



The Joint Venture Model of Knowledge Utilization: A Guide for Change in Nursing

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Abstract

Knowledge utilization (KU) is an essential component of today's nursing practice and healthcare system. Despite advances in knowledge generation, the gap in knowledge transfer from research to practice continues. KU models have moved beyond factors affecting the individual nurse to a broader perspective that includes the practice environment and the socio-political context. This paper proposes one such theoretical model, the Joint Venture Model of Knowledge Utilization (JVMKU). Key components of the JVMKU that emerged from an extensive multidisciplinary review of the literature include leadership, emotional

intelligence, person, message, empowered workplace and the socio-political environment. The model has a broad and practical application and is not specific to one type of KU or one population. This paper provides a description of the JVMKU, its development and suggested uses at both local and organizational levels. Nurses in both leadership and point-of-care positions will recognize the concepts identified and will be able to apply this model for KU in their own workplace for assessment of areas requiring strengthening and support.

The need to increase evidence-based nursing practice has grown within the nursing community as the means by which we improve the outcomes of practice. A multinational, interdisciplinary think tank, sponsored by Sigma Theta Tau to establish the preferred future for the nursing profession, reported that nurses can make the strongest contributions to population health through the delivery of evidence-based care, policy development and advocacy (Sigma Theta Tau 2004). To accomplish these aims, strategic action is required, including the development of a new and comprehensive model of knowledge utilization (KU) for nursing.

KU refers to the use of various kinds of knowledge, including empirics, aesthetics, personal knowledge and ethics (Knowledge Utilization Studies Program 2003). Nursing leaders such as Abdellah (1970) and Lindeman (1975) identified the need to use scientific evidence to improve the quality of nursing practice. Research utilization is defined as a process that transforms research knowledge into practice (Stetler 2001). Despite Horsley, Crane and Bingle's (1978) view of research utilization as an "organizational process," the utilization of research based on nursing knowledge remains a challenge for the nursing profession.

The nursing literature is abundant with models describing the KU process. Well-known models include the Stetler Model (Stetler 1994, 2001; Stetler and Marram 1976), the Ottawa Model of Research Use (Logan and Graham 1998), Individual Determinants of Research Utilization (Estabrooks 1999; Estabrooks et al. 2003), Stages in Research Utilization, Implementation, Evidence-Based Practice Cycle (Kitson 2001), Promoting Action in Research Implementation in Health Services Framework (Rycroft-Malone et al. 2002) and the Framework for Research Dissemination and Utilization (Dobbins et al. 2002). KU models are moving beyond factors at the level of the individual nurse (Kitson 1999; Stetler 1994, 2001; Stetler et al. 1998) to an enhanced and more expansive view that considers the broader socio-political, environmental and organizational characteristics of the practice environment (Kitson 1999; Rycroft-Malone et al. 2002). This paper proposes one such theoretical model, which the authors have named the Joint Venture Model of Knowledge Utilization (JVMKU). The advantages of this model

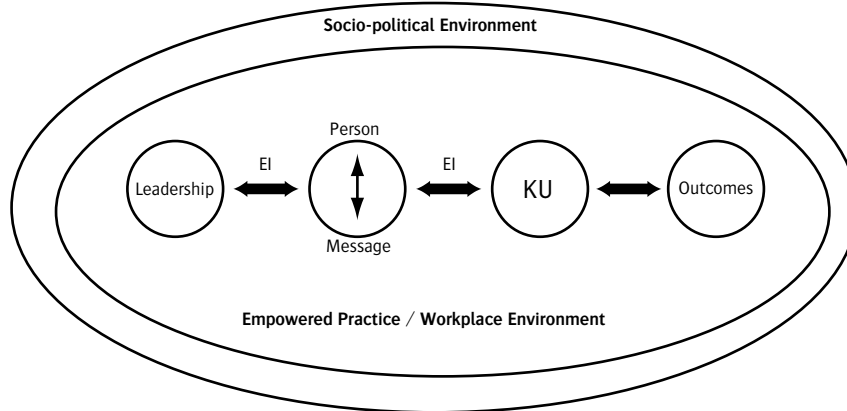
over others include comprehensiveness, clarity and its ability to place those factors that are shown to influence knowledge use into a visual, operational setting. The model can act as a guide for change in a variety of situations, and each of its general concepts can be extrapolated to the specific factors of each setting or situation. In this way, the concepts can be described in ways that are pertinent to a particular case. For example, a nurse manager wishing to introduce a new intervention or behaviour can examine each concept of the model to see which ones would support change in her practice environment and which would not. She may then alter aspects of the environment that can be changed, focus on the most favourable conditions or defer change until a later time. The JVMKU is not a “how to” model of KU; rather, it provides a practical guide for critical reflection on the deeper theoretical, philosophical and ideological issues affecting the process of KU. The model focuses on the interplay among individuals, organizations and the socio-political environment.

The JVMKU emerged through an extensive multidisciplinary review and critical analysis of the literature on KU, knowledge transfer, evidence-based practice and research utilization. This work was the result of a joint venture led by Dr. Linda Edgar and a team of doctoral candidates at McGill University. Scholarly discussion focused on examining the evidence of the influence of identified variables on KU and the relationship among these variables. Through inductive reasoning, the most likely robust factors that are related to KU were extracted and included in the model.

Overview of the Model

The JVMKU includes a global analysis of the factors influencing KU and provides a guide for knowledge use at both the local level of nursing units and at the organizational level. It endorses the position that people, using their skills and knowledge, are effective agents for change within motivating work settings. Specifically, the JVMKU posits that the interaction among leaders, emotional intelligence (EI), individuals/organizations and knowledge within the practice environment or workplace and the broader socio-political environment determines KU and its subsequent outcomes. Emotionally intelligent leaders who are able to market knowledge and innovation and create therapeutic working relationships with individuals and organizations are critical in facilitating the KU process. The use of EI by leaders and the establishment of supportive networks influence individuals’ and organizations’ commitment to KU, which in turn influences the use and implementation of knowledge in practice (i.e., outcomes of KU). This process is further influenced by the practice/workplace environment (e.g., valuation of individual contributions, unit culture) (Parahoo 2000; McCleary and Brown 2003) and the socio-political environment (CHSRF 2001; Kitson 1999).

figure 1

Joint Venture Model of Knowledge Utilization

The JVMKU describes the complex social intricacies of the KU process involving people and innovations – ideas, practices or objects that are new to an individual or organization (Rogers 1995). The next sections of this paper provide a more detailed description of each of the model's components. Figure 1 depicts these and the feedback process necessary for KU as proposed by the JVMKU.

Components of the Model

Leadership

Leadership, defined here as the practice of influencing people to achieve goals (Huber 2006), plays a significant role in the JVMKU. Effective nurse leaders are essential to establish excellence (Lewis and Matthews 1998; Upenieks 2002), particularly in creating a culture for evidence-based practice (Stetler et al. 1998). Research conducted in magnet hospitals indicates that the nurse leader plays a critical role in developing an environment that supports nursing excellence (Lewis and Matthews 1998; Upenieks 2002). Nurse administrators in magnet hospitals are characterized as responsive, supportive, visionary, knowledgeable, communicative, powerful and enthusiastic (Scott et al. 1999). Nurses in magnet hospitals report higher job satisfaction, autonomy and control, as well as better relationships with physicians, than those employed in non-magnet institutions (Upenieks 2002). Patient outcomes include lower mortality rates and higher patient satisfaction ratings (Lewis and Matthews 1998; Scott et al. 1999).

Staff nurses attribute most of their feelings about the workplace, and their level of organizational commitment, to the leadership behaviour of the nurse manager. Managerial behaviours that most contributed to nurses' job satisfaction include providing recognition, praise and thanks; meeting nurses' personal needs; offering help or guidance; using leadership skills; meeting unit needs; and supporting the team. Lack of recognition or support, not following through with problems, withholding help and criticizing contributed to decreased job satisfaction (McNeese-Smith 1997).

Research findings on leadership in non-nursing organizations consistently report its importance to good organizational and staff outcomes. Interviews conducted by the Gallup organization with 80,000 managers over a 25-year program of research identified the manager's role as catalyst (Buckingham and Coffman 1999). Great managers select for talent, define the right outcomes, focus on strengths and assist employees in finding the right fit within the organization.

Nurse leaders are critical in establishing the culture, capacity and infrastructure for KU (Pepler et al. 2005; Stetler et al. 1998; Tranner et al. 2002; Udon 2004). A conceptual framework developed to explain the multiple factors influencing the incorporation of evidence into practice identifies three elements: evidence, context and facilitation (Rycroft-Malone et al. 2002). The authors state that learning organizations that feature a transformational leadership style, openness, valuation of individuals' contributions, decentralized decision-making and a shared vision have the ability to transform cultures to integrate evidence into practice. Estabrooks (2003) discusses the need to consider the role of organizational determinants and more ecological approaches in the study of research utilization.

Emotional intelligence

Emotional intelligence (EI) is defined as "the ability to perceive accurately, appraise and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth" (Mayer and Salovey 1997: 10). EI has been referred to as the primal dimension of leadership (Goleman et al. 2002). Leaders with EI who radiate energy and enthusiasm, reach out to others and use such EI competencies as empathy and self-awareness are essential to creating a prosperous organization and increasing its overall performance (Goleman et al. 2002; Herbert and Edgar 2004). Common themes identified as important to translating research into practice include relationships based on trust, interaction among adopters, information sharing, communication, debate, collaboration and engagement of opinion leaders (Fitzgerald et al. 2003). These attributes are closely linked to EI. Creating a culture that incorporates KU requires emotionally intelligent leaders.

The person

“Person” is defined as the nurse (or other) in the workplace or practice setting who becomes involved in the KU process. When used by a nurse manager or administrator, the term is most likely to designate the clinical nurse or clinical nurse specialist. The manager with effective EI will foster a workplace that inspires the nurse to become involved in the KU process. The concept of person in the JVMKU integrates salient individual characteristics that influence the KU process (Traynor 1999) such as self-efficacy (Kim and Kim 1996; McCaughan et al. 2002), willingness to try new ideas (Funk et al. 1995), perceived advantage of implementing knowledge (Berwick 2003), understanding of research (Parahoo 2000; Traynor 1999), professional autonomy (Parahoo 2000; Traynor 1999), self-critical inquiry (Rolfe 1998a), critical thinking skills (Profetto-McGrath 2003), mentorship (Funk et al. 1995) and motivation (Le May et al. 1998). In particular, the person at work cannot be separated from the concept of motivation – that which activates, directs and sustains human behaviour (Edgar 1999). For background reading, we recommend the most widely used model of motivation at work, the Job Characteristics Model of Work Motivation (Hackman and Oldham 1980), to elucidate the relationship between the constructs of motivation and the work setting. This model combines the divergent factors of motivation, performance and satisfaction in a meaningful way. Its basic proposition is that work motivation arises from the characteristics of jobs. Jobs that have autonomy, feedback, task identity, skill variety and task significance, and that fall within the scope of the leader, create the necessary conditions for worker motivation and satisfaction due to high levels of work performance and the resulting good outcomes.

The JVMKU assumes that the person will be or is an active learner (an adopter or innovator) and an essential part of the KU process, able to identify critical factors affecting the different stages in his or her unique setting (Dobbins et al. 2002; Hogan and Logan 2004; Kitson 1999; Rogers 1995; Stetler 2001). The model also emphasizes that the person is not alone; the leader and person combine strengths to manage the complexities of KU and resolve operational issues. The person may also be found in other settings and organizational levels. Establishment of a “leader–person” group (support network) is critical for the initial support of activities related to KU and in promoting and supporting a successful KU process (Deloian 2001; McCleary and Brown 2003; Parahoo 2000; Royle and Blythe 1998).

The message

The concept of message refers to the innovation or the knowledge to be used and the communication needed to disseminate it. Message in the JVMKU implies that communication occurs in the setting with peers and among all levels of personnel in the organization. The characteristics of the innovation known to influence

KU include complexity (Berwick 2003; Dooks 2001; McCaughan et al. 2002), consumer preference, clarity (Funk et al. 1995) and relevancy (Berwick 2003; Van Der Weide and Smits 2001). The innovation or the message to be disseminated is more likely to be successfully transmitted if it is readily observable (Van Der Weide and Smits 2001), able to be piloted or tested as a temporary change (Berwick 2003; Dooks 2001), simple (Berwick 2003; Dooks 2001; McCaughan et al. 2002; Retsas 2000) and in keeping with the norms of the environment (Berwick 2003). Engaging formal and informal leaders to champion and communicate the innovation or message increases its chances of being adopted (Rogers 1995). Knowing how to transform the innovation message so that it conforms to the above characteristics increases the likelihood of its acceptance. One assumption of the model is that knowledge results from the best available evidence, most of which is ideally derived from research. The model would best be used at a point when a manager deems implementation of the message important and determines that sufficient strengths are present from each component of the model to enable the process to succeed.

Knowledge utilization

Knowledge utilization (KU) is defined as the use, in practice, of various kinds of knowledge (e.g., empirics, aesthetics, personal knowledge, ethics) (Knowledge Utilization Studies Program 2003). The gap in knowledge transfer from research to practice is an ongoing challenge that has been addressed in several qualitative and quantitative studies (Ax and Kincade 2001; Closs and Cheater 1994; Crosswaite and Curtice 1994; Downe 1996; Edwards et al. 2002; Le May et al. 1998; Mulhall 2001; Olade 2003; Rolfe 1998b; Schmitt 1999; Seymour et al. 2003; Tishelman et al. 2004; Upton 1999). For example, the gap is strikingly evident in the area of pain management, where – despite the growth of effective pain assessment and management research over the last 20 years – the assessment and care of patients in pain remains far from optimal (Brockopp et al. 1998; Brown et al. 1999; Twycross 2002).

Recognition of the gap in KU has led to action by several Canadian nursing organizations. The position statement by the Alberta Association of Registered Nurses (AARN 1997) articulates the role of research in the ongoing development of nursing practice and in cost-efficiency in healthcare. The Registered Nurses Association of Ontario has spearheaded a major project to develop and implement evidence-based practice guidelines in many settings (RNAO 2005). Several of these initiatives have been successful but have required extensive resources from the organization, other like organizations, the province and national nursing bodies (Graham and Logan 2004). The JVMKU might have been helpful in such large endeavours, as well as in small unit-based ones.

The outcomes

From a clinical perspective, “outcomes” is defined as the impact of various influences, especially (but not exclusively) interventions on “final endpoints that matter to decision-makers: patients, providers, private payers, government agencies, accrediting organizations or society at large” (Lipscomb and Snyder 2002: 4). Outcomes describe, interpret, predict and evaluate the consequences or effects of KU (Dalton 1995; Nies et al. 1999). Several efforts have been made to increase outcomes studies in nursing (Oermann and Floyd 2002) and to identify best practices (Mosocco 2001). They continue the concept of diagnosis-related groupings designed to manage costs, ensure quality of care and make decisions about resource allocations (White and Wager 1998). Thus, outcomes research provides evidence about the benefits, risks and results of treatments, and the requirements needed to achieve them. Outcomes are the “raison d’être” of any action.

Specifically, the concept of outcomes is included in the JVMKU because it provides (1) information on the positive and negative effects of KU on patients, healthcare professionals and organizations, (2) knowledge regarding effective and ineffective KU processes and (3) guidance for future knowledge transfer strategies (Dalton 1995; Mosocco 2001). Three main types of interrelated outcomes have been shown to be influenced by KU efforts and are emphasized by the model: (1) healthcare professionals-related outcomes (e.g., acquisition of knowledge, change in practice, personal outcomes) (Estabrooks 1999; Menix 1996; Nolan et al. 2000; Woltring et al. 2003); (2) patient-related outcomes (e.g., clinical, psychosocial, functional, fiscal, patient satisfaction) (Peters et al. 1999; Urden 1999); and (3) organization-related outcomes (e.g., retention, organizational commitment, job satisfaction, productivity) (Cullen 1999; Decker 1997; Dolan 2003; Letvak 2002; Shader et al. 2001). We have not yet included a cost–benefit analysis in the outcome. The nature of the message is, however, usually easily costed and can then be projected against expected and real outcomes in either a fiscal, ethical or quality-of-life format.

The working environment and the socio-political environment

The work setting and the socio-political environment surround and influence all the other components of the model. Royle and Blythe (1998) report that workplace factors account for 80% to 90% of the variance in research utilization. Facilitators and barriers to KU invariably include the context of nurses’ work (Parahoo 2000; Retsas 2000; Traynor 1999). Factors known to promote KU in practice include a positive research culture (Pepler et al. 2005; Retsas 2000), knowledgeable and supportive managers (Aiken and Patrician 2000), accessible research findings (Royle and Blythe 1998), professional authority (McCleary and Brown 2003), a clear system for the utilization of knowledge (Sitzia 2001) and multidisciplinary collaboration and appropriate resources (Funk et al. 1995). The

presence of potential change agents indirectly linked to the setting, such as nurse-experts, clinical nurse specialists and outside consultants, needs to be carefully considered.

Incorporation of research findings into practice demands a positive organizational research culture and strong, supportive managers (Aiken and Patrician 2000; Argote and Ingram 2000; Argote et al. 2000; Ducharme 1998; McNeese-Smith 1997; Retsas 2000; Stetler et al. 1998). In a study of factors affecting research use at the level of the nursing unit, Pepler et al. (2005) found that a culture which values use of research correlated positively with research utilization and, further, that culture is to a large extent a function of head nurses' behaviours. In addition, several studies in the field of KU and transfer suggest that approaches need to target key stakeholders, integrate knowledge based on personal and professional experiences and involve strategies that are customized, interactive and comprehensive (Dobbins et al. 1998; Dopson et al. 2002; Kitson 1999; Waddell 2002).

When good physician–nurse relationships exist in the work setting, the potential for good outcomes is extraordinary. Contemporary theoretical analyses of KU must therefore place greater emphasis on the influence of the wider context of the working environment (McCleary and Brown 2003).

KU does not occur within any type of workplace; it is more likely to arise within an empowered workplace environment – one that values the contributions of individuals; has decentralized decision-making and a shared vision; provides access to information, support and resources; and promotes opportunities for growth and movement within the organization (Kanter 1993). Leaders who wish to create a culture of knowledge utilization must facilitate access to these empowerment structures.

The socio-political environment provides the broadest context in which KU occurs. In *Knowledge Matters: Skills and Learning for Canadians*, the Government of Canada asserts that “a few key imperatives are driving us to action: the knowledge-based economy, for one, means an ever increasing demand for a well-educated and skilled workforce in all parts of the economy” (2002: 7). The knowledge-based economy and the current era of fiscal restraint in healthcare will continue to drive research imperatives such as the JVMKU.

An emerging agenda is evident across national research funding agencies, government documents (e.g., Romanow 2002) and national healthcare initiatives (e.g., CNAC 2002). These socio-political influences focus on values, costs, quality service and outcomes, evidence-based practice, public involvement in health (e.g., CHSRF 2001) and the need to motivate employees and create workplaces that

retain nurses in the healthcare system. The concepts identified in the socio-political component of this model are comprehensive in their own right. They are included to reflect awareness that the factors influencing an effective KU process at the person-nurse level go beyond the immediate workplace.

Discussion and Next Steps

The JVMKU is a generic and broadly based model articulating the factors that influence knowledge use in nursing and healthcare today. It has been created with broad strokes, thus permitting users to fill in the details with information pertinent to their specific situations. For example, a nurse leader at any level of an organization wishing to introduce a new intervention can examine the concepts in the model for supportive or negative characteristics (strengths and barriers), improve those where possible, focus on the most favourable conditions or defer change until a later time.

The JVMKU can enable users to apply their wisdom and knowledge to the global perspective of knowledge use. The model also incorporates feedback as an essential stage of the process, allowing a redefinition of particular situations. It may permit a focus on those areas that seem most significant, yet at the same time reminds the user to monitor the other areas.

To our knowledge, the JVMKU is one of the first models to provide a practical, holistic, global perspective and overview of KU that can be used at any level, from individual to organizational, at any point throughout the KU process and by anyone from the multidisciplinary healthcare team. One can observe the successful use of KU in clinical or administrative settings and match the components of the model to the actual process. The JVMKU may serve as a driving force for future conceptual thinking on an individual, unit or organizational basis. It includes unique attributes, such as EI and leadership, and shows the interaction between the various concepts. We have placed leadership and the resulting workplace environment at the hub of the model, as in the day-to-day reality. Those who use the model can focus on the unique strengths and barriers that each concept presents in their particular case.

Every new model, idea or framework must be tested. We propose to begin the testing process through an innovative qualitative design. The originators of the model will provide participating nursing units and administrative groups in hospital or community settings with a large, laminated poster of the model for display in meeting areas, as well as a guide to the use of the

model. Nurse leaders from each centre will be asked to display the poster for six months. At the end of this period, they will be invited to participate in an interview exploring how the model was or was not useful. This is an opportunity to engage in pushing knowledge use further for nursing at a time when our unified efforts are strongly needed. Please contact the lead author for further information.

Conclusion

Use of the JVMKU can promote a comprehensive view of problem-solving and change generation, and allows users such as nurse managers to identify and focus on workable strategies specific to their own environments. The model provides an integrated analysis of the most robust factors known to influence KU. Implementing and testing it in trial settings are the next steps. Using a model that combines the forces that shape the outcomes of knowledge use may well prove to be an empowering and informative guide for the nursing profession at this crucial time in its history.

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