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EDITORIAL

**Influencing Health Policy for  
the Imminent Health-Care Crisis:  
A Task for Informed Citizens,  
Proactive Nurses, and  
Committed Researchers**

As we write this editorial we cannot help but reflect on how much has happened in the past 6 weeks. In the autumn of 2008 we stand in a familiar place, with some continuity, many changes (some of which promise to be dramatic), and a nagging feeling that a profound and transformative shift in our societies is imminent. In Canada we have re-elected a minority government. In the United States a charismatic new president is preparing to take the helm, promising a dramatically different new era in American politics. We are now well into what threatens to be a deep and painful world economic crisis.

And in the midst of all these changes health care continues to top the list of urgent issues that many, across all countries, would really prefer to avoid.

Every society in the West is confronting what health economists call the “iron triangle” of cost, access, and quality — meaning that it is difficult if not impossible to either change or hold constant any one of the three without affecting the other two. Even countries with universal health-care systems are struggling with the burden of growing demand and rising costs. Researchers are showing us again and again that safe health care, the implementation of evidence-based practices, and the impact of care on quality of life fall well short of what they could and should be. But even these suboptimal conditions are not sustainable — they could not be sustained if resources and demand were to remain constant (and we all know that they will not).

The population of Canada, like that of most Western countries, is aging. People are living longer and birth rates are dropping. And this is just the beginning. We are still waiting for the real impact of the “pig in the python” or the “grey wave” — the shifts that will occur when the postwar baby boomers leave the workforce and enter the high-dependency phase of their lives in terms of health and social services.

Increased demand is already producing strains: The costs of care are rising, albeit faster in some countries than in others. In many areas, hospitals, clinics, and agencies are already overwhelmed. What will happen as patient needs mount and flood our system? Will emergency departments end up turning away the majority of patients who appear at their doors? Will types of care that are expensive to deliver overwhelm others to the point where some hospitals, clinics, and home care agencies will have to shut down in order to provide them? Will a lack of resources affect our ability to care for patients in crisis — or to attend to anything other than crises, often too late?

Can we have infinite resources for health promotion, cutting-edge medical technology, happy, healthy, fulfilled health professionals, and patients equipped with all the tools they need to take control of their health care and remain autonomous in the community as long as possible? Will we be able to meet the demands for a “full service” health-care system without raising taxes? Will there be growing disparities, in terms of service access, between those who can afford to pay and those who cannot? How will facilities and institutions and groups of workers and professionals who lose some or all of their resources reinvent themselves?

These are but some of the questions we face. Health care is rife with complex issues for which the easiest short-term approaches and the best long-term approaches are at odds. The issues are overwhelming, the solutions elusive. It is no wonder so many of us shut down before discussions even start. Yet avoiding, retreating, sitting on the sidelines, and maintaining our distance are neither acceptable nor viable responses.

In my (Sean Clarke’s) “home base” in scholarship, research on hospital quality of care, a concept called “failure to rescue” gets discussed regularly. Failure to rescue refers to those situations where no one picks up on and treats the early signs of deterioration in a patient’s condition and needless suffering, irreparable harm, or even death occurs. Researchers consider it the end result of a system of care that is poorly structured and resourced for the needs of the patients it treats. Perhaps it is time to worry that we may be failing to rescue our health-care system — a system that, albeit imperfect, has many virtues and reflects laudable values of equity and fairness. Yet we need to look carefully at what in the health-care system is worth rescuing and what is not working and should be modified or let go. We all need to take on this responsibility, as citizens, nurses and health professionals, and nurse researchers. Many of us occupy all three roles.

Where should we start?

We could begin by becoming better-informed citizens. Most of us have avoided becoming informed about health-care financing and policy,

beyond what we might hear or read in passing. Most of us have a limited understanding of how money gets spent in the health-care system, of what value we are getting for the resources invested, and of where compromises are being made and where best-case scenarios might lie. And those of us who *are* well informed are more knowledgeable about what the problems are than about possible solutions. For many of us, the process of getting involved and securing relevant information is too complicated and too time-consuming. Because the issues are so difficult, many find the prospect of digging into them too depressing. Even as nurses, we stand back and shake our heads as our patients and families endure the stresses that the health-care system imposes on them, then quietly go on with our lives. Yet we must make a point of getting involved and learning. We have access to information within our local communities, from the Internet, through our Members of Parliament, or from interest groups, and we can make our voices heard and influence others using a variety of media, including the latest modes of communication (think Facebook and YouTube).

Health professionals need to lead the way, by reading and listening, reflecting, discussing, and ultimately acting as change agents with respect to key issues in the health-care system — and role-modelling this proactivity for their friends, family members, colleagues, and fellow citizens. In this country nurses outnumber physicians five to one. Although this ratio has been constant for some time, until recently nurses never used their inherent power. Nurses are just beginning to recognize their power by virtue of their numbers and their role as the glue that holds the health-care system together. What we learned during the past decade of upheaval and nurse firings is that no health-care system can function without knowledgeable, skilled, and compassionate nurses. During the past 10 years nursing and nurses have found voice and discovered they can be agents of profound change.

Keeping silent is no longer an option. Silence is not a virtue when the safety and health of our patients are at stake. We must raise issues in public and in private, form coalitions with other health professionals, work with our professional associations and demand that they become players at the table, and ensure that the issues receive thoughtful attention by organizing and getting involved at the grassroots. The new modus operandi in politics is bottom up *and* top down action, to ensure that citizens, health professionals, and politicians are influenced by and accountable to each other.

How can researchers, particularly researchers in nursing, help to renew health care and preserve its values? They could begin by helping decision-makers to see how nurses have the potential to play an enor-

mous role in resolving the quality-cost-access problem. Decision-makers need to be encouraged to move beyond seeing nurses as nice people who toil on the frontlines of health care and bear witness to the human side of the system at its best and worst. The public and policy-makers must come to view nurses as well-informed stakeholders with critical perspectives, astute observations, and concrete suggestions for resolving the looming health-care crisis. Researchers must show, with facts and specific details, how nurses make important ideas come to life in health-care delivery: cost-effective, high-quality care provided by teams that include patients and families and a balanced approach to the use of technology, one that recognizes both the positive contributions and the limitations of technology. Data in hand, nurses and nurse scholars can show how care at its best focuses on helping patients and their families pass safely through our networks of professionals and agencies — and, to the greatest extent possible, on their own terms.

The critical mass of well-prepared nurse researchers in Canada and elsewhere must strive to keep the focus of policy debates on supporting patients and families with the resources that are at hand. They must collaborate with researchers in other disciplines to ensure that the evidence they are gathering is complete and speaks directly to policy-makers. They must use every chance they get to create ever more opportunities to produce data that will guide policy action and to offer evidence-based solutions and clear thinking on deeply emotional issues.

Our predicament is probably nothing compared to that of politicians — who are faced with what they believe to be a no-win situation. So high are the stakes and so loud the voices of the various stakeholders that even raising the questions will win them enemies. We must support and reward politicians who take on difficult questions in health policy, and we must defend those who are prepared to make unpopular choices in the short term to meet long-term goals. We can further support them by providing them with perspective and suggestions as defenders of the public good rather than as lobbyists for our own self-interest as an occupational group.

Hard and uncertain times are in store for health care, and avoiding the problems ahead will not save an effective and cherished if imperfect system. The absence of dialogue among stakeholders about the choices ahead is a near guarantee that the solutions will be inequitable and may even represent an abandonment of our society's values and the five core principles upon which the *Canada Health Act* is premised (public administration, comprehensiveness, universality, portability, and accessibility). The dialogue will be tough, demanding, and risky. To be productive it must carefully weigh fact, conjecture, and deep reflection on personal and shared values and beliefs. And it will certainly entail compromise.



## *Editorial*

This is a time for creative thinking — an opportunity to restructure and transform the health-care system. This is a time to get involved, to be proactive, to seek solutions and influence new health policies. This is nursing's time to make its mark. Keeping the welfare of patients and the well-being of society front and centre in our actions as citizens, nurses, and researchers is more likely to result in viable, fair solutions than trusting others to take up the charge or leaving developments to fate and chance.

**Sean P. Clarke**  
**Associate Editor**

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**Editor-in-Chief**

## **La déontologie en des temps de maladies contagieuses : une perspective relationnelle**

**Wendy Austin**

En des temps de maladies contagieuses, le personnel infirmier joue un rôle important et fait face à des peurs, des dangers et des exigences particulières. Ces défis nécessitent l'apport d'un code déontologique qui doit être élaboré puis compris. S'appuyant sur le cadre de travail de Callahan pour articuler une pensée déontologique et sur la notion de « préoccupations » inhérentes à la vie moderne articulée par Taylor, l'auteure cerne certains défis et défend le point de vue selon lequel l'approche déontologique actuelle en situation de pandémie, qui s'appuie sur le raisonnement moral, ne peut guider les infirmières et les infirmiers dans leurs actions déontologiques. Elle propose au personnel infirmier devant choisir un plan d'action la déontologie relationnelle comme solution de rechange viable. Cette approche fait de la déontologie une composante explicite des liens et de l'engagement mutuel et reconnaît le contexte comme un élément important dans le processus décisionnel déontologique.

Mots clés : déontologie, pandémie, personnel infirmier, déontologie relationnelle

# Ethics in a Time of Contagion: A Relational Perspective

Wendy Austin

In times of contagion, the key role of nurses brings fears, dangers, and unique demands. The ethics of such challenges need to be explored and understood. Using Callahan's framework for thinking ethically and Taylor's "worries" of modern life, the author elucidates some of the challenges and then argues that the current approach to pandemic ethics, with its reliance on moral reasoning, is insufficient to guide nurses' ethical actions. Relational ethics, which explicitly situates ethics within relationships and our commitment to one another, and which recognizes that context matters in ethical decision-making, is offered as a viable alternative for nurses in considering how to respond.

Keywords: ethics, pandemic, nurses, relational ethics, pandemic planning

Times of contagion are extraordinary times: surreal, chaotic, transformative. This is revealed by events in both the distant and the recent past. Revealed, as well, is the fact that in such times nurses play a substantive role. Groft's (2006) claim, in the context of the 1918 pandemic,<sup>1</sup> that "everything depends on good nursing" (p. 19) is not hyperbole. Nurses' key role brings fears, dangers, and demands that are particular to outbreaks of contagious or infectious disease. The ethics of these onerous times must be explored before they are upon us.

I argue in this article that our current approach to "pandemic ethics," with its reliance on moral reasoning (e.g., principlism), will be insufficient to guide nurses' actions. Relational ethics, which explicitly situates *How should I act?* within relationships and our commitment to one another, and which recognizes that context matters in decision-making, has been recommended as a more viable alternative. It is said that ethical thinking requires three qualities: perceptiveness about one's society and its values/beliefs, self-knowledge, and knowledge of the traditions of ethics (Callahan, 1999). Using these as a framework, I review the ethical concerns related to a pandemic and make the case for a relational ethics approach.

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<sup>1</sup> A pandemic is a global epidemic. The contagious disease is usually new to humans, has dire consequences, and is spreading rapidly.

## Society in Times of Contagion

### *Past Pandemics*

History allows us to glimpse the unfolding (or unravelling) of ethical life in times of contagion. There are records of plagues dating back to 541 BC: “During this time there was a pestilence, by which the whole human race came to be nearly annihilated” (Gottfried, 1983, p. 10). Memory of such plagues can be found outside of history books, too, such as in children’s playground songs: *Ring around the rosie, pocket full of poesy/ Ashes, ashes, we all fall down*. The bubonic plague and its deadly potency are nevertheless difficult for us to imagine. Within a span of 4 years (1347–51), the plague killed over 25% of the European population (Gottfried, 1983). Petrarch wrote, “Oh happy posterity who will not experience such abysmal woe — and who will look upon our testimony as fable” (cited in Gottfried, 1983, p. xiii). The abysmal woe of a pandemic was nevertheless experienced early in the 20th century (1918–19), when the Spanish influenza killed 20 million — with nearly as many Canadians dying of this flu as died in World War I (O’Keefe & Macdonald, 2004).

With antibiotics and new biotechnologies, however, we came to believe that the world was at last free of such risk. In the 1960s the US Surgeon General announced that infectious diseases were no longer a threat (Selgelid, 2005). Landmarks like the eradication of smallpox in 1977 supported such optimism. By 1981, however, human immunodeficiency virus (HIV) shattered it (Sontag, 1989), and to date has killed over 27 million people (Joint United Nations Programme on HIV/Aids & World Health Organization, 2007). Other new agents (like the ebola and West Nile viruses) and old, familiar ones that we thought had been conquered (e.g., staphylococcus; tuberculosis bacilli) are emerging as serious threats. Severe acute respiratory syndrome (SARS) disabused Canadians of the notion that we were safe from contagious disease, protected by science, technology, and distance.

In fact the pendulum seems to have swung in the other direction. There is currently a sharp focus on the potential for an avian flu pandemic. The media have been saturated with it. Time and resources are being focused on this particular disease. In 2006 Prime Minister Harper allocated \$460 million to prepare for a bird flu pandemic, President Bush \$7.1 billion (Alberta, 2006). Although preparing for such a threat is sensible, radically heightening fears about a disease that may never be transmittable from human to human seems questionable. Fear makes people overreact. (During the anthrax scare of 2001, worried Americans submitted 600,000 specimens of white powder, including brownies with

powdered sugar, to laboratories for testing.<sup>2</sup>) Also, if people are needlessly frightened too early, real risk may be ignored when it does occur (McNeil, 2006, March 26).

### ***Fear and Contagion***

Boccaccio (1300) describes how fear affected people during Florence's plague, noting that "one citizen avoided another," that neighbours and relatives stayed away, that "brother abandoned brother," and even that "fathers and mothers refused to see and tend their children, as if they had not been theirs" (p. 4). Fear can induce us to act in ways that would be unfathomable at other times.

Taylor (2004) labels the way in which people imagine their social existence (i.e., their lives with others) as the "social imaginary." Shared in stories, myths, and images, the social imaginary informs our sense of the moral order. In a pandemic, it will have real consequences. One possible sign of our social imaginary is the fact that "zombies" are everywhere in popular culture: in movies, books, and games. Even zombie parties are fashionable (St. John, 2006). This phenomenon is explained by our anxieties related to terrorism and natural disasters and by zombies as the "embodiments of the would-be megaviruses" that "plague" us "in the wake of SARS, West Nile and bird flu scares" (McConvey, 2008). Zombies may represent the way that others, even loved ones, can become life-threatening. In the classic zombie movie *Night of the Living Dead* (Romero, 1968), in which zombie-ism is spread through contact with the infected, people hide away and everyday life comes to a halt. A chilling theme of zombie tales is the untrustworthiness of authorities. Their advice to the public is either hopelessly simplistic or deliberately misleading.<sup>3</sup> *Night of the Living Dead* ends with the hero being shot in error by a rescue team. Our social imaginings and our actions are influenced by what is in the media<sup>4</sup> — and by what is not.

The warning by former UN Secretary-General Kofi Annan about the catastrophic potential of biotechnology (e.g., genetic manipulation; viral research) has received little attention ("UN leader," 2007). Bans against biological warfare, existing since 1925, are largely disregarded

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<sup>2</sup> In Alberta during the US anthrax scare, a friend's 80-year-old mother was stripped naked (and covered with a blanket) in the post office, as a response to the appearance of a powdery substance when another customer opened a letter.

<sup>3</sup> This theme is evident in the feature films *Outbreak* (Peterson, 1995) and *12 Monkeys* (Gilliam, 1995) and the novels *The Andromeda Strain* (Crichton, 1969) and *Contagion* (Cook, 1996), whose plots are driven by the threat of a pandemic.

<sup>4</sup> It was reported that the novel *The Cobra Event* (Preston, 1997) moved President Clinton to step up protective measures against bioterrorism (Broad & Miller, 1998).

(Riedel, 2004). The US biowarfare program (defensive since 1969) is brought to the public's attention only occasionally, such as when plague-infected mice went missing in New Jersey ("Mice missing," 2005). Smallpox is a potential bioweapon (US Department of Health and Human Services [USDHHS], 2005), and the United States has implemented a vaccination plan for health workers (Centers for Disease Control and Prevention, 2002). The bioweapons program of the former Soviet Union (e.g., gene manipulation of smallpox) is viewed as insecure (USDHHS, 2005).<sup>5</sup> Media silence may be a potent indication of the true prevalence of disease. Most people die from acute respiratory infections, diarrhea, measles, or malaria — all curable — in addition to malnutrition. If the 1.2 million deaths each year from malaria occurred in the industrialized world, perhaps malaria would rate as much press as bird flu.

### ***Preparation for a Pandemic***

The planning for a pandemic is also influenced by what Taylor (1991) terms the "malaises of modernity" or the common "worries" of modern life (pp. 1–2): *individualism*, *the primacy of instrumental reason*, and *loss of freedom*. With individualism, there is a societal expectation of a personal right to determine how we live. This freedom, however, comes at a cost — a loss of higher purpose or, as Taylor puts it, a sense of "something worth dying for" (p. 4). In a pandemic, a focus on the self will make it difficult to think in the terms necessary for societal survival — what is best for the community — or to act on the basis of duty to others. Research indicates that at least 25% of health-care workers believe it is acceptable to not show up at their workplace in a pandemic (Ehrenstein, Hanes, & Salzberger, 2006; Hogg, Huston, Martin, & Soto, 2006; Koh et al., 2005; Tzeng & Yin, 2006). As well, many health-care workers are not being assured that pandemic arrangements will provide protection and support commensurate with the demands that will be made on them (Kotalik, 2005; Tzeng & Yin, 2006). The sense of commitment between individual and community seems weak.

The primacy of instrumental reasoning is worrisome, as it can place economic rewards at the forefront of criteria for success. According to Taylor (1991), "putting dollar assessments on human lives" is "grotesque" (p. 6). Nurses who contracted SARS during the outbreak in Toronto claim that protective requirements were prematurely lifted to remove a travel advisory that hurt tourism. These nurses have filed a suit against the Crown (*Abarquez v. Ontario*, 2005). Instrumental reasoning also privileges technological knowledge. Taylor argues that such privileging undercuts

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<sup>5</sup> In 1979 an anthrax epidemic occurred in the Soviet Union; in 1992 the government admitted that it had been caused by the accidental release of spores (Riedel, 2004).

nurses' compassionate and caring work. An emphasis on technology shapes pandemic planning in problematic ways. In the United States it has been argued that "the most glaring example of the country's lack of readiness for a pandemic" is a shortage of ventilators (McNeil, 2006, March 12). Against a declared need for 742,000 ventilators, only 110,000 are available (McNeil, 2006, March 12). Left unaddressed is the need for nursing care for the 720,000 people on ventilators. How can this level of intensive care be possible in a true pandemic? How can it be a priority? In pandemic planning, our fascination with technology is a not a strength.

Taylor's third worry is the loss of political freedom, wherein we no longer exercise our power as citizens but leave things to those in authority. Community deliberations are vital to a society's response to contagious disease, and nurses, given their expertise and expected role, must both instigate such deliberations and participate in shaping them. One nurse describes nurses' views of decisions made during the 2003 SARS outbreak:

Most of us felt, you know, the decisions were made up there, and we could understand them. We could agree with them, but we were the ones who had to live with them. And there was nobody who really came and asked us what that was like. There was some — it wasn't like there was nothing — but there wasn't a sense of being listened to the way that we needed to be supported. (Bell, Hyland, DePellegrin, Bernstein, & Martin, 2004, p. 36)

For the sake of both the public and themselves, nurses need to exercise their right to significant input at all levels of pandemic planning. This is easier said than done. Research shows that many nurses are already overburdened by and uncertain of their responsibilities (Peter, Macfarlane, & O'Brien-Pallas, 2004) and that they find ethical activism particularly difficult in unreceptive environments — precisely where it is most needed (Dodd, Jansson, Brown-Saltzman, Shirk, & Wunch, 2004). Finding our voice seems crucial, however. Nurses' experiences during the SARS outbreak show that systemic health-care policies and funding must be addressed (Bergeron, Cameron, Armstrong-Stassen, & Paré, 2006). Nurses' knowledge and perspectives are essential to doing so.

Our past offers important clues to our future. Knowledge about our past can enable us to make the significant shifts in thinking that are required in a pandemic response. Recognition of the role of social imaginings and of the vulnerabilities of our society will allow us to better shape our response. We must also consider the ethical challenges that individual nurses will face. We can do so by looking at the recent experiences of nurses.

### **Self-Knowledge: Nursing in a Time of Contagion**

The 2003 SARS outbreak has been described thoughtfully by the health-care workers who lived through it (Godkin & Markwell, 2003; Hall et al., 2003; Hsin & Macer, 2004; Leung & Ooi, 2003; Maunder et al., 2003). Nurses have referred to it as a “wake-up call,” a reminder to be prepared for the unknown (Bergeron et al., 2006). SARS has been likened to a “dormant volcano erupting in the dead of night” (Bernstein & Hawryluck, 2003, p. 269), with health-care workers being called upon to rush towards the burning mountain in spite of any urge to run the other way. Many became ill; some died. Nurses were called heroes:

In the face of fear and isolation, nurses demonstrated incredible commitment to patients, to the healthcare system and to the profession. Even though they recognized personal risk, their duty to care took priority. (Campbell, 2006)

Although caught off-guard and unprepared by experience, nurses, like other health-care workers, rallied and responded. This involved the physical discomfort of tight-fitting masks, goggles, double gloves, and gowns. It involved the emotional discomfort of isolating patients from families and making tough decisions about resources. It required a reversal of normal responses: decreasing contact with patients and taking precautions before responding to a patient’s urgent need (Bernstein et al., 2003). As SARS progressed, it meant watching colleagues succumb to the disease. “I started having more nightmares re being yelled at by clients and managers,” said one nurse. “I developed aches and pains” (Bergeron et al., 2006, p. 50). A physician told the SARS Commission that she “got up each morning, shaky and nauseated.” She would vomit and then leave for work. Once home again, she would avoid her family for fear of infecting them (Godkin & Markwell, 2003). Though heroes, health-care workers were stigmatized and shunned as potential carriers of SARS (Leung & Ooi, 2003).

Some professionals did abandon their duties because of the risk to themselves or their families, and were permanently dismissed. Others abandoned their profession (Ruderman et al., 2006). In a Taipei hospital, 120 nurses (8%) resigned, many at their families’ insistence. Half of them changed their minds, withdrew their resignation, and returned to work (Chong et al, 2004).

Fears were exacerbated by uncertainty about the dangers of SARS and the precautions being taken (Maunder et al., 2003). Those in authority needed to be trusted, but they were facing an entirely new situation themselves. What sustained many was a sense of solidarity with others. Staff described needing contact with one another and being helped by supports such as a drop-in lounge and informal telephone and e-mail



networks. “When facing such a crisis it is crucial to feel that one is not alone” (Mauder et al., 2003, p. 1251). Connie Leroux, a nurse who contracted SARS at a Toronto hospital, was asked how she might respond to an avian flu pandemic:

My initial response when I think about [an avian influenza] is that I’d like to run away from it all and protect my family, and that’s the sense I get from my colleagues. However, I also have a very strong sense of responsibility [to] our community and our patients, so I’m not sure how many of us would actually leave, including myself. (Spicer, 2006)

Professional and personal demands will compete in times of contagion. The need to protect and care for loved ones will vie with professional commitments. Can ethics theories teach nurses such as Connie Leroux how to choose, how to act?

### **Bioethics**

Bioethics is focused on ethical action related to the scientific and technological advancements of biomedicine (Callahan, 1999). Its agenda has not included infectious disease (Tausig, Selgelid, Subedi, & Subedi, 2006). The dominant approach, principlism, is grounded in a belief that ethical reasoning should be objective (unemotional) and independent of context. Although feminist ethics and the ethics of care have challenged this view, for the most part bioethics remains “formalistic, procedural, disembodied and universalistic” (López, 2004, p. 878). This limited perspective has everyday consequences. Nurses’ ethical issues that do not pertain to the principled resolution of moral dilemmas go unaddressed, and even unrecognized (Chambliss, 1996). Some nurse ethicists, such as Peter and Liaschenko (2003), find “bioethical theory to be essentially irrelevant” to their efforts as nurse ethicists (p. 259).

Sociologists have argued that bioethics lacks “a practical understanding of how moral values and ethical behaviours are embodied and lived by social agents” (López, 2004, p. 878). Individualism is its cardinal value (Tausig et al., 2006). Of the primary principles of bioethics — nonmaleficence, beneficence, respect for autonomy, and justice — autonomy trumps all others (Callahan, 1999). The notion of the autonomous person not only minimizes the influence of historical, familial, social, and cultural influences on every individual, but belies our human interdependence (Fox, 1999). Such an emphasis negates the reality that ethics is fundamentally about our collective life. In addition, delineating justice as fairness (each of us should be able to follow our dreams with equal access to health resources) diminishes the ethical import of solidarity and our shared interests and responsibilities. The consequences of such a limited perspective could be dire in the extraordinary event of a pandemic.

Currently, our ethical guides to pandemic planning, such as that of the University of Toronto's Joint Centre for Bioethics (JCB) (2005), involve the identification of guiding values. This is highly useful. However, we need an approach to ethics that will enable us to also address difficulties related to enacting such values, including contextual factors related to power and politics. For instance, the duty of health-care workers to provide care is identified as a key issue in the JCB report on pandemic planning. The JCB advises that professional colleges and associations should, through codes of ethics, outline the responsibilities of their members in terms of response to infectious disease (and that those in authority should ensure the protection of health-care workers, including through disability insurance and death benefits). For nurses, such expectations are stipulated to some degree. The first element in the International Council of Nurses (2006) code of ethics is nurses' responsibility to attend to those requiring nursing care. Also, the ICN's position on the AIDS pandemic explicitly acknowledges nurses' ethical duty to provide care (1989, 2001). The Canadian Nurses Association (2002) code of ethics addresses not only nurses' commitment to safe, competent, and ethical care but also their ability to make their own moral choices, which may be influenced by external factors.<sup>6</sup> The idea of duty of care is considered by some, such as the ethicist Daniel Sokol (2006), as vague, heavily influenced by context, and perhaps ethically dangerous. According to Sokol, the limits of duty should be a function of normal risk, and "exotic, highly virulent disease" challenges these limits (p. 1239). If the risk is great, refusal to respond is not a moral wrong, Sokol says, no matter how grave the consequences for patients. He believes that patients and the community should expect that professionals will have competing obligations to community and family. Although Sokol is referring specifically to physicians, this type of nuanced approach to duty of care at least opens up a discussion on the limits of responsibility in times of contagion. Paradoxically, he finds that being a nurse implicitly means consenting to a range of risks. His assumption about nurses' duty is revealing: it exemplifies how ethical issues embedded in power and systemic politics go unrecognized within bioethical principlism.

As argued by Daniels (1991), a bioethicist, the moral pressure exerted by professional organizations to affirm the duty of care must be sensitive to risk. The fear of contracting or transmitting a lethal illness is relevant to the discussion (Ehrenstein et al., 2006). "I feared exposing myself or my child to SARS," a nurse confesses. "I thought about what might happen to him if I died. Who would care for him?" (Bergeron et al.,

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<sup>6</sup> As part of its Ethics in Practice series, the CNA is now developing a module on nurses' ethical considerations in an emergency or pandemic.

2006, p. 49). The effect of such fear on duty of care needs to be considered — something that a strictly principled approach to ethical action does not encourage.

### ***Relational Ethics***

Relational ethics explicitly situates ethical action in relationship (Austin, Bergum, & Dossetor, 2003; Bergum & Dossetor, 2005) and calls attention to how we engage and connect with one another (professional/patient, professional/professional, professional/community). It is argued that, while codes of practice are helpful and necessary, they are not sufficient. Openness to others and their situation is crucial to ethical action. This is reflected in a core element of relational ethics, “mutual respect,” in which the power dynamics that shape interpersonal and societal relationships in a given situation are considered. An individual or group may be severely disadvantaged when decisions are being made: their voice may not be heard, their needs not given priority. Relational ethics points to such vulnerability. Genuine dialogue (i.e., conversation in which a sincere effort is made to hear and appreciate the perspective of those involved) is valued as a prime means of addressing the question *How should I act?*

Called into question is the notion of the autonomous person, including the autonomous professional. As MacDonald (2002) argues, we need to acknowledge that individual professionals are not truly free to act as they wish. Professional power is conferred and shaped by social structures and relationships, including pressure by institutional authorities, other professions, and the public. Acknowledgement of the influence of accountability and shared responsibility is central to understanding the moral habitability (or inhabitability) of health-care environments (Austin, 2007), as is acknowledgement of the professional as a person with family and community ties and obligations.

Acknowledged, too, is the role of emotion in rationality and the fact that we are embodied beings. Our ethical decisions not only are informed by our emotions but affect us more than intellectually (Doka, Rushton, & Thorstenson, 1994). By framing ethical issues, including duty of care, in principled reasoning alone, we fail to give the quandaries of nurses and other health-care workers the attention they need for proper resolution. Despite protocols and international pandemic response guidelines, nurses may feel professionally and personally anxious and ill-prepared to cope with the demands that they will face. They may experience moral distress — a risk in caring work, particularly if resources are scarce. It may be wise to encourage them to discuss such concerns instead of remaining silent and alone in distress. Further, in a relational ethics approach, uncertainty is seen as inherent to ethical questioning.

The conviction that one should always know ahead of time how to act ethically is viewed with scepticism. Legitimation of such doubt can help to lessen nurses' self-doubts about moral competency.

In a time of contagion, what would a relational ethics approach look like? What would it mean to nurses like Connie Leroux, who are wondering how they might respond should a disease like avian flu strike their community? Relational ethics is primarily a means of starting to think about issues that are often ignored. For instance, Connie's recognition of her uncertainty — that she may feel compelled both to run away in order to protect her family and to act responsibly as a nurse — is a starting point for dialogue. Her acknowledgement that fear will play a role is not a weakness; it can be a means of diminishing the behavioural impact of fear. Open dialogue about such uncertainty can raise important questions: What can communities do to make it possible for nurses to stay, to make the risks endurable during an epidemic (e.g., quality equipment, life insurance, a voice in policy decisions)? What strategies (e.g., provision of accessible, coordinated child and elder care) could help nurses and other health-care workers deal with their competing relational responsibilities (to parents, spouses, children, neighbours, other nurses)? The direction of the dialogue and the decisions taken will matter. Do these involve the people who will be most affected? Are the consultation and decision-making processes transparent? Is the sense of *we are in this together* being supported? And perhaps most important, is the raising of difficult questions (those for which there are no answers) viewed as necessary or as *troublemaking*? Tough but necessary questions might include the following: Are we focused on the wrong things — are we unable to imagine new, more appropriate ways of acting? Where is our thinking most vulnerable? As difficult as it may be, nurses will have to ensure that they participate in deliberations in a way that is congruent with their expertise and with the high degree of public trust in the nursing profession.

Relational ethics cannot provide a step-by-step guide to resolving ethical issues in a time of contagion. However, with its emphasis on interdependent relationships, on emotions as well as reason, and on the influence of contextual factors, it can provide a foundation, an "attitude" from which to approach the issues. It can help us to address the realities of practice and of life from a stance of caring, compassion, and commitment.

Albert Schweitzer (1949) believed that ethics goes only as far as our consideration for others. Without this consideration, we have only pseudo-ethics. He believed that each of us should, as much as the circumstances of our lives allow, be engaged with this responsibility. During a time of contagion, nurses' knowledge and skills and their professional

fidelity to their communities will place them in circumstances that are different from those of the average citizen. We need to pursue a thoughtful understanding of the ethical demands of such a time, in order to find the wisdom to do the right thing. We need to consider, in Schweitzer's words, what the circumstances of our lives will allow. Our answers and our actions will ultimately define the moral integrity of our individual selves and our discipline (Pellegrino, 1993).

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## **La littérature traitant du diabète chez les Autochtones canadiens : une étude des méthodologies holistiques**

**Sylvia S. Barton**

La promotion de soins adaptés à la culture des personnes atteintes de diabète est une démarche essentielle dans le cadre des efforts visant à s'attaquer aux iniquités infligées aux Autochtones en matière de santé. S'appuyant sur les études publiées de 1995 à 2007, l'auteure présente une analyse descriptive des connaissances portant sur le diabète chez les Autochtones comme outil guidant l'intégration des pratiques infirmières de fine pointe dans les programmes de soins. La recension de la littérature n'est pas systématique mais elle est suffisamment exhaustive pour constituer un cadre théorique pouvant être appliqué dans les programmes de pratiques et de recherche en matière de diabète chez la population autochtone. Concernant les écrits sur un volet particulier de ce sujet, cette recension offre un instantané de la recherche communautaire portant sur cette maladie et axée sur les méthodologies holistiques historiquement utilisées en contexte canadien. La littérature traitant du diabète chez les Autochtones s'est révélée une riche source d'information. Toutefois, l'analyse des méthodologies holistiques indique une insuffisance pour ce qui est de la recherche sur le sujet et une utilisation limitée des principes directeurs holistiques clés quant à la recherche prévisionnelle politique sur les Autochtones.

Mots clés : diabète chez les Autochtones, recension de la littérature, soins adaptés à la culture, recherche communautaire portant sur le diabète, méthodologies holistiques, recherche prévisionnelle politique sur les Autochtones

# **Discovering the Literature on Aboriginal Diabetes in Canada: A Focus on Holistic Methodologies**

**Sylvia S. Barton**

Promoting culturally competent care for diabetes is critical to addressing the health inequities of indigenous peoples. Based on a review of studies published between 1995 and 2007, the author presents a descriptive analysis of Aboriginal diabetes knowledge guiding the involvement of advanced practice nurses in programs of care. While the literature review is not systematic, it is sufficiently comprehensive to provide a theoretical backdrop to Aboriginal diabetes programs of practice and research. In terms of a particular area of Aboriginal diabetes literature, it also provides a snapshot of community-based diabetes research focused on holistic methodologies historically used in the Canadian context. The Aboriginal diabetes literature is found to be a source of rich information. Analysis of holistic methodologies, however, reveals underdevelopment of research and limited use of key holistic guidelines for Aboriginal policy research.

**Keywords:** Aboriginal diabetes, literature review, culturally competent care, community-based diabetes research, holistic methodologies, holistic framework guidelines, Aboriginal policy research

Promoting culturally competent care associated with diabetes is increasingly viewed as an important nursing role (Canadian Nurses Association [CNA], 2004) that requires a focus on geographical, linguistic, educational, and social differences among Aboriginal populations and communities. The CNA (2004) views culturally competent care as the application of knowledge, skills, attitudes, and personal attributes required by nurses to provide appropriate care and services in relation to the cultural characteristics of their clients; it includes the valuing of diversity, knowledge about the cultural mores and traditions of the Aboriginal populations being served, and sensitivity in caring for an Aboriginal person.

One leading cause of morbidity and mortality in Native populations in North America is non-insulin dependent diabetes mellitus (NIDDM) (Benyshek, Martin, & Johnson, 2001). The Pima Indians of Arizona are considered to have the highest rate of NIDDM in the world (Farook, Hanson, Wolford, Bogardus, & Prochazka, 2002; Lindsay et al., 2002). The prevalence rates for diabetes in Canada's First Nations are now among the highest in the world (Health Canada, 2000; Young, Reading, Elias, & O'Neil, 2000). Among indigenous peoples of the Americas, South

Pacific, New Zealand, and Australia, diabetes is emerging as an increasing health concern (Anderson, 2000). Nurses have been challenged not only to improve the quality of care for Aboriginal people but also to advocate for best practices in developing strong Aboriginal communities.

Nursing initiatives to address diabetes issues among Canadian Aboriginal peoples are influenced by trends in research and social health policy and by evolving perspectives on Aboriginal health. Globally, there is research consensus that diabetes was close to non-existent in indigenous populations prior to 1940 (Hernandez, Antone, & Cornelius, 1999). Following the Second World War, the prevalence increased dramatically, and diabetes is now considered an epidemic in progress (Young et al., 2000). Researchers in the United States have collected much of the data, while researchers in Canada began to publish 20 years ago when rates among First Nations became noticeable. It has been observed that significant variability in tribal and regional prevalence is indicative of several trends, which are understood to be influenced by profound social, environmental, and lifestyle changes in the past 50 years, leading to the notion of diabetes as an illness of acculturation (Hegele, 2001; Waldrum, Herring, & Young, 2006).

As a result, the understanding of diabetes as a disease varies according to local culture and linguistic group, geographic placement, and degree of isolation. It is a perspective that values the participation of key Aboriginal people and organizations in the promotion of culturally competent diabetes care. Further, it is being shaped by recently established granting agencies, so that an Aboriginal diabetes research agenda will benefit Aboriginal peoples and communities across Canada (Wilson, 2003).

There has been a research shift away from viewing Aboriginal peoples as intriguing or pertinent research subjects and towards viewing them as research partners. A cultural approach to health places an emphasis on conducting research within Aboriginal knowledge traditions using Aboriginal methodologies as well as methodologies drawn from non-Aboriginal intellectual traditions (Smith, 1999). The object is to establish an equal-partner approach to health. In addition, concern with promoting culturally competent care rooted in social and political structures is based on critical social theory, which is directed at addressing oppressive sociopolitical conditions that limit the health potential of all people (Mill, Allen, & Morrow, 2001). The inclusion of different Aboriginal cultural structures in such conditions adds to the complexity.

A holistic framework for Aboriginal research policy would include the following guidelines:

...honoring past, present and future in interpretive and analytical research processes including historical references and intergenerational discourse; honoring the interconnectedness of all of life and the multi-dimensional aspects of life on the Earth and in the community in research design and implementation; and honoring the spiritual, physical, emotional and mental aspects of the person and the community in research protocols, methodologies and analyses. (Kenny, Faries, Fiske, & Voyageur, 2004, p. 8)

These guidelines offer a means to improve research practices or cultural competency, particularly for non-indigenous researchers. They also have implications for the design and conduct of studies, many of which lack access to community membership and to experts in traditional knowledge.

This study had two objectives. The first was to examine the literature on Aboriginal diabetes in the Canadian context between 1995 and 2007 and provide a descriptive analysis of Aboriginal diabetes knowledge guiding the involvement of advanced practice nurses in programs of care. While the literature review is not systematic, it is sufficiently comprehensive to provide a theoretical backdrop to Aboriginal diabetes programs of practice and research. The second was to provide a snapshot of community-based diabetes research on holistic methodologies historically in place in the Canadian context, and to identify the use of key holistic guidelines for Aboriginal policy research. It was hoped that this would reveal holistic research practices that could be applied in future work and would result in suggestions for improvements in this area.

### **Method**

During the initial phase of the review, I examined approximately 130 research articles published in peer-reviewed journals between 1995 and 2007 and addressing diabetes in Canadian Aboriginal populations. I used the CINAHL, MEDLINE, and Alternative Health Watch databases and conducted a manual search of key journals for the years 1995 to 2007, including *Social Science and Medicine*, *Culture, Medicine and Psychiatry*, and *Chronic Diseases in Canada*. I examined reference lists for additional empirical articles and book chapters related to diabetes and Aboriginal peoples. To ensure credibility of the articles retrieved, I included only those studies that employed research designs that described the research approach used.

Later in the inquiry, I selected for analytical review those articles that reported on a community-based empirical study using a Canadian sample, included a declaration by participants of Aboriginal ancestry, and addressed knowledge of diabetes from a cultural perspective. In order for

the diabetes knowledge to be considered cultural, it had to be focused on understanding, preventing, or managing diabetes from an Aboriginal perspective or on evaluating intervention programs. Only English-language publications were selected. Excluded were studies whose primary focus was an epidemiological, cultural, or biological understanding of diabetes or the risk factors and determinants of diabetes. Excluded also were government documents not accessible via an electronic database and studies that consisted of descriptions of programs for Aboriginal people, without a research component.

A total of 26 articles met these criteria. The purpose was to identify the implications of culture-specific knowledge for community-based research programs targeting Aboriginal diabetes and for advanced nursing practice generally. This approach was thought useful for identifying holistic research methods grounded in Aboriginal world views and experience or health policy implications from indigenous perspectives, as well as areas that filled an evident gap. Considering the varied foci of the studies, no attempt was made to present an integrated summary of the findings.

There is a vast literature devoted to diabetes and Canadian Aboriginal peoples crossing disciplinary boundaries — for example, within the biomedical, nursing, and health sciences in the last decade. One must therefore consider the nomenclature used to identify Aboriginal ancestry. In this article I use the terms *Aboriginal* and *non-Aboriginal* provisionally, in the knowledge that these do not accurately reflect differences among people and communities. In the context of Aboriginal diabetes research in Canada, the term *Aboriginal* is used to describe the indigenous inhabitants of Canada, which include First Nations (Status Indian and non-Status Indian), Métis, and Inuit persons. The nomenclature does not reflect the complexity of jurisdictional issues. This is an important issue, because the designations Metis, Status Indian, and Inuit have legal and constitutional implications. First Nations peoples are represented in all 26 articles selected. There is no one *Aboriginal* identity, just as there is no one *non-Aboriginal* identity.

## Findings

### *Synthesis of Aboriginal Diabetes Knowledge*

Research has shown that, among Aboriginal people, the incidence of type 1 diabetes is extremely rare but type 2 diabetes is increasing at an unprecedented rate (Health Canada, 2000). There is great cause for concern about the escalating rate of type 2 diabetes. Compared to the general population, Canada's Aboriginal peoples have earlier onset, higher rates of complications, greater severity of the disease at the time of diagnosis, and greater propensity to harbour risk factors for long-term illness

(Health Canada, 2000; Young et al., 2000). Increasing awareness of the high rates of diabetes among the Aboriginal population has led scholars to articulate a health promotion and illness prevention mandate. This is seen as a way to challenge environmental, social, and lifestyle factors that influence diabetes health, including increased fat intake, reduced physical activity, and an inherited susceptible genotype (Hegele et al., 1999; Lieberman, 2003; Schultz, 1999). The CNA's (2002) position statement on advanced nursing practice describes the leadership role as one of promoting high-quality care by guiding the activities of a person or group. It is by offering guidance and developing innovative approaches to clinical practice that nursing will advance as a discipline. Changing conceptualizations of research and research approaches, as well as rising diabetes rates (Health Canada, 2000), have contributed to the renewed interest among policy-makers and health professionals in promoting culturally competent care for Aboriginal persons with diabetes.

Diabetes is a long-term condition that can lead to medical complications and disability, including kidney disease, heart and circulatory disease, blindness, amputations, nervous disorders, birth defects, and premature death (Valer, 2000). In Canada, prevalence rates are lowest in the Northwest Territories and Yukon Territory and highest in the province of Ontario (Maberley, King, & Cruess, 2000). The prevalence of type 2 diabetes is known to vary substantially within and among Aboriginal groups, as well as in geographic distribution across the country (Bruce, Kliever, Young, Mayer, & Wajda, 2003; Delisle & Ekoe, 1993; Green, Blanchard, Young, & Griffith, 2003; Piore, Dyck, & Gillis, 1996). Although previously geography was considered a predictive factor in type 2 diabetes among Aboriginal people (Young, Szathmary, Evers, & Wheatley, 1990), caution should be exercised regarding the tendency towards geographic determinism. Several claims have been made about a pattern in the incidence of diabetes, such as that the frequency of type 2 diabetes decreases as latitude increases and that there exists a west-east prevalence gradient. Moreover, diabetes rates among Aboriginals are known to be higher on-reserve than off-reserve (Health Canada, 2000). However, complex historical and political factors must also be taken into account. For example, few reserves were established in the Northwest Territories or Nunavut, and the latest Statistics Canada (2008) data show that more First Nations people live off-reserve than on-reserve.

Compared to non-Aboriginal Canadians with diabetes, Aboriginals are more susceptible to developing complications and have higher diabetes-related mortality rates (Hanley et al., 2005). Macaulay et al. (2003) found that among Aboriginals with diabetes in Kahnawake, Quebec, 25% had retinopathy after 10 years of long-term illness. This compares to just over 10% of the general population with diabetes, according to the

National Institutes of Health in the United States (Macaulay et al., 2003). In a recent study, Hanley et al. (2005) found evidence of early neuropathy in 46.3% of Aboriginal people in Sandy Lake, Manitoba. Data on lower-limb amputations among Canadian Aboriginal people cited in a Manitoba study show that 91% of all lower-limb amputations among First Nations people involved patients with diabetes (Health Canada, 2000). Green et al. (2003) suggest that, among people with diabetes, Aboriginals are more likely than non-Aboriginals to develop nephropathy and end-stage renal disease (ESRD), and that, among those who do develop ESRD, Aboriginals are more likely than non-Aboriginals to require dialysis. Health Canada (2000) reports that “in Manitoba, it is estimated that an Aboriginal person is 12 times more likely to have diabetic nephropathy than a non-Aboriginal person...and that 71% of new persons (First Nations) on dialysis are adults with diabetes” (p. 17). In terms of heart disease and stroke, Macaulay et al. (2003) found that, among a Mohawk tribe in Quebec, half the participants with diabetes presented with significant heart disease that had led to heart attack and coronary bypass surgery (Health Canada, 2000). Montour, Macaulay, and Adelson (1989) found that rates of macrovascular disease among male and female diabetic participants were higher among the Mohawks of Kahnawake than among Cree/Ojibwa tribes in Ontario and Manitoba.

Given the link between maternal diabetes and the development of NIDDM in children, the high risk of perpetuating a cycle of diabetes has cultural implications for nursing practice, education, and research (Dabelea, Knowler, & Pettitt, 2000), especially as the birth rate among all Canadian Aboriginals remains high, particularly on reserves. The prevalence of gestational diabetes among James Bay Cree women (in Canada) is twice that among women in the general North American population and the second highest reported in any indigenous population worldwide (Rodrigues, Robinson, & Gray-Donald, 1999). Women who have had gestational diabetes are at high risk for developing NIDDM, and their biological children are at high risk of becoming diabetic (Dyck, Klomp, Tan, Turnell, & Boctor, 2002).

The American Diabetes Association (2002) reports the emergence of a disturbing picture in North America regarding diabetes in children and adolescents. Data from population-based studies with Aboriginal children in Manitoba in 1997 reveal that NIDDM is occurring in these age groups (American Diabetes Association, 2000).

Aboriginal leaders, Aboriginal community elders, and many authors have argued that primary prevention of diabetes for Aboriginal children and youth is the only solution to a foreseen public health disaster as the adverse outcomes associated with diabetes and other cardiovascular risk



factors become evident with the maturation of these populations. (Paradis et al., 2005, p. 333)

Empirical evidence has led to important developments in our understanding of diabetes as an imminent epidemic in North America and a major health concern worldwide. As a result of previous Aboriginal research, cultural transitions from traditional to modern lifestyles associated with environmental changes are implicated, along with a genetic susceptibility, in the development of NIDDM in indigenous populations (Gittelsohn et al., 1998). Obesity, fasting blood glucose, and insulin concentrations are all risk factors for diabetes. Studies investigating the mechanism through which exercise might prevent NIDDM have begun to focus on indigenous populations, many of whom have developed a demonstrably greater resistance to insulin. Lack of exercise continues to be a significant risk factor for NIDDM (Kriska et al., 2001). It is postulated that hyperinsulinemia, insulin resistance, and ultimately glucose intolerance, particularly in those who are obese, result from a sedentary lifestyle (Stoddart, Blevins, Lee, Wang, & Blaackett, 2002). These findings are important for several reasons. First, diabetes is complex and the variation in rates among different indigenous groups requires more research. Second, as research continues to identify the epidemiological features of diabetes, there are concerns that diabetes programs are not benefiting indigenous people. Third, much of the empirical evidence is replete with examples of the limited effectiveness of particular diabetes approaches adapted to meet the needs of different indigenous groups in North America (Boston et al., 1997).

In response to these issues, there have been calls by health professionals worldwide for effective community-based screening and primary prevention programs (Griffin, Gilliland, Perez, Upson, & Carter, 2000; Meltzer et al., 1998). Research has shown that pre-diabetes conditions are reversible through lifestyle interventions such as dietary improvements and increased physical activity (Diabetes Prevention Program Research Group, 2002; Uusitupa et al., 2000). Community-based diabetes prevention initiatives can form a basis for comparing the health of Aboriginal people with diabetes in Canada to that of indigenous people with diabetes in other countries. Such comparative information could serve to enhance our understanding of how social, political, and cultural contexts influence Aboriginal healing and well-being.

### ***Focus on Holistic Methodologies***

This analysis of 26 community-based Aboriginal diabetes studies provided an opportunity to identify the positive outcomes associated with innovative research approaches that attempt to balance scientific exper-

tise with indigenous perspectives, values, and community priorities. Of the 26 studies, 11 examined the effectiveness of an intervention program and explored Aboriginal approaches to learning as a result of screening initiatives to evaluate community-based diabetes programs. Two studies focused on understanding factors associated with Aboriginal perspectives, one addressing the Aboriginal meaning of diabetes and the other the sociocultural origins of diabetes. Eight articles report on a community-based participatory research project, the Kahnawake Schools Diabetes Prevention Project of the Centre for Research and Training in Diabetes Prevention.

### Discussion

The 26 studies analyzed were innovative and were well received and supported by the communities. The majority of designs isolated, to varying degrees, holistic elements that could be described as contributing to the success of a program. The criteria for determining the degree to which the design played a role in this success were drawn from the teachings and values of Aboriginal cultures — respect, relevance, reciprocity, and responsibility. The relationship that the researchers developed with Aboriginal community members had to be centred on *respect* for who they were, to be *relevant* to their world view, to be *reciprocal*, and to enhance their ability to take *responsibility* for their own lives. This amounts to no more than a snapshot of community-based diabetes research focused on holistic methods employed in the Canadian context. It points to the need for more research of this kind and the need for researchers to articulate how qualitative methodologies, in particular, can isolate the holistic elements of a program's success and the implications for Aboriginal health policy.

These studies represent an attempt to move away from colonial research approaches — which tend to be secular, fragmented, and objective — with the aim of discovering not definitive truths but, rather, multiple realities. New frameworks serve to deepen our understanding of events, which points to the need for exploration beyond the colonial paradigm. All paradigms have their limitations, however, and any attempt to replace colonial frameworks with holistic ones in pursuit of definitive truths should be viewed with caution. There simply are no definitive truths, and models claiming that there are should also be approached with caution. This applies particularly to the complex history of Aboriginal and non-Aboriginal relationships. Ermine (1995) explains that “those who seek to understand the reality of existence and harmony with the environment by turning inward have a different, incorporeal knowledge paradigm that might be termed [indigenous spiritualism]”

<b>Table 1 Studies of Community-Based Aboriginal Diabetes Using Holistic Methodologies</b>			
<b>Author(s) Study Participants Province</b>	<b>Research Strategy and Key Findings</b>	<b>Inclusion of Aboriginal Perspectives in Design and Conduct</b>	<b>Use of Key Holistic Guidelines for Aboriginal Policy Research</b>
<p><b>Daniel &amp; Green (1995)</b> Three Okanagan First Nations communities British Columbia</p>	<p>Population approach to undertaking a high-risk screening initiative in three communities. Identification of people with undiagnosed diabetes who provided baseline data for evaluating the effectiveness of an intervention program based on systematic summative evaluation. Baseline data included diagnostic assessments and physiological, anthropometric, psychosocial, and behavioural risk-factor screening activities.</p>	<p>Describes how the goals and objectives of a community health promotion program are used in an intervention in Aboriginal communities.</p>	<p>Evidence of interventions that nurture holistic health or balance as opposed to taking a problem-based approach to prevention.</p>
<p><b>Garro (1995)</b> Anishinaabe Manitoba</p>	<p>Interviewing of persons diagnosed with diabetes. The research methods, which centred on oral discourse, revealed the ways in which people account for their own diabetes, the increased incidence of diabetes, and how diabetes is a result of poor dietary choices as well as environmental and social change.</p>	<p>Reduces the conceptual gap between Anishinaabe perceptions of health and more universally accepted Western ones.</p>	<p>Evidence of assessing the relationship of perceived holistic health with self-reported management of diabetes.</p>

<p><b>Travers (1995)</b> Cape Breton Mi'kmaq Nova Scotia</p>	<p>Qualitative and participatory research strategies. An understanding of the sociocultural origins of diabetes related to policy, the market economy, and health care.</p>	<p>Studies diabetes in its natural context in order to preserve the perspectives of the Mi'kmaq people, retain the holistic nature of diabetes, and value participation of the Mi'kmaq people.</p>	<p>Better social/cultural understanding led to culturally relevant policies and practices for preventing and managing diabetes in Aboriginal communities.</p>
<p><b>Robinson et al. (1995)</b> James Bay Cree Ontario</p>	<p>Prospective cohort study to assess weight, blood sugar, and activity level in diabetics after a 3-month return to hunting and trapping lifestyle. Bush living increased physical activity but not enough to adequately control diabetes.</p>	<p>No evidence of Aboriginal perspectives in the design or conduct of the study.</p>	<p>No evidence of culturally relevant understanding of dietary and physical activity patterns among the James Bay Cree.</p>
<p><b>Hanley et al. (1995)</b> Remote northwestern First Nations community Ontario</p>	<p>Describe background, methods, and lessons learned in developing and implementing a prevalence screening and risk-factor survey.</p>	<p>Evidence of an amicable relationship with the community, a high participation rate, and high quality and broad scope of information collected, which was seen as making the Sandy Lake Health and Diabetes Project successful.</p>	<p>Excellent participation and community response attributed to the partnership established between the researchers and the community and to the employment of local people as recruiters and interviewers.</p>

<p><b>King-Hooper, Schulz, &amp; Watts (1995)</b> Nuu-chah-nulth British Columbia</p>	<p>Describe the Nuu-chah-nulth experience of participating in a community-based diabetes education program. Quantitative and qualitative information was combined to develop culturally appropriate, community-based prevention strategies. Many valuable lessons learned during the process, framed around an established partnership with the community.</p>	<p>Seeks the perspectives of Aboriginal community members as they participate in a community-based program, aiding the empowerment of individuals and groups.</p>	<p>Use of acceptable, meaningful, and relevant strategies, resulting in positive outcomes.</p>
<p><b>Dyck &amp; Cassidy (1995)</b> First Nations Saskatchewan</p>	<p>Link physical activity and reduced incidence of gestational diabetes. Strategies for including community members in the inception, development, and implementation phases.</p>	<p>Introduces strategies that are acceptable and meaningful to the participants.</p>	<p>Acknowledgement that a better understanding of Aboriginal culture, traditions, and ways of learning is necessary to bring about positive quantifiable outcomes related to behavioural change.</p>
<p><b>Morrison &amp; Dooley (1996)</b> Sioux Ontario</p>	<p>Describe role of Sioux Lookout Diabetes Program in preventing and managing diabetes. Identification of Aboriginal approaches to addressing diabetes and guiding community-based, culturally sensitive interventions.</p>	<p>Achieves positive changes relevant to community-based interventions by monitoring change over time.</p>	<p>Evidence of having used methods to build rapport with community members and to obtain feedback about specific interventions on a continuing basis.</p>

<p><b>McComber et al. (1996)</b> Mohawk Ontario</p>	<p>Description of how Kahnawake Schools Diabetes Prevention Project (KSDPP) used community participation as a way of preventing diabetes in future generations through diet and exercise.</p>	<p>Understands that, for many Mohawk people, diabetes health is more about well-being than about the absence of physical ailments.</p>	<p>Evidence of having considered the meaning of the self in relation to physical ailments and connections to other aspects of the self.</p>
<p><b>Herbert (1996)</b> Haida British Columbia</p>	<p>Describe how Haida Gwaii Diabetes Project contributed to the empowerment of the community.  Sheds light on historical background of local identity and how partnerships support the principles of participatory research.</p>	<p>Evidence of a shift towards viewing community members as key experts.</p>	<p>Evidence of incorporating the voice of the community, which encourages respect for culture and integration of local knowledge systems.</p>
<p><b>Gittelsohn et al. (1996)</b> Ojibwa Cree Ontario</p>	<p>Describe use of culturally appropriate, community-based diabetes prevention strategies.  Model developed for use in evaluation research proved useful in diabetes interventions.</p>	<p>Evidence that a community-based approach to diabetes prevention was implemented.</p>	<p>Evidence of understanding that knowledge is useful only if it benefits the community.</p>
<p><b>Boston et al. (1997)</b> James Bay Cree Ontario</p>	<p>Address the meaning of diabetes and use participatory action research to reveal the meanings ascribed by a group of Aboriginal people to the rising incidence of diabetes.  Collaborative inquiry found that the James Bay Cree attribute diabetes to colonial influences and to the decrease in bush living.</p>	<p>Cree knowledge and experience of diabetes are viewed as fundamental to any intervention for prevention.</p>	<p>Recruits from the Cree community became co-researchers in the study.</p>

<p><b>Macaulay et al. (1997)</b> Mohawk Ontario</p>	<p>Describe how a variety of intervention models were used to develop the KSDPP, including intervention and evaluation components. Use of qualitative methods to examine the program's life cycle.</p>	<p>Understands that, from a Mohawk perspective, <i>living in balance</i> is being well in mind, body, emotion, and spirit.</p>	<p>The overall goal of the program embodied the concept of <i>living in balance</i>.</p>
<p><b>Daniel et al. (1999)</b> Rural First Nations population British Columbia</p>	<p>Focus on the effectiveness of community-directed diabetes prevention and management, combining qualitative and quantitative information. Community-based actions need to focus on risk conditions (political, economic, and social subjugation) and living standards as well as risk factors (obesity, lack of exercise, poor diet).</p>	<p>Evidence of an attempt to narrow the gap between biomedical knowledge and Western health services, thus increasing the ability to address the diabetic needs of Aboriginal people in culturally specific ways.</p>	<p>Acknowledgement of the need to learn more about Aboriginal ways of being, in terms of oral traditions and ways of building trust, exchanging information, and forming relationships.</p>
<p><b>Jimenez et al. (2003)</b> Mohawk Quebec</p>	<p>Assess diet of Mohawk children in grades 4 through 6 using 24-hour recall after 4 years of participation. Statistical comparisons across assessments found no significant difference in the mean intake of energy, fat, and sucrose; significant decrease in consumption of high-fat foods and fruits; significant increase in energy contribution of white sugar.</p>	<p>The nature of the differences observed reveals the complexity of food choices and the need for interventions that are responsive to changes in the environment, such as in the food supply.</p>	<p>The complexity of food choices calls for interventions that respond to the needs of Mohawk children and their families with practical information.</p>

<p><b>Potvin, Cargo, McComber, Delormier, &amp; Macaulay (2003)</b> Mohawk Quebec</p>	<p>Elaborated four components of an implementation model of community programs: integration of equal partnership; structural and functional integration of the research components; flexibility in response to environmental demands; and a project that represents learning opportunities for all participants.</p>	<p>Evidence that the program is conceived as a dynamic social space defined through an ongoing process of negotiation.</p>	<p>The research and evaluation results revealed a need for all involved to reflect on the program and appropriate the lessons.</p>
<p><b>Cargo et al. (2003)</b> Mohawk Quebec</p>	<p>Examine perceptions of community ownership among project partners who took responsibility for decision-making in the context of the KSDPPP.  At 18 months and 60 months, project partners were surveyed cross-sectionally and their perceived influence assessed for three domains related to KSDPPP activities and operations and to Community Advisory Board (CAB) activities.  High mean scores for perceived influence for CAB members and community researchers suggested that decision-making was perceived as a responsibility shared among multiple community partners.</p>	<p>Consistent with Kanien'kehaka (Mohawk) culture, participatory democracy, or shared decision-making, is viewed as the primary mode of governance for the KSDPPP.</p>	<p>Evidence that the KSDPPP is perceived as an empowering and empowered community organization.</p>



<p><b>Delormier et al. (2003)</b> Mohawk Québec</p>	<p>Develop a theoretical framework of program implementation using a program in its sustainability phase: the KSDPP:  This qualitative study retrospectively analyzed diabetes prevention activities implemented over 11 months by the KSDPP intervention staff.</p>	<p>During the entire intervention cycle, the implementation of activities has promoted <i>living in balance</i> and reflected local cultural values.</p>	<p>Teaching, enabling, reinforcing, networking, and role modelling strategies were aimed at individual capacity-building and the creation of community spaces for children to have healthy lifestyles.</p>
<p><b>Levesque, Cargo, &amp; Salsberg (2004)</b> Mohawk Québec</p>	<p>Develop a culturally appropriate interactive computer program for Kanien'kehaka (Mohawk) children to self-report physical activity in groups.  A qualitative approach using focus groups eliciting discussion and drawing about physical activity.  Compilation of 30 physical activity and 14 non-physical activity choices with accompanying intensity options, which the children could make with assistance.</p>	<p>The development of PAIR is viewed as acceptable to children between 9 and 13, with most requiring no assistance.</p>	<p>An emphasis on flexible programming made PAIR an easily adaptable tool for accommodating diverse Aboriginal populations, different seasons, and changing trends with respect to physical activity.</p>

<p><b>Bisset, Cargo, Delormier, Macaulay, &amp; Potvin (2004)</b> Mohawk Quebec</p>	<p>Describe the conditions in the Kahnawake community that resulted in mobilization for type 2 diabetes prevention. Data collection and analysis were guided by grounded theory, resulting in the description of a phase preceding formal KSDPP implementation.</p>	<p>The phase “legitimizing diabetes as a community health issue” was understood as a shift (from living with a problem to preventing a problem) in the perceived preventability of diabetes.</p>	<p>The shift in perceptions involved understanding the context of an Aboriginal community, including structure and cognitive and relational elements. The use of lay knowledge in planning a health promotion intervention was viewed as critical.</p>
<p><b>Levesque, Guilbault, Delormier, &amp; Potvin (2005)</b> Mohawk Quebec</p>	<p>Use of an ecological lens to deconstruct the programming approach served to unpack physical activity interventions implemented through the KSDPP. Description of physical activity intervention through archive retrieval and interviews with intervention staff. Complex intervention package found to contain a host of multitarget, multisetting intervention strategies designed and implemented through dynamic exchange among diverse community partners.</p>	<p>The study was a first step in understanding community intervention packages and strategies for promoting physical activity in a community setting.</p>	<p>An emphasis on the potential for results to determine which type of intervention strategy is most effective for a given target group in a specific setting.</p>

<p><b>Paradis et al. (2005)</b> Mohawk Québec</p>	<p>Report on the impact on body size, physical activity, and diet of an 8-year community-based diabetes prevention program for elementary school children in a Kanien'kehaka community. Participants in the intervention and comparison community were followed up (1994–96) and cross-sectional measurements taken in the intervention community (1994–2002) were repeated.  Some successes in reducing risk factors for type 2 diabetes were shown in early results, but these benefits did not endure over the 8 years.</p>	<p>This intervention model combined traditional Native learning styles, social learning theory, the Precede-Proceed model, and the <i>Ottawa Charter for Health Promotion</i>.</p>	<p>A focus on participatory research, community ownership, and true grassroots participation throughout planning, delivery, and evaluation. Acknowledgement that policy and environmental changes and community-wide behavioural changes with respect to nutrition and physical activity are hard to achieve in the short term.</p>
<p><b>Cargo et al. (2006)</b> Kahnawake Québec</p> <p><i>(continued next page)</i></p>	<p>To understand the social context of program implementation, a qualitative study was undertaken with the aim of identifying the schoolteacher's role in implementing the objectives of the KSDPP; a locally governed Kanien'kehaka community-based diabetes prevention program.</p>	<p>Health promotion emphasized the importance of community ownership in the governance of community-based programs.</p>	<p>Evidence that participatory democracy or shared decision-making is a strong value.</p>

<p><b>Cargo et al. (2006)</b> Kahnawake Quebec (continued)</p>	<p>Prospective semi-structured interviews were conducted cross-sectionally with 30 teachers over 4 years.</p> <p>In implementing KSDPP objectives, teachers used the health education curriculum to varying degrees in enforcing the school nutrition policy, role modelling, and encouraging a healthy lifestyle.</p> <p>Findings show that children in different classrooms were exposed to a different intervention dose based on the extent to which teachers applied each element.</p>	<p>Evidence of the development of a culturally relevant measure of perceived holistic health supported by the Onkwehonwe idea of balance as symbolized in the Medicine Wheel.</p>	<p>Acknowledgement that challenges remain in terms of operationalizing subjective concepts such as holistic health within the Western science model.</p>
<p><b>Cargo, Person, Levesque, &amp; Macaulay (2007)</b> Mohawk Quebec</p>	<p>Assess the relationship of perceived holistic health with self-reported physical activity and television-watching in a sample of Kanien'kehaka youths living in a Mohawk community.</p> <p>Youths who were <i>living in balance</i> tended to be more physically active and to watch less television.</p>	<p>Evidence of the development of a culturally relevant measure of perceived holistic health supported by the Onkwehonwe idea of balance as symbolized in the Medicine Wheel.</p>	<p>Acknowledgement that challenges remain in terms of operationalizing subjective concepts such as holistic health within the Western science model.</p>

<p><b>Pierre, Receveur, Macaulay, &amp; Montour (2007)</b> Mohawk Quebec</p>	<p>Identify barriers to and facilitators of healthy food choices in children aged 6 to 12 in Kahnawake and help orient KSDPP to improve the diet of children. Focus groups (4) were conducted with 15 mothers of children enrolled in one of the two intervention schools. Results showed that cost, time, taste, season of the year, pressure from family and friends, and health concerns within the family can be both barriers to and facilitators of healthy eating for children.</p>	<p>Evidence that the KSDPP was considered a facilitator.</p>	
<p><b>Kirby, Levesque, Wabano, &amp; Robertson-Wilson (2007)</b> James Bay Cree Ontario</p>	<p>Investigate the relationship between perceptions of the environment and physical activity (PA) and walking patterns in Aboriginal adults, in order to inform the planning and implementation of community-relevant PA interventions. A survey of 263 residents of Moose Factory were asked about environmental factors related to walking and PA involvement. Hierarchical multiple regression suggested that a supportive environment is important for PA and that walking and activities of different intensity are mediated by perceived different environmental variables.</p>	<p>Emphasis placed on implications of promoting physical activity in rural environments where Aboriginal people face unique challenges such as bears, mosquitoes, and extreme cold.</p>	<p>Evidence that the relationship between remote rural environments and the involvement of Aboriginal people in physical activity is not understood.</p>

(p. 103). The desire to understand Aboriginal perspectives is not easy to fulfil through research. Couture (1991a) highlights the centrality of spirituality for indigenous peoples by describing “the spiritual as belonging to the world” (p. 60). Thus indigenous perspectives on spirituality demand recognition and respect, if Aboriginal people are to participate in research and if Aboriginal perspectives are to be incorporated into the research process.

These 26 articles also reveal underdevelopment of research and limited use of key holistic guidelines for Aboriginal policy research. And they merely scratch the surface of knowledge that is reflective of Aboriginal ways of interpreting the world while simultaneously being part of or at one with it. In other words, there is much work to be done in conceptualizing indigenous non-dualistic thinking as distinct from colonial dualistic thinking within community-based Aboriginal diabetes research.

Indigenous perspectives, however, are finding their way into colonial systems of research. Further, theoretical exploration of indigenous cultures is enhancing our understanding of contextual orientations, even if we still have a way to go. Although the incorporation of Aboriginal knowledges into health research has the potential to increase cultural relevance, future studies are challenged to, for example, operationalize Aboriginal concepts of holistic health. In navigating the research space between Aboriginal and Western ways of constructing knowledge, studies must be able, from a design perspective, to assess many aspects of Aboriginal understanding of holistic health, healing, and well-being. Efforts to be less reductionistic may be facilitated through incorporation of the community expertise that gives the face and content validity of new measures their meaning and relevance (Cargo et al., 2003). Ermine (1995) describes the contextual orientation of an indigenous spiritual perspective as “the inner space, that universe of being within each person that is synonymous with the soul, the spirit, the self, or the being. [It is that] priceless core [existing] within each of us” (p. 103). Couture describes the cultural orientation of indigenous theoretical exploration:

Traditional [indigenous] holism and personalism as a culturally shaped human process of being/becoming, is rooted in a relationship with Father Sky, the cosmos, and with Mother Earth, the land... This relationship... [is] marked by a trust and a respect which stems from a direct and sustained experience of the oneness of all reality, of the livingness of the land. (1991b, p. 207)

Non-dualistic thinking develops a physical image of the spiritual. The thoughts of the “world” are as creatures, and processes of growth and becoming, and not as abstract concepts and explanations. [Indigenous]

awareness and perception is of the spiritual as belonging to this world, and not to some beyond. (1991a, p. 60)

If indigenous perspectives are to advance our understanding of new orientations of diabetes within empirical research, they will have to be differentiated from the effects of non-indigenous perspectives. Cajete (1994), for example, describes the notion of interconnectedness as socio-cultural in relation to an indigenous perspective. For indigenous people, he states, “this primary context of relationship and meaning is found in the natural environment. In a sense, all traditional [indigenous knowledge] can be called environmental [knowledge] because it touches on the spiritual ecology of a place” (p. 193). Thus, explains Couture (2000), a healing path into what indigenous participants know and want to know is about “uncovering the [indigenous] story” or uncovering “some of the underlying realities and processes that mold the topography of the traditional, [indigenous] mind” (p. 157).

Each indigenous research participant embodies the orientations and perceptions that will influence diabetes experiences and practices. Battiste (1998) states that we need research (and education) that

draws from the ecological context of the people, their social and cultural frames of reference, embodying their philosophical foundations of spiritual interconnected realities, and builds on the enriched experience and gifts of their people and their current needs for [healing and well-being]. (p. 21)

Thus, if our research findings are to be credible and relevant to indigenous peoples, we will have to explore research approaches that are based on forms of shared inquiry that incorporate elements of holistic, interdisciplinary, and community-based design.

The authors of the 26 articles acknowledge that evidence of positive experiences and practices in their findings was supported by an association between diabetes and indigenous perspectives, which provided a starting point for exploring theoretically indigenous culture as different. They also acknowledge the need for their findings to be interpreted in relation to information associated with local customs, perceptions, and definitions of diabetes. In addition, they view culture-specific knowledge as enhancing the utility of local diabetes research conducted by health professionals, especially if guided by Aboriginal people.

Implicit in the studies is an emphasis on the complex interplay of socio-economic and political factors, including broad historical processes and local circumstances, with measurable positive health practices displayed by the recipients of diabetes care programs. Those influences, however, had to be explored theoretically, in order to reveal precisely what culture-specific knowledge was being understood in the discussion.

New approaches to shared inquiry depend on the willingness of researchers to employ research designs that will bring the perspectives and experiences of indigenous peoples into the research process.

McClure, Boulanger, Kaufer, and Forsyth (1992), in an extensive review of current policy issues concerning indigenous populations worldwide, find that indigenous people's new sense of empowerment is contributing to the changes taking place in the areas of health, community development, and community management. Thus shared inquiry based on co-participatory approaches that empower participants to take ownership of the research process have a good chance of generating culture-specific knowledge, as well as providing direction for research with indigenous peoples.

### **Conclusions**

This study found that the literature on Aboriginal diabetes is a valuable source of rich information, but that a range of innovative, community-based research initiatives are needed in Canada and globally. An analysis of 26 select community-based studies of Aboriginal diabetes revealed a number of elements that are important and relevant for those using key holistic guidelines for Aboriginal policy research. It also revealed gaps in culture-specific knowledge. The explicit incorporation of holistic frameworks into ethical research with Aboriginal people will help to inform choices about the design of studies, as well as the processes to be used. An explicit discussion of how guidelines are shaping research practices would be useful in disseminating holistic guidelines for new researchers in the field as well as in demonstrating best practices.

One of the issues to emerge from this focus on holistic methodologies is the need for local customs, perspectives, and beliefs to be incorporated into biological and cultural diabetes research on the healing and health practices of indigenous peoples worldwide. Without such an effort, community-based Aboriginal diabetes research will have little influence on indigenous health. Culturally competent advanced practice nurses are in an excellent position to contribute expertise to the development of holistic frameworks, especially if these frameworks include indigenous perspectives and theoretical explorations of Aboriginal culture and its diversity in the research discussions on diabetes health.

One implication of this new research culture is that the importance and relevance of guidelines for a holistic framework that reflects Aboriginal values and practices must be widely promoted among practitioners and researchers working with Aboriginal communities. To address this challenge, researchers could focus on community-based Aboriginal diabetes initiatives that use mixed-method approaches informed by the



development of a holistic framework for Aboriginal policy research. These approaches could be combined with a broad range of qualitative methods whose design and implementation embody indigenous ways of being, knowing, and doing, which are vital to the exploration of diabetes among Aboriginal peoples.

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### **Author's Note**

The author acknowledges the financial support of the Social Sciences and Humanities Research Council of Canada (Doctoral Fellowship Award #752-2002-1330), the University of Alberta Faculty of Nursing, and the University of Northern British Columbia.

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## **L'évaluation actuarielle des risques de violence dans les cliniques de lutte à la violence conjugale basées dans les hôpitaux**

**N. Zoe Hilton, Grant T. Harris et Norah Holder**

En réponse à la violence conjugale, la collectivité a récemment mis sur pied des cliniques de lutte à la violence conjugale basées dans les hôpitaux, une ressource qui s'ajoute à d'autres outils d'intervention. Dans le cadre de cette étude, 66 % des 111 femmes qui fréquentaient des cliniques en milieu hospitalier pour cause de violence conjugale ont subi des blessures physiques et 43 % d'entre elles ont reçu des menaces de mort. Peu d'entre elles recouraient en même temps à d'autres services (maisons d'hébergements ou services policiers) et la plupart comptaient sur l'aide d'amies ou de membres de leur famille. Nombre de participantes qui vivaient toujours avec leur partenaire agresseur envisageaient la possibilité de le quitter. Toutefois, un tiers seulement avaient fait des projets concrets pour passer à l'action. Les participantes étaient exposées à un risque de futures agressions exceptionnellement élevé, selon les deux entrevues réalisées auprès des victimes à l'aide de la méthode d'évaluation actuarielle de risques ODARA et selon leurs propres perceptions. Les résultats indiquent que les cliniques de ce type jouent un rôle important et que les mêmes outils d'évaluation actuarielle des risques peuvent être utilisés tant dans les secteurs de services aux victimes que dans le milieu de la justice pénale.

Mots clés : violence conjugale, évaluation de risques



# **Actuarial Assessment of Violence Risk in Hospital-Based Partner Assault Clinics**

**N. Zoe Hilton, Grant T. Harris,  
and Norah Holder**

Hospital-based partner assault clinics are a relatively recent addition to the community response to partner violence. In this study, 66% of 111 women attending hospital clinics for partner assault were physically injured and 43% reported death threats. Few concurrently used other services (shelters or police) and most relied on female friends and relatives for help. Many participants who currently lived with the perpetrator were contemplating leaving but only a third had made plans to do so. Participants faced an unusually high risk of future assault, according to both victim interview using the ODARA actuarial risk assessment and their own perceptions. Findings imply an important role for partner assault clinics and the feasibility of the victim service sector's using the same actuarial risk assessments as the criminal justice system.

Keywords: partner assault, nursing, injury, risk assessment

The health costs of partner violence have been estimated in the billions of dollars (e.g., Zink & Putnam, 2005). Yet the need for general hospitals to be part of an effective community response to partner assault has been acknowledged only recently, following rapidly expanding nursing research into the effects and risks of violence (e.g., Campbell & Henderson, 2006). Seminal work by Stark and Flitcraft (1996) revealed that as many as 25% of all women presenting at a hospital emergency department could be identified as having been assaulted based on medical history, whereas fewer than 3% were identified by the medical staff. Statistics indicating prevalence as high as 34% have been reported internationally (Bateman & Whitehead, 2004; MacMillan et al., 2006; Ramsden & Bonner, 2002). Often, women murdered by a spouse had sought help from a hospital or clinic in the year preceding the femicide (Sharps et al., 2001). The presence of extensive partner assault limits the effectiveness of nursing interventions for child maltreatment (Eckenrode et al., 2000). Stark and Flitcraft (1996) urge that hospitals identify and provide services for battered women.

Assaulted women are unlikely to disclose the violence unless asked directly — they want health professionals to ask how the injuries occurred (e.g., Ramsden & Bonner, 2002), especially in emergency

departments (Kelly, 2006; McMurray & Moore, 1994). Suggested policies, procedures, and screening questions for partner assault have been published (e.g., Bonhomme & Ratcliffe, 1999; Datner, Wiebe, Brensinger, & Nelson, 2007; Davison, 1997; Ernst, Weiss, Cham, Hall, & Nick, 2004; Furniss, 1998; Houry et al., 2004; Ramsden & Bonner, 2002; Rhodes & Levinson, 2003; Weiss, Ernst, Cham, & Nick, 2003; Zimmerman, 2005) and evaluated (MacMillan et al., 2006; Thurston & Eisener, 2006). Screening in emergency departments has identified women at risk for repeated violence (Houry et al., 2004) and for medical problems during pregnancy (Datner et al., 2007). Screening for partner violence has been well received by female patients (Bateman & Whitehead, 2004; Dienemann, Glass, & Hyman, 2005; MacMillan et al., 2006; Zink & Jacobson, 2003). Furthermore, talking to health-care providers about the abuse is associated with increased intervention and more positive outcomes among abused women (McCloskey et al., 2006). Nurses, however, express concerns about privacy, workload, insufficient expertise, discomfort with partner assault, and lack of follow-up for victims (e.g., Glowa, Frasier, & Newton, 2002; Hollingsworth & Ford-Gilboe, 2006; Janssen, Landolt, & Grunfeld, 2003; Johnson, 2001; Minsky-Kelly, Hamberger, Pape, & Wolff, 2005). Specially trained nurses and partner assault clinics are a potential response to these concerns.

### **The Niche for Hospital-Based Services**

Shelters for battered women originated in the 1970s. Most women who use them expect to end their relationships (Martin et al., 2000), thereby shortening their exposure to the abusive conditions (Panchanadeswaran & McCloskey, 2007). The process of leaving takes time (e.g., Furniss, 1998) and can be influenced by needs other than the woman's protection from violence (Wooldredge & Thistlethwaite, 2006). In contrast, despite pro-arrest policies in law enforcement, which emerged in the 1980s, some women who call the police wish to continue the relationship and do not necessarily anticipate the full weight of the criminal justice system (e.g., Hare, 2006). There is an evident gap in services for battered women who have decided neither to end the relationship nor to initiate a criminal justice response. Hotlines and community counselling centres are options, but a woman can go to an emergency department for in-person help 24 hours a day without it being obvious (including to her partner) that she is seeking help for partner violence.

Hospital-based domestic violence programs have rapidly proliferated since the 1990s, and standards for evaluating their structure and process have been developed (Coben, 2002). There is an emerging literature on evaluation in shelters and sexual assault programs (e.g., Riger et al.,

2002), but little is known about the characteristics of assaulted women who seek help from hospitals. Furthermore, while screening for abuse within health-care settings has received much attention, screening for the risk of future violence has not.

### ***Objective Measurement of Recidivism Risk***

One impediment to effective, coordinated community responses to partner assault is the absence of a common means to determine who is at risk. Without a shared ability to identify and communicate the likelihood and severity of repeated assault, health-care providers and policy-makers have no consistent way to set priorities and ascertain whether services are being directed to the most appropriate cases. While victims can predict repeated violence reasonably well (Cattaneo & Goodman, 2003; Hilton et al., 2004; Weisz, Tolman, & Saunders, 2000), they can be overly optimistic (Martin et al., 2000), leading Nicolaidis et al. (2003) to discourage relying on women's perceptions of their own safety. Several tools have been developed to assess the risk of domestic assault. We have reviewed these in detail elsewhere (Hilton & Harris, 2005). An evaluation of the Danger Assessment, DV Mosaic, DVSI, and K-SID found that they all statistically predicted re-assault but that only the Danger Assessment consistently outperformed victims' predictions (Roehl, O'Sullivan, Webster, & Campbell, 2005).

Tools derived from empirical research and statistical methods yield the most accurate prediction for a variety of medical and psychological outcomes (e.g., Ægisdóttir et al., 2006), especially for violent recidivism (e.g., Grove, Zald, Lebow, Snitz, & Nelson, 2000), including partner violence (Hilton & Harris, 2005). The 13-item Ontario Domestic Assault Risk Assessment (ODARA; Hilton, Harris, & Rice, in press) is the only published assessment tool for risk of repeated partner assault that used empirical item selection and risk estimates conducted with reference to actuarial tables. It predicted recidivism in a sample of 589 men with a police record for partner assault (Hilton et al., 2004) and in separate replications on new cases (Hilton et al., 2004; Hilton & Harris, in press; Hilton, Harris, Rice, Houghton, & Eke, 2008). Originally used by police services, the ODARA has the potential to be a tool to aid communication and service coordination across criminal justice and victim service sectors.

The present study was designed to profile women attending partner assault clinics, especially with respect to level of risk and severity of injuries ascertained primarily from a routine nursing care assessment. To explore the extent to which women were using the clinics exclusively and the status of the relationship, we examined participants' use of shelters, police services, and informal support and their stated expectations

regarding the abusive relationship, including perceived risk of repeated assault. We expected to find that most participants had been injured by a current abusive partner but that few had contacted either the police or a shelter. Pilot testing with 25 assaulted women in shelters showed that these women had experienced more severe assault and injury than women in general surveys (e.g., Bennice, Resick, Mechanic, & Astin, 2003; Dobash, Dobash, Wilson, & Daly, 1992; Graham-Kevan & Archer, 2003). On a five-point scale (0 = none; 5 = wounds from a weapon), their injuries averaged 2. ODARA scores indicated an average risk of recidivism much higher than in any of the four development and validation samples. This pilot work also showed that the ODARA could be scored from a client interview by victim service providers.

## **Method**

### ***Setting and Participants***

The research protocol was developed in partnership with two Sexual Assault/Domestic Violence Treatment Centres (SADVTCs) — hospital-based clinics providing emergency medical and nursing care, crisis intervention, forensic evidence collection, medical follow-up, and counselling to people who recently have been sexually assaulted or experienced domestic violence. Women may either refer themselves directly by visiting the hospital emergency department or be referred after an abuse screening disclosure there. Some clients are also brought by police, and SADVTC staff sometimes go to shelters to assess clients. The two SADVTCs in this study were located in hospitals in the Canadian province of Ontario serving urban populations (25,000 and 45,000) and surrounding rural populations, including English-speaking, French-speaking, and First Nations communities. The authors tailored the ODARA items for use in client interviews. Clinic nurses suggested further refinements to interview questions and the protocol for documenting responses. The ODARA interview and scoring materials and other study questions were translated into French, but the training sessions and printed ODARA instructions for staff were in English only.

Women assessed in the period 2003 to 2006 at the two participating SADVTCs after an assault by a male partner were eligible to participate. Prior to assessment, each client was informed by nursing staff about the study, including (a) its goals; (b) the research procedure, including 5 minutes of additional questions during the assessment and a researcher review of her hospital record; (c) the fact that the data would be treated in a confidential and secure manner and that only group information would be reported; (d) care and treatment would continue as usual if the woman did not consent; and (e) the woman could change her mind after

giving consent during the assessment or after leaving the hospital. Participants were also given a toll-free phone number for the principal researcher, but no calls were received. No record was kept of women who declined to participate, but all eligible clients of one clinic participated and staff at the other clinic noted that about five clients declined to participate due to time constraints (e.g., attending the centre on their lunch hour).

### ***Measures and Procedures***

The 13-item ODARA was part of the routine assessment conducted by SADVTC nurses; Appendix 1 shows the questions used to solicit information to score the ODARA. The nursing assessment included personal statistical information (e.g., age, children, living situation including use of shelters), details of the current assault (date, time, physical tactics used, threats, use of firearms, whether police attended), its effects (extent and location of injuries, the woman's emotional reaction), and assault history (number, duration, frequency, and severity of previous assaults; the woman's perception of increasing frequency and severity of violence). The nature of the current assault was recorded using the revised Conflict Tactics Scales (CTS2; Straus, Hamby, & Boney-McCoy, 1996), as were potentially more lethal acts (e.g., stabbing, burning, strangulation, gunshot, pushing from a vehicle). No follow-up data were collected to test the predictive accuracy of the ODARA. Because a violence risk assessment ought to be associated with the severity of assault, we examined the correlation of these aspects of the nursing assessment with those of the ODARA as a measure of its construct validity. Overall injury was coded from the hospital file on a scale of 1 (no injuries) to 5 (wounds from weapon).

For this study, participants also indicated whom they called *if you need help or just to talk*, from a list that included a variety of male and female friends, relatives, professionals, and *I have no one I can talk to*, as a way to characterize their support network and supplement information on concurrent use of other services. Participants rated the likelihood of experiencing an assault within the next year on a scale from 0 (no chance of this happening) to 10 (sure to happen). Each woman also reported whether she had thoughts about or plans for leaving the relationship, whether the perpetrator knew she wanted to leave, whether she had tried to leave before, and whether the perpetrator stalked her (followed her or waited at her home or her place of work, bothered her with phone calls or messages, tried to find out about her through her family or friends, entered her home or damaged her property, or threatened her face-to-face or in a message). These questions were included because stalking is thought to be a risk factor for violence, though its actual association with

risk is not known (e.g., Campbell, Glass, Sharps, Laughon, & Bloom, 2007); also, stalking creates fear in victims (e.g., Eke, 1999), which might increase their perception of risk.

The accuracy with which data were transcribed from the study forms and hospital records was assessed in a 10% sample of cases coded independently by two research assistants. Pearson correlation coefficients ( $r$ ) of the two codings were calculated for each variable and indicated almost perfect agreement,  $r_s(12) > .99$ .

## Results

Of the 111 participants, 71% were from the larger community and 29% from the smaller community. Participants ranged in age from 18 to 53 years ( $M = 36.2$ ;  $SD = 10.0$ ) and over half were currently living with the perpetrator, most cohabiting (39%) as opposed to being legally married (21%). A few (7%) were only dating the perpetrator. Duration of relationship ranged from 1 month to 31 years ( $M = 9.9$  years;  $SD = 7.0$ ). Most participants (60%) had children under the age of 16 years. Most (79%) had been previously assaulted by the perpetrator, beginning up to 30 years earlier ( $M = 5.5$ ;  $SD = 7.0$ ).

One third (38%) of those participants who were currently living with the perpetrator reported trying to end the relationship. Two thirds (66%) of participants had an injury due to the current assault, the most common site being the arm or hand (45%), followed by the face (37%). Such injuries are consistent with a woman's attempt to shield herself with her arms during an attack on her face or upper body. The vast majority (92%) received only bruises and cuts, yielding a mean of 2.1 ( $SD = .61$ ) on the five-point injury scale. There were nine cases of burns, broken bones, or contusions requiring stitches. One woman sustained internal injuries from a violent sexual assault by her common-law partner and one woman was slashed with a razor blade. One victim was beaten, stabbed, and slashed in the throat by her ex-husband, resulting in the sole overnight hospitalization in this sample. Acts of violence in the current assault included pushing (64%) and hitting (52%), but more brutal acts such as strangling (29%), kicking (20%), and sexual assault (11%) were also reported. A sizeable minority (43%) of women who were currently living with the perpetrator experienced death threats, and a small minority exhibited fear during the nursing assessment (13%).

### **Construct Validation of the ODARA**

Three participants reported no physical assault and are excluded from the remaining results. According to participants' responses, the mean ODARA score for the perpetrators was 7.3 (95% CI = 5.8, 7.7), which is

in the highest actuarial category (Hilton et al., 2004), skewness =  $-.06$  ( $SD = .23$ ), kurtosis =  $-.12$  ( $SD = .46$ ), Kolmogorov-Smirnov  $Z = 1.05$ ,  $p = .22$ . Although this average is higher than that found in ODARA research using police reports, the scores did show a full range and a normal distribution indicating statistical properties similar to those of the original research. Also, the 13 ODARA items had the same internal reliability ( $\alpha = .65$ ) as the original construction using police archives. ODARA score was positively associated with measures of the severity of the current assault, including the perpetrator's use of severe violence as measured on the CTS,  $r = .25$ ,  $p < .01$ , sexual assault,  $r = .22$ ,  $p < .05$ , the five-point injury scale,  $r = .25$ ,  $p < .05$ , and presence of potentially lethal acts (including, in this sample, stabbing, strangulation, and throat slashing),  $r = .19$ ,  $p = .05$ . ODARA score was also associated with prior medical treatment for assault by the perpetrator,  $r = .26$ ,  $p < .01$ . All of these findings show that ODARA scores exhibited the properties expected of this actuarial assessment of violence risk, providing evidence of construct validity in this first transition from a police tool to a victim service tool.

There was also a significant correlation between ODARA score and prior stalking, such that perpetrators with higher risk scores exhibited more stalking behaviours,  $r = .32$ ,  $p < .001$ . Greater risk was associated with breaking into the woman's home,  $M = 8.9$  (95% CI = 7.6, 10.3) versus not,  $M = 6.9$  (95% CI = 6.4, 7.4); making bothersome phone calls,  $M = 8.2$  (95% CI = 7.4, 9.0) versus not,  $M = 6.8$  (95% CI = 6.3, 7.0); using family and friends to find out about her  $M = 8.2$  (95% CI = 7.3, 9.1) versus not,  $M = 6.9$  (95% CI = 6.9, 7.4); and following her and waiting at her home or workplace,  $M = 8.1$  (95% CI = 7.1, 9.1) versus not,  $M = 7.0$  (95% CI = 6.4, 7.5).

### ***Participants' Perceived Risk and Use of Services***

Perceived likelihood of violence by the perpetrator in the next year was skewed towards the maximum rating,  $M = 7.9$  ( $SD = 3.0$ ), with 53% of those who responded giving a maximum rating of 10; however, these ratings were not correlated with ODARA score after removal of the ODARA item on victim concern about future violence. Participant ratings were most strongly associated with reports of increasing severity of the violence (61% of participants reported that assaults were becoming more violent),  $r = .29$ ,  $p < .05$ , but not with perceived increase in frequency of assault (65%),  $r = .02$ , ns.

Police were involved in a minority (13%) of the cases, and five women were residing in a shelter at the time of their participation. The 19 participants using police or shelter services were not at significantly different risk of partner violence, according to ODARA scores  $M = 6.8$  (95% CI = 5.5, 8.2) versus  $M = 7.3$  (95% CI = 6.8, 7.8). Interestingly,

the women were more likely to report that they would call a professional (therapist, clergy, lawyer) than the police (32% vs. 20%). Most participants reported that they would call a female friend (56%) or a female biological relative (55%) for help or just to talk. The inclusion of in-laws in the support network (14%) was significantly less prevalent than all other options.

## **Discussion**

In this study with 111 women at hospital partner assault clinics, injuries were reported by two thirds of the participants. Injuries consisted primarily of bruises and minor cuts and the most common injury sites were the arm or hand and the face. Most women (91%) had someone they would call for help, primarily a female friend or female biological relative, followed by a professional. Few women chose to access the police or a shelter. Calling the police was the least popular option other than using the perpetrator's family for support, which suggests that partner assault clinics are helping an otherwise underserved group. The women's reliance on friends and relatives suggests that there may be a place for public health education about empirically established risk factors for violence. Most of the participants who still lived with the perpetrator were thinking about leaving, but half had not made formal plans — a contemplation stage illustrated by the comment of one participant: "I don't know if I'm coming or going...can't let go."

According to participants' responses, the perpetrators' average scores were in the highest category of the ODARA, an actuarial risk assessment (Hilton et al., 2004). Risk was associated with several measures of assault severity, including the use of severe violence, sexual assault, injury severity, and potentially lethal acts, as well as with prior injuries and treatment for partner assault. These findings lend construct validity to the use of the ODARA in a victim interview. A limitation of this study is that we did not follow up the participants to obtain outcome information; future research is needed to establish the predictive validity of the ODARA clinical interview based on either victim reports or official records of violence perpetrated in the future.

The acceptance of the ODARA by women attending partner assault clinics, the psychometric properties of ODARA scores, and the association of these scores with assault severity indicate that the ODARA clinical interview is feasible for use when the primary source of information is the victim and when a primary concern is not just the occurrence of assault but also its severity.

Participants gave high ratings to the likelihood of repeated partner assault. In contrast to this finding, Weisz et al. (2000) report that women



whose partners had been criminally convicted perceived minimal chance of a future assault. The high ratings found in the present study are closer to ratings by women whose partners had recently been arrested (Cattaneo, 2007). Thus, perceived risk might be influenced by the amount of time elapsed since the last assault. One aspect of the present study that limits its comparability with previous research on women's risk perceptions is that the participants completed the actuarial risk assessment prior to reporting their own prediction. Further research quantifying women's predictions before versus after feedback about actuarial risk, and exploring women's reactions to this information, could add to our knowledge about how women appraise their own risk. Future research could also compare assaulted women's predictions across time and stages of decision-making.

In the present study, stalking was associated with actuarial risk of repeated assault but not with victims' predictions. It is unknown whether participants in the studies by Cattaneo (2007) and Weisz et al. (2000) had been stalked. Little is actually known about the predictive utility of stalking, over and above establishing risk factors for violence. Future research into the risk of repeated violence in stalking cases could benefit victims' psychological well-being and safety planning.

In conclusion, this study presents the first profile of women undergoing nursing assessment at hospital-based partner assault clinics. These clinics appear to fill a unique and important role in coordinated community responses to domestic violence. Hospitals are the only realistic source of help for assaulted women who, regardless of the severity of their physical injuries, want help at short notice without involving the police and without having resolved to leave the perpetrator. Such women see themselves as in great danger, consistent with an objective actuarial assessment. With full medical services available and an actuarial tool to communicate risk effectively to clients, police, and shelters, hospital-based clinics have a valuable role to play in a network of services for assaulted women. To the extent that recent assault is associated with a peak in victims' fear of future violence, clinic nurses serve a clientele who are at a pivotal point in terms of openness to information about health care, actuarial risk, and the need for safety planning.

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### **Authors' Note**

Funding for this study was provided by the Social Sciences and Humanities Research Council of Canada. However, the opinions expressed in the article are those of the authors.

We thank the following for facilitating data collection without special compensation: Sarah Kaplan, MSW, Maureen Hartle, RN, and the nursing staff of the SADVTC at the Cornwall Community Hospital; Mary Metcalfe, RN, and the nursing staff of the SADVTC at Orillia Soldiers' Memorial Hospital; Nancy Stirling, Joy McCormack, and staff of Muskoka Interval House; and Natalie Seltzer and staff of La Maison Rosewood Shelter. We thank Catherine Cormier, Carol Lang, Ruth Houghton, Sonja Dey, and Marnie Rice for their assistance with and comments on this study.

This study was approved by the Institutional Review Boards of the Mental Health Centre Penetanguishene, Orillia Soldiers' Memorial Hospital, and Cornwall Community Hospital.

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**Appendix 1 ODARA Clinical Interview Questions**

1. *Threat.* This time, did he threaten to harm or kill you or anyone else?
2. *Confinement.* This time, did he do anything to prevent you leaving the location?
3. *Substance Abuse.* Did he drink alcohol just before or during this assault; did he use drugs just before or during this assault; did he abuse alcohol or drugs in the few days or weeks beforehand; did he abuse alcohol or drugs more than usual in the few days or weeks before; is he more angry or violent when he uses drugs or alcohol; has he ever been charged for a crime when drinking; has he had an alcohol problem since he was 18; has he had a drug problem since he was 18? (*Ask substance abuse questions until the second "yes" response; score 1 for at least two "yeses".*)
4. *Prior Domestic Incident.* Before this time, have police ever been involved because he was hitting (or threatening) you, your children, his former partner, or her children?
5. *Prior Nondomestic Incident.* Before this time, have police ever been involved with him for any other kind of violent law-breaking?
6. *Violence to Others.* Is he violent to people other than you and the children?
7. *Prior Correctional Sentence.* Has he ever been sentenced to prison or jail for at least 30 days?
8. *Conditional Release Failure.* Has he ever had bail, probation, parole, or a no-contact order, AND disobeyed its conditions?
9. *Children.* How many children do you or he have? (*Score 1 for more than 2 altogether.*)
10. *Child from Previous Partner.* Do you have a child from a relationship before this partner?
11. *Assault on Victim When Pregnant.* Has he ever assaulted you when you were pregnant?
12. *Victim Concern.* Are you concerned that he will assault you or the children again?
13. *Barriers to Support.* Do you have any children at home aged 18 or under; do you live in a home with no phone; do you live where there is no access to transportation; do you live in a home with no people living close by; was there any alcohol involved in this assault — were you using alcohol; do you have any problems in your life as a result of using alcohol or other drugs? (*Ask Barriers to Support questions until the first "yes" response; score 1 for at least one "yes."*)

Note: Full scoring criteria are available in Hilton et al. (in press).



## **Une étude des réactions affectives négatives chez les personnes en attente d'une chirurgie**

**Jennifer A. Janzen et Heather D. Hadjistavropoulos**

Les longues périodes d'attente précédant une chirurgie sont associées à de nombreux effets négatifs. Bien que la dépression et l'anxiété aient fait l'objet d'études chez les patients en attente d'une telle intervention, les anxiétés fondamentales, comme la sensibilité à l'anxiété ou l'anxiété liée à l'état de santé, n'ont pas encore été étudiées. De plus, il existe peu de recherches sur le vécu des patients quant à la gestion de l'attente. Cette étude vise donc à examiner l'ampleur de la sensibilité à l'anxiété, de l'anxiété liée à l'état de santé, de la dépression et de l'anxiété, ainsi que leurs effets sur la capacité d'adaptation face à l'attente, les inquiétudes liées à celle-ci et l'anxiété face à la chirurgie, chez les individus en attente d'une telle intervention. Des personnes en attente d'une chirurgie ont répondu à un questionnaire mesurant ces construits. Les résultats ont révélé la présence d'un taux élevé d'anxiété liée à l'état de santé et de sensibilité à l'anxiété. Une analyse de régression a démontré que l'anxiété liée à l'état de santé et la dépression constituent des variables explicatives uniques pour ce qui est des capacités d'adaptation et que combinées, elles aident à établir le degré d'inquiétude face à l'attente. La sensibilité à l'anxiété et l'anxiété n'ont pas contribué aux prévisions de ces variables. Dans l'ensemble, les résultats suggèrent la nécessité d'accorder plus d'attention aux interventions qui se penchent sur la détresse psychologique vécue pendant le temps d'attente.

Mots clés : attente, chirurgie, anxiété, capacité d'adaptation



# **Examination of Negative Affective Responses to Waiting for Surgery**

**Jennifer A. Janzen and  
Heather D. Hadjistavropoulos**

Long surgical waiting times are associated with many negative consequences. Although depression and anxiety have been studied among patients waiting for surgery, fundamental anxieties, such as anxiety sensitivity and health anxiety, have not been examined. Furthermore, research into patients' perspectives on coping while waiting is limited. The purpose of this study was to examine the extent of anxiety sensitivity, health anxiety, depression, and anxiety and their influence on coping, concern about waiting, and anxiety about surgery in individuals waiting for surgery. Individuals waiting for surgery completed measures assessing these constructs. Results revealed a high degree of health anxiety and anxiety sensitivity. Regression analysis showed that health anxiety and depression are unique predictors of coping and together help to predict concern about waiting. Anxiety sensitivity and anxiety did not add to the prediction of these variables. Overall, the results suggest that further attention should be given to interventions that address psychological distress during the wait for surgery.

Keywords: waiting, surgery, anxiety, coping

Considerable waiting times for surgery are common in Canada. According to researchers at the Fraser Institute (2004), waiting times increased 92% between 1993 and 2004. Increasingly, we are acknowledging the substantial impact that waiting has on psychological functioning (Brownlow, Benjamin, Andrew, & Kay, 2001) and the loss of quality of life caused by progressive pain, immobility, disruption in the fulfilment of personal life goals, and feelings of helplessness and uncontrollability (Ackerman, Graves, Wicks, Bennell, & Osborne, 2005; Roy & Hunter, 1996).

Due to the non-emergent nature of elective surgery, waiting times are considerably longer for elective than for non-elective procedures (Hurst & Siciliani, 2003). Although many procedures are classified as elective by surgeons (Hurst & Siciliani, 2003), orthopedic surgeries, including hip and knee replacement and back surgery, have among the longest waits. According to researchers at the Fraser Institute (2004), the median waiting time for joint surgery in Canada in 2004 ranged, by province, from 24 weeks in Ontario and Quebec to 104 weeks in Saskatchewan. Back surgery also showed great variability, from 3 weeks in Manitoba to 24 weeks in Saskatchewan.

Individuals waiting for surgical procedures often show high levels of psychological distress. Researchers have found high levels of preoperative anxiety and depression in 20% to 50% of those waiting for hip replacement or back surgery (Arpino, Iavarone, Parlato, & Moraci, 2004; Brownlow et al., 2001; Pringle, Taylor, & Whittle, 1999; Sinikallio et al., 2006). This psychological distress is compounded by the fact that many patients are already anxious about their disease or illness, hospitalization, the use of anesthesia, or the surgical procedure itself (Panda, Bajaj, Pershad, Yaddanapudi, & Chari, 1996). Patients do have reason to be concerned or anxious about waiting, as longer waiting times have been associated with poorer surgical outcomes (Fortin et al., 2002; Hajat et al., 2002). Further, high levels of preoperative anxiety and depression are associated with increased pain, disability, surgical complications, failed surgery, and a prolonged stay in hospital (Block, Gatchel, Deardorff, & Guyer, 2004; den Boer et al., 2006; Holmes & House, 2000; Kohlboeck et al., 2004).

Despite growing research on the psychological consequences of waiting for surgery and the impact of psychological distress on surgical outcomes, the literature on anxiety in patients waiting for surgery is far from complete. Little attention has been given to different forms of anxiety. Anxiety is a multifaceted phenomenon that comprises thoughts, physiological responses, and behaviour. There are many types of anxiety. Most of the research described above focuses on trait anxiety, whereby a personality trait predisposes an individual to respond to a stressful situation with an anxiety response (Spielberger, 1983). Two other anxiety-related constructs have yet to be studied among patients waiting for elective surgery: anxiety sensitivity and health anxiety. Anxiety sensitivity, a vulnerability factor that predisposes certain individuals to develop anxiety disorders and a number of chronic health conditions, is defined as fear of the sensations associated with anxiety based on the belief that these may have catastrophic cognitive, physical, or social consequences (Reiss, Peterson, Gursky, & McNally, 1986; Taylor, 1999). Health anxiety is conceptualized as a dimensional construct characterized by a lack of concern about one's health at one end of the continuum and excessive anxiety at the other (Hadjistavropoulos, Owens, Hadjistavropoulos, & Asmundson, 2001).

The study of anxiety sensitivity and health anxiety in individuals on surgical waiting lists may help to predict which patients will have difficulty coping and which will develop psychological distress while waiting. It is quite possible that, compared to general anxiety and depression, these specific forms of anxiety are more predictive of concerns about surgery and anxiety. Because anxiety sensitivity is considered a vulnerability factor for subsequent anxiety experiences (Lilienfeld, Turner, & Jacob,

1993; Taylor, 1999), and because previous research has found increased anxiety in surgical patients (Arpino et al., 2004; Brownlow et al., 2001; Pringle et al., 1999; Sinikallio et al., 2006), anxiety sensitivity may also be present in this population and may play an important role in the response to surgical waiting times. In addition, health anxiety may be prominent in individuals waiting for surgery, as patients who are waiting experience a multitude of physical sensations, depending on their health condition, and health anxiety is known to influence the interpretation of bodily sensations (Warwick & Salkovskis, 1990).

In general, diathesis stress models (Zubin & Spring, 1977) suggest that negative affect, such as depression, anxiety, anxiety sensitivity, and health anxiety, combined with life stress, results in psychological difficulties (Zvolensky, Kotov, Antipova, & Schmidt, 2005). In relation to waiting for surgery, these models indicate that the combination of negative affect and the experience of waiting may predict who will have difficulty with the wait. The expectancy model of fear (Reiss, 1991) maintains that three fundamental fears — fear of negative evaluation, fear of bodily harm (e.g., health anxiety), and fear of anxiety (e.g., anxiety sensitivity) — predispose individuals to psychological difficulties, especially anxiety. Extrapolating from this model, health anxiety and anxiety sensitivity should be highly predictive of psychological difficulties, including difficulty coping with the experience of waiting for surgery.

Given the apparent risk of psychological distress while waiting for surgery, it is important to examine how individuals cope with the experience. Coping can be defined as the cognitive and behavioural ability to deal with particular demands, either internal or external, that are appraised by individuals as overwhelming their resources (Folkman & Lazarus, 1987). Researchers have used different dimensions to describe coping — for example, active or passive, emotion-focused or problem-focused. Generally, these concepts indicate similar strategies, with active or problem-focused coping involving efforts to change or resolve the problem and passive or emotion-focused coping involving responses to change an emotion, such as emotional preoccupation (Endler & Parker, 1990). Active or problem-focused coping tends to result in better outcomes, such as decreased depression and pain (Covic, Admansson, Spencer, & Howe, 2003; Young, 1992). Previous studies with individuals with health conditions, including conditions requiring surgery, have found that passive coping strategies are related to depressive symptoms and increased pain (den Boer et al., 2006; Hampson, Hampson, Glasgow, & Zeiss, 1996).

In this descriptive correlational study, we posed two primary questions: *Among patients waiting for surgery, what percentage experience elevated anxiety sensitivity and health anxiety and what percentage experience elevated*

*depression and anxiety? Among individuals waiting for surgery, to what extent do anxiety sensitivity and health anxiety, as opposed to general anxiety and depression, predict concern about the wait, concern about the surgery, and coping responses?* We collected additional data to determine what the participants might find helpful for dealing with the wait. It was hypothesized that, among individuals awaiting surgery, the levels of anxiety sensitivity and health anxiety would be higher than those for depression and anxiety, since the former are believed to be predisposing factors for other forms of anxiety. Drawing on models of fundamental fears, it was also hypothesized that, among individuals waiting for surgery, anxiety sensitivity and health anxiety would significantly predict more concern about the wait, anxiety about surgery, and maladaptive coping responses than general anxiety and depression.

## Method

### *Participants*

Of the 39 participants recruited, one was not included in the analyses due to a large amount of missing data (greater than 50%), leaving 38 participants in total. Participants ranged in age from 35 to 84 years with a mean age of 62.66 ( $SD = 10.49$ ). Participants were mostly female (61%), married (68%), and living with their spouse or partner (79%). Most (82%) had a high school diploma or higher. Almost half (47%) were retired. At the time of the interview, they had been waiting for surgery an average of 7 months ( $SD = 5.86$ ), with 29% waiting less than 4 months, 55% between 4 and 12 months, and 16% more than 12 months. The majority of participants were waiting for orthopedic surgery: knee replacement, 34%; hip replacement, 26%; shoulder surgery, 5%; spinal surgery, 16%; general surgery, 18%. Eighty-two percent of participants had had previous surgical procedures.

### *Procedure and Measures*

The study was approved by institutional ethics boards. Participants were recruited through media advertisements and interviews, surgeons' offices, family doctors' offices, and seniors' centres. Participation took approximately 1 hour and involved one of two researchers administering the questionnaires described below in a face-to-face interview. (After completing the interview, participants reviewed various self-help materials; this review was not part of the purpose of this study but will inform our future research.) Participants received \$40 for their participation.

The *Short-Form McGill Pain Questionnaire* (SF-MPQ; Melzack, 1987) consists of three parts, but for the purposes of this study only the descriptors of pain was used (Melzack, 1987). This involved having participants

identify words that described their pain, for a total score ranging from 0 to 45. This measure correlates strongly with the longer and well-established MPQ (Melzak, 1987) and has good test-retest reliability (Grafton, Foster, & Wright, 2005). Internal consistency for the SF-MPQ in this study was  $\alpha = .89$ .

The *Pain Disability Index* (PDI; Pollard, 1984) is a brief measure in which participants rate interference in daily functioning due to pain on a scale from 0 to 10 in several areas: family/home responsibilities, recreation, social activity, occupation, sexual behaviour, self-care, and life-support activity. The total score ranges from 0 to 70. Researchers have found strong correlations between the PDI and other disability measures (Strong, Ashton, & Large, 1994). Internal consistency for the PDI in this study was  $\alpha = .86$ .

The brief *Anxiety about Waiting and Surgery Questionnaire* was designed for this study. Participants were asked, "Overall, how concerned are you about waiting for the surgery?" and "Overall, how anxious are you about the actual surgery?" They responded on a four-point scale (1 = not at all, 2 = somewhat, 3 = moderately, 4 = very). This type of measure has face validity and has been used by other researchers to capture anxiety related to surgical waiting time (Cox, Petrie, Pollack, & Johnstone, 1996). Participants were also asked an open-ended question, "What do you think would be helpful while you wait?"

The *Short Health Anxiety Inventory* (SHAI; Salkovskis, Rimes, Warwick, & Clark, 2002) is a comprehensive measure of health-related anxiety consisting of two subscales, a health anxiety scale (14 items) and a negative consequences scale (4 items), and correlates with other measures of health anxiety (Salkovskis et al., 2002). Since our interest was health anxiety, we used only the health anxiety scale, which results in scores ranging from 0 to 42. A score of 15 is approximately one standard deviation above the norm (Salkovskis et al., 2002), which was used to represent elevated health anxiety. Internal consistency for the SHAI in this study was  $\alpha = .84$ .

The *Anxiety Sensitivity Index* (ASI; Peterson & Reiss, 1992) is a 16-item measure of anxiety-related sensations. Using factor analysis, researchers have found evidence for one higher-order general factor (Zinbarg, Brown, Barlow, & Rapee, 2001). The total score on the ASI can range from 0 to 64 and scores above 27 are used to identify elevated anxiety sensitivity (Donnell & McNally, 1990). The ASI has been demonstrated to have good test-retest reliability and validity with regard to the association between the ASI and various anxiety disorders (Rodriguez, Bruce, Pagano, Spencer, & Keller, 2004). Internal consistency for the ASI in this study was  $\alpha = .90$ .

The *Hospital Anxiety and Depression Scale* (HADS; Zigmond & Snaith, 1983) measures depression (7 items) and anxiety (7 items) in hospital, outpatient, and community settings. Scores on each scale range from 0 to 21 and a cut-off of 11 or greater identifies those with highly probable clinical levels of anxiety and depression (Zigmond & Snaith, 1983). Both subscales have been demonstrated to have good internal consistency and test-retest reliability and acceptable convergent validity with widely used measures of anxiety and depression (Bjelland, Dahl, Tangen Hang, & Neckelmann, 2002). In this study, internal consistency was  $\alpha = .84$  for the HADS-Anxiety (HADS-A) subscale and  $\alpha = .87$  for the HADS-Depression (HADS-D) subscale.

The *Coping with Health Injuries and Problems Scale* (CHIP; Endler, Parker, & Summerfeldt, 1998) assesses four coping methods — distraction, palliative, instrumental, and emotional preoccupation — with each scale assessed by eight items rated on a five-point scale and total scores ranging from 8 to 40. Instrumental, palliative, and distraction coping are viewed as active or problem-focused coping, and emotional preoccupation is considered a form of emotion-focused coping. Endler et al. (1998) demonstrate good internal consistency, test-retest reliability, and construct validity for each subscale. Internal consistency for the subscales in this study was  $\alpha = .85$ ,  $\alpha = .67$ ,  $\alpha = .80$ , and  $\alpha = .84$  for the distraction, palliative, instrumental, and emotional preoccupation subscales, respectively.

## Results

First, we analyzed the data using descriptive statistics (means, standard deviations, frequencies), in order to understand the experiences of those waiting for surgery. Then we used correlational analyses to examine correlates of concern about waiting, anxiety about surgery, and coping strategies. Next, we used multiple regression analyses to examine the relative contributions of anxiety, depression, anxiety sensitivity, and health anxiety to concern about waiting, anxiety about surgery, and coping. Finally, we summarized the participants' suggestions for what they would find helpful for coping with the wait.

### *Descriptive Statistics*

Descriptive statistics for the measures obtained from participants are presented in Table 1.

**Concern/anxiety about waiting and about surgery.** As seen in Table 1, participants gave higher ratings to concern about waiting than to concern about surgery. On average, 53% of participants were very concerned about waiting for surgery, 32% moderately concerned, 13% somewhat concerned, and 3% not at all concerned. When asked how anxious

<b>Scale (Range)</b>	<b>M</b>	<b>SD</b>
Concern about waiting (1–4)	3.34	.81
Anxiety about surgery (1–4)	2.37	1.00
CHIP emotional preoccupation (8–40)	22.64	7.95
CHIP distraction (8–40)	26.45	7.27
CHIP palliative (8–40)	23.34	5.64
CHIP instrumental (8–40)	30.67	5.92
MPQ total score (0–45)	17.94	10.45
PDI (0–70)	32.86	15.21
ASI (0–64)	22.39	12.69
SHAI (0–42)	13.24	6.25
HADS-A (0–21)	7.57	4.30
HADS-D (0–21)	5.21	4.18

they were about the surgery, 16% indicated they were very anxious, 26% moderately anxious, 37% somewhat anxious, and 21% not at all anxious.

**Coping strategies.** Age-related norms for the CHIP coping measure (Endler & Parker, 1999) implied that participants in the present study scored in the average range for all forms of coping and slightly above average for emotional preoccupation.

**Pain and disability.** Surprisingly, nine of the 38 participants reported no pain or pain-related disability while waiting for surgery and did not respond to the MPQ or PDI. For the 29 participants who responded to these measures, examination of scores suggested that participants were experiencing moderate degrees of pain (e.g., average score of 17.94 [ $SD = 10.45$ ] out of 40) and disability (average score of 32.86 [ $SD = 15.21$ ] out of 70). The MPQ pain scores were not statistically different from scores obtained in other samples of hip and knee replacement patients ( $M = 18.90$ ,  $SD = 1.87$ ; Grafton et al., 2005),  $t(84) = .68$ ,  $p > .05$ . PDI disability scores, however, were somewhat lower than scores obtained among patients with chronic pain ( $M = 41.9$ ,  $SD = 13.9$ ; Chibnall & Tait, 1994),  $t(150) = 3.09$ ,  $p < .05$ .

**Negative affect.** In this study, 36.8% of participants had elevated anxiety sensitivity and 34% had elevated health anxiety scores. On the HADS, 21.05% of participants met the cut-off for anxiety and 10.53% met the criterion for depression.

**Relationships among Study Variables**

Relationships among study variables were evaluated by calculating Pearson correlation coefficients. We first examined the extent to which coping strategies, concern about waiting, and anxiety about surgery were related to background variables. Pearson Product Moment Correlations were used to examine how these variables correlated with length of wait for surgery and age. Point-Biserial Correlations were used to examine how these variables correlated with the following dichotomous variables (whether the participant was living with a partner/spouse, had a high-school education, and was retired). Only one significant relationship emerged: younger individuals expressed greater emotional preoccupation than older individuals,  $r(38) = -.40, p < .05$ . This suggests that very little variance in coping, concern about the wait, and anxiety about surgery is related to background variables, including length of time on the waiting list.

We next examined relationships between concern about waiting, anxiety about surgery, and coping and the negative affective variables measured in the study, namely anxiety sensitivity, health anxiety, and anxiety and depression (see Table 2). We also examined the relationship of these variables with pain and disability, but note that we had only 29 participants for this analysis since 9 of the participants denied having pain and disability. As recommended by Cohen (1988), we defined a strong correlation as greater than .50, moderate as .30 to .50, and weak as less than .30.

As seen in Table 2, concern about the wait was moderately related to depression and health anxiety, but not to general anxiety and anxiety sensitivity. Concern about the wait was strongly related to pain and moder-

<b>Scale</b>	<b>MPQ</b>	<b>PDI</b>	<b>ASI</b>	<b>SHAI</b>
Concern about waiting	.52*	.41*	-.30	.32*
Anxiety about surgery	.38*	.01	.44*	.47*
CHIP emotional preoccupation	.50*	.43*	.54**	.68**
CHIP distraction	-.18	-.28	.13	-.03
CHIP palliative	.33	.34	.25	.23
CHIP instrumental	-.05	-.05	.10	.07
* $p < .05$ ** $p < .001$				



ately related to disability. In comparison, anxiety about surgery showed significant positive associations of moderate strength with all measures of negative affect (anxiety, depression, anxiety sensitivity, and health anxiety) as well as pain. Examination of the correlates of coping strategies used during the waiting period revealed that coping using emotional preoccupation was the only strategy with multiple relationships to the measures of negative affect. Coping by using emotional preoccupation was strongly related to health anxiety, anxiety sensitivity, and anxiety and depression, as well as pain and disability. No relationships were found among measures of negative affect and instrumental coping and palliative coping. Distraction showed a negative moderate relationship to depression but was not related to other measures of negative affect.

***Predicting, Concern about Waiting, Anxiety about Surgery, and Coping***

Regression analyses were used to further examine the extent to which the variables of negative affect (e.g., anxiety, depression, health anxiety, anxiety sensitivity) predicted concern about waiting, anxiety about surgery, and coping (see Table 3). Given that only 29 participants reported

<b>Table 3 Multiple Regression Results for Predictors of Concern about Waiting and Anxiety about Surgery and Emotional Preoccupation</b>				
	<b>Variables</b>	<b>B</b>	<b>β</b>	<b>R</b>
Concern about waiting	HADS-D	.05	.27	.37*
	SHAI	.02	.18	.32*
	Intercept = 2.75			
Anxiety about surgery	HADS-A	.06	.25	.47*
	HADS-D	.01	.03	.38*
	SHAI	.03	.19	.47*
	ASI	.01	.15	.44*
	Intercept = 1.24			
Emotional preoccupation	HADS-A	-.30	-.16	.52**
	HADS-D	.82	.43*	.60**
	SHAI	.64	.50*	.68**
	ASI	.05	.08	.54**
	Intercept = 11.19			
* $p < .05$ ** $p < .001$				

pain and disability, we were not able to consider these variables in the regression analyses. Since very few relationships were found among background variables and concern about the wait, anxiety about surgery, and coping strategies, background variables were also not considered in the regression analysis.

In the first regression analysis, we examined the extent to which the HADS-D and the SHAI predicted concern about waiting. The HADS-A and the ASI were not examined since no significant correlations between these variables and concern about waiting were found. Together, the HADS-D and the SHAI predicted 16% of the variance in concern about waiting,  $F(2, 35) = 3.31, p < .05$ . Neither the HADS-D nor the SHAI had unique predictive ability regarding concern about waiting.

In the second regression equation, we examined the extent to which the negative affective variables (ASI, SHAI, HADS-A, HADS-D) predicted anxiety about surgery. Together, the HADS-A, HADS-D, SHAI, and ASI predicted 16% of the variance in anxiety about surgery,  $F(4, 35) = 3.31, p < .05$ . There were no unique predictors of anxiety about surgery.

In the case of coping, we examined the negative affective variables that best predicted the tendency to cope using emotional preoccupation. We focused on this strategy since the above examination of the correlation matrix revealed few relationships between the other coping strategies and negative affect. In this regression analysis, we found that, together, the HADS-A, HADS-D, SHAI, and ASI predicted 55% of the variance in emotional preoccupation as a coping strategy,  $F(4, 33) = 10.06, p < .001$ . The HADS-D ( $\beta = .43$ ) and the SHAI ( $\beta = .50$ ) were statistically significant unique predictors of emotional preoccupation.

### ***What Can Be Done during the Wait?***

Participants were asked what would be of assistance to them while waiting for surgery. Their suggestions fell into two areas: those related to the waiting list, and those related to the provision of other services. For the waiting list, participants indicated a wish to receive information about their position on the waiting list ( $n = 3$ ), a timeframe for their surgery ( $n = 3$ ), information about the waiting list and how it was managed ( $n = 1$ ), and more contact with the people in charge of the waiting list ( $n = 3$ ). Additional services identified by participants as potentially useful were support groups ( $n = 5$ ), pain management ( $n = 3$ ), exercise programs tailored to their needs ( $n = 3$ ), massage and physiotherapy ( $n = 1$ ), and more information on their health condition and what to expect from surgery ( $n = 2$ ).

## **Discussion**

The goal of this study was to examine psychological functioning during the wait for surgery. Using well-established cut-off scores, we classified 21% of participants as anxious and 10.5% as depressed. Health anxiety was also examined, representing the first time this construct has been studied among patients waiting for surgery. An examination of participants' scores on the SHAI revealed that approximately 34% had elevated health anxiety. Previous studies with medical patients found similar rates of health anxiety (Grassi, Rossi, Sabato, Cruciani, & Zambelli, 2004). We also examined levels of anxiety sensitivity. The mean score on the ASI fell within a moderate range, with approximately 37% of participants classified as having elevated anxiety sensitivity. Previous studies have found elevated anxiety sensitivity in individuals with chronic health conditions, including gastrointestinal conditions, chronic pain, and recurring headaches (Asmundson, Wright, & Hadjistavropoulos, 2000). Our results suggest that these fundamental fears, which are considered to increase vulnerability to other psychological difficulties (Reiss, 1991), are elevated in individuals waiting for surgery.

Several statistically significant moderate-to-large correlations of interest were found despite the small sample size. Interestingly, concern about the wait had a moderate relationship to depression and health anxiety, but not to general anxiety or anxiety sensitivity. Anxiety about surgery had significant positive moderate relationships to all measures of negative affect (anxiety, depression, anxiety sensitivity, and health anxiety). An examination of coping strategies indicated that, unlike other coping strategies, emotional preoccupation had multiple relationships to the measures of negative affect. Emotional preoccupation revealed strong positive correlations with health anxiety, anxiety sensitivity, and anxiety and depression. These associations are not surprising, as they all focus on the emotional aspects of having a health condition or waiting for surgery. Interestingly, these relationships with negative affect were greater than relationships with background variables. Background variables, including length of time on the waiting list, were generally not significantly correlated with concern about the wait, anxiety about the surgery, or emotional preoccupation.

The relationship among the study variables was further examined using multiple regression analyses. These analyses were used to measure the relative contribution of the negative affective variables in predicting concern about the wait, anxiety about surgery, and emotional preoccupation while waiting for surgery. Of the negative affective variables, health anxiety and depression appeared to have greater value for under-

standing patient responses. Health anxiety and depression both uniquely predicted emotional preoccupation. They also predicted concern about the wait and anxiety about surgery, although there was overlap in the extent to which they predicted these variables. Health anxiety and depression, for instance, accounted for similar variance in concern about the wait. Health anxiety and depression also overlapped in the extent to which they explained variance in anxiety about surgery, and were similar to anxiety and anxiety sensitivity in this regard.

These findings were somewhat surprising as we had hypothesized that anxiety sensitivity and health anxiety would be unique and better predictors of coping, concern about the wait, and anxiety about surgery than anxiety and depression based on models of fundamental fears. We found only partial support for this in regard to health anxiety. It raises an interesting area for further research: to determine whether the predictive ability of these fundamental fears varies according to the stressful event. It could be that health anxiety is important for predicting responses to medical concerns whereas anxiety sensitivity shows greater predictive value in predicting responses to other types of stressful events (e.g., traumatic events). We were also surprised to find that depression had unique predictive ability for emotional preoccupation even though level of depression was generally found to be lower, in our study, than health anxiety, anxiety, and anxiety sensitivity. These findings support past research showing that, although they overlap in some ways, anxiety and depression are unique (Endler, Macrodimitris, & Kocovski, 2003); thus there is added value in assessing depression among patients waiting for surgery.

Overall, it proved more difficult to predict concern about the wait and anxiety about surgery (16% of variance explained) than to predict emotional preoccupation (55% of variance explained). Other variables are obviously important in determining concern about the wait and anxiety about surgery. In future research, it would be valuable to determine how much more variance in concern about the wait and anxiety about surgery would be accounted for by pain and disability. Other researchers have found concerns about waiting for surgery and anxiety about surgery to be related to current pain or concern about future pain (Ackerman et al., 2005; Moran, Khan, Sochart, & Andrew, 2003). As noted above, in the present study we were unable to assess the relative variance accounted for by pain and negative affect in concern about the wait and anxiety about surgery given that 24% of participants did not report pain.

Other important results from this study include the finding that patients have a great deal of concern about waiting for surgery, as 53% of participants indicated being very concerned about waiting. The majority

of participants (63%) were also somewhat to moderately anxious about the surgery itself. We asked participants what information they would find useful while waiting for surgery. In terms of the waiting list, many participants expressed a wish to receive further information about the waiting list and to have more contact with waiting list managers. Other researchers have also found that patients lack knowledge about the waiting process for elective surgery (Derrett, Paul, & Morris, 1999). Additional services identified by participants as potentially useful were pain management, exercise programs tailored to their needs, massage and physiotherapy, and more information about their health condition and the surgical procedure. Many participants cited the usefulness of support groups. Researchers have found support groups to be beneficial for quality of life in individuals undergoing surgery (Clarke, Frasure-Smith, Lesperance, & Bourassa, 2000; Feigin et al., 2000). Our results suggest that support groups may be a particularly valuable resource given the elevated levels of negative affect found.

### ***Summary, Limitations, and Future Directions***

The construct of health anxiety seems to be particularly relevant to waiting for surgery, with 34% of participants exhibiting significant health anxiety. Health anxiety was related to a tendency to cope using emotional preoccupation, concern about waiting, and anxiety about the surgery. Furthermore, it had unique predictive ability regarding emotional preoccupation. Although depression was elevated in fewer participants (10.5%) in the present study than in previous research (Brownlow et al., 2001), it was predictive of concern about the wait and anxiety about surgery and also showed unique predictive power with regard to emotional preoccupation. Anxiety sensitivity and anxiety were also elevated, with 37% of participants exhibiting elevated anxiety sensitivity and 20% demonstrating anxiety. Although these constructs were related to coping using emotional preoccupation and anxiety about surgery, they did not show unique predictive power. These results suggest that a focus on depression and health anxiety may help to improve efficiency in screening for psychological concerns while patients wait for surgery.

Some limitations with this study are apparent. In Canada, the provinces differ widely in the median length of waiting time for certain elective procedures (Fraser Institute, 2004). Due to long waiting times in Saskatchewan, where the study was carried out, the experiences of participants may have been different from those of individuals in other provinces. Another limitation is that the individuals who volunteered to participate may have had different characteristics, such as more active coping strategies, than those who chose not to volunteer. On the other hand, the individuals who chose to volunteer may have been particularly

stressed, frustrated, or anxious about waiting and thus participated because of the relevance of the study to their situation. Another limitation is the use of questions on concern about waiting and anxiety about surgery that were developed for this study. Although these questions have face validity and similar questions have been used by others (Cox et al., 1996), the reliability of the measures over time and extensive evidence regarding construct validity of the ratings are not available. Supporting the validity of the scales, the findings suggest that the scales captured what they were intended to measure, in that they were correlated in expected ways with variables measured in the study. A further limitation of this study is the fact that participants were not asked to provide information on pre-existing psychological conditions (e.g., depression, anxiety), which would have permitted examination of how pre-existing psychological problems affect the waiting experience. Finally, we should point out that the study was conducted with a small convenience sample and replication of the findings with larger, more representative samples would help to ensure generalizability. However, we did not find relationships where they did not exist (type 1 error) or fail to demonstrate relationships where they did exist (type 2 error).

Despite these limitations, this study has important implications. As waiting lists are common and sometimes long in Canada's health-care system, it is important that the resulting psychological distress be examined. Our findings offer insight into the needs of individuals who are waiting for surgery and help to identify factors, in particular depression and health anxiety, associated with coping using emotional preoccupation, concerns about waiting, and anxiety about surgery. This information can also be used to help tailor interventions for reducing the psychological impact of waiting for surgery. This information is important in the context of nursing, in that nurses often have a great deal of contact with individuals waiting for surgery. The influence of health anxiety and depression on coping with waiting and concern about surgery suggests that early assessment of these variables could help to reduce negative responses to the wait. In particular, the measures assessing health anxiety and depression that were used in this study are available to nurses and can be administered fairly quickly (e.g., HADS [Zigmond & Snaith, 1983]; SHAI [Salkovskis et al., 2002]). These tools could be used to screen for difficulties and refer the patient for more extensive psychological services. The HADS, for instance, is available for purchase from GL Assessment (<http://www.gl-assessment.co.uk/>) and a score of 11 is used to identify individuals with significant depression or anxiety, while the SHAI is available in the original publication (Salkovskis et al., 2002) and a score of 15 identifies individuals with health anxiety above the norm. As a first step, health providers who identify patients with health anxiety

or depression could refer them to self-help books. Research evidence supports the use of self-help materials for depression (Gregory, Schwer Canning, Lee, & Wise, 2004) and health anxiety (Jones, 2002). Self-help books for depression are plentiful and can be found in many bookstores or online. Manuals for health anxiety are more limited. However, the following two books can be found in bookstores or online: *Stop Being Your Symptoms and Start Being Yourself: The 6-Week Mind-Body Program to Ease Your Chronic Symptoms*, by Barsky and Deans (2006), and *Understanding Health Anxiety: A Self-Help Guide for Sufferers and Their Families*, by Kuchemann and Sanders (2001). A further option might be to refer patients with elevated health anxiety and depression for preoperative education, which has been found to significantly reduce anxiety (McDonald, Green, & Hetrick, 2004; Spalding, 2003). Pain education and management may also help to reduce negative affect (Oh & Seo, 2003).

In terms of future directions, in addition to the ideas mentioned above, it would be beneficial to follow individuals throughout the waiting period to examine fluctuations in emotions and coping in order to better inform treatment. Another avenue of research would be to explore the use of support groups in this population, as participants expressed an interest in this type of service. To our knowledge, support groups have not been examined in individuals waiting for elective surgery and may be particularly useful for this population, as waiting times can be considerable and negative affect is surprisingly common.

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### **Authors' Note**

This study was made possible by funding provided through the 2005–07 University of Regina President's Scholar program awarded to Dr. Heather Hadjistavropoulos and a 2006–07 scholarship from the Canadian Institutes of Health Research awarded to Jennifer Janzen.

We are indebted to the patients and health-care providers who made the study possible. We would also like to thank Michelle Bourgault-Fagnou for her assistance with data collection and analysis.

There are no conflict of interest or financial disclosure statements to make.

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## **La résilience communautaire comme mesure de l'état de santé collectif : perspectives de communautés rurales**

**Judith C. Kulig, Dana Edge et Brenda Joyce**

La résilience communautaire est un cadre théorique utilisé pour décrire le processus que les communautés utilisent pour gérer l'adversité. Une étude de cas d'une durée de deux ans et s'appuyant sur une méthode mixte a été réalisée au sein de deux communautés rurales pour recueillir de l'information sur la résilience communautaire. Cet article se penche sur les thèmes issus des entrevues qualitatives réalisées auprès de 55 membres de ces collectivités. Les participants percevaient la communauté comme un lieu d'interdépendance et d'interaction. La majorité des répondants définissaient la résilience communautaire comme la capacité de gérer des défis. L'infrastructure physique et sociale, les caractéristiques de la population, les caractéristiques conceptuels et les processus de résolution de problèmes figuraient parmi les éléments qui sont ressortis, alors que les attitudes individuelles négatives et l'absence d'infrastructure dans les communautés rurales figuraient parmi les obstacles identifiés. Le personnel infirmier peut jouer un rôle important quant à l'amélioration de la résilience de ces collectivités, en élaborant et en mettant en œuvre des programmes axés sur le modèle de la résilience communautaire, présenté dans cette étude.

Mots clés : rural, résilience communautaire, communauté

# **Community Resiliency as a Measure of Collective Health Status: Perspectives from Rural Communities**

**Judith C. Kulig, Dana Edge, and Brenda Joyce**

Community resiliency is a theoretical framework useful for describing the process used by communities to address adversity. A mixed-method 2-year case study was conducted to gather information about community resiliency in 2 rural communities. This article focuses on the themes generated from qualitative interviews with 55 members of these communities. The participants viewed community as a place of interdependence and interaction. The majority saw community resiliency as the ability to address challenges. Characteristics included physical and social infrastructure, population characteristics, conceptual characteristics, and problem-solving processes. Barriers included negative individual attitudes and lack of infrastructure in rural communities. Nurses could play a key role in enhancing the resiliency of rural communities by developing and implementing programs based on the Community Resiliency Model, which was supported in this study.

**Keywords:** rural, community resiliency, community, social processes, agricultural communities, mining communities

Community resiliency is one theoretical framework that is useful in explaining community responses to external forces such as economic downturns (Brown & Kulig, 1996/97; Kulig, 1999, 2000; Kulig & Hanson, 1996). By deepening our understanding of how communities view potential and actual threats and use problem-solving to address them, we will increase our overall understanding of the interplay between geographic setting and community resiliency. This article discusses the qualitative component of a mixed-methods case study conducted in two rural communities in the Canadian province of Alberta.

## **Literature Review**

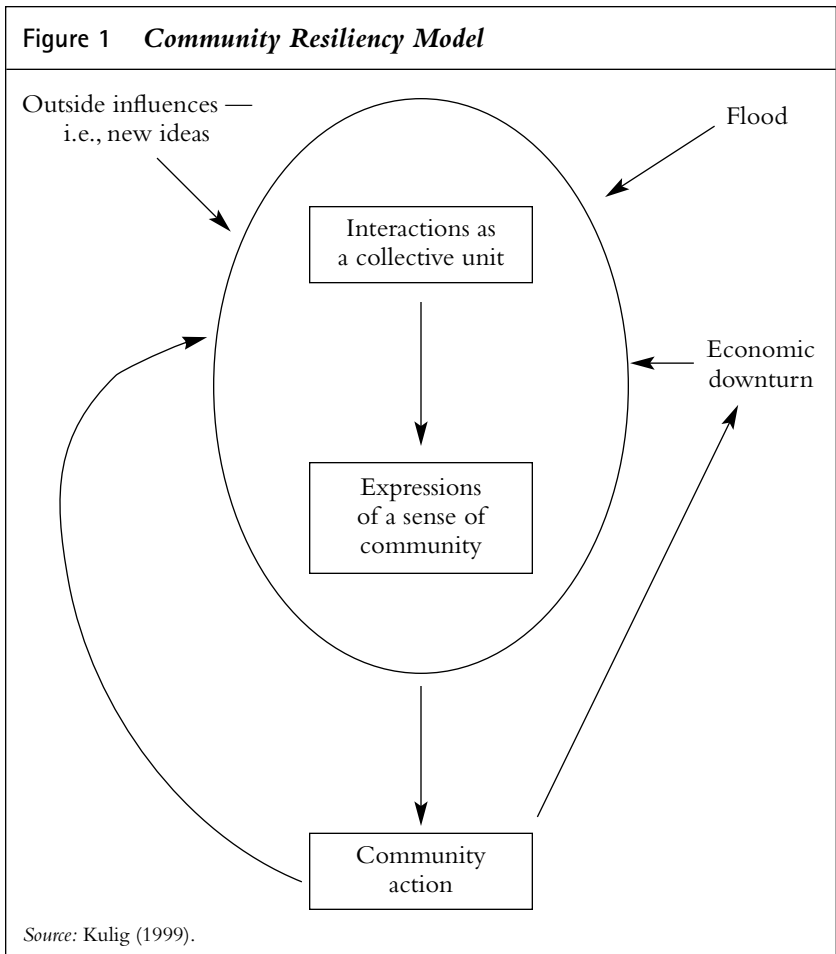
In this article, “rural” is defined as a community with a population under 10,000 that is outside the commuting zone of a large city (Mendelson & Bollman, 1999). A community is a place where interactions and social relationships are key (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1996; Hawe, 1994). Its primary function, according to MacMillan and Chavis (1986), is to satisfy the needs of its members through a process of “reinforcement.” In a community where everyone has a similar background,

people tend to identify with and strive towards common goals. Reinforcement therefore gives a community incentive to bond and express solidarity. The individual and the community are mutually reinforcing as they establish social norms to control behaviour and produce feelings of belonging and self-identity. Reinforcement ultimately promotes solidarity and a sense of security within the community (Huang & Stewart, 1996).

Community resiliency is the ability of a community not only to deal with adversity but to become stronger in spite of it (Brown & Kulig, 1996/97; Kulig, 1999, 2000; Kulig & Hanson, 1996). It is process-oriented, signifying that the community is constantly changing and may not always demonstrate an ability to meet challenges.

Breton (2001) notes that a neighbourhood's resiliency is dependent upon both physical and social capital, such as neighbour networks, social and physical infrastructure (e.g., health and social services), and local voluntary associations. Policies in the public and corporate sector also affect a neighbourhood's resiliency. Public celebrations such as fairs and festivals contribute to the viability and vitality of communities, and hence to their resiliency, by enhancing the sense of self, place, and community (Porter, 2000).

A series of interrelated studies has been conducted on community resiliency in an attempt to understand this concept from the perspective of rural residents collectively. Two studies were conducted in a former coal-mining town (Brown & Kulig, 1996/97; Kulig, 1996). Both concluded that resiliency is influenced by variables such as the presence of community leadership and proactive members and an ability to engage in community problem-solving. These variables contributed to community cohesiveness, a precursor to community resiliency. A subsequent study examined how the presence of community-based workers enhanced community resiliency (Kulig, 1998, 1999, 2000). This study led to the identification of a community-resiliency process (see Figure 1): the community experiences interactions as a collective unit, including "getting along" and "a sense of belonging"; this leads to the expression of a sense of community, exemplified by community togetherness and a shared mentality and outlook; consequently, community action occurs, as illustrated by the ability to cope with divisions and to deal with change in a positive way, the presence of visionary leadership, and the emergence of a community problem-solving process. Although the process of developing community resiliency is internal to the community, it is open to external influences such as new ideas. For example, economic changes can have consequences for the nature of community relationships and resiliency.



Other, related research also centres on resilient communities (Centre for Community Enterprise, 2000). Moreover, the literature focuses on individual rather than collective resiliency (Bell, 2001). Finally, little of this work features theoretical discussion about the concept of resiliency; instead, the work focuses on programs to help communities become more resilient (Centre for Community Enterprise, 2003).

Community resiliency promises to deepen our understanding of rural communities because the unique features of these communities challenge their ability to address adversity. For example, mining communities are associated with boom-and-bust cycles that economically impact on their ability to maintain and increase infrastructure. The extensive history of coal miners' strikes and general labour unrest has led to community orga-

nizing (Fisher, 1993; Giesen, 1995). Agricultural communities face similar challenges. The decline of the family farm (Bollman & Rothwell, 2002) and the increase in intensive livestock operations (ILOs) threaten the long-term sustainability of agriculture (Owen, Howard, & Waldron, 2000) and the rural lifestyle (Schiffman, Miller, Suggs, & Graham, 1995; Thu et al., 1997).

## **Qualitative Component of the Study**

### ***Purpose***

One research question was addressed in the qualitative component of the mixed-method study: *What is the meaning of community resiliency for rural communities that are or may be undergoing economic change?*

### ***Design***

This article reports the findings from the qualitative interviews conducted in the two participating rural communities. The first was an agricultural community (population 743) that also has oil wells. The county in which it is situated (population 3,697) had defeated a proposed ILO through concerted community action. Interviews were also held in surrounding towns (populations ranging from 161 to 1,004) that would have been affected by the ILO (Statistics Canada, 2003). The second was a coal-mining community (population 9,405) that had experienced several mine closures, the most recent in 2003 (Statistics Canada, 2003). This community has always been dependent on resources such as minerals, oil, and lumber.

### ***Data Collection and Analysis***

Ethical clearance was obtained from the academic institution of the principal investigator (PI; the first author). Great care was taken to establish community engagement at both sites through a six-member advisory board (three members from each community). A public meeting was held in each community to describe the study, and follow-up public meetings were held to present the findings. The meetings were publicized through posters, advertisements in the local media, and word of mouth. The findings were also presented to health-care agencies, local governments, and key community stakeholders. The establishment of trust and rapport with the communities was considered crucial to the success of the study.

A project coordinator (the third author) was involved in all aspects of the study, including data collection and analysis. Local research assistants (RAs) and transcribers were hired to conduct the interviews and to make confidential transcriptions of the taped interviews. The PI trained the RAs with assistance from one of the co-investigators (the second author).



A total of 55 interviews were conducted — 30 in the agricultural community and 25 in the mining community. In each community, the RA, with the assistance of the advisory board, compiled a list of potential participants. The RA then approached the individual, described the study, and asked if he or she would be willing to take part. There were no refusals. After an interview date was set, the RA went to the participant's home, obtained informed consent, completed the demographic sheet, and conducted the interview. The interviews, which lasted more than 1 hour on average, were conducted over a 5-month period in 2003.

Data collection and analysis were conducted concurrently (Neuman, 2007). Tentative themes and categories were generated by the PI on the basis of the data and confirmed through axial coding, which assigned labels and made connections between themes (Neuman, 2007). Therefore, contextual issues such as the type and history of experiences of the two communities, gender of the participant, and community involvement by the participant were all considered and incorporated as appropriate.

An auditor served as an additional check of the data analysis. This individual was chosen for her expertise in both method (qualitative research) and content (community). The auditor provided a detailed analysis and commentary on three transcripts from each community. The PI did not read this material until after data analysis was completed. The auditor's comments confirmed the results of the data analysis conducted by the PI and the project coordinator, while enhancing the data-analysis process and helping to ensure rigour and trustworthiness.

## **Findings**

A large proportion of the 55-member sample was female ( $n = 29$ ), married ( $n = 46$ ) with two children ( $n = 26$ ), and with 13 to 16 years of education ( $n = 30$ ). In addition, 24 participants were in the 35-to-49 age category, 34 had been born in a small town, 25 gave their ethnicity as "Canadian," and 27 indicated that they were Protestant. Regarding employment, 36 participants worked full time, nine worked part time, and 10 were either retired or currently not working.

The study has two limitations. The findings may be useful only for communities that are similar to the communities selected for the study, and the findings may be representative of these communities only at a given point in time.

### ***Describing Community***

All of the participants were asked to describe their experiences as members of the community. Overall, "community" was seen as a place

<b>Table 1 Community Characteristics</b>				
<b>Infrastructure</b>	<b>Physical Attributes</b>	<b>Individual Characteristics</b>	<b>Population Characteristics</b>	<b>Conceptual Characteristics</b>
Gathering places Resources and amenities	Physical location Terrain (natural, mountainous)	Diligence Entrepreneurialism Innovativeness	All age groups, religions, and socio-economic classes Followers, leaders, and participants Concern for others	Sense of community Sense of belonging Interdependence Sense of togetherness Warmth, openness, and friendliness Proactivity Inclusiveness Spirit of caring and cooperation Small-town spirit, pride, identity, and sense of well-being Spirit of optimism and confidence

where people lived and worked, and as characterized by interdependence and interaction among its members. Communities were also described as places with commonly held goals. One male participant from the agricultural community said, “A community is a group of people living and working together for the betterment of society, and hopefully to raise [children] in a proper moral manner and to educate their children and enjoy life.”

For some of the participants in the agricultural area, the word “community” had a certain fluidity. For example, some communities in this area had experienced school and church closures, which resulted in participants identifying their community as where their children attended school, where their mail was delivered, or where they socialized.

Almost all of the participants perceived that, in their respective community, they “fit in.” The exceptions were individuals who felt excluded from their community’s problem-solving processes and those who felt they belonged in some ways but not others — for instance, they might have fit in with young mothers because they had children the same age but had little contact with other groups due to the absence of shared interests. Several participants spoke about the importance of learning how to fit in, such as by being adaptable and finding out about the community. This view was expressed very well by a woman from the mining community:

*Participant: I feel at home here, I guess because we do like small towns in the first place and know the expectations and whatever to fit in.*

*RA: What kind of expectations are there?*

*Participant: I think it’s an interesting mix of what I call rugged individualism and community spirit. I don’t find that people go out of their way to make you [feel] welcome, but you sort of find your way in and then you make those connections.*

The participants portrayed their community as a desirable place to live, work, and raise a family. They focused on specific community characteristics (infrastructure, gathering places); individual characteristics (diligence, common goals); physical attributes (mountainous terrain); population characteristics (all age groups); and conceptual characteristics (pride, hope) (Table 1). Some of the concepts were more applicable to one or other of the two communities. For example, the participants from the agricultural community cited the importance of cooperation and interdependence to the survival of the community. These participants referred to population characteristics such as variety of age groups, whereas those from the mining community focused on individual characteristics such as diligence and entrepreneurship, with less emphasis on unity. One woman described the mining community succinctly:

*The main feature that strikes me is how fragmented it is. People do things in isolation. It doesn't seem to occur to them — or if it does, it doesn't seem to interest them — to check out what else is happening that day. People do things in their own circles...it's very difficult to get the whole community motivated in one direction unless it's something like the train disaster, where just about everyone did something to help out.*

The perceptions of the community and the levels of participation differed for the two sites. The differences may be related to four sets of community characteristics.

### ***Differences in Community Type***

In agricultural communities, it is common for farm families to help each other with planting and harvest. This spirit is magnified if there has been a tragedy or an unexpected event that prevents a family from performing the essential tasks on its land. Such interdependence and hard work were continually cited by the participants from the agricultural community.

Residents of the mining community were interdependent in some ways, but their level and type of commitment was different from that of the agricultural community. The mining community was described as a “mountain town” and as a “company town” that had been created because of its natural resources (coal and lumber). They saw its population as transient, primarily due to the cyclical nature of resource availability and market-driven demand for growth. Although the residents came from around the globe and learned to rely on one another in the absence of their extended families, the sense of attachment to the community was less evident than in the case of the agricultural community.

There were signs that the mining community was changing in this regard. Recent mine closures had not resulted in the mass departure of individuals and families. The participants spoke of the community having become their home and of their commitment to staying on. Some laid-off miners were considering other kinds of work so as to remain in the community, and town officials were encouraging this by providing information about local employment opportunities.

### ***Demographic Differences***

The second set of characteristics concerns the demographics of the community. The agricultural community was more homogeneous in terms of education, religious background, ethnicity, and length of time in the community. The population was stable, with only a few newcomers arriving from time to time, perhaps as a result of marrying into a farming family or securing work in the region in the oil industry. Recently, low-

income families had moved into the area, and concerns were raised because they were perceived as lacking social support and the resources needed to contribute to the community.

The mining community had routinely experienced population turnover and change since its founding. Compared to the group of participants from the agricultural community, this group contained a larger number of newcomers to the area. The perspectives of these participants tended to reflect a global context, with less emphasis on commitment to one community.

### ***Differences in Problems/Challenges***

The third set of characteristics relates to the nature of the challenges faced by the community. The participants from the agricultural community cited a variety of issues their community had addressed over the years, the proposed ILO being the most recent. The other group had difficulty listing issues they had addressed as a community, partly because of the nature of the community and the kind of people who live in a mining area. Most of the issues that this community had faced were beyond individual control (mine closures) and could not be altered even if the entire community were to organize to address them. Finally, due to the transient nature of the mining community's residents, experiences with community issues varied considerably among the participants.

### ***Group Differences***

The fourth set of characteristics pertains to the types of groups that made up each community. The agricultural community was the more demographically stable of the two. However, a number of comments by participants suggested the presence of distinct groups within the community: urban/rural, farm/town, county/community loyalty, established residents/newcomers. For example, some participants said that the town was considered urban because it had access to services not available to farm-dwellers. Participants also spoke of differences between farm and town living and how these ultimately played out in the different priorities of the two groups. One woman put it this way:

*In this community there is maybe a bit of separation between town people and farm people...and a lot of community goals and things are more town-centred. Farm people are often — not forgotten, but not a priority issue for the community as a whole. ...the recreational facilities are town-based.*

These perceived differences among groups are exemplified by statements indicating that some residents identified with the county while others were more attached to their local community. It was the opinion of some

participants that community sustainability depended upon a redefining of “community” to encompass the county and the placement of services and resources (e.g., arenas, retail services) to where they would benefit the most residents.

The mining community was also described as separated into groups. The participants spoke of old-timers/newcomers, bosses/workers, environmentalists/industrialists, and those who had never left the community versus those who had left to study and later returned. These divisions were partly based on the geography and history of the community, which resulted in the community being split into “hill” and “valley.” More newcomers lived on the hill than in the valley, which accentuated the various divisions. Like the agricultural community, the mining community had undergone population changes due to the cyclical nature of the resource industries that were its economic mainstay. This had led to the “newcomer” label for people who were transferred to the community as opposed to being born and bred there. The division between bosses and workers, meanwhile, was intertwined with the history of mining as a corporate entity and hard-won battles to create trade unions. One participant explained:

*This is the leadership side of the union movement, the leadership side of the corporate mindset. Here, the leadership side of even the social systems...[is based on] very strong foundational beliefs and haven't been challenged very often to integrate, compared to many communities who haven't got those histories or the necessity to integrate themselves more. [However,] those things that polarize people at the organizational level tend not to do so at the local level. People get along on the operating level, and I want to be clear: the leaders...know they have to get along, and they do in certain ways, but the...institutions they represent are pretty dogmatic about their priorities.*

The environmentalist/industrialist division was based on differences of opinion with respect to the extraction of natural resources.

### ***Understanding Resiliency***

A few of the 55 participants were unable to define “resiliency” without prompting. With prompting, almost all were able to do so. A very small number expressed a negative view of resiliency, describing it as “resistance.”

The majority of participants defined resiliency as the community’s demonstrated ability to address challenges. Phrases such as “bouncing back” and “carrying on” despite the odds were frequently used. “Resiliency is having the power to bounce back from a really bad situa-

tion,” said a woman from the mining community. “What would it look like? Well, it would look a little bit like a rubber band.”

Resiliency was seen as a positive characteristic that the community developed together through a variety of means, most of which were found right in the community. However, there was acknowledgement that some communities have ceased to exist because they lacked resiliency and therefore outlived their usefulness.

### ***Characteristics of Resiliency***

Table 2 shows the characteristics of resiliency as expressed by participants from both communities. Generally speaking, these characteristics focus on the *social processes* involved in developing resiliency and confirm the first two components of the Community Resiliency Model (interactions as a collective unit and sense of community).

The participants acknowledged that a diverse economy and a stable population are also essential to resiliency. They expressed the view that a sense of belonging and community pride are important conceptual characteristics of resiliency; that gathering places in the community enhance the ability of residents to come together; that social infrastructure, including commitment, social support, and stick-to-itiveness, are essential; and that personal characteristics, including open-mindedness, orientation towards the future, and willingness to change, are also imperative for community resiliency.

Another aspect that was seen by participants from both communities as essential to resiliency was proactivity. Reactive communities were perceived as those that are unprepared for what lies ahead. Community champions were seen as central to community resiliency because they demonstrate vision and provide the stimulus for the community to show its proactivity by taking risks and accepting challenges. Transparency in decision-making was viewed as essential, as was access to resources, including knowledge. Finally, the participants saw a supportive community-elected local council as imperative for resiliency.

However, the two communities differed in terms of what they considered important in the process of developing resiliency. The residents of the mining community viewed community as a collection of individuals who must be proactive and address problems together. Furthermore, these residents believed that community resiliency can be created from a combination of individual traits such as orientation towards the future and community pride. Residents of the agricultural community, in contrast, seemed to take for granted such notions as “community,” “working together,” and “the need for leadership.” This community did not have to work as hard to function as a community; it simply operated as it always

**Table 2 Characteristics of Community Resiliency**

<b>Infrastructure Characteristics</b>	<b>Social Infrastructure</b>	<b>Population Characteristics</b>	<b>Conceptual Characteristics</b>	<b>Problem-Solving Processes</b>
Diverse economy Gathering places Common goals	Social support Commitment Pride Stick-to-itiveness	Open-mindedness Flexibility Honesty Positive attitude Future orientation Willingness to change Presence of visionary leaders Accessibility of resources and knowledge Ability to act independently	Proactivity Creativity Ability to use networks Sense of togetherness and community Community pride	Transparent, collective decision-making process Supportive, community-elected council



had, in part because of the stability of the population and the strength of the ties binding the residents together.

The mining community cited the importance of leaders to the process of developing resiliency. Participants felt that without community champions, issues would not be addressed. However, it would have to be the “right” kind of leader: effective leaders have vision, commitment, and the charisma needed to convince members of the community to follow them. A male participant from the mining community defined leaders as “people with vision and the ability to realize that vision — and they’re hard to get: you may have the visionaries, but they can’t act; you may have the doers who don’t have a vision.”

Regardless of the community, togetherness, attachment to community, and the “right attitude” were all seen as essential for resiliency.

### ***Barriers to Resiliency***

Challenging events such as loss of industry or a succession of negative occurrences were identified as barriers to resiliency (Table 3). Participants from the agricultural community indicated that specific characteristics among the residents often formed barriers, whereas in the mining community the lack of volunteers and the lack of participation in community issues were seen as strong barriers.

Both groups of participants cited infrastructure as a potential barrier. For those from the agricultural community, one infrastructure barrier was the government’s removal of residents’ freedom to choose — a view that could be related to their recent experiences with the proposed ILO. Attitudinal characteristics were noted as potential barriers in both communities but were particularly significant for participants from the mining community. For example, members of this group mentioned apathetic citizens who did not contribute to the community and therefore decreased its resiliency. “Most things in life come down to attitude — just the way you look at things,” said a man from the mining community. “I think if you have a negative attitude, then you’re not going to bounce back.”

### ***Displaying Resiliency***

Almost all of the participants believed that their community displayed resiliency. The exceptions were those who felt that their community was in the process of healing (e.g., from the ILO issue) or had yet to demonstrate resiliency (e.g., by dealing with the mine closures). The mining community was perceived as resilient because the population had remained stable despite the recent closures. The agricultural community’s successful community action was given as an example of resiliency. Other ways in which communities displayed resiliency was by honouring their

<b>Table 3 Barriers to Resiliency</b>					
<b>Challenging Events</b>	<b>Infrastructure Characteristics</b>	<b>Social Infrastructure</b>	<b>Population Infrastructure</b>	<b>Conceptual Infrastructure</b>	<b>Attitudinal Characteristics</b>
<p>Succession of negative events</p> <p>Sudden or unexpected events (e.g., natural disasters)</p> <p>Loss of industry</p>	<p>Economics</p> <p>Lack of health services and postsecondary education</p> <p>Prevalence of shift work</p> <p>Age and gender biases</p> <p>Geographical isolation</p> <p>Lack of support from council</p> <p>Disempowerment</p>	<p>High crime rate, particularly in combination with lack of community spirit and lack of communication</p>	<p>Lack of knowledge and education</p> <p>Lack of vision</p> <p>Lack of communication</p> <p>Low self-esteem</p> <p>Low rates of participation</p> <p>Lack of leadership</p> <p>Lack of caring</p> <p>Convergent thinking</p>	<p>Failure to be proactive</p>	<p>Lack of belief in the community</p> <p>Complacency</p> <p>Negativity</p> <p>Apathy</p> <p>Insularity</p> <p>Individualism</p> <p>Powerlessness</p> <p>Jealousy</p> <p>Ignorance</p> <p>Prejudice</p> <p>Fear of change</p> <p>Intolerance</p> <p>Unwillingness to develop partnerships</p> <p>Rigidity</p>

history, hosting regular events and activities, and continually making changes and improvements, which entailed five steps: (1) acknowledging the problem, (2) sharing information and communicating with the larger community, (3) selecting a group to address the issue, (4) generating solutions, and (5) accepting and implementing the solutions. When asked how individuals could contribute to community resiliency, the participants identified having the right attitude, having community pride and spirit, working together for the greater good, sharing one's talents, and forming partnerships.

### **Discussion**

The participants in this study perceived their communities as collective units of interaction that were dependent on individual behaviours. They believed that individual attributes such as interdependence and willingness to address common goals lead to a collective sense of community. To them, "rural" was defined not only by population size or physical location but also by subjective experience. The participants gave examples of how close relationships and ways of interacting were important in defining "rural." Their descriptions of community are supported by the literature, which discusses communities as having social and relational characteristics (Bellah, et al., 1996; Howe, 1994). Geographical aspects of community are vital, but given the nature of rural communities, particularly agricultural ones, residents must create community based on social relationships rather than physical location.

All of the participants treated resiliency as the ability of their communities to move on despite the challenges they were facing or had faced. The development of community resiliency was described as a proactive process based on infrastructure, population characteristics, social infrastructure, conceptual characteristics, and problem-solving. Visionary leaders and community residents who have the right attitude and who engage in collective problem-solving were seen as crucial to this process. The participants believed that their community's rural base and its dependence on natural resources were potential barriers to its resiliency.

The above findings fit with the Community Resiliency Model, which centres on the interactions of the community as a collective unit, creation of a sense of community, and community action founded on proactive problem-solving (Kulig 1998, 1999, 2000). For example, concepts such as sense of togetherness and sense of community are apparent in both the present findings and the model. In addition, individuals with a positive attitude and common goals will have a shared vision of their community. Finally, being proactive, having visionary leaders, and engaging in collective problem-solving were also noted.

The findings also suggest a relationship between being rural, experiencing economic hardship, and resiliency. Natural resource communities such as those represented in this study are facing economic downturns (mine closures) and the possibility of new industries (such as ILOs) moving in. Threats to rural sustainability can be addressed by applying the three components of the Community Resiliency Model. Social interaction can be reinforced by ensuring the availability of gathering places such as schools and community halls. Inclusive activities like parades and rodeos are also important, because they offer opportunities for social interaction and collaboration. Economic instability and the closure of facilities such as schools and churches can threaten not only the community's resiliency but its very survival.

Community action can be supported through forums for leaders from rural communities that have demonstrated resiliency to share their experiences with communities that are similar. Such initiatives would be enhanced by leadership workshops, mentoring programs, and the like. Health and social service personnel such as nurses and social workers could play a significant role in developing and implementing initiatives like these, thereby contributing to community resiliency and rural sustainability.

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### **Authors' Note**

A heartfelt thank you is extended to all those who were interviewed or completed the surveys; to advisory board members Darlene Albrecht, Merv Bashforth, Lana Love, Jim Matthews, Fred Munn, and Yvonne Oshanyk; to research assistants Nanette Jones, Lisa Land, and Jennifer Van Royan and transcribers Denise Gamroth, Kate Wright, Michelle Weiss Mess, and Sandra Ladwig; to Sylvia Wilson, Yan Jin, Kir Luong, Nicole Mack, and Murray McKay of the Evidence and Research Branch, Alberta Health and Wellness; to Karen Houweling, Chinook Research Summer Award; to undergraduate research assistants Tanya Hossli and Stacey Lutes and graduate research assistants Carol Sui and Bill Alles; and to Brenda Nixon, secretary, Mary W. Walters, editor, and Gretchen Barnhill, proofreader. Without the contributions of these individuals, the study could not have been completed.

We are grateful for the generous funding of the Canadian Institutes of Health Research, which supported this endeavour through its strategic initiative Building Healthy Communities through Rural and Northern Health Research. A faculty release grant from the Canadian Centre for Health and Safety in Agriculture provided the first author with the time needed to prepare this article.

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## **L'environnement psychosocial au travail et l'utilisation de données probantes par les professionnels de la santé**

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Geneviève L. Lavigne, Jean-Pierre Bonin, Alain D. Lesage,  
Pascale L. Denis, Martine Renaud, Nadège Maisy,  
Lambert Farand et Hélène Racine**

Cette étude a pour but d'étudier les liens entre divers aspects de l'environnement psychosocial au travail et l'utilisation de données probantes par les professionnels de la santé dans le cadre de leur pratique. Une descriptive corrélationnelle a été élaborée et les professionnels de la santé œuvrant dans les unités de santé mentale de deux hôpitaux ont été invités à remplir un questionnaire sur leurs perceptions de leur environnement psychosocial au travail et sur leur utilisation de données probantes. Des corrélations et des analyses de régression ont été réalisées et les résultats indiquent qu'il existe une corrélation entre l'utilisation de données probantes et le soutien social, ainsi que le pouvoir décisionnel. Selon les résultats des multiples analyses de régression, le soutien social perçu ( $\beta = 0,27$ ,  $p < 0,01$ ) et le pouvoir décisionnel perçu ( $\beta = 0,25$ ,  $p < 0,01$ ) constituent d'importantes variables explicatives quant à l'utilisation de données probantes. Les auteurs de l'étude ont conclu que la présence d'un solide soutien social et d'un pouvoir décisionnel certain au sein des groupes interprofessionnels incite les professionnels de la santé à utiliser des données probantes dans le cadre de leur pratique.

Mots clés : environnement psychosocial au travail, interprofessionnel, utilisation de données probantes



# **The Psychosocial Work Environment and Evidence Utilization by Health Professionals**

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The purpose of this study was to investigate the relationships between dimensions of the psychosocial work environment and health professionals' use of evidence in their practice. A correlational descriptive design was developed. Health professionals working in mental health units at 2 hospitals were asked to complete a questionnaire about their perceptions of the psychosocial work environment and their use of evidence. Correlations and regression analyses were performed. Use of evidence was found to be correlated with social support and decision latitude. Results of multiple regression analyses found perceived social support ( $\beta = .27, p < .01$ ) and perceived decision latitude ( $\beta = .25, p < .01$ ) to be significant predictors of the use of evidence. The authors conclude that good social support and decision latitude among interprofessional groups may promote use of evidence by health professions in their practice.

Keywords: psychosocial work environment, interprofessional, use of evidence

Health-care workers are being encouraged to make ever greater use of not only their own knowledge but also the knowledge that is generated by scientific research (Dickinson, 2004). As a result of this trend, evidence-based practice has become a tool for justifying certain activities or for demonstrating the inefficacy of practices that have proven to be unfounded or very costly (Beaulieu, Battista, & Blais, 2001). In a synthesis of literature on research utilization, three general areas of research activity were identified: descriptions of research utilization models, studies examining individual determinants of research use, and studies examining the influence of organizational characteristics on research use (Cummings, Estabrooks, Midodzi, Wallin, & Hayduk, 2007; Estabrooks, Scott-Findlay, & Winther, 2004). There is increased awareness that organizational influences are important to the use of research in nursing (Cummings et al., 2007). Despite the increase in the number of empirical investigations of research utilization, few investigators have examined research utilization in an interprofessional context. Most of the research has focused on the practices of individual practitioners or clusters of practitioners in a single

profession (Zwarenstein & Reeves, 2006). The research reported here was carried out with health professionals working in an interprofessional context and was based on a framework that would allow for examination of organizational factors linked to workload, autonomy, support, and reward (Karasek & Theorell, 1990; Kristensen, 1999; Siegrist, 1996).

### Literature Review

For the purposes of this study, evidence-based practice is the integration of individual clinical expertise with the best available external clinical evidence from systematic research. Evidence-based practice is informed by data from randomized clinical trials as well as systematic reviews, meta-analyses, and the consensus of experts. It includes the dissemination and use of information so that the evidence reaches clinical practice (Sackett, Rosenberg, Muir Gray, Haynes, & Richardson, 1996; Sigma Theta Tau International, 2006). In order to describe the use of evidence by health professionals in their practice, the research team adopted the utilization stages described by Knott and Wildavsky (1980). According to these authors, the effectiveness of the knowledge utilization process rests on user performance in a series of interdependent activities or stages: (1) *reception* – having access to knowledge through documents or consultants/experts, (2) *cognition* – reading and understanding studies and reports, (3) *reference* – using and drawing inspiration from one's knowledge, (4) *effort* – making an effort to disseminate and foster the use of knowledge, (5) *adoption* – adopting knowledge in one's decision-making process, (6) *implementation* – using knowledge in projects and actions, and (7) *impact* – measuring the results of applying knowledge. In practice, health professionals do not employ a linear model or work through the stages one by one in their utilization of evidence. According to Gabbay and May (2004), the evidence utilization process is much more dynamic and iterative. In this study, "knowledge" refers to evidence and "evidence utilization" refers to all of Knott and Wildavsky's (1980) stages combined (see Appendix 1).

Fostering the use of evidence in health-care practices represents a significant challenge and calls for a variety of strategies and interventions. Several investigators have suggested that the field should not be restricted to individual characteristics and that a large number of factors related to research utilization be examined (Lomas, 1993; Nilson Kajermo, Nordstrom, Krusebrant, & Bjorwell, 1998). Royle et al. (1998) identify organizational barriers to research utilization such as time constraints, limited access to the literature, lack of training in information-seeking and critical appraisal skills, and a work environment that is not conducive to information-seeking. In their study, Cummings et al. (2007) found

hospital characteristics that positively influenced research utilization by nurses, such as staff development, opportunities for nurse-to-nurse collaboration, and staffing and support services. In addition, the Promoting Action on Research Implementation in Health Services (PARIHS) framework, developed by a group of researchers, has identified three major influences on research implementation: the nature of the evidence used, the ability of the context to cope with change, and the type of facilitation needed to ensure successful change (Kitson, Harvey, & McCormack, 1998; Rycroft-Malone, 2004). Based on the PARIHS framework, Estabrooks, Midodzi, Cummings, and Wallin (2007) identify factors that predict more research utilization among nurses at the individual level (time spent on the Internet and lower levels of emotional exhaustion), at the specialty level (facilitation, nurse-to-nurse collaboration, conducive context, and perceived ability to control policy), and at the hospital level (hospital size). In their systematic review, Zwarenstein and Reeves (2006) suggest that interprofessional education and collaboration interventions might affect knowledge translation and evidence-based practice. According to these authors, there is little information on mechanisms for improving interprofessional collaboration and facilitating evidence-based care. Several authors cite the importance of context in evidence-based practice (Aiken, Sloane, & Sochalski, 1998; Dunning, Abi-Aad, Gilbert, Hutton, & Brown, 1999). McCormack et al. (2002) define context as "the setting in which practice takes place." According to Nonaka and Takeuchi (1995), the organizational knowledge-creation process takes place mainly at the group level but the organization provides the enabling conditions; the organization provides organizational contexts or mechanisms to facilitate group activity, as well as the creation and accumulation of knowledge at the individual level. In the present study, the organizational context is defined by the psychosocial work environment (Karasek & Theorell, 1990; Kristensen, 1999; Siegrist, 1996). This framework allows for an examination of organizational factors linked to workload, autonomy, social support, and reward as dimensions of the work environment that influence use of evidence among health professionals from interprofessional groups.

## **Theoretical Framework**

### ***Psychosocial Work Environment***

This framework, as defined by Kristensen (1999), is primarily based on Karasek's Job Strain Model (Karasek & Theorell, 1990) and Siegrist's (1996) Effort-Reward Imbalance Model. The dimensions of the Job Strain Model are psychological demands (amount of work, complexity of work, and time constraints) and decision latitude (the ability to use

one's qualifications and develop new job skills and the opportunity to choose how to do one's work and to influence related decisions). Social support has been included in the model to take into account the support of superiors and colleagues (Johnson & Hall, 1988). The principal hypothesis of this model is that job strain results from the combined effects of increased psychological demands and low decision latitude in the workplace, and that this increases health risks among health professionals. Social support from both colleagues and superiors is expected to moderate the effect of job strain.

The Effort-Reward Imbalance Model is based on the hypothesis that a work situation characterized by a combination of a high degree of effort expended and little reward received (money, esteem, and career opportunities) can have pathological effects on health (Siegrist, 1996). Under this theoretical framework, an optimal psychosocial work environment is characterized by demands that are adapted to a worker's abilities (psychological demands), a satisfactory level of influence (decision latitude), adequate social support from superiors and colleagues, and a balance between effort expended and rewards received (Karasek & Theorell, 1990; Siegrist, 1996). The independent variables are psychological demands, decision latitude, social support, and the effort/reward ratio, and the dependent variable is use of evidence.

### **Purpose**

The purpose of the study was to investigate, in an interprofessional context, the relationships between four dimensions of the psychosocial work environment (psychological demands, decision latitude, social support, and effort/reward) and health professionals' use of evidence in their practice. Three questions were addressed: *To what degree are health professionals exposed to a high-risk psychosocial work environment? What correlations can be found between variables of the psychosocial environment and the use of evidence by health professionals? Which of these variables can predict use of evidence?*

### **Methods**

#### ***Design and Sample***

We developed a correlational descriptive design for this quantitative study. In this case, and in exploratory studies in general, a correlational design is more appropriate (Aronson, Ellsworth, Carlsmith, & Gonzales, 1990). The participants were health professionals working in the mental health field at two Canadian institutions that were in the process of reorganizing work. Institution A was a French-speaking hospital and insti-

tution B was an English-speaking university hospital. The participants were surveyed before the changes began. This convenience sample comprised 365 English-speaking and French-speaking professionals within different health-care disciplines (nurses, psychiatrists, physicians, psychologists, specialized educators, social workers, and occupational therapists). The study was approved by the ethics committees of both hospitals. In 2006 the participants received, through the hospital's internal mail, a letter describing the study and inviting their participation, along with a self-administered questionnaire, a consent form, and a self-addressed envelope. They were instructed to complete the questionnaire, which would take approximately 20 minutes, and return it to the primary researcher, together with the consent form, in the envelope provided. Confidentiality was maintained by using numbers to identify participants.

### **Measures**

**Sociodemographic variables.** Sociodemographic data were collected from all participants. Participants were asked to report their age, gender, and academic background. They also indicated the type of institution where they worked and their job title, department, and employment status. Participants from the two institutions did not differ on any sociodemographic variable except gender: 80.2% of the female participants were from institution A, while the distribution of male participants was relatively equal.

**Psychosocial work environment.** The validity of the original English version of the scales for psychological demands and decision latitude, from the Job Content Questionnaire (JCQ), has been well documented (Karasek, 1985; Karasek & Theorell, 1990). The psychometric qualities of the French version were evaluated using a representative sample of workers in the province of Quebec ( $n = 1,100$ ). The instrument's internal consistency was supported by Cronbach alpha coefficients ranging from 0.68 to 0.85. Factor analysis was also used to support the bi-dimensional structure postulated by the theory (Brisson et al., 1998; Larocque, Brisson, & Blanchette, 1999).

**Decision latitude.** Decision latitude was measured using nine questions from the JCQ (Karasek, 1985). This variable was composed of two subscales: use of qualifications and control over task. The range of potential scores for the decision latitude variable was 24 to 96. The scale's internal consistency is  $\alpha = .73$  (English-speaking) and  $\alpha = .77$  (French-speaking). Respondents with a score less than or equal to 72 (the median score observed among a reference group of workers from the Quebec population) were considered the exposed group, with low decision latitude (Institut de la statistique du Québec, 2000).

**Psychological demands.** Psychological demands were also measured using nine questions from the JCQ (Karasek, 1985). Potential scores for the psychological demands variable ranged from 4 to 36. The scale's internal consistencies were  $\alpha = .68$  (English-speaking) and  $\alpha = .70$  (French-speaking). Respondents with a score greater than or equal to 24 (the median score observed among workers in Quebec) formed the group with a high level of psychological demands in the workplace (Institut de la statistique du Québec, 2000).

**Social support.** Social support at work includes support from both colleagues and superiors and has three components: socio-emotional support or esteem, instrumental support, and hostility or conflict (Karasek, 1985). A four-point scale was used to measure social support. *Social support from colleagues* was measured using five items and *social support from superiors* using six items from the JCQ (Karasek, 1985). These scales have been used in several studies with nurses (Bourbonnais, Comeau, & Vézina, 1999; Bourbonnais & Mondor, 2001) and present good psychometric qualities. Potential scores for the social support variable ranged from 11 to 44, and the median score for the present study was 35. The scale's internal consistencies were  $\alpha = .81$  (English-speaking) and  $\alpha = .81$  (French-speaking). The groups with low social support at work consisted of those with a score of less than 35 for social support from colleagues and those with a score of less than 35 for social support from superiors.

**Effort/reward imbalance.** Reward has three dimensions — money, esteem, and career opportunities — and was measured using 11 questions from Niedhammer and Siegrist's (1998) instrument. Potential scores for the reward variable ranged from 11 to 44. The scale's internal consistencies were  $\alpha = .81$  (English-speaking) and  $\alpha = .70$  (French-speaking). Effort was measured using six items that referred to demanding aspects of the work environment (three items measuring quantitative load, one measuring qualitative load, one measuring increase in total load over time, and one measuring physical load) (Siegrist et al., 2004). The potential range of the effort variable was 6 to 24. The scale's internal consistencies were  $\alpha = .82$  (English-speaking) and  $\alpha = .70$  (French-speaking). In this study, *imbalance between effort and rewards* was measured by a ratio computed for every participant according to the formula  $e/(r \times c)$ , where  $e$  is the total score on the effort scale,  $r$  is the total score on the reward scale, and  $c$  represents a correction factor for different numbers of items in the nominator and denominator. A correction factor of  $6/11$  was used. As a result, a value close to 0 indicates a favourable condition (relatively low effort, relatively high reward), whereas values above 1.0 indicate that a high degree of effort was expended without receiving or expecting commensurate rewards (Siegrist et al., 2004).

***Use of evidence in a health professional's practice.*** In order to describe and measure the use of evidence by health professionals, the research team adopted the utilization stages proposed by Knott and Wildavsky (1980) and Landry, Amara, and Lamari (2001). Based on the work of these authors, a seven-item evidence utilization scale was developed and validated in English and French simultaneously, by investigators representing different disciplines and different English-speaking and French-speaking cultures. Each item conveyed a degree of utilization based on a five-point Likert scale (1 = poor; 5 = excellent) (see Appendix 1). Potential scores for use of evidence ranged from 7 to 35. Although Knott and Wildavsky (1980) present these stages as a set of interdependent activities, empirical research has shown that, in practice, health professionals do not employ a linear model or work through the stages one by one in their use of evidence. According to Gabbay and May (2004), the evidence utilization process is much more dynamic and iterative. In addition, in the present study this scale was cumulative, and the global score provides information on the health professional's attitude with respect to global use of evidence. In order to facilitate a common understanding of evidence among participants, a definition was provided alongside the instructions for using the scale (see Appendix 1). To verify the scale's structure, in the present study an exploratory factorial analysis was conducted with the sample (a principal components analysis with direct oblimin rotation). The findings indicate the emergence of a single factor (eigenvalue = 4.97, 71% of the variance explained). The scale's internal consistencies were  $\alpha = .83$  (English-speaking) and  $\alpha = .94$  (French-speaking). Inter-correlation between the seven items in the scale ranged from .46 to .80 (mean inter-correlation of .66) and the means of individual items ranged from 2.77 to 3.46. The validity of the scale's factorial structure and the homogeneity of items were supported, which made it possible to calculate a global score (i.e., a continuous variable computed by summing the scale's various items). A continuous variable, as computed in the present study, makes it possible to explore this dependent variable in a way that would not be possible with single items (e.g., correlations, analyses of variance, and regression analyses; Tabachnick & Fidell, 2001).

### ***Data Analysis***

The data were analyzed using SPSS 14.0. Descriptive statistics were calculated for all variables. Pearson correlations were performed, and the chi-square tests were cross-tabulated in order to describe the association between variables in the psychosocial work environment and the use of evidence. Analyses of variance were performed to explore differences between participants associated with institutions A and B as well as

between nurses and other health professionals. Finally, regression analyses were performed on the data to identify the psychosocial predictors of use of evidence. The level of statistical significance was set at 5% for all the analyses.

### Results

Of the 365 health professionals, 149 completed the questionnaire, for a response rate of 40.8%. The final sample therefore consisted of 149 individuals who were 47.3 years of age, on average ( $SD = 11.00$ ; range = 22–77 years). It comprised 86 women (57.7%), 62 men (41.6%), and 1 unreported participant. As for the professions represented, the sample consisted of 30 nurses (20.1%), 35 psychiatrists (23.5%), 4 physicians (2.7%), 23 psychologists (15.4%), 6 specialized educators (4.0%), 17 social workers (11.4%), 17 occupational therapists (11.4%), and 17 others (11.4%). The participants had 17.9 years of service, on average ( $SD = 10.15$ ; range = 1–40 years), and 80.5% were working full time. Finally, the English questionnaire was completed by 36 participants (24.2%) and the French questionnaire by 113 participants (75.8%) (see Table 1).

Table 2 presents the numbers of participants exposed to the psychosocial work environment dimensions. The results reveal that 50.3% of participants reported high psychological demands and 52.7% low social support. Almost half reported low decision latitude (47.7%) and a third noted an imbalance between effort expended and rewards obtained (35.4%). For use of evidence, the mean value of the scale was 21.91 ( $SD = 6.05$ ; range = 7 to 35).

	<i>n</i>	%
<b>Occupation</b>		
Nurse	30	20.1
Psychiatrist	35	23.5
Psychologist	23	15.4
Social worker	17	11.4
Occupational therapist	17	11.4
Physician	4	2.7
Specialized educator	6	4.0
<b>Gender</b>		
Female	86	57.7
Male	62	41.6



**Table 2 Frequency of Psychosocial Work Environment Dimensions (N = 149)**

Dimensions	n	%
Psychological demand +	75	50.3
Decision latitude -	71	47.7
Social support -	77	52.7
Effort/reward imbalance	52	35.4

+ = high - = low

**Table 3 Correlation between Psychosocial Work Environment Dimensions and Use of Evidence (N = 137)**

Measure	Use of Evidence	Psychological Demands	Decision Latitude	Social Support	Effort/Reward Imbalance
Use of evidence	1.0	.03	.32***	.30***	-.01
Psychological demands	.03	1.0	-.11	-.31***	.63****
Decision latitude	.32***	-.11	1.0	.41****	-.25**
Social support	.30***	-.31***	.41****	1.0	-.51****
Effort/reward imbalance	-.01	.63****	-.25**	-.51****	1.0

\*  $p < 0.05$  \*\*  $p < 0.01$  \*\*\*  $p < 0.001$  \*\*\*\*  $p < 0.0001$

The correlations revealed a significant relationship between use of evidence and decision latitude ( $r = .32, p < .001$ ), as well as between use of evidence and social support ( $r = .30, p < .001$ ) (see Table 3). Health professionals who used evidence perceived a high level of decision latitude and reported being supported by colleagues and supervisors. A multivariate analysis of variance was performed to determine whether differences existed between the two institutions on the variables of the present study. Only one significant difference was found ( $F(1, 133) = 11.31, p < .01$ ): on average, participants from institution A used less evidence ( $M = 20.49, SD = 6.34$ ) than those from institution B ( $M = 24.17, SD = 4.81$ ).

Furthermore, a multivariate analysis of variance was performed to determine whether differences existed between nurses and other health professionals on the variables of the present study. Because the groups differed in size (nurses,  $n = 30$ ; other health professionals,  $n = 119$ ), the assumption of equality of variance was checked and found to hold true for each variable. Consequently, regular  $F$ -statistics can be reported (Tabachnik & Fidell, 2001). Two significant differences and one marginally significant difference were found. First, on average nurses perceived

significantly lower psychological demands ( $M = 22.36, SD = 2.86$ ) than other health professionals ( $M = 23.82, SD = 3.34; F(1,132) = 4.65, p < .05$ ). Second, nurses used significantly less evidence ( $M = 19.28, SD = 6.18$ ) than other health professionals ( $M = 22.50, SD = 5.90; F(1,132) = 6.66, p < .05$ ). Finally, nurses tended to perceive less social support from colleagues and superiors ( $M = 33.62, SD = 3.60$ ) than other health professionals ( $M = 35.07, SD = 3.62; F(1,132) = 3.65, p < .10$ ). When interpreting these results, it is important to remember that the sample comprised only 30 nurses; this greatly limits our ability to generalize the significant differences found between nurses and other health professionals.

Finally, regression analyses were performed to determine whether the variables (psychological demands, decision latitude, social support, and effort/reward) of the study could predict the use of evidence among health-care providers. Table 4 presents the results of the regression analyses. Because significant differences were found between the two institutions and between nurses and other health professionals on the dependent variable, the use of evidence variable was first regressed on these variables (block 1), in order to control for their influence. In block 2, the use of evidence was regressed onto psychological demands, decision latitude, social support, and the effort/reward ratio (i.e., the independent variables of this study). After controlling for the influence of institution of origin and health profession (nurses vs. other health professionals), perceived social support ( $\beta = .27, p < .01$ ) and perceived decision latitude ( $\beta = .25, p < .01$ ) were found to positively and significantly predict the use of evidence (see Table 4). Furthermore, the effort/reward ratio tended to positively predict the use of evidence ( $\beta = .21, p < .10$ ). Moreover, the addition of the last three predictors to the model predicting the use of evidence added 16.1% explained variance to the 11.3% already explained

	$\beta$	<i>p</i> Value
<b>Block 1</b>		
Institution	.28	< .001
Occupation	.22	< .01
<b>Block 2</b>		
Psychological demands	-.03	ns
Decision latitude	.25	< .01
Social support	.27	< .01
Effort/reward imbalance	.21	< .10
ns = not significant		

by the institution of origin and the health profession, for a total of 27.4% of explained variance. We can therefore conclude that, although there are significant differences between the two institutions and between nurses and other health professionals, the psychosocial work environment has a similar impact on the use of evidence by health practitioners in interprofessional groups.

### **Discussion**

The exploratory correlation analysis found significant relationships between social support, decision latitude, and use of evidence. A more thorough investigation of the nature of these relationships in the regression analysis demonstrated that social support and decision latitude were significant predictors of use of evidence. Although there were significant differences between the two organizations and between nurses and other health professionals, the psychosocial environment had a similar impact on the use of evidence among health practitioners.

The first observation to emerge from the data is that social support from colleagues and superiors acts as a predictor of use of evidence. The three components of social support are socio-emotional support or esteem, instrumental support, and hostility or conflict (Karasek, 1985). Several other studies have identified managerial support, peer support, and coaching as strategies for promoting research utilization by nurses (Logan & Davies, 1995; Nilson Kajermo et al., 1998; Royle et al., 1998). In their study with unregulated care providers, Janes, Sidani, Cott, and Rappolt (2008) found that the process of knowledge utilization was enhanced when peer relationships on the unit were collaborative. The link between the utilization of knowledge and workplace relations has been identified in studies of evidence-based health care (Janes et al., 2008; Rycroft-Malone, 2004). Further studies in this area may enhance the conceptualization of knowledge utilization as a social process and make more explicit the link between a healthy workplace and practice excellence (Janes et al., 2008).

Rycroft-Malone (2004) identifies context as a key component promoting the successful implementation of evidence in practice, such as "learning organizations" that create learning cultures where attention is paid to individuals, group processes, and organizational systems. Such contexts are characterized by decentralized decision-making, an emphasis on the relationship between administrators and workers, and transformational leaders (Rycroft-Malone, 2004; Senge, 1990). The second observation to emerge from the data is that decision latitude acts as a predictor of use of evidence. Decision latitude is defined as the ability to use one's qualifications and develop new job skills and as an opportunity to choose how to do one's work and influence related decisions (Karasek, 1985).

In a recent study, Estabrooks et al. (2007) identify facilitation, nurse-to-nurse collaboration, autonomy to determine policy, and procedures and higher context as related to the use of evidence. Some studies have identified lack of sufficient authority to change practices as a barrier to research utilization (Hutchinson & Johnston, 2006; Thompson, Chau, & Lopez, 2006). Leadership that is supportive of teamwork and staff involvement in decision-making have been found to greatly influence research utilization by nurses and others in health-care settings (McCormack et al., 2002).

### **Limitations**

The sample size was acceptable for the statistical analyses reported here, but future research should try to replicate the significant differences found between nurses and other health professionals, since only 30 nurses participated in the present study. This small number of nurses might limit the generalizability of the findings to all nurses. Larger studies in other settings with interdisciplinary teams are still required, in order to further investigate the significance of the psychosocial work environment for how health professionals use evidence in their practice. Caution should therefore be exercised with respect to generalization based on this study.

### **Conclusion**

In a context where knowledge is considered an important competitive advantage, and where the concepts of evidence-based medicine, evidence-based nursing, and evidence-based management have become central to professional practice around the world (Desouza, 2006; Dicenso, Guyatt, & Ciliska, 2005; Keskin, 2005), it is reasonable to assume that larger numbers of workers are turning to evidence in their workplace decision-making. It may therefore be useful to implement strategies that foster social support and decision latitude by health professionals. Future research is needed to develop and test conceptual frameworks, including interprofessional collaboration, to foster the utilization of evidence among health-care workers and investigate the effect of evidence use on patient safety and employee satisfaction.

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### **Authors' Note**

The authors would like to thank the Canadian Institutes of Health Research and Fonds de la recherche en santé du Québec for providing financial support for this study.

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<b>Appendix 1 Evidence Utilization Scale</b>					
<p>Evidence-based <i>practice</i> means integrating individual clinical expertise with the best available external clinical evidence from systematic research. Evidence-based practice is informed by data from randomized clinical trials as well as systematic reviews, meta-analyses and the consensus of experts. Evidence-based practice also emphasizes the dissemination and use of information so that the evidence reaches clinical practice.</p> <p>The following sentences are statements concerning how you use evidence in your practice when evaluating options and making decisions. Circle the number that best represents your answer.</p>					
<i>In your practice</i>	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
1. Your <i>access</i> to evidence is	1	2	3	4	5
2. Your level of <i>understanding</i> of the evidence is	1	2	3	4	5
3. Your capacity to <i>evaluate the quality</i> of evidence is	1	2	3	4	5
4. The degree to which you <i>follow</i> available evidence is	1	2	3	4	5
5. Your efforts to <i>share knowledge</i> about evidence with your colleagues are	1	2	3	4	5
6. Your team's <i>use</i> of evidence is	1	2	3	4	5
7. Your ability to <i>assess</i> the effects of an evidence-based practice on your clientele is	1	2	3	4	5
<p><i>Source:</i> Based on the utilization stages described in Knott and Wildavsky (1980) and Landry et al. (2001).</p>					





## **L'herméneutique interprétative et la modification d'une conception moderne de la méthode**

**Ann Holroyd**

Les chercheurs en sciences humaines doivent de nos jours relever un défi, celui de reconnaître l'importance de créer un horizon de signification commun dans le cadre de leur travail. Pour atteindre cet objectif, ces derniers doivent comprendre l'effet qu'entraîne le choix d'un cadre conceptuel, c.-à-d. un rétrécissement qui influe sur leur connaissance et leur compréhension de l'individu. L'approche méthodologique de l'herméneutique philosophique interprétative met l'accent sur le fait que l'apprentissage issu de l'expérience s'étend au-delà des rétrécissements imposés par des méthodes formalisées et offre une façon de pensée médiane dans le cadre de la rencontre en contexte de recherche. Cet article explore les possibilités de l'herméneutique interprétative, notamment la façon dont elle peut élargir la notion de recherche et permettre non seulement d'acquérir des connaissances mais aussi d'accéder à une compréhension. Pour ce faire, il se penche sur l'herméneutique philosophique de Gadamer, qui amène les chercheurs à intégrer un éventail de perspectives philosophiques plutôt que d'adopter une méthode philosophique particulière. La recherche intégrant l'herméneutique philosophique interprétative comporte un élément clé, soit l'importance accordée à l'expérience humaine.

Mots clés : herméneutique interprétative, expérience humaine

## *Best Practices for Research*

# **Interpretive Hermeneutics and Modifying the Modern Idea of Method**

**Ann Holroyd**

A challenge currently facing human sciences researchers is recognizing the importance of creating a shared horizon of meaning in their work. To move towards this goal, researchers require an awareness of how their chosen conceptual framework creates a stricture through which they know and understand the individual. The methodological approach of philosophical interpretive hermeneutics emphasizes that what is learned from experience extends beyond the strictures of formalized method, thus offering a middle way of thinking in the research encounter. This article explores how interpretive hermeneutics can broaden the notion of research from one of simply knowing to one of understanding. It does so by engaging with Gadamer's philosophical hermeneutics, where researchers strive to embrace a constellation of philosophical outlooks rather than a specific philosophical method. A key insight in research involving philosophical interpretive hermeneutics is its emphasis on human experience.

Keywords: advanced nursing practice and education, philosophy and theory, interpretive hermeneutics, human experience

Carefully constructed research frameworks and formalized methods offer the most respected research approaches available to human sciences researchers. Although these methods are of great value, especially in the realm of the health professions, the inclusion of other ways of engaging in human sciences research is equally important but presents a considerable challenge. Part of this challenge is the fact that formalized methods offer researchers a well-organized, clearly delineated path — a conceptual framework — to the acquisition of knowledge. Such knowledge helps to inform the calculative reasoning and objective ways of knowing that are an important part of the health professions, but are these methods sufficient when employed as the predominant mode of research?

A detailed reflection on the philosophical underpinnings that shape human sciences researchers' vision of the world and their interpretation and communication of the human condition are presented here as a way of disrupting the boundaries and dogmatism of current understanding

and its application to research. This reflection highlights why it is important in human sciences research to strive towards the goal of creating a shared horizon of meaning. This article explores how the methodological approach of interpretive hermeneutics can broaden the notion of research from a concern mainly with cognitive knowledge to one that also values experiential understanding. An interpretive hermeneutic research approach will be of interest to researchers who want not only to know but to understand human experiences that are particular to their work, such as the experience of chronic illness.

### **Human Sciences Research and Formalized Methods**

Individuals have an innate need for deeply felt human experiences that express vitality and life energy, yet both our history and our culture create a tension for and against this need. This tension is not limited to our personal experiences; it is also apparent in many of our professional undertakings, including health-care research. From a historical and cultural perspective, we live in a time when the analysis and methodological questioning of researchers often operate from a strong system of formalized beliefs.

During the 20th century the philosopher Wilhelm Dilthey (1883–1989), one of the pioneers of modern Western philosophy, called attention to formalized methods in human sciences research and the limitations they create. Concerned with the tendency in the human sciences to take on the norms and ways of thinking of the natural sciences and apply them to the study of individuals (Palmer, 1969), Dilthey reacted against the rationalistic sciences by indicating their inadequacy in understanding human phenomena (Hughes & Sharrock, 1997). As one of the first modern-day researchers to pioneer an approach to human phenomena, Dilthey promoted the importance of meaning in human experience (Dilthey, 1976).

In many ways, today's human sciences researchers demonstrate both their historical and their cultural situatedness. A host of early life philosophers, including José Ortega y Gasset (1883–1955), Ludwig Klages (1872–1956), and Georg Simmel (1858–1918), set the stage for the research approaches that are best suited for interpreting human phenomena (Palmer, 1969). A common finding amongst these approaches for the interpretation of human phenomena is the desire to get at the experiential fullness of our human existence in the world.

### **Methodological Challenges in Interpretive Phenomenology**

Researchers who situate themselves in the world of philosophical interpretive hermeneutics face a considerable challenge related to the lack of

articulated methods. While traditional research approaches offer definitive methods that include well-organized conceptual frameworks with detailed techniques and procedures, phenomenological researchers are without a method and are stimulated to learn about the philosophical underpinnings that shape their vision of the world and how they can work towards the interpretation and communication of the human condition (Caelli, 2001). Both Gadamer (1972/89) and van Manen (1997a, 1997b) explain that a hermeneutic phenomenological approach has no method available from which to direct a human sciences investigation. In fact, Gadamer questions any method that tries to turn philosophy into a purely methodological enterprise (Grondin, 2003). According to Palmer (1969), the work of interpretive hermeneutics is not so much to develop a procedure for understanding as to clarify the conditions upon which understanding takes place. Caputo (1987) also offers cautionary insight into the challenges surrounding method: to remain so highly focused on method makes science subservient to method, so that method rules instead of liberating. Caputo encourages researchers to maintain a focus on *methodos* or *meta-odos*, meaning the way we choose to pursue a matter.

The search for method demonstrates researchers' desire for legitimacy in an academic world that keeps human sciences researchers questing for a map that will legitimate their efforts (Angen, 2000). Bernstein (1985) writes that strict methodological procedures developed in an effort to minimize the taint of subjective bias, prejudice, and tradition and to prevent distortion of what he calls the purity of the results. In keeping with this idea, traditional methodological procedures prompt researchers to enter the research encounter with a preliminary way of seeing that which stands before them. In turn, this perspective offers researchers a sense of confidence so that they do not need to call into question their guiding presuppositions and thus can operate in such a way that the answer is always potentially present and expected within the system (Palmer, 1969, p. 233). For example, I may be interested in researching the influence of health professionals' supportive care on individuals hospitalized for a chronic illness. My guiding presupposition is that supportive care is strongly associated with the knowledge and skill level exhibited by health professionals. This presupposition with which I enter the research encounter diminishes the possibility of questioning or bringing into dispute what I, as a researcher, believe to be the critical features of supportive care. What is also being minimized in this research encounter is the context of an individual's hospitalization for a chronic illness: it is an incurable illness and, because of its persistent nature, individuals may identify the attitude of the health professional as the most important aspect of care during hospitalization (Shaw, 2007). In other words, presuppositions can minimize the possibility of an open dialogue between

the researcher and the research participant that would help to clarify the conditions for understanding, as well as to expand each individual's horizon of meaning.

It is important to enter the research encounter with preparatory knowledge. The difficulty lies in how this knowledge informs the use of methodological procedures that can limit the researchers' scope of vision and openness to the array of human experiences that stand before them. When researchers approach their phenomenon of concern guided by assumptions that they are not prepared to dispute or question, what likelihood is there of uncovering new knowledge and new understanding? Koch (1996) speaks of the need to be less attentive to method and more concerned with methodology. For Koch, methodology is "the process by which insights about the world and human condition are generated, interpreted, and communicated" (p. 174).

Interpretive hermeneutics offers a movement away from traditional research and its focus on method and methodology. Gadamer (1972/89) reminds us that the human sciences are about our very being, and that, as researchers, we must consider the social, historical, and temporal nature of life. For that reason, interpretive hermeneutic research is based on a very different understanding of experience.

### **The Humanist Tradition and Human Sciences Research**

Hans Georg Gadamer (1900–2002) made a tremendous contribution to 20th-century thought by proposing a different approach to the human sciences and their concern with human phenomena. Gadamer highlights this approach by drawing attention to the significance of the humanist tradition for the human sciences. Subsequently, Gadamer stresses his conviction that method alone will not determine the scientific relevance of the human sciences (Grondin, 1997): the experiences of the socio-historical world cannot be raised to a science by the inductive procedures of the natural sciences (Gadamer, 1972/89, p. 4). Gadamer takes issue with the prevailing concept of experience, especially within human sciences research (Taylor, 2002). Experience, as it is currently understood, is orientated to a form of knowing that is highly perceptual in nature and identifies knowledge as a body of conceptual data (Gadamer, 1972/89). This orientation can negate the experiential fullness of our human existence and how our history and culture inform what is known and what is understood. Gadamer's *Truth and Method* (1972/89) offers detailed insight into the humanist tradition and the recent historical changes that have created a methodological bias that values the use of rigorous methods in human sciences research.

The humanist tradition underwent noteworthy changes with the introduction of the philosophy of Immanuel Kant (1724–1804). As Grondin (1997) explains, the Kantian turning point marks a period when the human sciences were compelled to rely on the methodology of the natural sciences in order to enhance their own scientific relevance (Gadamer, 1989, p. 41). Gadamer recognizes the value of methodological paradigms but cautions against their unquestioned adoption in the research setting. He thereby reacquaints the researcher with the humanist tradition, which in turn helps to bring the researcher closer to the human sciences (Grondin, 2003).

In this tradition, humanism encompasses a sense of direction that an individual tries to cultivate in his or her life (Gadamer, 1989). Humanism is not defined by the notion that humanity should distinguish itself from the animal nature out of which it stems through the process of reason; rather, it denotes the importance of being vigilant with respect to the darker side of humanity's animal nature (Grondin, 1997). Through the process of education or formation, for which there are some models but no scientific rules, one becomes vigilant about one's animal nature (Grondin, 1997). Gadamer (1989), in his rehabilitation of humanism, starts with the notion of culture, or *Bildung*. In the humanist tradition, the individual is always in the process of self-formation, education, and cultivation, all key components of *Bildung*. To strive towards *Bildung* is to recognize that there is no fixed idea of what an individual is, that one is always in the process of forming the unique inherent dispositions that are part of one's humanity (Gadamer, 1989). What this description evokes is the idea that a cultured individual is not someone who possesses a wealth of factual or cultural knowledge. On the contrary, a cultured person is someone who never ceases to learn and who is forever willing to challenge what he or she may have once taken for granted. Grondin, quoting from Gadamer's lecture at a 1995 conference, writes:

The cultured person is the one who is ready to admit as plausible (literally, to value) the thoughts of others...to leave something undecided is what constitutes the essence of those who can ask questions. The person who is not equal to recognizing their own ignorance and, for that reason, to keeping the open character of some decisions precisely in order to find the right solution, will never be what is called a cultured person. The cultured person is not the one who displays superior knowledge, but only the one who, to take an expression from Socrates, has not forgotten the knowledge of his ignorance. (2003, p. 25)

Through our openness to perspectives that are different from our own, we are able to manifest the general characteristics of *Bildung* (Warnke, 1987). The characteristics of *Bildung* make us more human and help us

to grasp what we are attempting to understand (Gadamer, 1989). In other words, it is important that researchers grasp the impossibility of getting to know human phenomena in such a way that one can say *I know everything there is to know about them*. Human phenomena are not objects that can be construed based on the model of the sciences. Human life as we know it is much more fluid, contextual, and relational (Jardine, 1990), and this must be considered in our research. For that reason, human sciences researchers find themselves risking the achievement of certainty for the achievement of understanding in their research endeavours. And only through ongoing dialogue with that which researchers are interested in understanding can they hope to achieve a degree of confidence that their understanding has been enlarged and deepened. Gadamer's humanism stresses that this new understanding is possible only through (hermeneutic) experiences, because this is what helps researchers to change or adjust their perspective.

Gadamer speaks of experience in the full sense of the term, including the experience of negation (Taylor, 2002). From an interpretive hermeneutic perspective, to be experienced "does not mean knowing everything but, quite the contrary, being radically undogmatic, being prepared to have and learn from new experiences" (Weinsheimer, 1985, p. 204). For instance, researchers may be interested in studying a persistent, progressive illness such as heart disease. As a researcher, I may assume that the truth pertaining to the object of study is centred on its alteration of the biological structures of the body, or that any experiences associated with this disease reside in its physical features. If I base what I know on my cognitive experiences associated with heart disease, there is minimal opportunity to research this health problem beyond a frame of reference that often underestimates experience in the full sense of the word, where the dynamic, complex, and uncertain nature of persistent health conditions such as heart disease is considered. An obvious but often overlooked step in our utilization of research methods is to ask if it is possible to ever get to the bottom of things, to discover the real structure of human behaviour and consciousness, especially through the pursuit of a particular kind of research approach (Schwandt, 1999).

### **Differentiating Knowing and Understanding in Human Research**

Research based on a model of the sciences drives the quest for a specific kind of interpretation, one with a sound objective footing (Dunne, 1993), orderliness, and closure. However, this serves to decrease sensitivity to the voices of our research participants (Davey, 2006). Deeply connected to the scientific method is the unquenchable thirst for knowledge.



Knowledge — its origins, characteristics, and limitations — is rooted in an empiricist orientation, particularly as it has developed during the last four centuries (Hughes & Sharrock, 1997). This view promulgates a way of knowing that effectively trumps our everyday experiences. It embraces the belief that life can be known from an external, objective vantage point. To situate yourself within an empiricist orientation, you must abstract from the experiences that stand before you (Hughes & Sharrock, 1997). Is it realistic to believe that we can be satisfied, in our research encounters, with a methodological approach that reduces contextual human phenomena to a body of knowledge that is predominantly viewed as factual and objective in orientation?

Subtle but obvious differences do exist between what it means to know and what it means to understand, especially as they relate to research processes involving human phenomena. In the context of the recent history of Western culture, it is common to define understanding as a primarily epistemological or cognitive process: it is not unusual for knowledge and understanding to be used interchangeably. Martin Heidegger, whom Gadamer follows in this regard, challenged the epistemological understanding of understanding.

In *Being and Time* Heidegger writes that understanding is less a cognitive process than a capacity, a possibility, and an ability that arises out of our existence through experience (Heidegger, 1962). As Gadamer (1972/89) explains, to understand is more than to reconstruct in a disinterested fashion the meaning of a text or research phenomenon according to its author. Individuals who possess an understanding of something are not endowed with specific knowledge as much as they are able to exercise a practical skill (Grondin, 2002), and that skill centres on the use of language. To understand, you must have the ability to grasp something, to be prepared to see what stands before you with great clarity, and to integrate a particular meaning into a larger frame (Grondin, 2002, p. 36). Whatever it is that we are attempting to understand, it “has to be construed, not on the model of the scientific grasp of an object, but rather on the speech-partners who come to an understanding” (Taylor, 2002, p. 126). This statement specifies the difference between knowing something, which involves mainly a unilateral form of communication, and understanding something, which involves bilateral communication. For example, a large percentage of clinical research involves what Rose (1994) calls the anatomo-clinical method, which constitutes “man” as an object of knowledge. This construction makes possible a science of the human individual where a person can be diagnosed, calibrated, and generalized (p. 68). Researchers whose prime concern is the attainment of knowledge engage in the use of a method that will offer them what Taylor calls “full intellectual control over the object,” where there is little

opportunity for the object to talk back at or surprise the researcher (2002, p. 127). The communication between the researcher and the object of his or her attention is for the most part a one-way process.

Someone who seeks to understand must be willing to engage in bilateral communication. Thus researchers must be prepared to challenge what they already know and recognize that whatever understanding they may achieve depends on the standpoint of all individuals involved in the interaction. Take, for example, research involving individuals with “idiopathic pain,” or pain with no agreed upon cause such as lower back pain, and no obvious signs of soft tissue injury (Bendelow, 1996). The researcher may possess a firmly grounded epistemological understanding of the generalized physiology of pain, but what happens when the pain cannot be linked to an identifiable physiological condition? An empirical referent is important in research that values calculative reasoning and objective ways of knowing. Without this referent, the research encounter becomes difficult at best, especially within methodologies informed by the natural sciences.

Gadamer (1996) describes science as based on “projective constructions” rather than on the experiences of life. In other words, science is a kind of mechanics: it artificially produces effects that would not come about by themselves. As researchers, we project these constructions onto the object(s) we are interested in researching, thereby eliminating the practical dimension whereby our experiences of life inform what we know and what we understand. Researchers who are interested in the interpretive method need to consider lived experiences in an effort to value, within their research approaches, the importance of moving towards understanding. Returning to the example of idiopathic pain, it is safe to say that individuals who live with pain know it in a more practical way, one that calls forth their experiences; they know that pain has a physical cause but that this is only one aspect of the whole. Pain is also an existential issue and always relates back to the individual’s entire existence. Practically speaking, individuals know and understand those aspects of their existence that influence their pain. In other words, pain involves not only empirically derived knowledge but practical understanding, and to understand is to experience. If a researcher wishes to gain an understanding of an individual’s pain, he or she must be willing to be informed, so to speak, by that person and his or her life experience with pain. Both parties must be willing to engage in bilateral communication where each individual’s current knowledge and understanding of pain is challenged and expanded upon.

[Understanding] consists of very real aspects of experience, [without which] factual assertions often lose their force, for they include the sense

of the whole, the overview with its myriad adumbrations, associations, and connotation that remain in the background and yet determine whether the emphases and import of a text are properly grasped. (Hoy, 1978, p. 48; also quoted in Solloway & Brooks, 2004, p. 2)

### **Defining Understanding in Terms of Experience**

Defining understanding in terms of experience, rather than conceptual knowing, is significantly different from more traditional research methods. When researchers define understanding from a primarily cognitive perspective they rely on the theory of induction. Induction begins when the researcher recognizes those experiences that repeat themselves. As certain experiences accumulate, the researcher may begin to abstract a general concept that covers all such experiences. The acquisition of a concept through induction results in a situation of minimal need for any further experiences. “Inductive experience is fulfilled in the knowledge of the concept — which, in both senses, is the end of experience” (Weinsheimer, 1985, p. 202).

Gadamer’s interpretive hermeneutics denies that understanding needs an awareness of rules (Fleming, Gaidys, & Robb, 2003). Understanding is what Davey (2006) calls an enduring task, one that often involves those revelatory moments when it becomes apparent that another does not think the same as me or that I cannot think as they do about a person or object of concern (p. 5). In this enduring task of understanding, researchers recognize the constellation of concepts and affectivity they bring to the research encounter and the value in challenging them or bringing them into some form of dispute.

Consider an individual living with human immunodeficiency virus (HIV). During our lifetime, we learn the meaning of HIV from the culture in which we are raised. This persistent illness was given a name for us, and along with this name a host of meanings and associations derived from the culture in which we were raised. If we are surrounded by individuals who do not have HIV, then this type of chronic illness has no significance for us beyond what we have learned from others, possibly through formal education. Conversely, if we are brought up in a culture that is greatly touched by this persistent illness, then the meanings and understandings that we associate with HIV are significant. Our background experiences shape how we as researchers see that which stands before us. A later encounter with an individual with HIV and the willingness to question our early assumptions can be an occasion for us to challenge and revise these earlier meanings and understandings. When we bring our unquestioned meanings of HIV to the research encounter, they take on a cognitive form of awareness. This conceptual form of knowing becomes what Ortega y Gasset calls “masks worn” (Crotty,

1996, p. 161) by individuals living with HIV. In turn, these masks inform our experiences of these individuals.

The meanings and understandings imparted to us by our culture are what come to the forefront when we come into contact with the object that concerns us, such as individuals with HIV. Interpretive hermeneutic researchers recognize the degree to which our encounters with our research participants may become nothing more than an occasion in which our pre-established knowledge and understanding inform our engagement with that which stands before us. The knowledge and understanding with which we enter the research encounter can become nothing more than screens that hide from us what we are interested in. Returning to the example of individuals with HIV, if we as researchers wish to gain a more comprehensive understanding of individuals with HIV, and not merely things that have to do with HIV, we have to remove the mask and penetrate the screen that often hides that which we are interested in (Crotty 1996).

Removing the mask can provoke us to start questioning both the familiarity and the strangeness we feel in an encounter with the “object” that concerns us. Without awareness there is a greater possibility that the very experiences that need to be understood will be concealed.

In considering the need for “experienced” researchers, it is apparent that human sciences researchers must be encouraged, early on in their careers, to recognize how their implicit sense of the human condition can block their understanding of others. Is it possible to know and understand another when we are blocked by our own unreflecting outlook? Researchers must be vigilant to the way in which the historically derived horizon of the past can be radically cut off from the horizon of the present.

### **Calling into Question Our Own Horizons of Expectation**

In *Truth and Method*, Gadamer (1979/82) writes at length about the importance of thinking beyond understanding as a strictly instrumental process. He attends to the importance of calling into question our own horizons of expectation, reminding us that the human sciences are about our very being and experiences. In particular, he offers an exposition of two forms of experience: *erlebnis* and *erfahrung*. Although Gadamer argues for the displacement of *erlebnis* (a personal life experience) by *erfahrung* (the experience of social interaction), the consideration of both forms of experience has value in furthering the ability of researchers to understand lived human experiences.

*Erlebnis* denotes an experience that is isolated and categorical. *Erfahrung*, in comparison, is an experience that is ongoing and cumula-

tive. Simply stated, *erlebnis* is something you have and *erfahrung* is something you undergo. An *erlebnis* experience is something that happens in the moment and jolts you out of the daily course of events. Life as you know it is suddenly and unpredictably felt in ways that it has never been felt before. This is an opportunity to allow the experience to make a lasting impression, one that can be of continuing importance, especially as life remains connected to and returns to its everydayness. Because of the indelible relation of an *erlebnis* — an unforgettable experience — to all experiences, it could be said that *erfahrung* denotes the ongoingness of *erlebnis*. In this sense, a life-jolting experience may provide an opportunity to awaken oneself to oneself. In this awakening, individuals assume a new stance on the world — *erfahrung*. By assuming a stance of *erfahrung*, one increases one's probability of having subsequent *erlebnis* and *erfahrung* experiences.

Consider the experience of receiving a cancer diagnosis. For most individuals, this moment will be forever marked as an unforgettable experience. Although they may have had other episodic-type illnesses over the course of their lives, this experience is very different. In comparing the experience of receiving a cancer diagnosis to the experience of having a common episodic illness, one could say that the short-lived episodic illness was a straightforward event with no lasting meaning. A cancer diagnosis, on the other hand, is an experience that separates itself out from the rest of the individual's life. It does this by calling "for [its] distinction in the moment of its conception and derives it by the place it takes in the rest of the life" (Arthos, 2000, p. 3). In other words, an *erlebnis* experience can be viewed as a predominantly negative and painful experience in which one learns what one did not know before and could never expect (Palmer, 1969). It serves to shatter any prior understandings so that the individual does not so much understand better as understand differently. It teaches the person what he or she did not know or understand before this point in time. This event can help the individual see that an *erlebnis* experience is the great teacher from which we emerge wiser and perhaps sadder. As Palmer states, the truly experienced person is one who has learned the limitations and finitude of all expectations (p. 233).

It is through *erlebnis* experiences that we come to see the significance of our culturally constructed ways of being in the world. An *erlebnis* experience helps us to see that we do not know everything and that when we are open to being non-dogmatic we are taking a stance of *erfahrung*, whereby we are forever prepared to transform our views. "Gadamer calls this process a reversal in consciousness...experience leads to the recognition that that which one previously took as the truth of the object under study is precisely that: simply that which one took as its truth and

not its truth at all” (Warnke, 1987, p. 26). When one is open to experience in this way, one is demonstrating hermeneutic consciousness.

### **Engaging in the Dialectical Character of Experience**

It is in this letting go that researchers develop an awareness of the many possibilities that exist about how individuals live and cope in the world. This sense of understanding arises out of *erfahrung* — social interaction — and indicates an orientation to experience that increases the probability of *erlebnis* (Solloway & Brooks, 2004). From Gadamer’s exposition of the experienced individual, one is able to see that interpretive understanding is born from inspiration, not methodological calculation, and that when one is engaging in the event of understanding, rules are not the guarantors of truth. Hermeneutic consciousness exists when researchers demonstrate openness to restructuring or reversing their awareness of the phenomenon of concern. By viewing the phenomenon in a different light, researchers, as a result of moving towards an *erfahrung* stance, are themselves forever changed. Researchers who embrace hermeneutic consciousness recognize that “the new [phenomenon] contains a truth above the old, the old has served its time” (Palmer, 1969, p. 195).

Researchers who recognize the importance of creating a shared horizon of meaning in their work must be prepared to acquire a structure of openness characterized by authentic questioning. When researchers are prepared to engage in the dialectical character of experience, referred to as the hermeneutic circle (Gadamer, 1972/89), the realization exists that there is no neutral vantage point where you can begin to engage with the phenomenon of concern. All knowledge and understanding develop historically, meaning that all participants bring certain assumptions to the research inquiry. As a result, researchers working within traditional research approaches will understand their phenomenon of concern in much the way their predecessors did. Jardine (1998) writes about how easy it is to miss the radical mystery that confronts us in our engagement with every individual. Rigid theories can determine in advance the conditions under which anything new will be accepted, thereby foreclosing the possibility of our own transformation. To be open to anticipations — based simply on the thing itself — researchers must hold in reverence the immanent ambiguity that exists in every individual, and in this awareness a space is open for genuine dialogue to occur.

Experienced — *erlebnis/erfahrung* — researchers recognize the importance of genuine dialogue, particularly when trying to reach agreement about the phenomenon of concern. Researchers must resist thinking about human phenomena in a limited way: the way to expand current horizons of understanding is to engage in open dialogue. In other words,

when the researcher is engaging with the phenomenon of concern he or she must be prepared to engage in open and honest dialogue in order to arrive at some agreement about the whole experience.

This article has emphasized the importance of researchers being open to different possibilities and new modes of description as they relate to their phenomena of concern. More often than not, researchers in the human sciences wield the power to control the context of what they believe to be important in the research encounter. Unfortunately, this may mean that human sciences researchers will work from their own unchallenged assumptions, including the assumption that knowledge of an individual's illness is all that is necessary. In recognizing the inherent differences between what it means to know and what it means to understand, researchers are moved to consider the alternatives that exist outside of the cultural parochialisms that often direct their thinking.

Through the lens of interpretive hermeneutics, researchers are given an opportunity to move beyond the assumptions and purported truths associated with their phenomena of concern. The approach of philosophical interpretive hermeneutics emphasizes that any learning that takes place — particularly within the philosophical framework of an *erlebnis* experience — involves, amongst other things, a commitment to be guided by the nature of that which they are attempting to understand. When researchers take a stance of *erfahrung* there is greater opportunity to disrupt the boundaries and dogmatism of current understanding in human sciences research. By seeing beyond the limited meanings that are associated with our phenomena of concern — in this case individuals and their experience with chronic illness — we are moved towards a path of possible awakening. In this awakening, researchers and individuals who live with chronic illness come to know and understand illness in ways they previously had not considered.

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### **Author's Note**

The author is grateful to Monash University in Australia and her supervisor, Dr. Karen Francis, for providing an International Nursing Scholarship during completion of her PhD studies.

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## Happenings

### **Quirk-e: Queer Seniors Creating Community**

**Claire Robson and Christine Morrissey**

Gays face special challenges in the health-care system. The Queer Imaging & Riting Kollektive for Elders, or Quirk-e, is a grassroots community-engaged arts program that gives older queer people a voice. Originally a partnership between an artist and the Generations Project (a program for lesbian, gay, transgendered, and bisexual [LGTB] seniors), Quirk-e is now one of four member groups of the Arts Health and Seniors Project, managed by the Vancouver Parks Board and funded by several agencies in the Vancouver area: Vancouver Coastal Health, the SMART Fund, the BC Arts Council, United Way of the Lower Mainland, Society for the Arts in Healthcare, Vancouver Foundation, Britannia Seniors' Centre, and the Generations Project itself.

The Arts Health and Seniors Project is dedicated to exploring how participation in the arts can enhance the health of seniors and to supporting the development of new knowledge and expertise in the fields of seniors' wellness, chronic disease management, and community-engaged arts. The school of nursing at the University of British Columbia is responsible for the project's research component, whose purpose is to examine the impact of art-making on the emotional, spiritual, and physical health of queer elders.

Though the research is not yet complete, anecdotal evidence collected in interviews and evaluations suggests that members of the Quirk-e collective see themselves as healthier as a result of their participation in the group, which provides them with support, community, and an opportunity to process concerns, to celebrate, and to reflect on their lives. For many, participation in the collective has helped them to achieve (or in some cases renew) a sense of themselves as writers and artists. Thus their experience with Quirk-e has had a positive impact on how they construct and perceive their identities. At the same time, the collective's community outreach has raised the visibility of older queers, not just in the community at large but also in the queer community, which tends to focus on the young and the beautiful. There is now competition for

places in the 19-member collective, which has exhibited and performed at some of Vancouver's prominent venues.

The members of Quirk-e work with lead artist Claire Robson and assistant lead artist Shelley Whitehead and with Christine Morrissey, who directs the Generations Project and serves as senior worker with the group. Robson and Whitehead design learning experiences aimed at fostering new artistic skills, partly through one-on-one feedback and support. Learning occurs in a variety of contexts, including teacher-directed instruction, whole-group discussion, small-group interaction, peer feedback sessions, and partner work. Quirk-e members meet for 2 hours each week and also participate in occasional field trips and informal gatherings. They communicate regularly through e-mail and Web-based sharing.

Despite some serious health issues, members get out to the meetings on a regular basis, and, despite the large size of the group, have mastered the basics of using digital cameras and the technicalities of archiving and accessing work in different forms. This is quite an achievement given that many members had extremely limited technological skills when Quirk-e was founded. Several did not own a camera, a few had never used e-mail, and many lacked basic computer skills. During the collective's first year, 2006–07, members took photographs and created compositions in Adobe Photoshop. They also engaged in personal writing in various genres, including poetry, full-length memoir, personal essay, play, short story, and flash fiction. The artistic outcome was a community show that combined text and image creatively. As practising artists, Robson and Whitehead set the bar high and continually challenge members to push themselves, both conceptually and in terms of craft. One member, Gina, sums up the process:

*At times I felt frustrated and a little annoyed...but I do think it's much better now... I would go away and "stew on things" for a while and new ideas would spring into my head. I must say, all of this has been a very good learning exercise for me.*

In November 2006 Quirk-e produced a PowerPoint Display and an anthology titled *Self-Portraits*, which were launched at an open house held at the Britannia Seniors' Centre attended by 75 members of the public. The group then produced an installation work combining digital imagery and text exploring the theme "transformations." This showed at the Roundhouse Community Centre in June 2007 as part of Honouring Our Elders Week. The installation was exhibited at the University of British Columbia and at the Vancouver Public Library's Moat Gallery. The collective has since published a second anthology, *Transformations* — with the first run of 200 copies selling out within a month.

Readings by Quirk-e members are much in demand at community events. Much of the work produced by the collective has a strong queer content, and members are proud that their work may be increasing public awareness of the concerns and experiences of older LGTBs. Of the 16 Quirk-e members who responded to the question *Did the program make you more visible as a queer?*, 14 answered in the affirmative. “The showings and readings are great for showing LGTB seniors making art in the community,” commented one member. Quirk-e has received extensive coverage in *Xtra West*, a gay newspaper with a circulation of 42,000, and Robson has received an *Xtra West* Writer of the Year Award for her groundbreaking work with the group. The experience of reading in public has instilled confidence in individual members, many of whom had never before performed or read in public. Many of the written evaluations of Quirk-e’s first year commented on the sense of community it had created:

*This is the most important part of the activity for me — to meet new people and make new friends. Quirk-e has been a great success for me in this regard.*

*It was an awesome experience to be with senior queers making a difference, in a small way, to the community.*

*Connecting to other LGTB members of the community enlarged my circle of friends immensely — I’m more likely to go out to events.*

It is still too early to quantify the group’s impact on individual members, so we will highlight just one story. Gina is a former high-school physics teacher who describes herself as a “left-brained, scientific” person seeking a vehicle through which to tell the story of her transsexual journey. Gina was surprised and delighted to find that the methods favoured in Quirk-e gave her quick and easy access to her stories, and she proved to be a quick study, writing several short stories (one of which has been published in the Arsenal Pulp Press collection *First Person Queer*), a play, and a full-length memoir. Her installation piece, *Transition*, begins with a photograph of herself as Murray (a man), taken on his wedding day. Slowly, in a series of images that scan from left to right, Murray morphs into Gina, a woman. The final photograph shows Gina smiling, with the tiny, blurred image of Murray still visible in the region of her heart. Here are Gina’s program notes:

*The intent of Transition is to show, using two photographs taken twenty-five years apart, the transition of the artist from male to female. Transition is a process of physical and emotional changes. Showing only two photographs — before and after transition — would capture some of the phys-*

*ical changes of the artist but not her emotional changes over time. That required presenting the two photographs several times within the work, but modified in ways that suggest the passage of time and, with it, the gradual emergence of the artist's female gender identity that was present all her life.*

Quirk-e serves as an example of what a properly funded grassroots arts program can offer. The health-care system still has much to do before it can truly embrace the needs of seniors. The needs of queer seniors are even further neglected, yet little research has been conducted into the particular issues and challenges that queer seniors face. The artistic work produced by members of Quirk-e goes far beyond art therapy, to gain a wide audience. This has broadened public perceptions of queer seniors and has contributed to the building of a more accepting and educated community, one that makes the world a safer, healthier, and more welcoming place for queer elders.

The members of Quirk-e are proud of their achievements and confident of their voices, of their identity as artists, of their ability to tell their stories and articulate both their needs and their accomplishments. On a practical level, the collective represents a community of practice founded upon creative process — a community that provides mutual support and enduring friendships.

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*Claire Robson, lead artist for Quirk-e, is a writer, a writing teacher, and a doctoral student at the University of British Columbia, where her research focuses on creative writing and queer seniors. Christine Morrissey is director of the Generations Project. Her experience helping to care for an aging queer, first at home, then in a nursing facility, and finally in a hospice, renewed her appreciation of the need to recognize queers as they move through various systems and institutions.*

## *Happenings*

### **Taking Stock: The First Decade of the Nursing Research Fund**

**Lisa M. Wise, Sanober Motiwala, and Peter C. Coyte**

As the scope of the nursing profession evolves and as health-care systems worldwide feel the strain of a limited supply of nurses, nursing research is being recognized as an under-explored area of health research. In Canada, nursing research has historically been sparsely and inconsistently funded by national and provincial governments. In 1999, under mounting pressure from nursing leaders across Canada to address the dearth of nursing research evidence, the federal government established the Nursing Research Fund (NRF). The Canadian Health Services Research Foundation (CHSRF), an independent funding organization established by the government, was tasked with administering the \$25-million NRF over 10 years.

The goals of the NRF were “to develop a knowledge base to better enable nurses to deliver quality care in an environment of health care restructuring, to identify approaches to retrain/retool the existing workforce, and to attract new members to the profession” (Government of Canada, 1999). These goals align with the five objectives of the CHSRF’s mission (CSHRE, 2007a):

1. Increase the capacity for nursing researchers and nursing-related research.
2. Create new nursing knowledge that is useful for health-service managers and policy-makers.
3. Increase the ability of health-service managers and policy-makers to access and use relevant research.
4. Help health-service managers, policy-makers, and their organizations to routinely apply relevant research in their work.
5. Bridge the gap between nursing researchers and decision-makers.

The NRF was initially set up to support the following programs (Government of Canada, 1999) (the annual target funding allocations are shown in parentheses):

1. Nursing Research Chairs (\$500,000).
2. Training Awards (\$750,000), including career reorientation awards, postdoctoral fellowships, and other student awards, through Regional Training Centres (RTCs).
3. Research Funding for (a) nursing policy and management (\$500,000), through the CHSRF's existing competitions; and (b) nursing care issues (\$500,000), through the Canadian Nurses Foundation's Nursing Care Partnership (NCP) program.
4. Knowledge Dissemination activities (\$250,000).

In this article we present an evaluation of the NRF. With approximately 1 year remaining in the NRF's timeframe, the evaluation assesses whether its objectives have been met and whether there is a need for continued targeted investment in nursing research in Canada.

### **Methods**

Both quantitative and qualitative data were collected in order to identify all expenditures and activities supported by the NRF. Quantitative data, mainly in the form of annual reports, financial reports, and the review reports from each nursing chair, were provided by the CHSRF. Qualitative data were collected through interviews with stakeholders in the nursing community. Interviewees were recruited through a purposive sampling approach, with nurses being selected based on their association with the NRF and/or the nursing research community. Based on available financial resources and project timelines, 36 stakeholders were approached for interviewing, and 23 interviews were ultimately conducted, for a response rate of 64%.

The adequacy of each NRF program was assessed in terms of its contributions to the achievement of the five NRF objectives. The assessment was used to populate an evaluation matrix (Figure 1), with the columns representing the five objectives and the rows representing the four NRF programs implemented by the CHSRF. The evaluation also assessed the CHSRF's financial administration of the NRF.

The Nursing Research Chairs provided us with written permission to access their annual reports. An ethics proposal was submitted to the Office of Research Ethics at the University of Toronto for qualitative data collection (i.e., stakeholder interviews). Since the proposal was considered a program evaluation, it was exempt from ethics review.



**Figure 1 Evaluation Matrix**

<b>Programs</b>	<b>Objective 1 Create research capacity</b>	<b>Objective 2 Enhance research output</b>	<b>Objective 3 Create capacity for research use</b>	<b>Objective 4 Enhance research use</b>	<b>Objective 5 Link research supply and use</b>
P1: Nursing Research Chairs	Successful	Successful	Some gaps remain	Some gaps remain	Successful
P2: Training Awards	Successful	Successful	Some gaps remain	Some gaps remain	Successful
P3a: Research Funding for nursing policy and management	Some gaps remain	Successful	Significant gaps remain	Some gaps remain	Successful
P3b: Research Funding for nursing care issues	Successful	Successful	Significant gaps remain	Some gaps remain	Successful
P4: Knowledge Dissemination	Some gaps remain	Some gaps remain	Some gaps remain	Some gaps remain	Successful

Successful
  Some gaps remain
  Significant gaps remain

## Results

### *Activities Associated with NRF Programs*

The NRF supports a variety of activities as part of its four programs. Table 1 summarizes the target and actual funding for each program, as well as major outputs associated with each. To date, the NRF has been used to support six Nursing Research Chairs and two nursing-related chairs (CHSRF, 2007a). These chairs have formed the basis for mentorship of applied health-services researchers, the establishment of a dedicated research program, and several opportunities for alignment and overlap of researchers and decision-makers. As part of its Training Awards program, the NRF has funded joint training awards, career reorientation awards, and postdoctoral awards, as well as graduate-level awards through the three nursing-related RTCs: the FERASI Centre in Quebec, the

Table 1 NRF Programs and Outputs

Program	Annual Funding		Outputs
	Target	Actual (average <sup>a</sup> ± SD <sup>b</sup> )	
P1: Nursing Research Chairs	\$500,000	\$426,597 ± 68,582	<ul style="list-style-type: none"> <li>- 6 Nursing Research Chairs, 2 nursing-related chairs</li> <li>- supervision of numerous interns, doctoral and master's students, postdoctoral fellows, and junior faculty</li> <li>- development of initiatives such as annual summer research internships and applied research apprenticeships</li> <li>- involvement of decision-maker partners (student thesis committees, guest lectures, research seminars, workshops)</li> </ul>
P2: Training Awards	\$750,000	\$387,875 ± 50,123	<ul style="list-style-type: none"> <li>- 23 joint training awards</li> <li>- 4 career reorientation awards</li> <li>- 21 postdoctoral awards</li> <li>- 3 RTCs</li> <li>- 1 RTC development grant</li> </ul>
P3a: Research Funding for nursing policy and management	\$500,000	\$767,966 ± 123,457	<ul style="list-style-type: none"> <li>- 47 open-grants competition awards</li> <li>- 10 REISS<sup>c</sup> Competition Development Fund awards</li> <li>- 4 REISS awards</li> <li>- 2 PHSI<sup>d</sup> awards (through CIHR)</li> <li>- 1 training grant</li> <li>- 9 letter-of-intent preparation grants</li> </ul>

<p>P3b: Research Funding for nursing care issues (NCP program)</p>	<p>\$500,000</p>	<p>\$486,464 ± 22,665</p>	<ul style="list-style-type: none"> <li>- 98.5% of the \$2.255 million received from CHSRF in 2003-07 was spent on nursing care research projects</li> <li>- since 2003, NCP has leveraged over \$4.6 million from partner organizations</li> <li>- 27% of projects funded have a decision-maker as primary or co-primary investigator</li> </ul>
<p>P4: Knowledge Dissemination</p>	<p>\$250,000</p>	<p>\$82,904 ± 19,852</p>	<ul style="list-style-type: none"> <li>- networking (chairs and RTC meetings)</li> <li>- 2 nursing policy syntheses: Commitment and Care (2001) and Staffing for Safety (2006)</li> <li>- 1 Health Institutes Design Grant (1999)</li> <li>- 2 communication infrastructure development grants (1999, 2001)</li> <li>- 1 network infrastructure needs assessment (2003-04)</li> </ul>

<sup>a</sup> Average expenses are based on direct program expenditures between 1999 and 2007.  
<sup>b</sup> Calculated by taking the square root of the sum of squared deviations of the annual amount spent from the average annual amount spent and dividing it by 9 (years — i.e., 1999-2007).  
<sup>c</sup> Research, Exchange, and Impact for System Support.  
<sup>d</sup> Partnerships for Health System Improvement.

Ontario Training Centre in Health Services and Policy Research (OTC), and the Centre for Knowledge Transfer in Alberta. Annually, the largest portion of NRF funding targets research projects and programs covering a broad range of nursing topics. Approximately half of the funding targets research on nursing policy and management issues and the other half targets clinical nursing research through the NCP program (Government of Canada, 1999).<sup>1</sup> Finally, the NRF supports a variety of knowledge dissemination initiatives such as policy syntheses and knowledge networks.

### ***Evaluation Matrix***

Analyses of each program were synthesized in an evaluation matrix (Figure 1), which summarizes the output of the NRF. No single program has fully met all five objectives; this highlights the importance of having a wide range of activities in order to build nursing research capacity.

#### ***Objective 1: Building of Research Capacity***

The NRF has been successful in creating new capacity for nursing research. The Nursing Research Chairs program (P1) has created capacity through the chairs' supervision of numerous graduate students (doctoral, master's) and mentorship of junior faculty and postdoctoral fellows. Training Awards (P2) for career reorientation, allowing mid-career researchers from other disciplines to redirect their expertise to nursing research, and postdoctoral awards for new tenure track faculty, have also contributed to capacity-building. By 2006, two of the RTCs supported by the NRF had recruited 64 doctoral and 89 master's students (FERASI Centre, 2006; Ontario Training Centre in Health Services and Policy Research [OTC], 2006).

#### ***Objective 2: Expansion of Research Output***

The NRF has been highly successful in increasing the output of nursing research. An exceptional number of publications and conference presentations have been generated through the Nursing Research Chairs program (P1). NRF research grants (P3a and P3b) have enabled a large volume of nursing research. By the end of 2006, the NRF had been used to wholly or partially fund 47 projects and programs through the CHSRF's Open Grants Competition, more than 20 special project grants and awards, and two Research, Exchange, and Impact for System Support (REISS) competition programs (CHSRF, 2007a). In addition, over the past 5 years the NCP program (P3b) has committed more than \$2.2 million to clinical nursing research projects while leveraging over

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<sup>1</sup> Administration of the NCP that funds clinical nursing research projects has been delegated to a separate organization, the Canadian Nurses Foundation.

\$4.6 million in matched funding from hospitals, charities, research institutes, and other organizations (Canadian Nurses Foundation [CNF], 2007).

***Objective 3: Creation of Capacity for Research Utilization***

The NRF has been moderately successful in achieving objective 3 relative to its other objectives. The engagement of decision-makers by the Nursing Research Chairs in research seminars, workshops, and student thesis committees increases the ability of decision-makers to understand and apply research findings. Policy internships and research apprenticeships offered by some chairs directly expose decision-makers to research, allowing them to use this knowledge in their home organizations (DiCenso et al., 2005; O'Brien-Pallas et al., 2005). The RTCs also actively expose decision-makers to research-oriented graduate students, which results in the hiring of these graduates by decision-making organizations such as Health Canada, the Association of Ontario Health Centres, and the Ontario Ministry of Health and Long-Term Care (FERASI Centre, 2006; OTC, 2006). Increasingly, the engagement of decision-makers on research teams is a requirement for project funding through P3 of the NRF. This requirement engages research users from the inception of the research and arguably increases the relevance of the findings for decision-makers.

***Objective 4: Increase the Use of Research***

All NRF programs have contributed to the moderate success of objective 4. The Nursing Research Chairs (P1) have demonstrated some success in increasing the use of nursing research — for example, by having their research used to inform national activities in health human resource planning (O'Brien-Pallas et al., 2005) and being called upon to shape a licensing examination for acute-care nurse practitioners (DiCenso et al., 2005). Holders of postdoctoral awards (P2) have also demonstrated success in *increasing the use of research*. One decision-maker partner proclaimed that, before the placement of a postdoctoral fellow there, her organization was essentially “an evidence-free zone.” Another decision-maker partner claimed that her agency had been simply a “data miner” and that information was transferred into useful knowledge largely through the initiative of the postdoctoral fellow. The RTCs have increased the use of research through networking activities and interactions between researchers and decision-makers — for example, through the requirement that graduate students complete a policy practicum (OTC, 2006). Through P3a and P3b, the NRF has funded a number of special projects and commissioned reports on issues of relevance for

policy-makers. Examples include studies on nurse staffing and patient safety and a review of issues affecting nursing human resources.

**Objective 5: Link between Research Supply and Research Use**

All four programs have been highly successful in achieving the NRF's fifth objective. The Nursing Research Chairs (P1) have involved decision-makers in research seminars, symposiums, and workshops. Several of the chairs have also invited decision-makers to sit on student thesis committees and assist in identifying research topics, as well as to play direct supervisory roles through policy internships. Habitual inclusion of decision-makers in the learning environments of trainees will inevitably ensure that this link is maintained as trainees embark on their own research careers. All three types of training award (joint training, career reorientation, and postdoctoral) in P2 require award-holders to have a decision-maker partner involved in their research. The RTCs have also been instrumental in linking research supply and research use. The twinning of doctoral students with decision-makers throughout their 4-year research residency (FERASI Centre) and graduate student field placements (policy practica; the OTC) have resulted in a constant exchange of ideas and knowledge. Also, both the FERASI Centre and the OTC have decision-makers on their governance bodies and advisory boards (FERASI Centre, 2006; OTC, 2006). The Partnerships for Health System Improvement administered by the Canadian Institutes of Health Research (CIHR) as part of P3 is designed to support research that is relevant for health-system managers and policy-makers. The requirement that decision-makers be included in REISS and NCP proposals has established strong links between research suppliers and users, fostering ongoing collaboration (CNE, 2007). Finally, P4 has demonstrated success in *bridging the gap between researchers and users*. The participation of both researchers and users of nursing research (i.e., decision-makers and front-line workers) in knowledge network meetings and conferences facilitates knowledge exchange. The policy syntheses facilitate the overlap of input by both research teams and advisory groups (consisting of researchers and decision-makers), the final result being a report that can be used by all members of the nursing community.

**Financial Administration of the NRF**

The government appointed the CHSRF to administer the \$25-million NRF. This program evaluation has assessed how the monies have been spent and whether the NRF programs have met the targets set out in the original agreement between the government and the CHSRF.

While the NRF has been used to cover the direct costs associated with the programs, it has also covered annual overhead costs such as

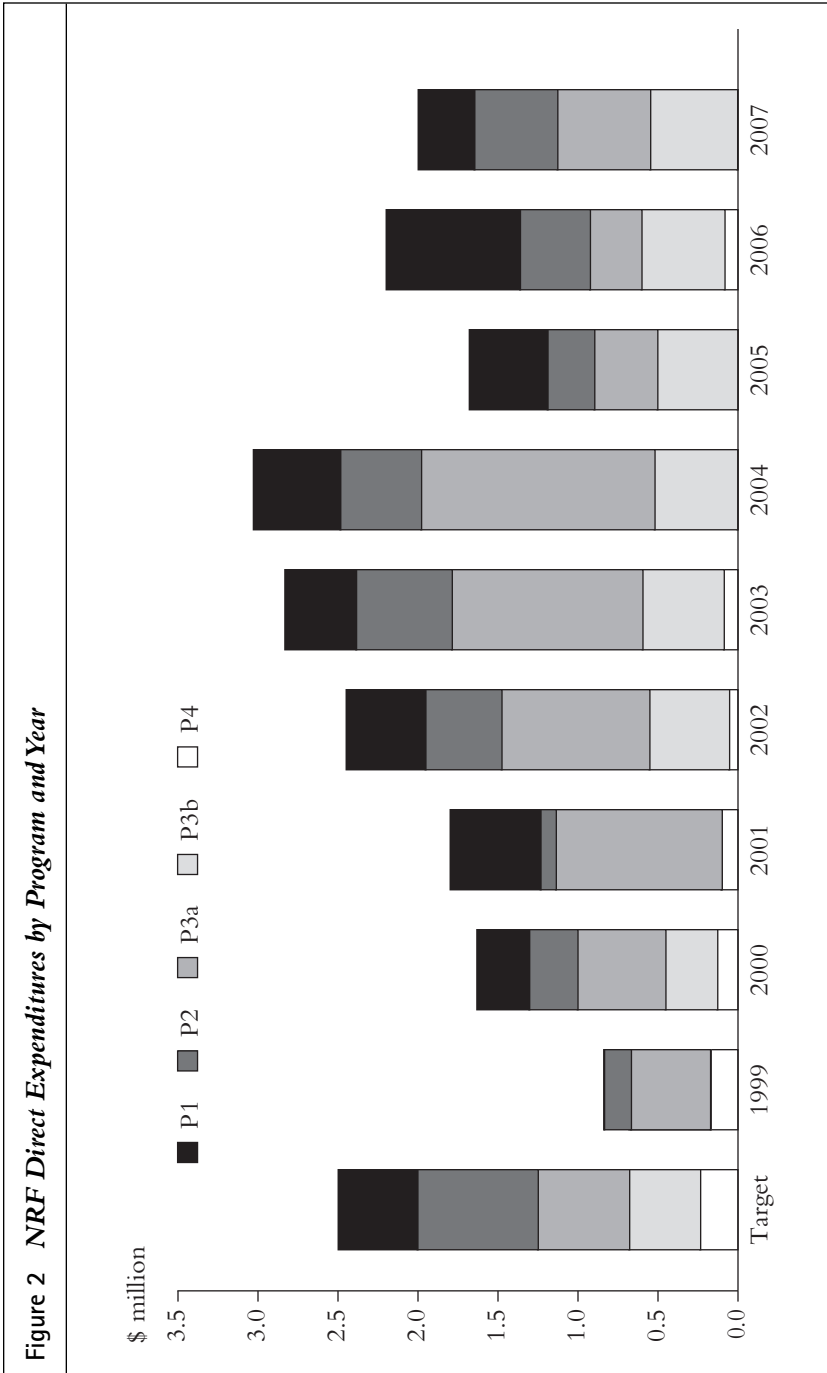
CHSRF salaries related to the administration of the programs. The investment portfolio of the NRF has included annual investment management fees and investment-related income. Excluding the start-up year (1999), the average annual breakdown of all NRF funds has been just under \$3 million (CHSRF, 2007b). Over the course of the decade, an average of 72.4% of NRF funds has been allocated to the four programs, while 25.8% and 1.8% have been associated with overhead costs and investment management fees, respectively.

The amount remaining in the original NRF endowment can be more accurately calculated by combining the endowment (\$25 million) and the generated investment income and then subtracting the total expenditure (including program direct costs, overhead costs, and investment management fees). This reveals that the CHSRF is indeed on target, with just over \$5 million remaining for the final 2 years (2008 and 2009) of the agreement (CHSRF, 2007b).

Figure 2 breaks down the annual allocation of approximately \$2.5 million among the various programs for the period 1999 to 2006 (with estimated figures for 2007) (CHSRF, 2007b), with the target allocation reported in the leftmost column. Although it appears that the NRF has been under-spent in all years except 2003 and 2004, for which overhead costs and investment income are included, the average annual allocation of NRF funds has been within the target range of \$2.5 million.

## **Discussion**

The NRF has been most successful in building research capacity (objective 1), increasing nursing research output (objective 2), and bridging the gap between researchers and users of research (objective 5). The objectives with the widest gaps are building utilization capacity (objective 3) and increasing utilization (objective 4). There are two plausible reasons why gaps remain. First, it is very difficult to assess activities associated with these particular objectives given the small timeframe allotted to this evaluation. Specific research projects funded through the NRF need to be followed before the impact of the findings on the nursing community can be assessed. Without sufficient time to access decision-makers and evaluate the nursing environment prior to the inception of the NRF, it is difficult to accurately measure the achievement of these objectives. Second, awareness of the NRF appears to be greater within the academic community than among decision-makers and nurses in the field. This is likely due to the fact that the CHSRF is the administering agency, and researchers are more likely than decision-makers to participate in CHSRF programs. There has been more awareness of and participation in activities associated with objectives 1 and 2 (i.e., *supply* of





research) than those associated with objectives 3 and 4 (i.e., *use of research*). The CHSRF itself has acknowledged that there is a need for enhanced receptor capacity in nursing research, claiming that most efforts in program development are concentrated on “pushing” relevant evidence from researchers to decision-makers, as opposed to decision-makers “pulling” evidence from the research community (Ellis, 2007). Still, the CHSRF has also contributed significantly to nursing research from its own endowment, which has helped in the achievement of these more elusive objectives.

### **Limitations**

Limitations of this evaluation should be noted. Information gaps were observed between financial records and annual reports. For the years 1999 to 2003, only certain sections of annual reports were made available to the evaluation team. From 2003 onwards, summaries of expenditures and activities received from the CHSRF typically did not match the reports. As well, this evaluation was limited in its ability to truly define the value added by the NRF vis-à-vis other research investments. Evaluation of how research funds have been spent in other research areas would provide insight into whether the NRF has been effective relative to other funding sources. However, given the small timeframe, comparison of nursing research investments and outcomes with those in other research fields was beyond the scope of this evaluation.

### **Conclusion and Recommendations**

The Nursing Research Fund has been largely successful in meeting its objectives through a variety of programs. Gaps remain in transferring nursing research to useful and effective practice and policy-making. A review of the state of nursing research currently underway (Jeans, 2007) shows that funding for nursing-related research in Canada by organizations other than the CHSRF was on the rise between 2000 and 2005 but is now on the decline. This suggests that although there was an initial drive to increase nursing research funding from organizations other than the CHSRF, the momentum has been lost. The shortage of nursing faculty in Canadian universities is also a consideration, as nursing professors often do not have the time to conduct research due to their heavy teaching loads. In a national survey of Canadian nursing programs, 60% of schools reported that they did not have sufficient faculty to teach and supervise students in clinical settings (Pringle, Green, & Johnson, 2004). Given the relative success of the NRF, the current state of nursing research, and the shortage of nursing researchers in Canada, continued funding for research, perhaps in the form of a second phase of the NRF,

is recommended. Nursing stakeholders interviewed as part of this evaluation had varying perspectives on relevant topics for the next phase of the NRF. Stakeholder engagement in the setting of priorities is warranted if the Canadian government renews its investment in nursing research.

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### Authors' Note

Funding for this project was provided by the Canadian Health Services Research Foundation (CHSRF). The authors would like to thank Wanrudee Isaranuwatjai and Jenny Korolik for their valuable assistance,

as well as CHSRF staff, who provided documentation and facilitated site visits.

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*CJNR is indebted to the persons below who served as reviewers for Volume 40. They gave generously of their time and shared their knowledge, and in so doing have contributed greatly to the editorial process and to the development of nursing knowledge.*

*CJNR est reconnaissante envers les personnes ci-dessous nommées pour avoir révisé son volume 40. Ces personnes ont généreusement donné de leur temps et ont partagé leur savoir. Ce faisant, elles ont largement contribué au processus éditorial et au développement des connaissances en sciences infirmières.*

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