 hypothesis was not supported. Perhaps accuracy of communication is perceived by a RN though other methods of communication as well as during a one-on-one RN-manager interaction. Other communication methods that may convey accurate information include written memos or development of policies and procedures specific to the emergency department. Managerial actions may also suggest communication accuracy, such as accurately representing the position and interest of the emergency department to other departments and to administration. These modes of communications do not occur within the context of a RN-
manager interaction but may give a RN opportunities to assess communication accuracy. Because the relationship between interaction frequency and communication accuracy has not been previously explored, comparison of study results to relevant studies cannot be made.

Although McAllister (1995) reported that interaction frequency directly influenced trust, the present study is the first to report an indirect relationship between interaction frequency and managerial trust with ability and emotional availability as mediators. This suggests that opportunities to interact with staff is a hallmark of a knowledgeable and emotionally available manager and ultimately, helps to facilitate trust in one’s manager.

**Emotional Availability**

Emotional availability reflects a manager’s complete state of emotional engagement whose thoughts, feelings and beliefs were readily accessible to a RN to allow connection in a particular moment (Kahn, 1990, 1993). Study respondents reported a relatively high average score for emotional availability, located in the upper third of the score range. Although a manager may not be physically present in the emergency department on a regular basis, survey respondents still described their managers as demonstrating a high degree of emotional availability during interactions when a manager was available. Previous studies of staff RNs identified an effective manager as one who is emotionally present and available to interact with staff (Schmalenberg & Kramer, 2009).

In the final model, emotional availability had a positive and significant relationship with benevolence towards a RN. The H17 hypothesis was supported. Specific emotional engaging behaviors, such as being approachable and focusing on a RN during interactions, indicate to the RN that the manager supports and cares about a RN. In turn, a manager who is emotionally engaged and present during an interaction with a RN, leads to an enhanced degree of benevolence towards a RN. Given that the relationship between emotional availability and benevolence towards a RN has not been previously investigated, comparison of study results to pertinent research cannot be made. The present study is the first to report an indirect relationship between emotional availability and managerial trust mediated by benevolence towards the RN. This suggests that an emotionally present and engaged manager is respectful and caring towards staff RNs, Ultimately, trust in one’s manager is built and enhanced.

**Non-significant Determinants of Trust in One’s Manager**

**Job Tenure**

Job tenure refers to the number of years study participants had been employed as a staff nurse in an Ontario acute care hospital emergency department. Survey respondents reported a higher average job tenure than previous research involving Ontario staff nurses employed in critical care, medical or surgical hospital units (Lucas, Laschinger & Wong, 2008; Wong et al., 2010). A higher average job tenure suggests that emergency departments experience less nurse turnover than other clinical areas.

In the final model, job tenure was not found to be positively and significantly related to managerial trust. The H1 hypothesis was not supported. This finding is consistent with results of previous studies (Costigan et al., 1998; Mayer & Davis, 1999) but distinct from Flaherty and Pappas (2000) in which job tenure was reported to
be significantly related to managerial trust. Because trust is established and sustained in the context of a relationship with one’s manager, characteristics of one’s manager rather than attributes of oneself may be more salient in the formation of trust (Frazier et al., 2010).

**Propensity to Trust**

Propensity to trust refers to a RN’s personality trait regarding the generalized willingness to trust others. Also referred to as dispositional trust, propensity to trust focuses on individuals in general rather than on a specific referent, such as one’s manager (Rotter, 1967). Considered to be a stable attribute across situations and contexts, trust propensity is not influenced by managerial, relational and environmental characteristics (Mayer et al., 1995). Study participants reported a reasonable average level of propensity to trust that was positioned in the middle third of the score range. There was little variability in the mean score with restriction of range, suggesting that survey respondents tended to have a modest, conservative level of dispositional trust. The majority of participants did not report an extreme degree of propensity to trust in which an individual either never trust others or always trust others, regardless of the circumstances (Mayer et al., 1995). Kiffin-Petersen and Cordery (2003) also found a range restriction of scores for trust disposition. Propensity to trust has not been previously explored among nurses.

In the final model, propensity to trust was not determined to be significantly related to managerial trust. The H2 hypothesis was not supported. Study findings support relevant studies that also failed to find a significant relationship between dispositional trust and trust in one’s manager (Colquitt et al., 2007; Dirks & Ferrin, 2002; Shooter, Paisley & Sibthorp, 2010). However, other study findings concluded that propensity to trust was a small but significant positive predictor of trust in one’s manager (Mayer & Davis, 1999; Payne & Clark, 2003). The lack of relationship suggests that perhaps interactions with one’s manager provided the RN with other information to determine the extent of managerial trust. Propensity to trust is used to evaluate trustworthiness in the early stages of a relationship (McKnight et al., 1998). Over time, a RN’s decision to trust relies more on other information, such as attributes of one’s manager or the RN-manager relationship, and less on propensity to trust. In due course, propensity to trust tends to lose impact on managerial trust and may eventually fail to significantly predict trust in one’s manager (Frazier et al., 2010).

**Self-determination**

Self-determination refers to a RN’s sense of control and autonomy over work behaviors and processes (Spreitzer, 1996). Survey respondents described a reasonably high average score, positioned in the upper third of the score range. In comparison to other studies, lower scores have been reported by Ontario acute care nurses employed in a clinical units other than emergency departments (Faulkner & Laschinger, 2005; Laschinger, Finegan, Shamian & Wilk, 2001). Perhaps survey respondents believe they have more job autonomy in an emergency department than other hospital units (Mallidou, Cummings, Estabrooks & Giovannetti, 2010). Given the fast-paced, high pressure environment of an emergency department, a staff RN is expected to collaborate with other health care providers to accomplish treatment and achievement of patient admittance or discharge (Creswick, Westbrook & Braithwaite, 2009). For successful collaboration and optimal patient outcomes, a staff
RN may require a substantial amount of independence and freedom in completion of job tasks and processes.

In the final model, self-determination failed to be significantly related to trust in one’s manager. The H19 hypothesis was not supported. The study finding is contrary to numerous studies in which greater perceptions of self-determination enhanced trust in one’s manager (e.g.; Laschinger, Finegan, Shamian & Wilk, 2001; Moye & Henkin, 2006; Nyhan, 2000). However, Chan et al. (2008) found that control over one’s job was an outcome of managerial trust rather than a determinant. When providing work structures that empower a staff nurse, a manager exchanges legitimate power and control with leadership practices that focus on support and cooperation. Nurses perceive such actions as benevolent support by supervisors to reduce feelings of helplessness in the workplace and to provide nurses with a sense of empowerment (Chan et al.). Consequently, workplace empowerment is seen as evidence of a manager’s trust in the nurse’s competence and integrity. A nurse reciprocates in kind by extending trust towards one’s manager (Chan et al., Gouldner, 1960). A nurse’s trust results from positive evaluation of workplace empowerment structures initiated by one’s manager.

By placing trust in one’s supervisor, a staff nurse has more freedom and autonomy in deciding how to independently complete job tasks. A staff nurse is more confident to freely experiment with learning new ways to do things, without fear of being unfairly penalized. A sense of job control and self-determination results from reciprocated trust in one’s manager. Chan et al. (2008) concluded that enhanced managerial trust resulted in greater self-determination among private sector employees. For the present study, perhaps a greater degree of trust in one’s manager produces a greater sense of self-determination among participants. Self-determination may actually be an outcome rather than a predictor of managerial trust.

Access to Support

Access to support reflects a workplace empowerment structure that facilitates access to guidance from one’s manager. Survey respondents described a relatively low average score, located near the bottom third of the score range. Low scores have also been found in previous studies of Ontario acute care nurses (Davies, Wong & Laschinger, 2011; Faulkner & Laschinger, 2007; Lucas et al., 2008). Among non-health care workers, a higher score was reported (Chan et al., 2008). Overall, staff RNs across Ontario did not feel supported by their managers possibly due to large spans of control, lack of sufficient resources and ongoing organizational change. Lack of adequate preparation for a manager role in terms of knowledge and skills was also noted to be a characteristic of an unsupportive manager (CHSRF, 2006).

In the final model, access to support was positively and significantly related to self-determination. The H20 hypothesis was supported. Study findings are similar to other studies which also reported a positive, significant correlation between access to support and self-determination (Chang, Shih & Lin, 2010; Knol & van Linge, 2009; Laschinger, Finegan, Shamian & Wilk, 2001). When a supportive manager delegates authority and decision making, a nurse may perceive a greater sense of independence and autonomy over performance of one’s job. A supportive manager encourages and advocates for more independence and control for staff RNs, promoting opportunities and policies that facilitate an autonomous nursing practice (Faulkner & Laschinger, 2008). Given
that access to support was not found to be an indirect determinant of managerial trust, it was deleted from the final model.

**Access to Resources**

Access to resources refers to a workplace empowerment structure that facilitates access to adequate time and personnel to provide effective and safe nursing care. Study participants reported a low average score, located near the bottom third of the score range. Low average scores have also been found in other studies of Ontario acute care hospital staff nurses (Davies, Wong & Laschinger, 2011; Faulkner & Laschinger, 2007; Lucas et al., 2008) and among American emergency department staff RNs (DeVivo, Griffin, Donahue & Fitzpatrick, 2010). Non-health care workers reported greater access to resources (Chan et al., 2008). Survey respondents and other emergency department staff RNs do not feel they have adequate time and personnel to provide care, probably due to a workforce shortage, heavy patient workload, financial constraints and demanding environment of an emergency department (CNAC, 2002).

In the final model, access to resources was significantly related to self-determination. The H21 hypothesis was supported. The results are in agreement with other studies which also identified a positive and significant relationship between access to resources and self-determination (Chang, Shih & Lin, 2010; Knol & van Linge, 2009; Laschinger, Finegan, Shamian & Wilk, 2001). When a RN has sufficient resources to effectively and safely provide care, such as required equipment and adequate staff, a RN recognizes a sense of autonomy and control over one’s practice (Laschinger, Finegan & Wilk, 2009). Without adequate resources, safe and effective nursing care is difficult if not impossible to achieve. Given that access to resources was not found to indirectly influence managerial trust, it was deleted from the final model.

**Span of Control**

Span of control reflects the number of employees directly supervised by a RN’s manager. Participants estimated that, on average, managers supervised 71 direct reports, ranging from 9 to 200 employees. One-quarter of managers had a span of control of more than 90 employees. Findings are similar to previous results among Ontario acute care hospitals (Doran et al., 2004; Laschinger & Wong, 2007; Lucas et al., 2008). However, a more recent study reported that on average, Ontario nurse managers in acute care hospitals oversaw 87 employees, ranging from 29 to 174 (Meyer et al., 2011). In the study by Meyer et al., information for span of control was obtained from human resource departments and verified by nurse managers. Given the study methodology of Meyer et al. as well as potential inaccuracies of span of control for the present study, study results of Meyer et al. are more likely to be a valid snapshot of the increasingly complex role of managers.

In the final model, span of control failed to be negatively and significantly related to interaction frequency. In addition, span of control also failed to be negatively and significantly related to emotional availability in the final model. The H22 and H23 hypotheses were not supported. As well as span of control, perhaps extended operational hours of an emergency department and effectiveness of one’s manager interact to influence frequency of RN-manager interactions and availability of one’s manager. In an examination among...
Ontario acute care hospital managers, Meyer et al. (2011) concluded that operational hours of a unit and span of control as well as an effective leadership style determined the number of direct reports that daily interacted with one’s manager. With round-the-clock operational hours of an emergency department, Meyer et al. calculated that a manager interacts each day with 7% of direct report employees. With a wide span of control, an effective manager theoretically interacts with more staff each day to resolve problems. Surprisingly, a wide span of control may enable an effective manager to interact more frequently with a staff RN and therefore may appear as more emotionally available. In contrast, a manager with a more narrow span of control may interact with fewer employees on a daily basis. A narrow span of control may result in fewer RN-manager interactions and one’s manager may be seen to be emotionally unavailable. Leadership style had less influence on narrow spans than on wide spans of control (Meyer et al.).

**Deleting Determinants of Trust in One’s Manager**

**Benevolence towards Co-workers**

Benevolence towards co-workers of the RN reflects the extent to which a manager consistently supports and safeguards the welfare of co-workers of the RN (Mayer et al., 1995). Survey respondents reported a reasonable average level of benevolence towards a nurse’s co-workers, placed in the middle third of the score range. The construct was deleted from the hypothesized model due to an unacceptably high correlation with benevolence towards the RN. A survey respondent may have been unable to differentiate between the degree of benevolence directed towards oneself and towards one’s co-workers. Perhaps participants believed that the extent of managerial benevolence directed towards oneself was essentially the same as the extent of benevolence directed towards one’s co-workers.

**Interactional Justice**

Interactional justice is a RN’s perceived fairness of the interpersonal treatment received from one’s manager (Moorman, 1991). Survey respondents reported a reasonably high average interactional justice score that was positioned in the upper third of the score range. Although interactional justice was significantly correlated with trust in one’s manager, the construct was deleted from the hypothesized model as the construct was also highly correlated with integrity and emotional availability. The three instruments’ items similarly assessed fair, respectful behaviors of the supervisor, therefore demonstrating conceptual overlap among the three variables.

**Generalizability of Study Findings**

**Survey Response Rate**

The survey response rate of 40% was similar to a previous survey of Ontario emergency room staff RNs (Wilding, O’Brien, Pagliarello & Friedberg, 2008) as well as recent studies involving American emergency department staff nurses (Friedman Singer, Infante, Oppenheimer, West & Siegel, 2012; Roethler, Adelman & Parsons, 2011).

**Sample Demographics**

**Employment status.** In comparison with the College of Nurses of Ontario (CNO) RN database (2011),
fewer study participants reported working full-time and more respondents described working regularly on a part-time or casual/occasional status. Similar findings were also found in another survey of Ontario emergency room staff nurses (Wilding et al., 2008). Given the high patient acuity, complex, unpredictable environment and endless overcrowding inherent to an emergency department, perhaps nurses are less willing to work full-time hours and prefer to work on a part-time or casual basis. In addition, almost all study participants indicated that they were covered by an union contract or collective agreement. This result is identical to results of a survey of Canadian RNs employed in acute care hospitals (Canadian Institute of Health Information [CIHI], 2005).

**Nursing education.** When compared to all Ontario RNs, more survey respondents had earned a RN diploma and fewer had received a baccalaureate degree (CNO, 2011). Given that study participants were solely staff nurses and that the CNO RN database is comprised of all nursing positions, fewer baccalaureate-prepared RNs may reflect the difference between study findings and provincial statistics.

**Gender and marital status.** More survey respondents reported to be male in comparison to the CNO RN database (2011). The discrepancy lends support to the evidence that male RNs are more likely to work in emergency departments than in other clinical units (CIHI, 2005). Regarding marital status, most survey respondents reported they were currently married or live with a common-law partner which is reasonably comparable to a study of Canadian acute care RNs (Jourdain & Chenevert, 2010).

**Self-rated overall health.** In comparison to the general population in Ontario (Statistics Canada, 2011), more study participants rated their overall health as either very good or excellent. Additionally, fewer study participants regarded their overall health as fair or poor compared to Ontario acute care hospital RNs (CIHI, 2006). Interestingly, although nurses are believed to be less healthy than the general population (CIHI), survey respondents see themselves to be healthier than either Ontario residents or RNs working in other clinical areas. It is conceivable that only healthy RNs are physically and emotionally able to work in the demanding and rather hectic environment of an emergency department. Consequently, RNs with fair or poor overall health are less likely to work in such an environment.

**Average age and tenures.** The average age of survey respondents was slightly lower than what was reported by the CNO RN database (2011). A younger RN may be more attracted to the fast-paced and energetic nature of an emergency department than an older RN (Keepnews et al., 2010). As well, perhaps younger nurses indicated a greater willingness to participate in research and identified this on their annual CNO membership renewal form. Study findings for average professional and organizational tenures are comparable to results reported by Wong, Laschinger and Cummings (2010).

**Work Setting Characteristics**

**Health care organization.** Survey respondents reported that more health care organizations were teaching hospitals in comparison to the actual number of official teaching hospitals. Membership in the Council of Academic Hospitals in Ontario bestows teaching hospital status (CIHI, 2007). Survey respondents may not have been aware if their health care organization had acquired council membership and was therefore an official
teaching hospital.

**Emergency department.** Of study participants, fewer stated their emergency department had a low volume of annual patient visits (less than 15,000) in comparison to description of all emergency departments across Ontario (CIHI, 2007). In contrast, more nurses reported being employed in an emergency department with a medium (15,000 to 30,000 annual patient visits) or a high volume (greater than 30,000 annual patient visits) than the CIHI report. Perhaps survey respondents may not have known the exact number of annual patient visits, requiring them to make an ‘educated guess’. In addition, given that the CIHI information is somewhat dated, it is also quite conceivable that emergency departments have experienced an increased number of annual patient visits over the past few years.

**Implications for Use of Study Findings**

**Nursing Education**

The significance of ability as a direct and indirect managerial trust determinant underscores the need for formal education in leadership skills and knowledge for first-line managers. A structured, evidence-based, professional leadership development curriculum would allow nurse managers to develop skills that are needed to establish and sustain a staff RN’s trust in the manager. Nurse educators, in collaboration with nurse leaders, are called upon to design, deliver and implement a leadership development program for nurses in first-line manager positions (Sullivan, Bretschneider & McClausland, 2003).

In a study of nurse managers’ needed skills (Mathena, 2002), nurse managers identified professional development needs for mostly process-oriented issues, including knowledge in situational analysis, data management, cost benefit analysis and financial projections and analysis (Mathena). Although nurse managers indicated they required less knowledge in interpersonal skills, they did describe a need for knowledge in conflict resolution, effective staffing strategies, team building and communication strategies. Furthermore, Sullivan et al. (2003) found that novice and expert nurse managers described distinct learning needs. New nurse managers identified their principal developmental needs to be communication and organizational skills, financial management and budgetary skills, conflict resolution, skills in staffing and scheduling and time management. Tenured nurse managers described their chief educational needs to be conflict resolution, staff development, human resources updates, team building and time management (Sullivan et al.). Although several formal leadership programs currently exist, they tend to focus on universal competencies of leadership styles and attributes for all nurse leaders rather than specifically for first-line nurse managers (MacPhee & Suryaprakash, 2012).

In addition to improving perceptions of a manager’s ability, a formal, professional program would also emphasize the importance of benevolent and ethical behaviors towards a staff nurse. Conflict resolution and team building exercises may result in a staff nurse perceiving a greater degree of benevolence and integrity in one’s manager. As well, the curriculum would include how to implement or strengthen a fair decision-making process with opportunities for feedback and concerns from staff nurses. Based on results of the present study, specific
knowledge regarding communication strategies and team building would also be core components of the manager development program. Incorporation of specific first-line manager knowledge and skills into a formal nurse leadership professional program would help enhance perceived ability, benevolence, integrity and procedural justice of one’s manager and contribute to a staff nurse’s degree of trust in one’s manager.

**Nursing Leadership**

In addition to a formal professional development curriculum, nursing administration within an organization is called upon to promote achievement of learning goals for novice nurse managers (MacPhee & Suryaprakash, 2012). Development of a structural orientation program speaks to the degree of organizational support for effective and knowledgeable nurse managers (Sullivan et al., 2003). Rather than learning ‘on-the-job’ or by ‘trial and error’, an official orientation program provides knowledge specific to one’s organization, including payroll and budgeting skills, institutional policies and procedures, introduction to key personnel of other departments and interdepartmental communication. Although nurse managers may become effective in managing their individual areas of responsibilities, global knowledge is also needed to understand the larger organization and its key decision makers (Mathena, 2002).

Mentorship participation is considered to be the most important component of a nurse manager development program (Kirby & DeCampli, 2008). Mentors allow nurse managers to apply knowledge to their everyday practice and offer necessary and immediate guidance in a non-threatening fashion. As well as experienced nurse managers, mentorship may also be provided through a fellowship or residency program of a professional nurse executive association (Kirby & DeCampli). By successful completion of an orientation program with an essential mentoring component, nurse managers may be adequately prepared for their role and be perceived as having greater ability. Trust in one’s manager is therefore developed and sustained.

Given that benevolence directed towards the RN was found to be a key antecedent to managerial trust, first-line managers are ideally situated to ensure that interactions with a staff RN are respectful and civil. Respect is recognizing that each employee is a full human being who deserves to interact with an attentive and concerned manager (Laschinger & Finegan, 2005). Considered to be a value of the overall organization, respect also reflects the culture of the clinical unit (Faulkner & Laschinger, 2007). A manager has the authority and resources to create an unit environment in which practising nurses feel respected and valued by one’s manager. A manager who interacts in a respectful and caring manner towards a staff nurse sets the stage for a work environment that values respect.

First-line nurse managers are also entreated to consistently exhibit ethical behavior. A nurse manager who is perceived to have integrity, is more likely to enhance and sustain a staff RN’s trust. Through ethical behaviors, a nurse manager demonstrates that integrity is an essential value that is reflected in the culture of the work environment. By consistently being honest and ensuring congruency between words and actions, one’s manager promotes integrity as an essential value of the work environment.

Integrity and benevolence are further enhanced through creation of a fair decision-making process of the
unit. Perhaps through a nursing practice council, staff nurses have the opportunity to voice their concerns regarding a decision of a manager. Through enactment of accurate decisions that apply to all concerned parties with opportunity for feedback, the process and, by extension the unit culture, appear fair and just (Moorman, 1991). By participating in a fair decision-making process, a staff RN will perceive that one’s manager is acting in a benevolent and ethical manner.

**Future Research**

This study focused on development of a staff RN’s trust in one’s manager in Ontario acute care emergency departments. The final model depicted that trust in one’s manager arises from knowledge and behaviors of one’s manager as well as a fair and just unit-based decision-making process. Future research should further test and refine the final theoretical model for a greater understanding of the development of trust within a health care environment.

To determine the antecedents of a staff nurse’s trust in one’s manager, cross-sectional data was collected and used. Many researchers believed that data collected at one point in time prevents knowing true causality among the variables. Using the final model, subsequent studies may incorporate a longitudinal study design that examines the development of managerial trust over at least two points in time. This would allow understanding of the effect of time on each trust determinant and help determine if the relationships of the final model are robust over time.

The present study omitted certain constructs that, from a theoretical perspective, may have influence trust in one’s manager. Although power of one’s manager were inherent in the present study and not explicitly explored, subsequent studies could investigate the relationship between a manager’s use of power and managerial trust. Given the inherent power differential between a RN and one’s manager, a staff nurse tends to experience greater risk and vulnerability than one’s manager. As a result, a nurse’s degree of managerial trust may be influenced by a manager’s use of power. Given that little research has investigated the effect of manager’s use of power on managerial trust, future research is needed to fully understand the role of power in the development of trust in one’s manager (Mayer, Bobko, Davis & Gavin, 2011).

Future research could also examine determinants of context-specific managerial trust, such as trusting one’s manager to effectively resolve conflict among staff or trusting one’s manager to not punish a staff nurse for a medication error. Perhaps the final model would be further refined depending on the particular situation which requires a RN to trust one’s manager. Additionally, follow-up research could investigate the influence of a clinical unit’s culture, such as a work environment that promotes a climate of respect among individuals. The current study investigated trust within an acute care emergency department but future nursing research could further test and refine the final model in other clinical units, such as a medical or critical care unit. The final model could also be examined in different sectors of the health care system, such as long term care or community care. This would facilitate understanding regarding the effect of different health care sectors on the development of managerial trust and examine if the relationships of the model are robust in different clinical units or sectors.
Finally, subsequent research using an interventional quasi-experimental design where nurse managers participate in a nurse manager development program to attain needed skills and competence with a pre and post test for ability and trust would provide further evidence of the causality. The study would also give practical and applicable advice to nursing administration.

Future research is required to: 1) establish validity of causality among determinants and trust in one’s manager through longitudinal and intervention quasi-experimental study designs; 2) investigate the influence of certain omitted constructs in the establishment of trust; 3) test the final model in different clinical units and health care sectors. The knowledge gained from this study lays the foundation upon which follow-up research can build.

**Study Limitations**

**Selection Sample Bias**

The first limitation refers to the sample selection and possible selection bias. While participants were randomly selected from the CNO RN 2009 Database, names were drawn from a list of nurses who had given their consent to participate in research. In addition, the study depends upon the accuracy of the CNO RN database, specifically a RN’s current home mailing address. If a RN fails to provide CNO with a current mailing address, the nurse will not receive the survey if randomly selected for participation in the study. Therefore every staff RN working in Ontario emergency departments did not have an equal chance of being included in the sample. It is not known whether nurses included in the sample were substantially different from nurses who did not wish to participate in research or who had not updated their mailing addresses. Sample selection bias may have been introduced into the study and reduced the generalizability of the results.

**Low Response Rate**

A second limitation involves a low response rate of returned and completed surveys which may undermine the external validity of study results and compromised the ability of the researcher to make valid claims regarding all staff RNs employed in Ontario acute care hospital emergency departments (Hager, Wilson, Pollak & Rooney, 2003). A low response rate may result in non-response bias, a source of error in which characteristics of survey respondents differ significantly from characteristics of non-responders (Rogelberg & Stanton, 2007). Nurses may have decided not to participate for a variety of reasons, including negative attitude towards trust in one’s manager, questionnaire length, dissatisfaction with manager and lack of time.

In the study, the response rate was low at 40%. It is not known whether study participants differed significantly from selected nurses who chose not to participate. Approaches in the study to facilitate a high response rate included a prenotice letter to alert potential participants of an upcoming survey, use of reminder letter, university sponsorship, providing a pre-stamped, pre-addressed survey return envelope and offering an opportunity to donate to charity (Dillman et al., 2009; Rogelberg & Stanton, 2007). Despite the low response rate, comparison of sample demographics to membership statistics of CNO RN Database (2011) offered evidence that study participants were representative of the population of emergency room staff RNs across Ontario. The sample demographics were also similar to other samples of acute care staff nurses who participated in research (Wong et
Common Method Variance

This study relied upon a self-report survey to measure both predictor and outcome variables. Use of a single source of data may have introduced common method variance, a source of measurement error that originates from the use of the specific method rather than from the study constructs (Doty & Glick, 1998). Measurement error jeopardizes construct validity and inflates correlations among variables, causing observed relationships to differ from true relationships among study variables (Spector, 2006). In this study, common method bias may have resulted from numerous sources: respondents may attempt to remain cognitively consistent in their responses; respondents may respond to items more as a result of social acceptability rather than their true feelings; respondents may agree or disagree with survey items independent of their content; mood of respondents; and examination of abstract, social constructs, such as trust, which introduce subjectivity (Podsakoff, MacKenzie, Lee & Podsakoff, 2003; Spector).

In the present study, precautions were taken to reduce common method variance. Podsakoff et al. (2003) and Spector (2006) suggested that common method variance and measurement error may be controlled if: 1) A study is well designed with a careful analysis of the study’s purpose and necessary measurement methods. As the study examined attitudes and perceptions of respondents, using a monomethod approach with a self-report survey was suitable for the purpose of the study and provided necessary data to test the hypothesized model. 2) Self-reported surveys are evaluated for accuracy and biases. Method biases may be reduced through careful attention to the items themselves and using items that were clear, concise and specific. Few items were negatively worded. The measures in this study underwent confirmatory factor analysis with removal of unclear or confusing items. Measures provided evidence of strong validity and reliability. Different scale anchors were used to reduce covariation caused by the same scale anchors. 3) Assuring respondents that responses were anonymous and confidential and only group data, not individual data, will be used for reporting purposes. Participants were informed that they may choose to skip any question. These procedures reduced the likelihood that respondents would be less likely to edit their responses to be more socially desirable, lenient or consistent with how they think the researcher wants them to answer (Podsakoff et al.). In spite of the precautions, common method variance cannot be ruled out in the study.

Cross-sectional Nature of Data

An additional limitation is the cross-sectional nature of data. Although structural equation modeling was used to analyze the data, longitudinal replication of the study would provide stronger evidence of causation. In addition, omission of relevant variables may have introduced bias into the study. Although the chosen study variables were conceptually and empirically supported, there are determinants of managerial trust that were not examined, such as manager’s use of power, context-specific managerial trust and culture of the work environment. Potential determinants are identified in a previous section (Implications for Future Research).
Psychometric Properties of Study Instruments

Several study instruments had not been previously tested among nurses and psychometric properties of the instruments were not known. Potentially, instruments with weak reliability and unknown construct validity may have adversely affected statistical conclusion, internal and external validity of the study (Shadish, Cook & Campbell, 2002). Unreliable instruments may have weakened relationships among variables, potentially leading to incorrect judgments regarding the strength of relationships between trust determinants and managerial trust. Statistical errors may have compromised internal validity of the study (Shadish et al.).

Absence of confirmed validity among study instruments may have compromised construct validity due to a possible mismatch between a construct and its items. The items may not have adequately measured all aspects of the construct and may have possibly measured a different concept than intended. The lack of construct validity may have threatened the study’s internal validity, as it is not known what construct was actually measured.

Although the use of potentially unreliable and invalid instruments could have been a possible limitation, psychometric testing of the study instruments provided evidence that instruments had good to very good internal consistency reliability. In addition, confirmatory factor analysis of the measurement model ensured construct validity of instruments to confirm that retained items were valid indicators of the representative construct. A noted exception was the Communication Accuracy Subscale with a reduced internal consistency reliability after measurement model testing. After deletion of one item, alpha coefficient for the modified measure ($\alpha = .65$) was considerably lower than the original subscale ($\alpha = .75$). Although validity of the scale improved, the lowered reliability coefficient indicated that the content of the items may have been so heterogenous that the instrument was not a valid measure of the construct.

Trust Measure

Although at least 50 unique trust instruments have been incorporated into prior empirical trust investigations within the context of a subordinate-supervisor relationship (McEvily & Tortoriello, 2008), none of the instruments suitably measured trust as conceptualized in this study. A few did measure a willingness to be vulnerable (Gillespie, 2003; Mayer & Davis, 1999) but none also measured trust as an expectation of positive managerial behaviors. Therefore, a decision was made to use a single item to measure trust in one’s manager. In a meta-analytic study of trust, Colquitt et al. (2007) concluded that relationships between trust and its antecedents did not vary across multi-item instruments that measured willingness to be vulnerable or across direct, single-item measures that explicitly used the word trust.

The use of single-item trust measurement may be a limitation of the study. By using a single-item trust measure, it is unlikely that respondents had the same understanding of the word ‘trust’. Study participants may have not viewed trust as conceptualized in the study, compromising the construct validity of single item (Shadish et al., 2002). It is not known what construct was actually being measured, thereby threatening construct validity. As it is not guaranteed that managerial trust was actually being measured, perhaps incorrect inferences about relationships in the model may be made. The use of single item may threaten internal validity of the study.
Generalizability of Study Findings

Overall, sample demographics and work setting characteristics as well as survey response rate were reasonably similar to characteristics of the target population, specifically staff nurses working in emergency departments across Ontario acute-care hospitals. The dynamic and demanding nature of an emergency department work environment may help explain slight differences between survey respondents and the broader RN population, particularly current employment status, self-rated overall health and average age. Study findings regarding union membership, marital status and professional and organizational tenures were almost identical to attributes of the general RN population. Work setting characteristics were also relatively comparable to pertinent documents, although differences suggest that survey respondents may have been somewhat unaware regarding official teaching status and number of annual patient visits. Given the comparable similarity to the population of interest, study findings may be inferred to be applicable to the population of interest (Shadish et al., 2002).

Knowledge Transfer Plans

Based on Lavis et al.’s (2003) framework, knowledge transfer aims to inform specific target audiences of the low level of managerial trust among staff nurses and solutions to facilitate trust as proposed by the research. The value of fair, caring and ethical behaviors from one’s manager in development of managerial trust will be communicated to Accreditation Canada, a key legislative body which publicly regulates management standards and practices in health care organizations. Administrative audiences, including health care organizations, Chief Nursing Officers, Boards of Directors and first-line managers, in collaboration with nursing education audiences, such as the Canadian Association of Schools of Nursing, will be targeted to fund and implement formal educational opportunities and mentorship programs for first-line managers. Study findings will be further conveyed to supportive interest groups, such as Nursing Leadership Network of Ontario, the Academy of Canadian Executive Nurses and provincial, national and international nursing and allied health associations. Means of communication will encompass a one page summary sheet, presentations at conferences, publication of findings in scholarly journals as well as in newsletters and websites of target audiences.

Summary

This study presented new evidence to enhance knowledge regarding development of a staff nurse’s trust in one’s manager. The purpose of the study was to test and refine a hypothesized theoretical model that explored the impact of attributes of the individual RN, the manager, the RN-manager relationship and the work environment on a staff nurse’s trust in one’s manager among RNs providing direct patient care in Ontario acute care hospital emergency departments. The hypothesized model was developed through a review of the related literature and conceptually supported constructs. This is the only study to investigate the development of managerial trust within a Canadian health care work environment.

Consistent with the hypothesized model, managerial ability, benevolence towards a RN, integrity and procedural justice directly predicted the degree of a staff nurse’s managerial trust. In the final model, greater manager knowledge, benevolent and ethical behavior towards the RN and a fair decision-making process resulted
in a greater degree of managerial trust among study participants. Procedural justice and ability also had an indirect effect on managerial trust. Other indirect determinants of managerial trust included facilitation of effective teamwork, communication accuracy, interaction frequency and emotional availability. Propensity to trust, job tenure, span of control, access to support and resources and self-determination failed to directly or indirectly influence managerial trust.

Although several study limitations were present, study findings generated practical implications for nursing education and nursing leadership. Results of the study create opportunities for future research with new methods and areas of investigation. Longitudinal and interventional study designs in addition to examination of trust in different clinical areas and health care sectors would help build current knowledge about managerial trust development in health care.

In conclusion, development and maintenance of trust in one’s manager were determined to be a series of interactions among a manager’s competence and character as well as a fair and just work culture. The knowledge from this study provides insight into how positive, healthy RN-manager work relationships are created and sustained to achieve optimal outcomes for patients, nurses and health care organizations.
References


Management, 22(2), 259-298.


Appendix A – Registered Nurse Survey
On Letterhead
Exploring Determinants of Registered Nurses’ Trust in their Managers

Introduction
You are invited to participate in this survey to gain a better understanding of factors that affect nurses’ trust in their managers. The study involves Registered Nurses who provide direct patient care in an emergency department in an Ontario hospital and have at least six months experience as a RN. Your responses are confidential and anonymous, and only grouped data will be used for any presentation or published report.

Instructions
When you are completing this survey, think of the emergency department where you work MOST frequently. Please answer the questions in the space provided and return the questionnaire by mail in the enclosed pre-addressed, postage-paid envelope.

Please complete this questionnaire ONLY if you are a RN providing direct patient care in an Ontario hospital emergency department AND have you have at least six months experience as a RN.

If not, please place an X in one of these boxes and return the questionnaire. This will help us track our true response rate.

☐ I DO NOT WORK AS A REGISTERED NURSE PROVIDING DIRECT PATIENT CARE IN AN ONTARIO HOSPITAL EMERGENCY DEPARTMENT

☐ I DO NOT HAVE AT LEAST SIX MONTHS RN EXPERIENCE.

☐ I DO NOT WISH TO PARTICIPATE IN THIS STUDY

Please return this survey in the pre-addressed, postage-paid envelope to:

The Lawrence S. Bloomberg Faculty of Nursing
University of Toronto
130 - 155 College Street
Toronto, Ontario M5T 1P8
Attn: Barbara Wilson, doctoral candidate
1. Please check off all those characteristics that describe your hospital (CHECK ALL that apply)
   - Is located in an urban area with a population greater than 100,000
   - Is located in an urban area with a population less than 100,000
   - Is located in a rural or remote area
   - Is formally considered a 'teaching hospital'
   - Is not a teaching hospital but we do have learners from at least two different health disciplines
   - Does not regularly engage in teaching students from health disciplines
   - Has multiple sites besides the site I normally work at
   - Has more than one critical care unit

2. What is the annual number of patient visits to the emergency department?
   - Less than 15,000 visits/year
   - 15,000 to 30,000 visits/year
   - Greater than 30,000 visits/year

3. What patient population is served by the emergency department where you work MOST frequently? (CHECK ALL that apply)
   - Pediatrics (younger than 17 years of age)
   - Adults & Seniors (18 years of age and older)

4. How many years have you worked as a:
   a. Registered Nurse (# years)
   b. Registered Nurse in this hospital (# years)
   c. Registered Nurse in your current unit/role (# years)

5. What’s your CURRENT employment status in your emergency department where you work MOST frequently?
   - Full-time
   - Part-time
   - Casual/Occasional

6. What’s your PREFERRED employment status in your emergency department?
   - Full-time
   - Part-time
   - Casual/Occasional

7. What is the length of your MOST frequently worked shift in this emergency department?
   - 8 hours or less
   - 10 hours
   - 12 hours
   - Other Specify:

8. Is your job unionized?
   - Yes
   - No

Please CIRCLE the extent to which you agree or disagree with the following statements regarding your beliefs about other people.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Never</th>
<th>Sometimes</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. People can be trusted?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10. People try to take advantage of you if they get the chance? (R)*</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11. People try to be fair?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12. You can’t be too careful in dealing with people? (R)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13. People try to be helpful?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>14. People are just looking out for themselves? (R)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

* = Item is reverse coded
Please **CIRCLE** the extent to which you agree or disagree with the following statements regarding your nurse manager/immediate supervisor.

<table>
<thead>
<tr>
<th>My nurse manager/immediate supervisor…</th>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is physically present in my emergency department at regular intervals.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Is easily accessible to me.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Helps out in my emergency department when he/she is able.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Understands the work that I do.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Is aware of what I need to provide care.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Recognizes the importance of adequate RN staffing.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Is approachable.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Pays attention to what I’m saying when we interact.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Makes time to listen to me and my concerns.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Is successful at getting people to work together.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please **CIRCLE** the extent to which you agree or disagree with the following statements regarding your nurse manager/immediate supervisor.

<table>
<thead>
<tr>
<th>My nurse manager/immediate supervisor…</th>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Is very capable of performing his/her job.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Is known for be successful at the things he/she tries to do.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Has much knowledge about the work that needs to be done.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Has specialized capabilities than can improve our patient care.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Is well qualified.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Is very concerned about my welfare.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Cares a lot about my needs and desires.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Would not knowingly do anything to hurt me.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Really looks out for what is important to me.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Will go out of his/her way to help me.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Is very concerned about my co-workers’ welfare.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Cares a lot about my co-workers’ needs and desires.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Would not knowingly do anything to hurt my co-workers.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. Really looks out for what’s important to my co-workers.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Will go out of his/her way to help my co-workers.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Has a strong sense of justice.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. Keeps his/her word.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. Tries hard to be fair in dealings with others.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. Takes actions that are consistent with his/her words.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30. Has similar values to me.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31. Shows behavior that is guided by sound principles.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Please CIRCLE the extent to which you agree or disagree with the following statements regarding your work-related communication (written, oral and electronic) with your nurse manager/immediate supervisor over the previous 3 months.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Biased information. (R)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Valid estimates of resources I needed to care for my patients.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. Information that was too late. (R)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. Conflicting messages. (R)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. Important details about the care needs of my patients.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6. Necessary information for my job.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. Relevant information for my job.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8. Explanations that were easy to understand.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9. Information that made sense to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10. Clear ideas.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11. Information in a timely manner.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12. Accurate information.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13. Information that I already knew. (R)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

* = Item is reverse coded

Please CIRCLE the extent to which you agree or disagree with the following statements regarding your nurse manager/immediate supervisor.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Considers my viewpoint.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>15. Suppresses personal biases.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>16. Provides me with timely feedback about a decision.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>17. Treats me with kindness and consideration.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18. Respects my rights as an employee.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>19. Deals with me in a truthful manner.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Please CIRCLE the extent to which you agree or disagree with the following statements regarding your interactions with your nurse manager/immediate supervisor.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Never</th>
<th>Seldom</th>
<th>Occasionally</th>
<th>Often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. Does your nurse manager/immediate supervisor initiate work-related interaction with you?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>21. Do you initiate work-related interaction with your nurse manager/immediate supervisor?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>23. Do you interact with your nurse manager/immediate supervisor formally at work?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>24. Do you interact with your nurse manager/immediate supervisor informally or socially at work?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Please CIRCLE the extent to which you agree or disagree with the following two statements regarding your nurse manager/immediate supervisor.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>25. Overall, I trust my nurse manager/immediate supervisor.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>26. I feel confident about my nurse manager’s/immediate supervisor’s work-related knowledge.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
1. Is your nurse manager/immediate supervisor a Registered Nurse?
   _______ Yes → Go to question #5
   _______ No → Go to question #4
   _______ Don’t know → Go to question #5

2. If your nurse manager/immediate supervisor is NOT a Registered Nurse, what is his/her educational background or previous work role?
   ____________________________________________ (Educational background or previous work role)

3. Including nursing and other staff, approximately **HOW MANY** people report to your nurse manager/immediate supervisor?
   _______ (# people)

4. From the list below, please identify other resource persons available to support your nurse manager/immediate supervisor and your emergency department. (**CHECK ALL** that apply)
   _______ Charge Nurse without a patient assignment
   _______ Clinical Nurse Educator/Instructor
   _______ Clinical Nurse Specialist/Advanced Practice Nurse
   _______ Coordinator
   _______ Clerk(s)/Secretary
   _______ Other: Specify: ___________________________

**Please CIRCLE the extent to which you agree or disagree with the following statement regarding your job in the emergency department.**

<table>
<thead>
<tr>
<th>STATEMENT</th>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. I am confident about my ability to do my job.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6. The work that I do is important to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. I have significant autonomy in determining how I do my job.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8. My impact on what happens in my department is large.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9. My job activities are personally meaningful to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10. I have a great deal of control over what happens in my department.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11. I can decide on my own how to go about doing my own work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12. I have considerable opportunity for independence and freedom in how I do my job.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13. I have mastered the skills necessary for my job.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>14. The work I do is meaningful to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>15. I have significant influence over what happens in my department.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>16. I am self-assured about my capabilities to perform my work activities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>17. Overall, my current work environment empowers me to accomplish my work in an effective manner.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18. Overall, I consider my workplace to be an empowering environment.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>19. I have significant influence over what happens in my department.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Please CIRCLE the extent to which you agree or disagree with the following statements regarding your job in the emergency department.

### HOW MUCH OF EACH KIND OF OPPORTUNITY DO YOU HAVE IN YOUR PRESENT JOB?

<table>
<thead>
<tr>
<th>Statement</th>
<th>None</th>
<th>Some</th>
<th>A Lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Challenging work</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. The chance to gain new skills and knowledge on the job.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. Tasks that use all of your own skills and knowledge.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

### HOW MUCH ACCESS TO INFORMATION DO YOU HAVE IN YOUR PRESENT JOB?

<table>
<thead>
<tr>
<th>Information Available</th>
<th>No Knowledge</th>
<th>Some Knowledge</th>
<th>Know A Lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. The current state of the hospital.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. The values of top management.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6. The goals of top management.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

### HOW MUCH ACCESS TO SUPPORT DO YOU HAVE IN YOUR PRESENT JOB?

<table>
<thead>
<tr>
<th>Support Available</th>
<th>None</th>
<th>Some</th>
<th>A Lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Specific information about things you do well.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8. Specific comments about things you could improve.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9. Helpful hints or problem solving advice.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

### HOW MUCH ACCESS TO RESOURCES DO YOU HAVE IN YOUR PRESENT JOB?

<table>
<thead>
<tr>
<th>Resources Available</th>
<th>None</th>
<th>Some</th>
<th>A Lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Time available to do necessary paperwork.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11. Time available to accomplish job requirements.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12. Acquiring temporary help when needed.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

### IN MY WORK SETTING/JOB...

<table>
<thead>
<tr>
<th>Statement</th>
<th>None</th>
<th>Some</th>
<th>A Lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. The rewards for innovation on the job are</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>14. The amount of flexibility in my job is</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>15. The amount of visibility of my work-related activities within the institution is</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### HOW MUCH OPPORTUNITY DO YOU HAVE FOR THESE ACTIVITIES IN YOUR PRESENT JOB?

<table>
<thead>
<tr>
<th>Activity</th>
<th>None</th>
<th>A Lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Collaborating on patient care with physicians.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2. Being sought out by peers for help with problems</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3. Being sought out by managers for help with problems</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4. Seeking out ideas from professionals other than physicians e.g. social workers, respiratory therapists</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Please CIRCLE the extent to which you agree or disagree with each statement regarding day-to-day decisions (e.g. schedules, worker responsibilities) made by your nurse manage/immediate supervisor.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Accurate information necessary for making the decision is collected.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6. Opportunities to appeal or challenge the decision are provided.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. All sides affected by the decision are represented.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8. Standards are created so that decisions are made with consistency.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9. Concerns of all those affected by the decision are heard.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10. Useful feedback regarding the decision and its implementation is allowed.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11. Requests for clarification or additional information about the decision are allowed.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
1. What is your current marital status?
   ______ Single never married
   ______ Married/common-law
   ______ Separated/divorced/widowed

2. What is your gender?
   ______ Female
   ______ Male

3. In what year were you born? (This is a very important question for you to answer and will help us look at generational differences).
   19____ (Enter Year)

4. Please indicate highest level of education both in and outside of nursing. (CHECK ALL that apply)

   Nursing
   ______ RN Diploma
   ______ RN Baccalaureate
   ______ RN(EC) Program
   ______ Masters
   ______ Other  Specify: __________________

   Outside Nursing
   ______ Diploma/Certificate
   ______ Baccalaureate
   ______ Masters
   ______ Other  Specify: __________________

5. Are you currently enrolled in an educational course at an university or college?
   ______ Yes
   ______ No

6. In general, how would you rate your overall health compared to other people your age? (CHECK ONLY one).
   ______ Poor
   ______ Fair
   ______ Good
   ______ Very Good
   ______ Excellent

To thank you for your participation, please select ONE charitable organization to which a donation will be made on your behalf.

   ______ Canadian Breast Cancer Foundation
   ______ Ovarian Cancer Canada
   ______ Heart and Stroke Foundation of Ontario

Thank you for taking part of your very valuable time to complete this survey!
Appendix B1 – Prenotice Letter
On Letterhead

Exploring Determinants of Registered Nurses’ Trust in their Managers

Date:

Dear Registered Nurse Colleague,

We are writing to ask for your help with an important doctoral research project we are conducting at the Lawrence S. Bloomberg Faculty of Nursing, University of Toronto to understand what factors influence your trust in your manager. In the next few days you will receive an invitation to participate in this project by answering questions about your job, your unit and your relationship with your manager.

We would like to do everything we can to make it easy and enjoyable for you to participate in the study. We are writing in advance because many people like to know ahead of time that they will be asked to fill out a survey. This research can only be successful with the generous help of registered nurses like you.

To say thank you, you will be given the opportunity to select a non-profit, charitable organization to which we will make a donation on your behalf. We hope you will take approximately 30-45 minutes of your time to participate in this project. Most of all, we hope that you enjoy the opportunity to voice your opinions about your work and your workplace.

Best Wishes,

Barbara Wilson RN PhD(c)
Investigator
Doctoral Candidate
Lawrence S. Bloomberg Faculty of Nursing
University of Toronto
130 - 155 College Street
Toronto, Ontario M5T 1P8
Phone: 416-946-3928/Fax: 416-978-8222
barbara.wilson@utoronto.ca

Dr. Ann Tourangeau RN PhD
Faculty Supervisor
Associate Professor
Lawrence S. Bloomberg Faculty of Nursing
University of Toronto
130 - 155 College Street
Toronto, Ontario M5T 1P8
Phone: 416-978-6919/Fax: 416-978-8222
ann.tourangeau@utoronto.ca
Exploring Determinants of Registered Nurses’ Trust in their Managers

Date:

Dear Registered Nurse Colleague,

We would like to invite you to participate in a doctoral research project we are conducting at the Lawrence S. Bloomberg Faculty of Nursing, University of Toronto. The purpose of the study is to examine the factors that influence nurses’ trust of their managers. Your name was randomly selected from the College of Nurses of Ontario registration list. If you are a RN providing direct patient care in an emergency department in an Ontario hospital and have at least six months experience as a RN, please consider participating in this study.

Lack of nurses’ trust in their managers is a growing problem in health care settings. Your responses will help us understand the factors that contribute to your trust in your manager and assist in developing strategies to enhance trust between nurses and their managers in emergency departments. It is important that we gain a clear understanding of these factors because trust in one’s manager results in important outcomes, such as job satisfaction and turnover. To examine this topic, we have developed a survey that asks for your experiences and your opinions about your job and your department, as well as more general questions about yourself.

If you wish to participate, please complete and return the survey in the enclosed pre-addressed, postage-paid envelope. Your participation in this research is entirely voluntary and not related to your employment. We estimate that the survey will take approximately 30-45 minutes to complete. All information is kept confidential and your name will be kept anonymous. If you do not wish to participate in the survey, please return the uncompleted survey after which you will not be contacted further.

Although there are no known risks involved in participating in this study, there is a minimal risk that emotional distress or discomfort may be created by some questions. Should you experience distress or discomfort while completing the survey, you may refuse to answer any question or stop filling out the survey altogether and end your participation in the study without providing a reason. Your decision to participate, or not to participate, or to later withdraw may be done without explanation and without any consequences to your employment.

Although you receive no direct benefit from participating in this study, the survey may give you an opportunity to reflect upon your practice and provide us with useful information for creating strategies that may help promote your trust in your manager. To thank you for your valuable contribution, you will have the opportunity to select one of three non-profit, charitable organizations among which a total of $500 will be proportionately donated on your behalf upon return of a completed survey. At the end of the survey, you may choose one of the following three charitable organizations: 1) Canadian Breast Cancer Foundation; 2) Ovarian Cancer Canada; or 3) Heart and Stroke Foundation of Ontario. Upon return of a completed survey, each charitable organization will receive a portion of $500 which will correspond with each organization’s selected proportion as chosen by participants. An overview of the study, study results and amount of funds donated to each charitable organization and other study information can be found at the following website:

http://individual.utoronto.ca/truststudy

Your responses will be kept strictly anonymous and confidential. Your anonymous responses will only be seen by Barbara Wilson, doctoral candidate, Ann Tourangeau, faculty supervisor, and other members of the doctoral supervision committee as needed. Barbara Wilson, doctoral candidate, will be responsible for entering your anonymous responses into a password protected computer file. Your manager and hospital will not have access to your survey data. No names or identifying information will be used in any presentation or report that may be published. Only grouped data will be reported. Each participant and survey is identified by a study number to enable us to send out reminder letters to individuals who have not returned a survey. The master code list will be kept in a locked, filing cabinet separate from the surveys. All study information will be securely locked in the research office of Barbara Wilson, doctoral candidate, at the Lawrence S. Bloomberg Faculty of Nursing, University of Toronto for two years after study completion, at which time surveys and the master code list will be securely destroyed.

If you have any questions or concerns about the study, please contact us using the email or telephone numbers listed below. If you have any
questions or concerns about your rights as a research participant in this study, please contact University of Toronto Office of Research Ethics at ethics.review@utoronto.ca or 416-946-3273.

CONSENT

I understand that by returning a completed survey, I have consented to being included in the above described study and any questions I have were addressed to my satisfaction. I understand that my participation is voluntary and that I may withdraw at any time without affecting my employment. I understand that I will not benefit from my involvement in the study and that I have received a copy of this form. I voluntarily consent to participate in this study.

Please keep this letter for your own information.

Thank you very much for considering to participate in this study.

Barbara Wilson RN PhD(c)  
Study Investigator
Doctoral Candidate
Lawrence S. Bloomberg Faculty of Nursing
University of Toronto
130 - 155 College Street
Toronto, Ontario M5T 1P8
Phone: 416-3928/Fax: 416-8222
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Dr. Ann Tourangeau RN PhD
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Phone: 416-6919/Fax: 416-8222
ann.tourangeau@utoronto.ca

DISCLAIMER

The College of Nurses of Ontario and its involvement in this research is limited to the provision of a mailing list.

The College of Nurses of Ontario does not endorse or participate in this research in any manner.
Dear Registered Nurse Colleague,

Recently we mailed you a survey package seeking your opinions about factors that influence your trust in your manager. Your name was randomly selected from the College of Nurses of Ontario registration list.

To the best of our knowledge, the survey has not been returned. If you have already completed and returned the survey to us, please accept our sincere thanks. If not, please consider participating in the study by completing and returning the survey in the enclosed pre-addressed, postage-paid envelope. Because the survey has been sent to only a small, but representative sample of emergency department staff nurses in Ontario hospitals, it is extremely important that your survey be included in the study if the results are to accurately represent the opinions of all Ontario emergency department staff nurses.

Should you have any questions about the research, or if by chance you did not receive the survey, or it has been misplaced, please contact Barbara Wilson at (416) 946-3928 or barbara.wilson@utoronto.ca and she would be happy to send you another copy. If you have questions about your rights as a research participant, please contact University of Toronto Office of Research Ethics at ethics.review@utoronto.ca or (416) 946-3273.

The original information letter that was sent with the first survey package as well as additional study information can be found at the study’s website:

http://individual.utoronto.ca/truststudy

Thank you very much for considering to participate in this study.

Sincerely,

Barbara Wilson RN PhD(c)
Investigator
Doctoral Candidate
Lawrence S. Bloomberg Faculty of Nursing
University of Toronto
130 - 155 College Street
Toronto, Ontario M5T 1P8

Dr. Ann Tourangeau RN PhD
Faculty Supervisor
Associate Professor
Lawrence S. Bloomberg Faculty of Nursing
University of Toronto
130 - 155 College Street
Toronto, Ontario M5T 1P8
Appendix B4 – Second Reminder/Information Letter & Consent to Participate (week 7)

On Letterhead

Exploring Determinants of Registered Nurses’ Trust in their Managers

Date:

Dear Registered Nurse Colleague,

A few weeks ago we invited you to participate in a doctoral research project we are conducting at the Lawrence S. Bloomberg Faculty of Nursing, University of Toronto. Your name was randomly selected from College of Nurses of Ontario registration list. We are writing to you again because of the significance each survey has to the usefulness of this study. In order for the results of this study to be truly representative of the opinions of all Ontario emergency department nurses, it is essential that each person in the sample complete and return the survey. If you have already completed and returned the survey to us, we sincerely thank you for your contribution. If not, we encourage you to participate by completing the survey and return it in the enclosed pre-addressed, postage-paid envelope. In the event that your survey has been lost or misplaced, a replacement is enclosed.

Lack of nurses’ trust in their managers is a growing problem in health care settings. Your responses will help us understand the factors that contribute to your trust in your manager and assist in developing strategies to enhance trust between nurses and their managers in acute care settings. It is important that we gain a clear understanding of these factors because trust in one’s manager result in important outcomes, such as job satisfaction and turnover. To examine this topic, we have developed a survey that asks for your experiences and your opinions about your job and your unit, as well as more general questions about yourself.

If you wish to participate, please complete and return the survey in the enclosed pre-addressed, postage-paid envelope. Your participation in this research is entirely voluntary and not related to your employment. We estimate that the survey will take approximately 30–45 minutes to complete. All information is kept confidential and your name will be kept anonymous. If you do not wish to participate in the survey, please return the uncompleted survey after which you will not be contacted further.

Although there are no known risks involved in participating in this study, there is a minimal risk that emotional distress or discomfort may be created by some questions. Should you experience distress or discomfort while completing the survey, you may refuse to answer any question or stop filling out the survey altogether and end your participation in the study without providing a reason. Your decision to participate, or not to participate, or to later withdraw may be done without explanation and without any consequences to your employment.

Although you receive no direct benefit from participating in this study, the survey may give you an opportunity to reflect upon your practice and provide us with useful information for creating strategies that may help promote your trust in your manager. To thank you for your valuable contribution, you will have the opportunity to select one of three non-profit, charitable organizations among which a total of $500 will be proportionately donated on your behalf upon return of a completed survey. At the end of the survey, you may choose one of the following three charitable donations: 1) Canadian Breast Cancer Foundation; 2) Ovarian Cancer Canada; or 3) Heart and Stroke Foundation of Ontario. Upon return of a completed survey, each charitable organization will receive a portion of $500 which will correspond with each organization’s selected proportion as chosen by participants. The original information letter that was sent with the first survey package, amount of funds donated to each charitable organization and other study information can be found at the following website:

http://individual.utoronto.ca/truststudy

Your responses will be kept strictly anonymous and confidential. Your anonymous responses will only be seen by Barbara Wilson, doctoral candidate, Ann Tourangeau, faculty supervisor, and other members of the doctoral supervision committee as needed. Barbara Wilson, doctoral candidate, will be responsible for entering your anonymous responses into a password protected computer file. Your
manager and hospital will not have access to your survey data. No names or identifying information will be used in any presentation or report that may be published. Only grouped data will be reported. Each participant and survey is identified by a study number to enable us to send out reminder letters to individuals who have not returned a survey. The master code list will be kept in a locked, filing cabinet separate from the surveys. All study information will be securely locked in the research office of Barbara Wilson, doctoral candidate, at the Lawrence S. Bloomberg Faculty of Nursing, University of Toronto for two years after study completion, at which time surveys and the master code list will be securely destroyed.

If you have any questions or concerns about the study, please contact us using the email or telephone numbers listed below. If you have any questions or concerns about your rights as a research participant in this study, please contact University of Toronto Office of Research Ethics at ethics.review@utoronto.ca or 416-946-3273.

CONSENT
I understand that by returning a completed survey, I have consented to being included in the above described study and any questions I have were addressed to my satisfaction. I understand that my participation is voluntary and that I may withdraw at any time without affecting my employment. I understand that I will not benefit from my involvement in the study and that I have received a copy of this form. I voluntarily consent to participate in this study.

Please keep this letter for your own information.
Thank you very much for considering to participate in this study.

Barbara Wilson RN PhD(c) Ann Tourangeau RN PhD
Investigator Faculty Supervisor
Doctoral Candidate Associate Professor
Lawrence S. Bloomberg Faculty of Nursing Lawrence S. Bloomberg Faculty of Nursing
University of Toronto University of Toronto
130 - 155 College Street 130 - 155 College Street
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DISCLAIMER
The College of Nurses of Ontario and its involvement in this research is limited to the provision of a mailing list. The College of Nurses of Ontario does not endorse or participate in this research in any manner.
Appendix B5 – Third Reminder Letter (week 9)
On Letterhead
Exploring Determinants of Registered Nurses’ Trust in their Managers

Date:

Dear Registered Nurse Colleague,

Recently we mailed you a survey package and follow-up letter seeking your opinions about factors that influence your trust in your manager. Your name was randomly selected from the College of Nurses of Ontario registration list.

To the best of our knowledge, the survey has not been returned. If you have already completed and returned the survey to us, please accept our sincere thanks. If not, please consider participating in the study by completing and returning the survey in the enclosed pre-addressed, postage-paid envelope. Because the survey has been sent to only a small, but representative sample of Ontario emergency department staff nurses, it is extremely important that your survey be included in the study if the results are to accurately represent the opinions of all emergency department staff nurses in Ontario.

Should you have any questions about the research, or if by chance you did not receive the survey, or it has been misplaced, please contact Barbara Wilson at (416) 946-3928 or barbara.wilson@utoronto.ca and she would be happy to send you another copy. If you have questions about your rights as a research participant, please contact University of Toronto Office of Research Ethics at ethics.review@utoronto.ca or (416) 946-3273.

The original information letter that was sent with the first survey package as well as additional study information can be found at the study’s website:
http://individual.utoronto.ca/truststudy

Thank you very much for considering to participate in this study.

Sincerely,

Barbara Wilson RN PhD(c)  Ann Tourangeau RN PhD
Investigator Faculty Supervisor
Doctoral Candidate Associate Professor
Lawrence S. Bloomberg Faculty of Nursing Lawrence S. Bloomberg Faculty of Nursing
University of Toronto University of Toronto
130 - 155 College Street 130 - 155 College Street
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