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Renewing Perspectives on Men's Prostate Cancer Literacy and Engagement Along the Disease Continuum

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1. Introduction

In this chapter, we intend to familiarize readers with the complex scope of the experience of being a man with prostate cancer in current societies and dealing with scientific and popular health knowledge related to prostate cancer. We discuss issues of taking care of one's male body, being an older learner learning while facing a chronic degenerative disease, as well as the questions that social and health care professionals may encounter from men in providing meaningful health care. The provision of health care to men seems controversial, due to the lack of national policies on men's health in most countries as well as scarcity of men's health promotion programs in multicultural societies.

This chapter presents a brief overview of the state of knowledge about masculinities and gender, health literacy, and age – all major social determinants of health for men. The authors of each section present scientific knowledge produced in their qualitative research to contextualize other scholars' ideas and arguments. At the end of each section are clinical vignettes and reflection questions related to the contents of each section.

2. Men, masculinities, health and prostate cancer: Complex technology, body control, and decision making

In this section we address the issue of control that may coexist with other needs facing men, from prostate cancer detection through rehabilitation. Being in control relates to both the social enactments of masculinities and to how men understand current trends in health and technology. Control has been discussed as an important signifier of virility in different

cultural contexts (Almeida, 1996; Bourdieu, 2001) and as a factor in men's perception of their bodies and assessment of the emotional and physiological care they receive. For men, losing control is seen as a negative experience, which may lead to negative experiences of preventative methods or care (Courtenay, 2000). Control is also a powerful metaphor for how current medicine, through increasingly technological interventions in the body, is being shaped by technoscience (Clarke et al., 2003; Steinberg, 1997). This "virile" [our emphasis] biomedical agenda should be tempered by attention to what some call "subjective variables," which we call "social or cultural factors". These factors include how men experience different types of masculinities and how these experiences and values inform men's attitudes toward health (Zanchetta et al., 2010). Social/cultural factors are relevant to every aspect of health and disease, and taking them into account will open professionals' perception to the complexity and richness of gender-related experiences of health practices.

2.1 Control in men's studies

The issue of control in the context of men's health is rooted in the upsurge of so-called men's studies in international academic literature, an upsurge that followed debates about gender in what is now known as the second wave of feminism (Butler, 1990; Scott, 1989). Men's studies tried to consider seriously the feminist claim that gender was not only about women, but should involve a close analysis of the relationships between genders. In addition, power relations emerged as a concomitant issue in debates about control. Such relations were not only analyzed in terms of how men relate to women, but also how men relate among themselves, and any claims that biology determined gender practices and power relations were to be vigorously denied. Gender was to be seen as socially constructed, not necessarily derivative of one's biological make-up. Men's studies scholars believed gender relationships are pervasive in our understanding of the world and that, therefore, our practices are deeply influenced by gendered understandings (Courtenay, 2000; Monteiro, 2000, 2001).

Studies of masculinities or men's studies became an important, separate subfield in the early 1980s and 1990s, especially in North America, Western Europe, and Australia (Carrigan et al., 1985; Cornwall & Lindisfarne, 1994; Gilmore, 1990; Kimmel, 1987). Masculinity was then increasingly incorporated into critical discourse on gender and power, instead of being an unquestioned universal category within discourse, culture, and politics (Monteiro, 2000). Authors began to discuss the unequal distribution of power between men and women, and among men themselves. The idea of hegemonic masculinities (Connell, 1995) became central to studies of masculinities, for example, because it enabled both deconstruction of masculinity as a uniform category that could be applied to all men and a discussion of power inequalities that affected men. Without construing men as merely victims of social expectations, these discussions opened up talk about plural masculinities in the study of men.

2.2 Masculinity, health, and prostate cancer

When discussing diversity among men, it then became important to address the challenges involved in becoming a man. Different masculinities are not purely biological or self-evident; they emerge in a process that is at the same time social, cultural, historical, etc. With the process of becoming a man seen as a process of men incorporating certain expectations, social roles, and practices (Bourdieu, 1997, 2001), masculinities can then be seen as also problematic, complex, and sometimes burdensome to men and their health. When men are

viewed as a diverse group, with some men having better access to social prestige and power than other men and women, dynamics of gender and gender inequality become clearer and richer. Also, viewing men as diverse enables exploration of links between gender dynamics and health, a research agenda in progress.

Researchers pursuing this agenda has begun to explore the close relationships between masculinities and health (Courtenay, 2000), in the sense that gender perceptions and gender-related differences aid in explaining differences in health risks, and how health practices play a role in gender differences. Taking care of oneself, for example, might be considered effeminate in some contexts, leading to higher incidence of easily preventable diseases. When men embody masculinities that promote risky behavior as proof of virility, sexual conquests or failure to use condoms may put men (and their sexual partners) at higher risk for sexually transmitted diseases. In the case of prostate cancer, both the fear of bodily fragility (before and after treatment) and a masculinity that discourages care may be relevant to understanding how men experience their bodies and diseases (Mahalik et al., 2007).

Lohan (2007) suggests that, rather than focusing on men's studies and concepts such as hegemonic masculinities, researchers should embrace critical studies on men, a research area more attuned to feminist critiques of gender and power relations in society, in order to assess which factors explain how gender and health connect. Critical studies on men not only incorporate culture and behavior, but contextualize discussions of men's health in a wider explanatory framework including psychological, biological, and other factors. This context can be relevant to increasingly technological health interventions that regard differences (such as race and gender) in different terms than traditional health interventions. As biological difference becomes understood in genetic terms, for example, and as health research incorporates these advances in genetics, researchers of men's health will need to rethink how health, biology, and bodily differences are being lived in real life by men.

Men's experiences with health and prostate cancer should not be understood in a merely cultural register, however. Although cultural factors, such as the idea of "men don't cry" [our emphasis], are very important in understanding how men experience prostate cancer and care (Chapple & Ziebland, 2002), embodied factors, such as side effects of surgical and other interventions, reduce men's sense of their own virility (Chapple & Ziebland, 2002). Understanding embodied factors demands an understanding of masculinities that goes beyond social construction and embraces the complex interaction of many factors. Masculinities contradict each other, vary locally and nationally, and comprise complex hierarchies, for example (Connell & Messerschmidt, 2005; Wall & Kristjanson, 2005). They are also deeply infused with technology in varied contexts (Mellstrom, 2004).

2.3 Control in men's health-related experiences

Men's need and search for control, and attempts to be in control, suggest avenues to understanding the context for possible associations of cultural, embodied, and technological factors in men's experiences with prostate cancer. Such complex associations, because they help to constitute men's emotional and embodied experiences with disease and gender, may be crucial to understanding how men experience disease and recovery differently and thus how successful prevention and treatment can be. Control is multifaceted for men: Control over one's body and its diseases; control over other men, over women, over one's feelings, and over the public sphere, are some examples. As part of performing masculinities successfully, men generally avoid situations where they may lose control. Such situations

may include preventive care and other actions that may improve health or prospects for survival (Kimmel, 1995; Lohan, 2007). Control is also at stake in current medical interventions, where advances in genetics, nanotechnology and other fields potentially enable control over every bodily process (Channel, 1991; Hogle, 2005). Proponents of this “virile” [our emphasis] approach to health and disease, we argue, need to pay attention to the complexity of men’s lived experiences and gender differences in order to enhance the approach’s effectiveness.

2.4 Control and the delivery of health care

Control is a general trend in how health and disease are being tackled by modern, techno-scientific medicine. The trend, called “bio-medicalization” (Clarke et al., 2003) describes how techno-science is becoming the dominant framework through which the concepts of health and the body are understood, as well as how health interventions are researched and used (Hogle, 2005; Lenoir, 2002a; Lenoir, 2002b). Bio-medicalization frames many health-related actions, from how we perceive the body visually, to the increasing use of technologies that make body interiors available for display and intervention (Taylor, 2005; Van Dijck, 2005), to ways of designing bodily interventions that are increasingly mediated by technology (Lenoir, 2004). This trend toward the incorporation of technology in health is increasingly evident as genetics becomes a dominant language to describe and understand diseases, including diabetes (Hedgecoe, 2002), cancer (Chung et al., 2002; Fujimura, 1996; Monteiro, 2009), and many others (Fullwiley, 2007). Not only has prostate cancer begun to be reinterpreted as a genetic disease, along with cancer in general, but the search is ongoing for genes to classify prostate cancer, diagnose it early, and refine surgical interventions (Shen & Abate-Shen, 2010). As prostate cancer becomes “molecularized” (Monteiro, 2009), its amenability to intervention is also transforming (Monteiro, 2011).

With a new, biomedical and techno-scientific approach to health and disease, control over bodily processes has been sought in ways unimaginable in the past. From increasingly precise interventions in the body, to the search for genes that would enable early diagnosis and even modeling of future behavior (Monteiro & Keating, 2009), control is at the center of how health is understood and practiced today. This effort to control bodily processes through increasingly sophisticated technology may, however, ignore the particularities of gender and masculinities, as discussed above. Nonetheless, an approach to prostate cancer that relies increasingly on techno-science to classify, diagnose, and surgically intervene can offer exciting new ways to approach the disease. Improving outcomes and enabling new methods for treatment and diagnosis will hopefully help circumvent some of the barriers towards self-care present in traditional masculinities, which usually see self-care as contrary to an ideal of the male body as impenetrable. New genetic tests could replace existing methods for examining the prostate, which many men find invasive. Establishing molecular bio-markers for prostate cancer that could reliably establish risk for the disease, for example, may enable early diagnosis, early treatment, and higher survival rates. Bio-markers would avoid, for example, uncomfortable examinations and unreliable prostate-specific-antigen (PSA) tests. However, an assumption of technological progress overlooks the many pitfalls such technology-based treatments could face. For instance, given discussion on the centrality of socio-cultural factors in explaining how men relate to their bodies and to health, it is not certain whether men will accept the idea of knowing in advance their risks for cancer. They may fear of loss of control over their health or fear becoming cancer “patients in waiting” at an early age before any cancer symptoms appear (Rajan, 2006). Mere

knowledge that one carries genes that make one susceptible to cancer does not necessarily lead men to adopt preventive behavior. Indeed, it is clear that men avoid such behavior due to social expectations (Mahalik et al., 2007). Also, risks inherent in currently available prostate-cancer treatments are problematic for many men, in spite of any other considerations relating to their knowledge about preventing and monitoring cancer (Chapple & Ziebland, 2002).

When powerful trends to reinterpret health and disease in terms of new technologies (genetic or otherwise) dominate, researchers run the risk of ignoring the rich debate over socio-cultural factors that affect gender and health/disease. Although new technologies offer wonderful prospects for diagnosis and treatment, social factors such as gender, behavior, and culture should not be underestimated in terms of their contributions to understanding health and risk behaviors. Control, an attribute of hegemonic masculinity, is often associated with science and technology (two very male-dominated fields in some respects). This traditionally Western logic should be enriched with an understanding of how culture, society, and history explain health, disease, and treatment.

This debate about control, genetics, and technology is meaningful to social and health professionals who care for and advise men and their significant others throughout the prostate-cancer trajectory. Professionals should reflect on their beliefs about masculinity and prostate cancer, and their professional practice. Knowing that control is central to many men's experiences of masculinity, professionals should take a cautionary approach when presenting decision aids and discussing options about which they ask men to make immediate decisions. Caution is recommended mainly when men make decisions without professional guidance, because men may postpone reflection in favor of taking immediate action, thereby trying to demonstrate autonomy and willingness to decide. Men have been highly influenced by medicalization of erectile dysfunction in advertising for sexual-performance-enhancing drugs, advertising that focuses on the social importance of erections to virility. Therefore, professionals need to expand their understanding of the values and meaning that men attribute to diseases that threaten their sense of masculinity, and therefore their sexual and emotional health.

2.5 Informing professional practice

Knowledge of multiple aspects of culture, society, and history is important to help social and health professionals decode behavior expected of men as engaged partners in their own treatment and rehabilitation. Societies are becoming more and more multicultural, giving men opportunities to learn new meanings of being a man, and new attitudes to men's health, men's self-care, men's sexuality, and facts and myths related to prostate cancer (Zanchetta et al., 2010). For professionals, it is difficult to gather scientific evidence on men's behaviors, due to men's resistance to participating in clinical and behavioral studies (Deslauriers & Deslauriers, 2010). Again, gender-related discourse and perceived lack of control over data-collection encounters may affect men's participation in studies. To counteract resistance, researchers recommend allowing men to feel in control of their disclosure of personal information, such as feelings, fears, disagreeable symptoms, threatening thoughts, and awareness of uncertainties (Deslauriers & Deslauriers, 2010). Such research fieldwork strategies may also be helpful for assessment and follow-up interviews in clinical contexts, where professionals can use a conversational style with men, instead of a professional authoritative style of asking direct and probing questions. Despite a culturally and socially constructed trend of men being attracted to technology (Lerman et al., 2003;

Mellstrom, 2004) and technological advances in prostate-cancer-risk identification, early detection, treatment, and rehabilitation, men still perceive that technological interventions reduce their capacity to control the responses of their bodies and emotions to such interventions (Chapple & Ziebland, 2002).

Widespread public access to prostate cancer information in popular and scientific media has uncovered current discourse surrounding uncertainty about prostate cancer among researchers and health care professionals. Certainly, men are less likely to trust the health care system's assurance that current technologies are helpful and to rely on information from health care professionals in their decision making. Regardless of men's personal level of education and health literacy, they should be supported in enhancing their ability to perceive and differentiate levels of risk when making informed decisions about treatments. Gender-related experiences are, again, important to consider in the clinical context, because men's health experiences tend not to be solitary. Men's experiences are, instead, influenced by the roles of women (mothers, wives, partners, daughters, nieces, aunts, etc.) and other caring figures (fathers, same-sex partners, coaches, etc.) in their lives. Together, caring figures influence men's decisions to seek medical help, adhere to treatments, and most important, transcend the limitations and changes imposed by prostate cancer. Such a collective view of men's health experiences challenges current organizational policies requiring that personal information remain private and neglects the social and cultural fact that men are human beings, who (in less publicly demonstrative ways than women) are influenced by intimate others in seeking health and well being (Zanchetta et al., 2010).

2.6 Reflecting on control in men's experiences with prostate cancer screening

Below are some true stories with fictitious names as clinical vignettes and reflection questions to help readers identify control as a key concept in men's experience of prostate cancer and reflect on how control plays out in clinical practice. No answers are provided, because we want to stimulate readers' recall of their own experience so that they can construct appropriate answers to the reflection questions.

2.6.1 Clinical vignettes

- John, a 56-year-old accountant, was urged by his wife to get screened for prostate cancer. After months of postponing his decision, he agrees to make an appointment for an annual physical. During the history taking, he tells the doctor that he feels fine and does not understand why he should have a physical. John says, "If it isn't broken, why fix it?"
- Charles, a 50-year-old engineer, comes to the clinic for his annual physical and discusses prostate screening with his family doctor. They discuss the merits of DRE versus PSA testing. His doctor explains both screening tests. Charles is reluctant to have a DRE test, given the invasive nature of the procedure. In spite of the information his doctor provides about the limited sensitivity and specificity of the PSA test, Charles decided to have the PSA test done, because he believes that it will be less invasive than the DRE test.
- Silvio, a 50-year-old computer designer, is a newcomer to Canada who speaks and understands English at an intermediate level. After arriving, he looked for a family doctor to monitor a recurrent inflammation in his prostate as well as have his annual PSA test. Due to pain and urinary troubles, the doctor ordered an abdominal

ultrasound. Silvio remembers that he barely understood his doctor's explanations about the ultrasound. He had it in a hospital without any problems but is worried about the presence of blood in his urine for the last 5 days, which he does not understand. He believes that the doctor "saw something" during the ultrasound. He feels lost, with no clues about his situation and really wants to do something about that. Unfortunately, he must wait three to four weeks for a follow-up medical consultation.

2.6.2 Questions

- Why is control important when it comes to men's health?
- What strategies could health care professionals consider that might promote men's empowerment as active participants in planning preventative health actions for prostate cancer and its treatment?
- What barriers might contribute to men feeling a loss of control over early detection of prostate cancer?

3. A contemporary view of educating elders for health: Insights for educational practice in clinical and community settings

This section focuses on the relationship between older people and health education, as it relates to men with prostate cancer. Men's knowledge and understanding of learning about health, both in a biomedical and socio-cultural sense, is essential during the prostate cancer trajectory. Davis et al. (2008) discuss the importance for health care professionals of recognizing factors that contribute to elder's low health literacy, which may be increasing. Health literacy is a central to successful communication between health care professionals and elderly patients. It is not only essential for elderly patients to be equipped with appropriate knowledge of the disease process so as to be actively involved in their care, but health education must support patients to become more autonomous. Education for empowerment, as pioneered by Paulo Freire, requires a health education process centered in dialog between educators and learners (Wallerstein & Bernstein, 1988). Educating today's older people about cancer requires new educational strategies, particularly new education technologies that simplify complex cancer information and facilitate learning. Older people are active users of computers and the internet; misconceptions to the contrary must not shape health care professionals' beliefs about older people's ability to learn about their health (Alpay et al., 2004).

3.1 Older patients' acquisition of formative learning

A discussion involving knowledge and learning implies talking about "alphabetization" and literacy, or even about various literacy levels and literacy backgrounds. Traditionally, literacy was defined in general terms but, currently, we tend to differentiate among a range of literacy concepts. The new term "alphabetization" belongs to the old literacy paradigm in which we assessed individuals in terms of their ability to read, write, and use numbers. The goal was to rank individuals according to their literacy level, what we now call the "degree of alphabetization." Today, some literacy researchers work within a new literacy paradigm: as a social practice reflecting the literacy background of the person (Barton et al., 1998, 2000). Kaszap and Clerc (2008) clarify both alphabetization and literacy concepts and suggest how to use them.

The degree of *health alphabetization* may indicate – at a specific time in one's life – competence in searching for, identifying, collecting, understanding, critiquing, and interpreting health information. This information is used to create and communicate messages about one's health status, to make choices in preventing disease, to recover or preserve health, to solve problems related to one's health using language (written, oral, visual, audible, tactile, etc.) in a variety of contexts in day-to-day life (at the world, community, school, and individual levels). Health alphabetization can frequently be measured by tests, and other reporting and self-appraisal methods. On the other hand, the concept of *health literacy* comprises several assets (translation of Kaszap & Clerc, 2008, as cited in Kaszap & Zanchetta, 2009). First, it sums all health information acquired from family, school, social, cultural, and professional sources (formal and informal) during a continuous, gradual learning process. Second, it sums all the values, beliefs, fears, habits, attitudes, and behaviors that each person holds in all the aspects of life related to health. Third, health literacy comprises one's specific background: (a) health culture and health knowledge, (b) the type of health education to which one was exposed, individual's attitudes, behaviours, and feelings, values and beliefs; (c) practices in searching for health information, reading and decoding it, and communicating it (in oral or written form), and (d) using numerical information and health information to solve health problems in everyday life. Seen from the above-described point of view, measurement of health literacy is neither feasible nor possible. However, it is a state, or even a set of personal practices, that can be described more or less accurately. Seen this way, health literacy can be more or less broad, more or less adequate – or inadequate – for a situation or a context. Zanchetta (2002) describes the origin of men's prostate cancer literacy as follows:

All men reported that during childhood, school and family constituted the sources of available health information during the formation of their informational background on health matters. Health information in childhood was synonymous with consuming healthy food, having good hygiene, and receiving vaccinations at school. (p. 191)

Men's learning experiences with prostate cancer build on lifelong learning about health and its incorporation into daily life. Zanchetta (2002) proposes a definition of health literacy about prostate cancer based on survivors' experiences:

Older men live and deal with health information through the handling of the imprints of their beliefs, and representations, as well as life, learning, and illness experience. For this, a supportive environment is primordial to enable them to regain the sense of illness, the decision-making power upon one's body and destiny, as well as to redefine the social roles by reconstructing partnerships with the social and informational network. (p. 294)

The definition above shows that the construction of health literacy is multidimensional and involves social factors, such as life stories, cumulative experience, social learning, autonomy, and social interactions. Seminal studies have demonstrated a strong relationship between low literacy and poor health (Brown et al., 1993; Davis et al., 1991; Francis, 1991; Mayeaux et al., 1996; Weiss et al., 1992, 1994; Weiss & Coyne, 1997) and proposed health literacy as a new social determinant of health (Rootman et al., 2007; Zanchetta et al., 2011). Therefore, we suggest that inadequate health literacy may impede other social determinants of health, which in turn may worsen one's ability to use health information in making decisions.

Considering the above-mentioned factors, we propose a conceptual framework (Figure 1) that shows alphabetization as an integral part of health literacy, within the social determinants of health. Together with a supportive environment, health literacy may influence individuals' response to particular health situations and contexts as well as their awareness of existing resources and ways to accessing them. Perlow (2010) reports that low health literacy has major

impacts on health disparities and adverse health outcomes throughout the lifespan, including hospitalization, chronic disease, and higher health care costs.

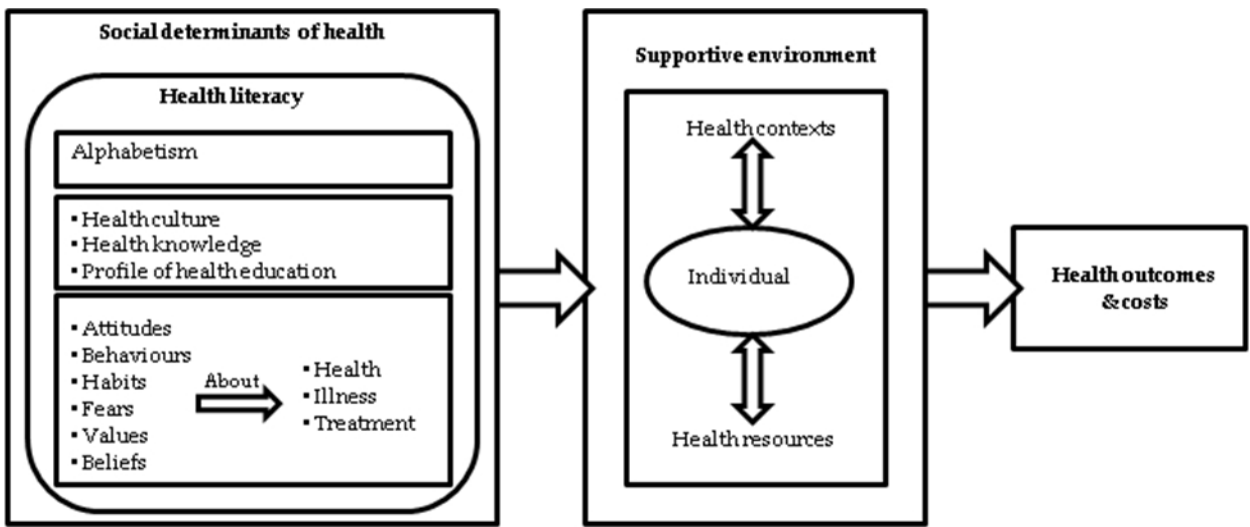


Fig. 1. The health literacy conceptual framework

With the growing elderly population in developed and developing countries, health costs (financial, human, material, physical, emotional, etc.) are anticipated to grow. The emerging worldwide movement of supporting patients to be autonomous, aware partners in health care is also leading education and health professionals to rethink the role of health educators. To promote health literacy, health educators are facing demands to renew and expand their toolboxes of educational aids and to adopt teaching innovations to sustain the mobilization of learning potential among older patients. The next section presents some considerations for health educators to think about.

3.2 Strategies in health education

Over time, health education has been done mostly in a traditional way by health professionals, according to health curricula. In this approach, information is given on disease, and treatments are explained in a “you have to” way. This approach is basically one-way knowledge transmission, from professionals to patients and not vice versa. Using this traditional approach, professionals scarcely have time to learn what health literacy patients already have. Patients do not have time to discuss their fears, values, and conceptions. The traditional approach to health education has brought with it serious problems. For example, recent research tells us that inadequate literacy often reveals misconceptions about different aspects of health, such as patient’s erroneous understanding of how a body change in enduring diseases, long term effects of drugs or other treatments (Buston & Wood, 2000; Kaszap et al., 2000, 2006), and false beliefs about popular treatments (e.g., magical peas or liniments) with supposedly spectacular effects on blood pressure (Kaszap et al., 2000). With older men, health educators should take such health-related misconceptions and false beliefs into account and propose new strategies for health education.

Health education should not merely be transmission of information, because recipients of transmitted information may filter it through faulty premises; for example, misconceptions about bodies, health, and treatments and false beliefs about natural

products that supposedly have miraculous effects on various diseases. Before delivering health information, health professionals should seek to understand the literacy backgrounds of older men: what they know, their beliefs, fears, habits, conceptions, and behaviors concerning their health, illness, medications, and treatments. Torres et al. (2008) reveal the importance of such exploration to understand and address the deeply rooted web of ideology, norms, and practices that influence health decision making and behavioral responses. Kruger et al. (2007) argue that professionals must ask elders questions about their functional and emotional health status. Health professionals should understand older men's "supportive environments" (Zanchetta, 2002, p. 294), comprising their families and their social and information networks. Without this baseline information about older men, health professionals will not be able to teach them appropriately, to enhance their understanding of diseases and treatment, to persuade them to follow medication and treatment regimes, or to prepare them to choose among treatment options (Kaszap & Drolet, 2009).

Transmitting information does not imply that its recipients agree with it and will immediately act upon it. New knowledge needs to be constructed. Knowledge construction means, therefore that, when new knowledge is offered, it needs to be discussed, even challenged, before it can be accepted and integrated in an individual's own existing knowledge system. Construction of health-related knowledge requires time, but taking this time will save time and money in the long run: time lost in repeated explanations, time and money lost in preventable hospitalization and preventable health deterioration. Moon (2011) explains that elder experience transformative learning with success but as a process which takes time and need support. Knowledge construction happens within relationships between older individuals and health professionals when professionals explore with elders their health backgrounds – their values, beliefs, fears, habits, attitudes, conceptions, and behaviors; and when professionals respect each patient's learning style: their individual ways of listening, asking questions and answering them. Knowledge construction also happens when explanations are meaningful (neither too technical nor childish) and use appropriate terminology, examples, or visual aids, such as photos and drawings. Concomitantly, lack of trust in relationships between health professionals and older individuals may jeopardize their engagement in teaching-learning initiatives, due their fear of disclosing personal information about their health problems (Kaszap & Drolet, 2009). Professionals need to find out about older men's misconceptions and false beliefs by asking questions about their health, illness, and treatment. By 'misconceptions', we mean erroneous explanations from erroneous understandings. By 'false beliefs', we mean beliefs based on superstitions and popular knowledge, not on scientific proof. All together, they are erroneous premises. These erroneous premises should be challenged and deconstructed prior to proposing new knowledge. Deconstructing knowledge means that professionals need to ask questions about an older man's conceptions or beliefs to be able to understand why the older man thinks the way he does. Where did he get that explanation? Then professionals need to start a dialog about both sides of the argument and give examples and explanations based on scientific knowledge. Professionals need to drive the discussion in a way that older men will adopt the scientific position because, when older people do not properly understand their disease and the needed treatments, when they are not adhering with their treatments or medication, they become severely ill and need to be hospitalized.

3.3 Evolution from existing to new educational technologies

Despite well documented challenges in educational initiatives with older learners, some researchers interested in promoting older learners’ health literacy are incorporating new technological tools into health teaching to enhance learning. Most older individuals are willing to learn about new technology, even to use and master it, especially if they are under 80 years old and in good mental health (Kaszap et al., 2002; Gil-Gómez et al., 2011; Jensen et al., 2010; Mackert et al., 2009; Saposnik et al., 2010; Wallington, 2008). It seems to be just a matter of having help in learning how to use new technology and having enough time to understand and practice it. Kaszap et al. (2000), in a study exploring the experiences of rural and urban older individuals with various technologies, documented elders’ preference for information-gathering contexts (see Figure 2). They preferred private contexts (such as a visit to a professional’s office) for gathering information on personal matters and group

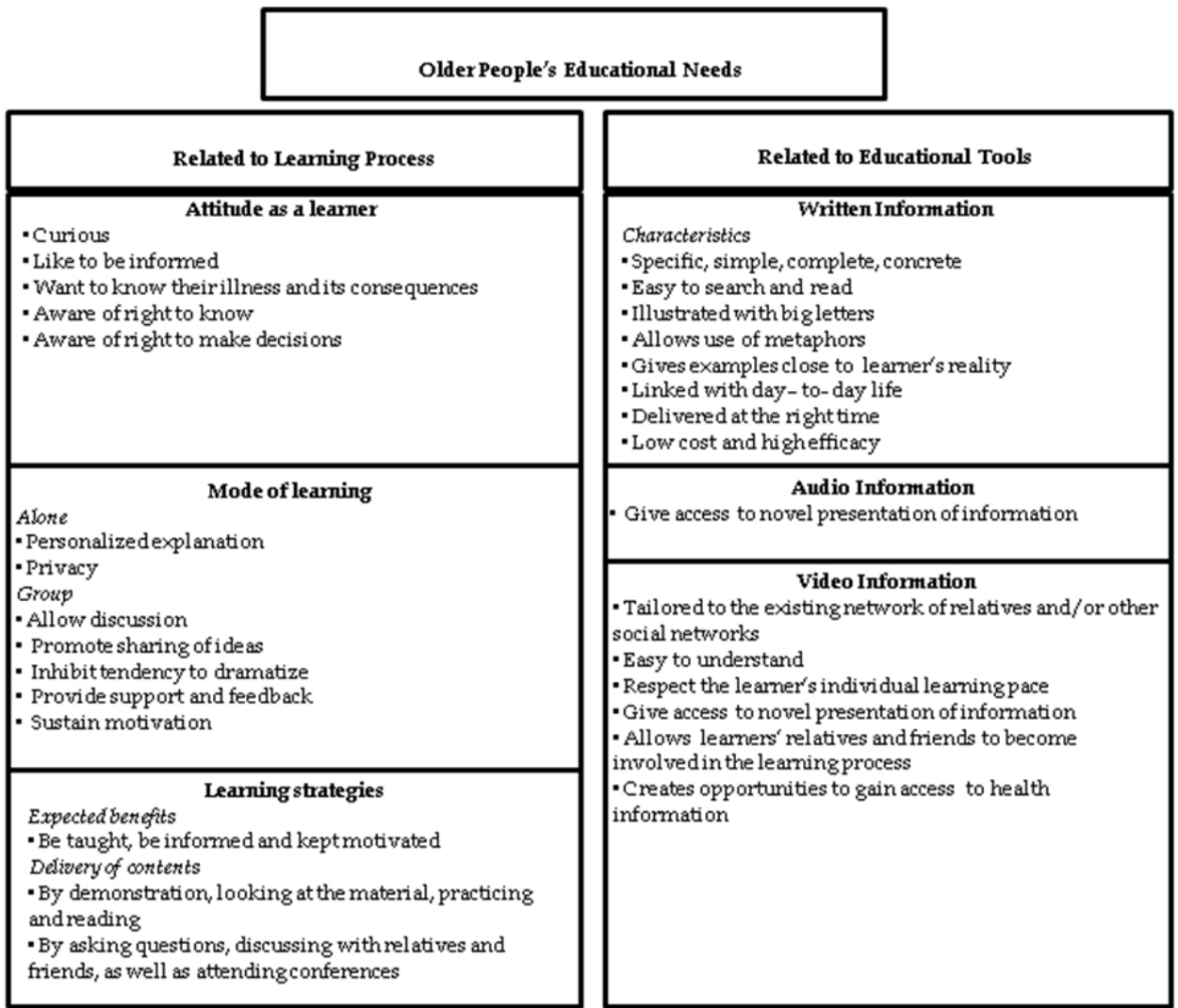


Fig. 2. Older individuals’ views on different aspects of health learning contexts (among relatives and friends, even strangers) for gathering general information about health, illness, and treatment, because belonging to a group allows discussion, idea sharing, support, and maintains motivation for continuous learning. Golding (2011) reports

that older men in community settings learn when education is social, local, practical, situated, and in groups, particularly isolated men. Prins et al. (2009) argue that social interactions are needed to support elders, and Bergsma (2004) adds that personal and social change are possible through empowerment education.

In libraries nowadays, it is common to see elders looking for information on the Web, writing emails, or chatting on Skype. Community initiatives to develop computer literacy among older learners are undoubtedly opening new avenues for learning about health, for both already and newly computer-literate elders. Twenty-first century elders are becoming more familiar with technologies such as cell phones, videos, and computers. Even interactive video games (Nintendo Wii and Wii balance board) have been introduced to older patients for curative and rehabilitation purposes (Gil-Gómez et al., 2011; Saposnik et al., 2010). Elders are open to, and like, new experiences in the context of playing and exercising in rehabilitation and homecare settings. In the news, we see older people bowling via Wii to improve their balance after surgery and using Wii-based yoga and light exercise to regain vitality after hospitalization. Technological possibilities now exist that encourage elders to access information and take care of themselves in a variety of contexts. Health educators should support them through teaching older people to make use of these new opportunities for learning about health, illness, and treatments. Along with face-to-face discussion, virtual chatting can enhance older people's lives, despite any health conditions.

3.4 Rethinking prostate cancer and prostate health education

To prevent prostate cancer and deal with the disease throughout its trajectory, both prostate cancer information and prostate cancer literacy are important. The complexity of scientific knowledge make prostate cancer education with men of all ages and education levels a real challenge, in particular with older men having low degrees of alphabetization, whose social and information networks are crucial supports for decision making (Zanchetta, 2002). According to Kaszap and Drolet (2009), health literacy appraisal should explore a person's ability to acknowledge his/her own prior knowledge, current fears, beliefs, values, misconceptions, attitudes, habits, and behaviours – all of which build the foundation for constructing new knowledge. Innovations in clinical practice will certainly be needed to reveal the dynamic relationships between health knowledge, health literacy, the internet as a source of health information along with professional guidance (Jensen et al., 2010), especially for older people who are hard to reach (Macker et al., 2009), and the advantages of other technology used in rehabilitation and prostate cancer education. Levasseur and Carrier (2010) stress that rehabilitation and health literacy share goals: both see as important individuals' overall capacities for self-care, enhancing functioning, facilitating individuals' participation in their own health care, client-centered care, and equity in access to services, for example. Inspired by Zanchetta (2002) and knowledge construction theories (Jonnaert, 2009), education about prostate health can be expanded to include all men, regardless of their conceptual and experiential knowledge.

Older individuals may actively participate in transformative learning initiatives if time and supportive social interactions to foster learning are available to them (Moon, 2011; Prins et al., 2009). Support can include helping older individuals understand how to find information on the internet and how to mobilize a supportive network of groups or individuals in the community (Wallington, 2008). Health educators should use age-specific tools and elder-client-centered instructions to promote older people's health literacy (Morrow et al., 2007). Educational materials should be prepared for specific purposes and complex information

delivered in forms other than writing (Roberts & Partridge, 2011), such as story telling (Wilkin & Ball-Rokeach, 2006). Discussions should use common terminology and repeat contents taught through learner-teach-back techniques. Professionals should apply medical information to topics familiar to elders (Prasauskas & Spoo, 2006), for which professionals need to understand older patients' literacy backgrounds. No more than four essential points should be provided at a time, with any written information reflecting learners' colloquial language, framed by learners' own health culture, and stating expected health behaviors (Prasauskas & Spoo, 2006).

It may take time for health professionals to learn about each elder's fears, beliefs, habits, behaviours, and conceptions of health before it is possible to discuss disease and their treatment (Orel et al., 2005). However, learning older men's communication styles and literacy backgrounds will help professionals to begin talking about prostate cancer treatment and to gain clients' trust, without inspiring too much fear. Health professionals should let older men absorb the fact that they have prostate cancer before discussing solutions – absorbing such information also takes time. The educational process should occur in several steps; otherwise it will be perceived as challenging older men's sense of masculinity. Such caution in communication is particularly relevant for physicians, who are advised to inquire, in all consultations, about older men's functional and emotional health status (Kruger et al., 2007). Finally, it is important that older men themselves examine their assumptions (about, for example, masculinity) before constructing new knowledge and accept the need to make changes in their lives; for example, they may need to change their food choices to supplement medical treatment of their prostate cancer (Mróz et al., 2011).

3.5 Reflecting on men's accounts of prostate cancer health education

In the clinical vignettes presented below we present the experiences of some older men in learning about prostate cancer, including why they sought information and how engagement in learning helped them move toward better prostate health.

3.5.1 Clinical vignettes

- Claudio, a 59-year-old flooring installer, receives a diagnosis of prostate cancer. He tells his urologist that he has no symptoms and feels just fine. Because he feels well, he is not concerned about the diagnosis and decides that he will not let this diagnosis affect him in any way. He is not interested in discussing treatment options and decides to leave the physician's office.
- When Constantin, a 67-year-old newspaper columnist, receives the diagnosis of prostate cancer, he tells his oncologist that his father had prostate cancer and experienced serious side effects from the treatment. Constantin does not want to go through what his father experienced and decides to refuse any and all prostate cancer treatment offered to him. In fact, he is so concerned about possible side effects that he does not even want to discuss treatment options with the oncologist.
- When Bernardo, a 69-year-old retired parole officer, receives a diagnosis of prostate cancer, he is initially surprised. However, within a few days he tells his wife that he has gained the distinction of joining the brotherhood of prostate cancer. Bernardo is, has lived a full life and refuses to let the prostate cancer diagnosis define who he is. Bernardo has a great sense of humor and subscribes to the adage that laughter is the best medicine.

3.5.2 Questions

- What are some principles of adult learning that can guide health professionals in teaching older men about prostate cancer?
- Identify strategies that could foster learning among older men about their health and their bodies.
- What teaching strategies should health professionals consider when promoting literacy about health and prostate cancer among older men?

4. Information strategies and health behaviors related to levels of prostate-cancer literacy

In Section 3, we contextualized health literacy within the perspective of men's experiences with prostate cancer. In this section, we present the results of a qualitative study with 14 Francophone Canadian men. The study documented men's strategies for dealing with prostate cancer information and their self-rated levels of health literacy (Zanchetta, 2002). The study demonstrated that levels of health literacy were not influenced by older men's self-reported general literacy (Zanchetta et al., 2007) and that, despite differences in their levels of health literacy, older men reported similar strategies for dealing with prostate cancer information: comparison, deduction, and hypothesis formation (Zanchetta et al., 2007). These information strategies revealed the importance of communication through social, intimate, and interpersonal interactions in enhancing older men's health literacy.

4.1 Older men's construction of health literacy

Older men's health literacy is influenced by several factors, such as seeking health-related information to promote and maintain health, leading to personal empowerment (World Health Organization, 1998), reading and numeracy skills, comprehension, and decision making (Oldfield & Dreher, 2010); opportunities to obtain health-related information; concepts of masculinity (Peerson & Saunders, 2010; Zanchetta et al., 2010); and congruency between health-related information and personal views of masculinity (Zanchetta, 2002).

To guide decision making in collaboration with physicians, men with prostate cancer face great challenges in learning about and understanding their disease (Barry, 2010). Two of these uncertainties relate to prostate cancer's trajectory and the complex information patients receive about their prognosis and treatment options (Nanton et al., 2009). These uncertainties influence men's ability to participate in decision making about their care. In Zanchetta et al.'s (2007) study, men's various information strategies allowed them to participate in making decisions about their complex care. Low health literacy rates are another prominent challenge. Low health literacy rates limit men's understanding of prostate cancer information (Easton et al., 2010). Another challenge to the health literacy of men with prostate cancer is the lack of consensus among health care professionals about the most effective decision aids and the safest methods for screening and monitoring (Gwede & McDermott, 2006). Nor does consensus exist among health professionals on whether prostate cancer screening improves health outcomes (Krist et al., 2007) or what harmful consequences prostate cancer treatment has for men's physical and sexual functioning (Barry, 2010).

All of the above challenges, added to contradictions in information from health care professionals, contribute to men's confusion in trying to understand scientific discourse about prostate cancer and the impact of treatment on men's sexual function. Men's goal for learning about prostate cancer becomes clear: They seek information they can use to

survive the disease, not scientific understanding of the disease process (Zanchetta et al., 2007). Erectile dysfunction, one potential consequence of prostate cancer treatment, represents failed masculinity (Knight & Latini, 2009) for men who adopt traditional masculinities. This representation undermines their motivation to learn about prostate cancer and its treatment.

4.2 A new understanding of older men's construction of prostate cancer literacy

Through a discourse analysis technique called "abduction in communication" (Boudon, 1998, 1999, 2000), reasons why men with disparate levels of education (from three years of home schooling to doctorate) used similar information strategies were identified. Three analytical assumptions guided the analysis that revealed the similarity of these cognitive processes: (a) men's attempts to connect general health information with prostate cancer information would disclose the *modus operandi* of becoming prostate cancer literate, (b) men's key motivations for learning would determine the strategies they used to construct information strategies, and (c) external factors initially considered negative, non-collaborative, and obstructive would motivate men to construct more information strategies. The results of the analysis are (presented in the rest of Section 4.2 and in Figure 3 to 6) portray how older men's use of prostate cancer information and their discourse about prostate cancer was framed by ideas of space, distance, and possibility. Men's use of information responded to their need to deal with notions of truth, lies, and the possibility of errors; plausible and non-plausible uses of information; possible and impossible decisions; fact and illusion, and so on. In addition, men dealt with how long they might live; whether they would remain in their own homes as they grew older or move to retirement homes or seniors' apartments; and where they might ultimately die.

4.2.1 Core information strategies men use to become prostate-cancer literate

Despite differences in men's self-reported levels of schooling and self-rated health literacy, with survival as an ultimate goal for learning, men looked for new informational support among peers, other individuals, relatives, media, and health professionals. Men mainly used hypothetical reasoning to decode the prostate cancer information they acquired from health professionals and informal sources (newspapers, television, internet, books, pamphlets, etc.). Men's struggles to become prostate cancer literate included reflecting on life and death as well as using the cognitive processes of hypothesizing, deducting, and comparing. To do that, they combined prostate cancer information they gathered from medical journals and their physicians with information from their own illness experiences. Figure 3 presents the general analytical categories and shows how the interpretative poles oscillate between the positive and negative impacts of decoded information related to the dimensions of health, diagnosis of prostate cancer and illness, men's socio-cultural identity, the external world, and the imprints of life and prostate cancer-related information. One of the key strategies men used to decode information was to compare information from different sources about the accuracy of medical prognoses, changes in lifestyle due to cancer, recovery expectations, and expected difficulties in end-of-life situations. As men felt more certain about the predictability of medical prognoses, some men's attitudes changed. Although some remained socially isolated, others enrolled in prostate cancer support groups, became more committed to their own health, or to men's collective health. Certainty also brought to older men a greater will to live and a peaceful acceptance of possible death from prostate cancer.

In the figures 3 to 6, the arrow going from bottom left to top right of each figure means the paradigm of understanding from a negative to a positive pole.

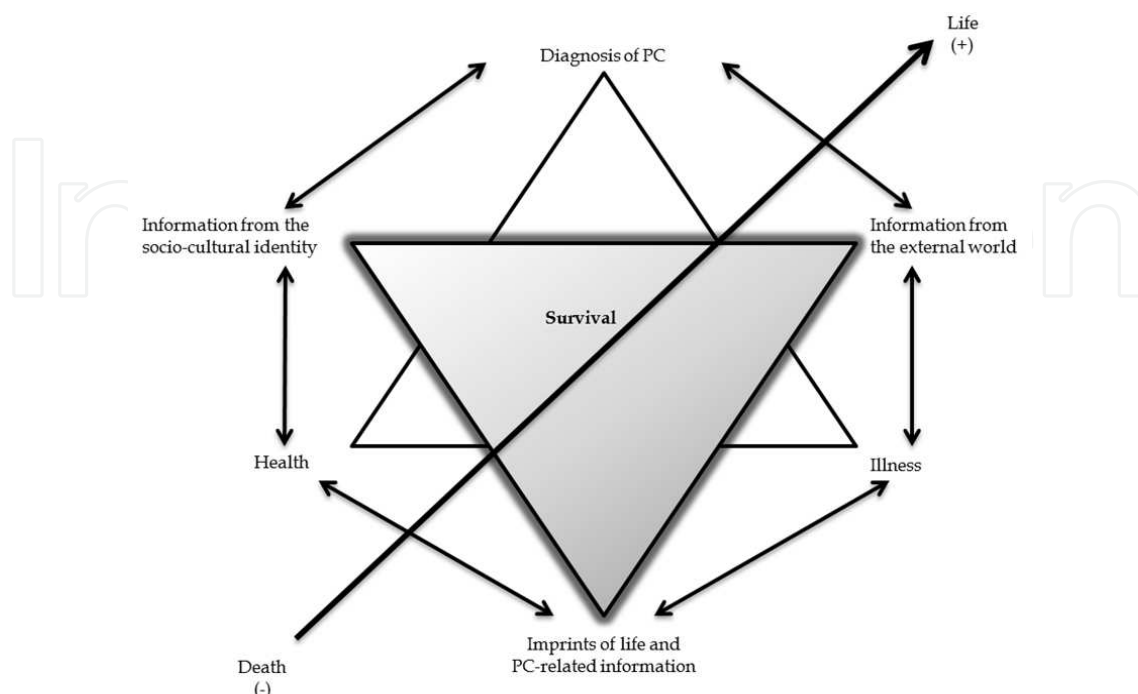


Fig. 3. General analytical categories related to core information strategies

4.2.2 Strategies for dealing with prostate cancer-related information within the paradigm of health literacy

Older men also used their new prostate-cancer health literacy to create multiple possibilities for living with prostate cancer. They used their accumulated knowledge to transform previous representations about life after prostate cancer and the disease itself. From their contacts with other individuals in their social networks, men learned how to survive better and longer with prostate cancer. Particularly relevant in this transformation were information exchanges with other prostate cancer survivors, sharing information with undiagnosed men, and new information provided by significant others.

Analysis of men's accounts of exchanges of information also revealed controversies about whether information gathered through the process mentioned above actually contributed to men's prostate cancer literacy. First, older men seemed to be more interested in communicating information and personal experiences with prostate cancer than in the process of learning itself. Second, partial, imprecise, or superficial information about prostate cancer could either stagnate or propel older men's learning about prostate cancer. Third, the hypotheses (deductive and inductive) those men generated after contact with prostate cancer information impelled them to either confirm or refute the hypotheses. In doing so, older men built the core of their interpretative logic and thereby created meaning out of their experiences with prostate cancer. The information strategies thus fueled men's determination to transform all future contact they had with prostate cancer information. Figure 4 presents how men compared their situations with those of other individuals living with cancer and, whether they had low or high levels of health literacy, formed hypotheses, made comparisons, and decisions.

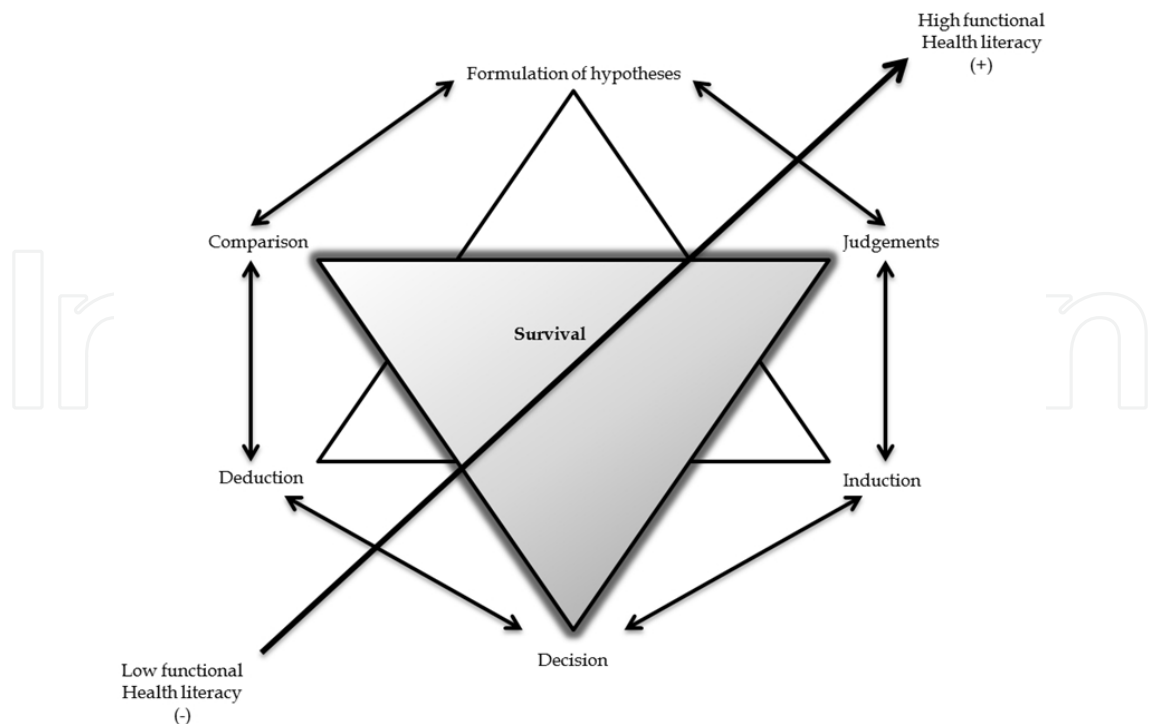


Fig. 4. Strategies for dealing with prostate cancer-related information

4.2.3 Strategies men use to make sense of prostate cancer information

Men's use of hypothesizing and of deductive and inductive reasoning varied in intensity and frequency, depending on older men's self-rated level of health literacy and the uncertainty they faced about their medical conditions. Men's use of these analytical techniques was congruent with their tendency to assess information logically by seeking to understand events and facts and by decoding large amounts of (sometimes contradictory) prostate cancer information. The intensity and frequency of men's hypothesizing, deduction, and induction seemed to be associated with the importance they attributed to the process of decision making, regardless of its domain. The cognitive processes of hypothesizing and deducting also influenced men's acceptance or refusal of prostate cancer information, because men selected information based on their values. Selecting, valuing, and incorporating prostate cancer information, and other information indirectly related to prostate cancer, can be explained by men's increasing interest in information seeking. Men's main focus was learning what to do to ensure their survival and how to do it. This focus led men to value what could help them understand clinical facts. Men sought to find, in each piece of prostate cancer information, anything that could contribute to a pragmatic plan for surviving cancer. Men valued information that was personally relevant to them and could contribute to decision-making. In this information-selection process, men's participation in information networks and the information support that they received from significant others were important. Men's constant hypothesizing seemed to be an attempt to understand and compare information from multiple sources, information that created doubts in their minds. With these doubts, men constantly struggled to reduce abstraction and uncertainty in the information they gathered. The difficulty with abstraction related most often to descriptions of cellular processes and cell-level responses to treatment, as expressed by levels of PSA, prostate cancer recurrence, and metastasis. Without being able to understand this complex information, men could not evaluate its pertinence and quality. Men needed to evaluate this

information to construct meaning by comparing it to their own health experiences, as well as with health and prostate cancer information they had already gathered. Figure 5 displays the key factors that influenced the way older men lived with prostate cancer information.

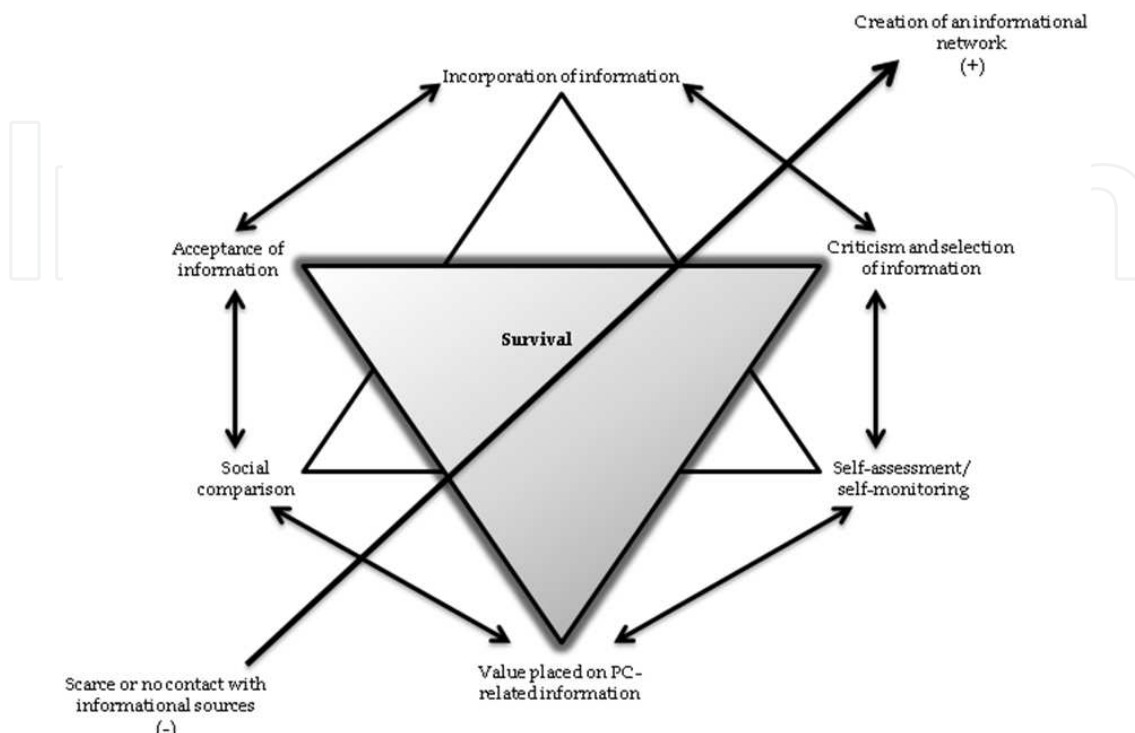


Fig. 5. Key factors influencing the way men live with prostate cancer-related information

4.2.4 Key factors underlying older men's information strategies

For older men, the utility of all information men found relevant was its contribution to solving problems, filling knowledge gaps, and helping men learn how to live with prostate cancer. The relevance individual men attributed to information revealed differences among older men in their critical attitudes to the information they gathered. Men either focused on analyzing the information's technical content or applied the information to political and collective aspects of men's experiences with prostate cancer.

These critical attitudes revealed how men came in contact with and joined information networks to explore their social environments. Men who had little or no contact with sources of health information other than their urologists lived in cognitive isolation. On the other hand, men who gradually constructed networks comprising health professionals (other than urologists) and lay people slowly incorporated new knowledge into their lives through collective learning and exchanging experiences, knowledge that supplemented and complemented information from their urologists.

Incorporation of information into men's lives was a goal shared by men with prostate cancer and other individuals who were directly or indirectly involved with their new lives after medical recovery. Before being able to decode prostate cancer information, some men confronted the reality that other men and women live with cancer that was more or less severe than theirs. This confrontation raised men's awareness of the potential impact of prostate cancer on their own lives. Comparing their lives to the lives of others allowed men to ascertain the relevance of prostate cancer information and incorporate it into their daily lives, specifically into self-assessment and self-monitoring. Men valued information that responded

to their pragmatic needs, rather than theoretical information that was difficult to decode. Once they found enough information to answer their questions, men stopped searching.

The quality of prostate cancer information was another factor men used to evaluate the credibility of information sources and whether or not to accept information from them. When men perceived new information to be high quality, even if it contradicted information that they deemed valuable, they were open to comparing it to contradictory information. The issues of quality, criticism, and acceptance explained men's unwavering acceptance of medical diagnoses of prostate cancer, their strong tendency not to seek second medical opinions, and their unconditional acceptance of medical therapies recommended by their physicians. Moreover, other issues were at play in this process: men's lack of knowledge about the disease and its medical treatment, trust in the technical competence and scientific knowledge of their physicians, and what value men placed on prostate cancer information.

Figure 6 displays the dynamics of how men lived their daily lives (outside of hospitals and clinics) with the prostate cancer information they gathered through information networks. Men's prostate cancer literacy depended on the effects of experiences with prostate cancer within or outside such networks. Men would create and be part of information networks to build their individualized knowledge about prostate cancer. Being part of information networks helped them understand and make meaning out of their own illness experiences. Men's understanding of the disease was a shared construction of experiences of others in their immediate social environment. This shared construction filled men's knowledge gaps and resolved misunderstandings, allowing men to construct new social roles inspired by their awareness of the need to share knowledge and gain empirical skills to manage prostate cancer. Therefore, men tended to transmit information about the prevention and early detection of prostate cancer, as well as how men already touched by the disease had improved the quality of their lives.

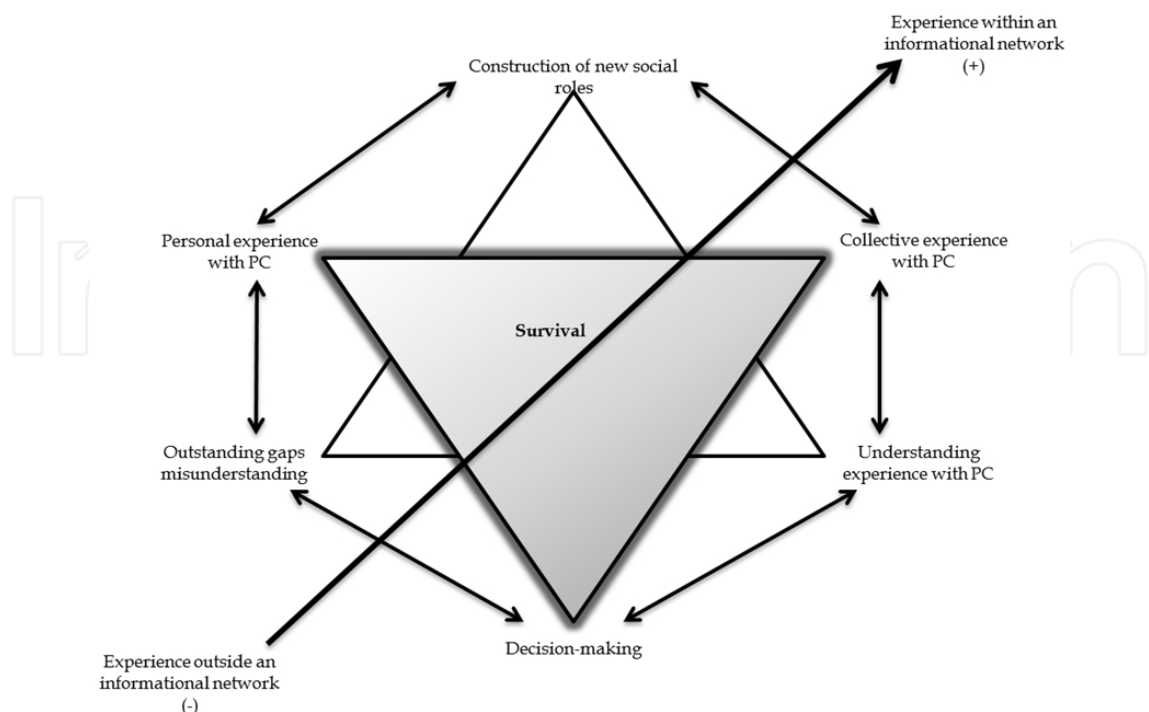


Fig. 6. Dynamics of living with prostate cancer-related information

4.3 Ultimate goals in constructing information strategies for becoming prostate-cancer literate

As described above, the process of becoming prostate-cancer literate unfolded along the life-death continuum; levels of health literacy (from low to high); levels of contact with information networks (from no contact to creation of one's own information network); and illness experiences within or outside information networks. Men's information strategies came out of the desire to preserve their moral integrity, self-image, and to maintain their social roles (as husbands, fathers, grandfathers, friends, and peer counsellors). Awareness of loss, regret, deception, and hope encouraged older men to remain in their social roles, while sharing their wisdom about how to live well¹ with prostate cancer (Zanchetta, 2004). Living well with prostate cancer included creating a new body free of embarrassing conditions (e.g., urinary incontinence), a new masculinity, and a new perception of control. Living well also included redefining one's sense of successful adaptation and, most important, adopting new familial and other social roles while being aware of one's own vulnerability (Kelly, 2009). Men's experience with uncertainty throughout their prostate cancer trajectory was affected by their knowledge about the disease, the disease's stage, and the availability of informal support networks (Nanton et al., 2009). These factors may, in turn, have affected men's desire to survive prostate cancer.

One of older men's primary goals was to understand their illness experiences, an understanding which would enable them to tackle their other primary goal: to regain decisional power over their own bodies and destiny. Guided by hope of surviving prostate cancer, older men decided either to make their journey solitary or collective – experiences shared with family, friends, peers, and strangers. It was between these two extremes of experience with prostate cancer that construction of new social roles, even new social identities, occurred. These new roles and identities preserved the integrity of men's masculine self-images, despite suffering related to loss of sexual functioning.

Men reborn out of collective prostate-cancer journeys distinguished between sharing their own experiences and transmitting information about prostate cancer. They also discerned with which strangers to talk about their experiences of prostate cancer and with which strangers to share its private issues. In contrast, men emerging out of solitary prostate-cancer journeys felt unprotected from the dehumanizing health care system and its professionals. They felt restrained in their freedom to share their cancer experiences with others and believed that silence among men about prostate cancer was natural. Despite these differences in men's preferences for living with prostate cancer, we can identify in the participants' accounts the same underlying rationale. Men's decisions about disclosing their experience with prostate cancer were explained by the intensity of their wishes, as fathers and husbands as well as friends, to protect their loved ones from worry.

4.4 Contributions of this research to the practice of social and health professionals

The research findings described in Section 4 may challenge clinicians' perception that academic education level is the only indicator of patients' ability to understand health information and that less educated patients will be unable to do so. For example,

¹ Because none of the research participants was free of prostate cancer, it is beyond the scope of this section to discuss men's perspectives on being free of the disease, feeling safe, or having the disease under control.

sometimes physicians' communication style (e.g., rapid transmission of brief information, underestimating men's capacity to capably make decisions) can push men to adopt a critical, reflective attitude toward the information physicians transmit. In the research described above, this paradox supported older men's determination to educate themselves about prostate cancer and general health. Therefore, social and health professionals should view men's process of becoming prostate cancer literate as a collective, affective, and social process involving other men, women, and other significant others. Medical information about treatment options and their impacts on sexual health is less important to men with prostate cancer than prostate cancer's impacts on men's social identity.

4.5 Reflecting on men's accounts of constructing prostate cancer literacy

In Section 4, we discussed how men construct their prostate cancer literacy throughout the disease process. Below are some accounts to guide readers' reflection about the multiple dimensions of literacy that underpin the process of becoming prostate cancer literate. There are no correct answers to the reflection questions. We hope that reflecting on your own experience as health care professionals will help you answer the questions.

4.5.1 Clinical vignettes

- Michael, a 56-year-old underground miner, was recently diagnosed with prostate cancer. He arrives at an appointment with his oncologist to discuss treatment options. Michael is presented with two options: hormone therapy and orchiectomy. The oncologist discusses the potential outcomes of each of these options. Michael is quite concerned about hormones' possible side effects, such as hot flashes, growth of the mammary glands, and reduction in sexual stamina. Neither option is particularly appealing to Michael. He decides that he needs time to consider the treatment options and discuss them with his wife of 30 years.
- Frank, a 67-year-old retired postal worker, shares with his doctor his experience of participating in a support group for men undergoing prostate cancer treatment. At first he thought this group might be a good source of support as he navigated the often complex world of prostate cancer treatment. After attending a few meetings, however, he discovered that all the men in the support group do is complain. He was also surprised that their complaints were not about discomfort or side effects that they had experienced as a result of their treatments but, instead, about their difficulties getting information and answers to their questions.
- Raymond, a 51-year-old registered nurse, was diagnosed with prostate cancer six months ago. He began hormone therapy two months ago. As a health care professional, his is well acquainted with medication side effects. During a routine follow-up visit with his urologist, Raymond reports that he has been experiencing numerous side effects which he believes are related to the hormone therapy. In addition, and perhaps more concerning, is the fact that his sex drive has severely diminished and he is now experiencing erectile dysfunction. His symptoms are so intense that he finds himself unable to work. He reports that he has been doing some reading on alternative and more natural methods of treatment and wants to discuss discontinuing his hormone therapy. He tells the urologist that his quality of life is so affected by the hormone therapy that he is not willing to continue living like this.

Questions

- What new facilitators for learning can professionals give men, to help them decode prostate cancer information?
- How should professionals incorporate discussion about issues of masculinity when teaching men about modalities of screening, monitoring, treatment, and rehabilitation?
- What are the advantages, for professionals, of learning about how men construct personally relevant meaning from prostate cancer information?
- What innovations should be introduced into prostate-cancer-teaching practices to move from a treatment-focused teaching toward a gender- focused approach?
- Which simple strategies could you create to assess the health literacy of men with prostate cancer in your clinical practice?

5. Health literacy: Impact on survival of the prostate cancer patient, significant others, and clinicians

Health professionals demonstrate growing interest in the functional aspect of health literacy (Oldfield, & Dreher, 2010), despite their concomitant concern about how to assess and deal with it in daily professional practice. According to Peerson and Saunders (2009), “Because health literacy involves knowledge, motivation and activation, it is a complex thing to measure and to influence” (p. 285). Professionals’ interest in health literacy focuses on individuals’ understanding of health messages, which can enable them to participate more actively in their treatment and be successful in self-management of their illnesses. For years, research on the multiple factors related to health literacy has been guided by several conceptual and theoretical models: information seeking (Bagley-Burnett, 1992; Lenz, 1984), information needs (Derdiarian, 1987), uncertainty in illness (Mishel, 1990), and unaided decisions in health care (Pierce, 1996). Relevant psychological features of information-seeking behavior were explored in some seminal studies. These features are anxiety, resulting in the tendency to attribute responsibility for decision making to others; avoidance or receptivity to learning about one’s disease; motivation to seek disease-specific information; and attributing the cause of cancer to fate or personal fault (Lavery & Clarke, 1999; Siegel & Raveis, 1997; Walker et al., 1996). Furthermore, studies have shown that representations of a disease tend to shape individuals’ preferences for the type, amount, nature, and use of health information (Fieler et al., 1996; Gollop, 1997a, 1997b; Griffiths & Leek, 1995; Ko et al., 1997; Meischke & Johnson, 1995). Other studies opened new avenues for understanding individuals’ preferences for the content of health information: the *how*, *when*, *why*, *who*, and *where* of prognosis, treatments, management, and control of illness (Chalmers et al., 1996; Davison & Degner, 1997; Fieler et al., 1996; Hack et al., 1994; Shaw et al., 1994).

5.1 Health literacy as a survival tool for the patient

If patients’ ultimate goal in obtaining health information is to survive, health literacy plays a key role in individuals’ sense of self-determination (Zanchetta, & Moura, 2006) and in their ability to deal with illness uncertainty (Zanchetta, 2005). Despite the impressive number of studies related to learning about health issues, few researchers have explored the influences of health learning on individuals’ illness experiences within the context of their community

life. This learning experience, framed by community features, seems to be particularly critical to older individuals living with cancer, because they report decreased social and community involvement as well as shrinking social networks (Houldin & Wasserbauer, 1996). Cutilli and Bennett (2009) demonstrated that men perform worse than women on health-literacy-assessment tests, due to factors such as education, language, income, information-seeking behavior, and type of health insurance. For older men, such predictors of low performance on health literacy assessments are particularly relevant, because marital status, education, and perceived health status predict health-information seeking (Elder et al., 2010). Low literate individuals tend to have difficulty understanding health information and using the health care system. The reasons for this difficulty include (a) limited comprehension of written and verbal health information, (b) not trusting written health information and preferring to gather health information through personal communication, (c) inability to understand health terms and concepts, (d) insufficient information about the health system, and (e) feelings of shame and embarrassment in revealing their limitations (Health Canada, 1999). The paramount issue, low health literacy, seems to be related to cultural, cognitive, and social aspects of having access to, understanding, and using health information (Oldfield & Dreher, 2010). In particular, low literate individuals who have low levels of numeracy and general knowledge may have difficulty dealing with treatment-related information containing ratios, probabilities, or percentages. Such information, about cures, treatment complications, and/or side effects, is usually given to patients in the contexts of decision making or informed consent. Certainly, one's ability to understand complex health information can either undermine or enhance one's interest in gathering health information.

Studies have also demonstrated that older men consider information on self-management of their diseases too superficial (Walker et al., 1998), especially because of aging-related problems such as cognitive impairment and decrease in vitality. The search for, processing of, incorporation of, and meaning attached to health information seems to be directly affected by older men's level of disease awareness (Morasso et al., 1997), which may decline with cognitive impairment. The nature of prostate cancer treatment demands that health professionals provide clinical education that responds to older men's knowledge deficits and addresses the physical and psychological problems men experience after treatment (Miaskowski, 1999). For example, men who undergo cryosurgical ablation of the prostate may face complications, such as urethrectal fistulae, bladder-outlet-obstruction incontinence, impotence, and urinary tract infections. Radical prostatectomy may lead to anxiety, bladder spasms, pain, high risk of hemorrhage, and pulmonary embolisms. The complications surrounding external beam radiation include fatigue, diarrhea, and cystitis. Finally, hormone therapy leads to impotence, hot flashes, gynecomastia, and high risk of pathologic fractures (Giddens, 2004). The impact of such complications can affect men's self-image, and dealing with complex medical information can become challenging for older men. To become health literate, they must make sense of health information, find congruency between their past and new knowledge (Craig, 1987), and incorporate health information into their daily lives in a meaningful way.

Interestingly, incorporation of new knowledge about prostate cancer and other medical issues differs according to men's self-reported level of health literacy and unfolds within the

multiple, interconnected dimensions of their lives. Zanchetta (2002) showed that health information is incorporated into daily life only if it is congruent with the following factors: men’s individual identities; their social trajectories within a specific masculine identity, health-education experience, and life stories; representations of aging, body, cancer/prostate cancer, and health/illness. Table 1 summarizes key definitions of health literacy applicable to learning about prostate cancer in a clinical context.

As consumers of prostate cancer information, men with prostate cancer reveal common strategies for using information (Zanchetta, 2004). Older men tend to perceive prostate cancer as an innocuous disease and react nonchalantly to prostate cancer diagnosis. They usually receive partial information and lack comprehension of clinical conditions and/or the evolutionary stages of prostate cancer. Nonetheless, they enjoy reading, which leads to an interest in reading books about other men’s experiences with prostate cancer, the prostate gland, prostate-cancer survival, prognosis, and treatments. They also enjoy learning about principles of chemotherapy, preparation for undergoing chemotherapy and its effects, and modes of adaptation to prostate cancer. They do not believe information displayed in medical pamphlets, due their lack of identification of the pamphlet’s authors. Frequently, older men assess their own clinical conditions and the effectiveness of their treatments by tracking changes in their PSA test results. They tend not to seek second opinions from urologists other than their own to either confirm the need for therapy or the quality of scientific evidence in health information. However, men correlate the health information they have with new information they find. Finally, because older men value their physicians’ professional competence and trust them, men do not gather health information from other (formal or informal) sources (Zanchetta, 2002).

Conceptual definitions of health literacy – ability to:
Access, read, or listen to; process; and appraise textual, graphic, and numeric health information.
Build new meanings from health information.
Understand health messages and communicate them in users’ social environments.
Navigate the health care system.
Use textual, numeric, and graphic health information to inform decision making, reduce health risks, and enhance quality of life.
Use health information to access health care in a medical culture that requires self-defense and health vigilance.
Evaluate and communicate health information to improve one’s own and one’s family’s life.
Solve health problems by using multiple forms of language (written, oral, visual, tactile, etc.), at multiple levels (individual, family, community, world) and in multiple contexts (home, work, school).
Use all family, school, social, cultural, and professional assets gathered through continual learning (formal or informal), through regular contact with information, knowledge, attitudes, and health behaviors in all aspects of life.

Source: Kaszap & Zanchetta (2009)

Table 1. Conceptual definitions of health literacy

Zanchetta (2002) observed, during a community information session with a total of 50 participants (women, and men with and without prostate cancer) about the epidemiological, treatment, and rehabilitation aspects of prostate cancer, that most men's questions were about technical procedures. These questions indicated lack of comprehension, difficulty with basic interpretation of the medical content of health information, and knowledge gaps, and thereby revealed the participants' world of living with prostate cancer. Table 2 gives the questions men asked, in their original form and grouped into themes. In the same study, men's learning needs were raised by two chairmen of a prostate cancer support group, who had compiled the accounts of several other men. The chairmen said that becoming literate about prostate cancer is not a linear, one-dimensional process. According to them, men become aware of their lack of knowledge about prostate cancer and motivated to seek information about it for the following reasons: (a) acknowledgment that, for men, ageing is usually accompanied by prostate problems, (b) symptoms of excessive prostate enlargement launch information seeking about early signs/symptoms of prostate cancer, (c) men's new awareness of their vulnerability to disease after receiving a prostate cancer diagnosis, (d) receiving information about treatment side effects and their impacts on men's lives, (e) men's perception and experience of treatment and its side-effects, (f) recurrence of prostate problems after treatment, and (g) psychological and social impacts of treatment of prostate cancer.

Theme	Questions
Epidemiology	Why do the rates of prostate cancer increase? What are the environmental risk factors? Are the risk factors presented in the slides in conformity with their degree of importance? Is there something that one can do about the family risks factors? What is the most dangerous type of cancer? Rectal, bladder, or prostate?
Screening procedures	When must one begin PSA testing? What do you recommend as preventive action? After what age must one have an examination? After the age of 50, what is the suggested interval between examinations?
Causes	Is there any link with stress? Does drinking alcoholic beverage cause prostate cancer? Does bleeding during the biopsy transmit cancer? Is it true that sitting for long periods may cause prostate cancer? Could a vasectomy cause prostate cancer? Could hormone therapy cause prostate cancer?
Knowledge issues	What is serum testosterone? Is there another type of testosterone? What is its source of production? What does a gland full of granulomatosis mean? What are the meanings of the letters and degrees used to classify cancer?

Theme	Questions
Diagnostic procedures	Can a prostate cancer diagnosis be made using a blood test? If the cancer is in its beginning stage, can a biopsy indicate its presence?
Self-assessment	Does prostate irritation mean prostate cancer? Does the presence of blood in the sperm indicate prostate cancer?
Technical procedures	What does a rectal examination indicate? What justifies the removal of the testes? Does an examination exist that allows us to see the whole prostate? During a rectal examination, does the physician feel just a part of the prostate? Can a physician identify prostate cancer simply by looking at the prostate? How can one see the prostate with an echography? How is the result of an echography analyzed with the PSA? What can one do after having lymph nodes removed? Is radiation therapy applied through the rectum? Is chemotherapy as efficient as surgery? What is the likelihood of bleeding after radiation therapy?
Interpretation of PSA titration levels	What are the normal limits of the PSA test? Does the PSA have another type of utility? Could it indicate another type of disease?

Table 2. Scope of men’s questions about prostate cancer

Men may also learn about prostate cancer through the collective experience offered in prostate cancer support groups. In these support groups, men learn from each other as well as from invited speakers; exchange information and experience; offer and obtain mutual help, advice, and support; and advocate for their rights as health consumers and citizens. Despite these multiple opportunities, some men still believe that other men come together in prostate cancer support groups to complain and cry “like a woman” (F. S. and W. K., personal communication, Kingston, Canada, March 2004). Such a misconception may explain why men from ethnic minorities tend not to enrol in prostate cancer support groups and why some men only attend them after treatment, despite their physicians’ recommendations or referrals. In other cases, doctors referred men to prostate cancer support groups after treatment, which may imply that these men decided on treatments with only partial knowledge of their consequences and later regretted their decisions (D. G., personal communication, Montreal, Canada, June 2001).

Other ethno-cultural influences also influenced study participants’ behavior related to prostate cancer. First, most of the Caucasian men (who self-identified as being of European descent) were socially expected to keep silent about disease and any suffering. Second, their mothers taught them to promote their own health and take preventive action against diseases, mainly through nutrition (Zanchetta et al., 2004). Given such expectations of stoic silence, men need professional mentoring and assistance to acknowledge that time is required to deal effectively with the diagnosis of prostate cancer,

adequately comprehend medical information, consider available alternatives, and reflect on the potential outcomes of their decisions. Such an investment of time will ultimately generate a greater sense of control over men's life choices and a greater degree of normalcy in their lives.

5.2 Impact of men's prostate cancer literacy on their significant others

The impact of a prostate cancer diagnosis on couple and family dynamics is frequently reported in the scientific literature. However, other than shared stress, other experiences of men's significant others with prostate cancer information remain poorly explored. Men themselves report feeling embarrassed in revealing to their wives that prostate-biopsy results confirm their urologists' suspicion of prostate cancer (Zanchetta, 2004). Another gap in the literature concerns partners' unidentified or unmet information needs (Sinfield et al., 2008). For partners, becoming prostate-cancer literate would facilitate their participation in decision making as well as collaboration in all stages of treatment – as information gatherers, care providers, promoters of adherence with treatments, and even advocates for health and social services. As most of partners of men with prostate cancer are women, likely also elderly and living with their own diseases, we can expect that men's partners are knowledgeable consumers of health services who are able to sustain their partners' struggles to learn about prostate cancer. Because close interpersonal relationships influence illness experiences and transform the solitary cancer journey into a joint experience (Illingworth et al., 2010), partners can discover, learn about, and transcend limitations to redefining the meaning of prostate cancer.

Another impact of prostate cancer literacy is men's decision to share their illness experiences with their sons. This decision relates to genetic predisposition to cancer, early detection, and screening procedures (Zanchetta, 2002, 2004). However, a "code of silence between men" can prevent disclosure of diagnosis. In Zanchetta's (2002) study, decision to inform sons and sons was explained from two opposite perspectives. Fathers who shared their illness experiences with their sons did so because of feelings of fatherhood and its perceived inherent responsibilities, and a concomitant desire to protect their sons. These fathers were concerned about the possibility of another case of prostate cancer in the family, felt confident in talking about prostate cancer, valued talking about illness experience to improve their own well-being, and perceived themselves as being open minded. Fathers who did not share their illness experiences with their sons felt unable to discuss parental subjects with their children, did not want to upset their sons with the daily problems caused by prostate cancer, felt that their sons were not concerned about prostate cancer, and had difficulty revealing personal experiences that provoked feelings of frustration and regret.

5.3 Surviving multiple professional challenges to sustain men's prostate cancer literacy

Health professionals utilize evidence-based practice to bridge the theory-practice gap and to guide patient care with the best available evidence (Paley et al., 2007). The goal of health and social professionals in the prostate cancer care continuum (screening, detection/diagnosis, treatment, rehabilitation) is to provide instrumental care and information that combines effective medical and social science with optimal technology,

allied to a humanistic approach. However, to provide services that respond to the specific needs of men, according to the World Health Organization (2002), professionals need to acknowledge gender-specific roles and biological distinctions as well as differences among men in needs, power, access to resources, obstacles, and opportunities. Gender equity is needed in the delivery of health services to overcome the structural oppression that grants women access to a humanist approach in health care relationships, but denies men access to the same humanist approach. Zanchetta et al. (2010), in discussing the role of health and social professionals in supporting men's preventative prostate health behaviors, warn that "men today also define their relationships according to trustworthiness. For this reason, professionals should learn how to build trusting relationships with men, to facilitate a new men's culture of seeking preventive care for diseases that threaten men's self-identity" (p. 266). Although Kelly (2009) found that health professionals acknowledge the need to establish trusting relationships with men and aim to overcome communication barriers with them, men in the same study reported that not being taught to deal with physical changes after undergoing prostate cancer treatment led them to feel betrayed by the health care system.

Prostate cancer can significantly impact every aspect of a man's life. Jonsson et al. (2009) conclude that men with prostate cancer "are placed in a new life situation, against their will" (p. 273). These patients move through their illness experience with feelings of fear and uncertainty. Although scientific advances continue to enhance preventative, screening, diagnosis and treatment options, patients continue to experience the prostate cancer journey as separate silos of care. Patient-centered care is one approach that could reconnect these silos into a care continuum. Patient-centered care, which has gained momentum in the last two decades, is an approach to providing health care in which the patient is the focal point. According to the Picker Institute (2011), the eight guiding principles of professional practice in organizations committed to patient-centered care are (a) respect for patients' values, preferences, and expressed needs, (b) coordination and integration of care, (c) information, communication, and education, (d) physical comfort, (e) emotional support and alleviation of fear and anxiety, (f) involvement of family and friends, (g) continuity and transition, and (h) access to care.

The application of these principles coexists with challenges that professionals may face to satisfactorily implementing patient-centered care to ultimately sustain men's prostate cancer literacy. The first challenge is the unresponsiveness of professional practice to the needs of male patients. Despite the patient centered-care movement, patients are continually *cared for* not *cared with*; for instance, professionals present patients with complex treatment options, seeking yes or no decisions about life-changing, high-risk treatments but allowing little time for men to reflect, learn about, and discuss options. Professionals who provide direct care, such as nurses, are faced with the difficult choice of dividing their time among a complex array of institutional demands. These other priorities ultimately result in less time for teaching their patients about health. Professionals are driven by their technical expertise, leading to the transfer of knowledge from 'expert health care professional' to 'patient'. Is this prevalent practice effective? Does men's motivation to seek care rest on the attainment of 'patient knowledge'? Or does their need to survive underpin all the other tasks that men living with prostate cancer must undergo? Ethnic-minority men are less likely than Caucasians to share health information with care providers that they obtained elsewhere. Those whose first languages are not

English tend to complain about disrespect and racial discrimination and are thus less likely than Caucasians to advocate for tests and treatments (Elder et al., 2010). Older men with co-morbidities do not extensively seek information on prostate cancer and its treatment, relying more on the technical expertise of health professionals (Nanton et al., 2009). How do health professionals deal with all these simultaneous and synergistic factors?

The second challenge is twofold: first, it concerns the complexity of the health teaching needed for men to become partners in their care; second, it concerns the similarly complex health teaching needed for men to become decision-making partners. A prostate cancer diagnosis may give a man the opportunity to revisit his life priorities and to learn more about health and how to face health threats (Mishel et al., 2002). For this reason, promotion of health literacy goes beyond simple provision of information; instead, men's lived experience must be taken into account to facilitate their discovery of health information within their unique masculine contexts of living, learning, and applying knowledge. Throughout the prostate cancer trajectory, health education will offer men reassurance, knowledge, and understanding about how to balance the changes they are expected to face.

For prostate cancer screening, Gaster et al. (2010) suggest an "Ask-Tell-Ask" approach that fosters open, interactive dialog between health professionals and men. *Ask* initiates discussion that enables the health professional to explore a man's need for information; *Tell* provides a patient-focused response by the health professional, tailoring information to the patient's needs; and *Ask* allows for reflection and summation of the dialog. This approach facilitates therapeutic interaction between health professional and patient, actively focusing on the patient's own perspective and situation. It enables the patient to move beyond receiving the information toward understanding, internalizing, reflecting, and ultimately, discovering prostate-cancer-care information as it intertwines with sense of himself as a person. No matter what the presentation tool (simple paper or Web-based decision-making aid), the Ask-Tell-Ask approach engages men in learning about prostate cancer screening and making decisions about it (Krist et al., 2007).

Application of patient-centered care to prostate cancer promotes reciprocation and interactivity, allowing patients to be active partners with health professionals in the delivery of care. The one-way, linear communication in traditional prostate cancer care is less effective in engaging men with their own care (Gaster et al., 2010). Individualized teaching may better satisfy men's knowledge needs. Feldman-Stewart et al. (2009) found that men most often asked questions about treatment: first, because of their need to understand and, second, because of their desire to make decisions and plan. Even if men living with prostate cancer did want a lot of information, the amount of and details of information they asked for varied enormously, due to personal reasons. For example, with recent technological advances in the treatment of prostate cancer, men have the opportunity to consider various treatment options. Open prostatectomy procedures can now be performed by surgeons with success rates similar to those with laparoscopic or robot-assisted prostatectomy (Lallas & Trabulsi, 2010). Despite these options, patients' feelings of vulnerability when facing complex information about treatment options can be overpowering. Health professionals ask men with prostate cancer to make life-altering decisions about complex, high-risk treatments they know little about. Men are expected to reduce their experience of prostate cancer to a simple *yes* or *no* consent to treatments. When health professionals focus only on

outcomes of the procedures, they leave behind the process by which the outcomes are achieved. In contrast, men not only focus on the outcomes of care, but more important to them, the process of care (Jayadevappa et al., 2010). The way that health professionals deliver prostate cancer care can significantly influence men's active engagement in their care (Martinez et al., 2009). Knowledge of disease progression and response to treatments is key for men living with advanced or recurrent prostate cancer, because they need instrumental knowledge to deal with uncertainty about how long their bodies will be able to respond to therapies (Nanton et al., 2009).

Being a partner in care means being a decision maker. Stacey et al. (2010) report that men want more opportunity to decide than they are allowed. Their vehemence remains unchanged if they are not offered decision aids or the opportunity to discuss the details of treatment with health professionals. This vehemence applies equally to the informed consent process, which usually requires more in-depth information and clearer explanations to support men's understanding. Moreover, men want more information on potential harms of therapies, since health professionals tend to present more often the benefits. As discussed in Section 5.2, men's partners should be considered in the process of decision-making. To include men's partners, Illingworth et al. (2010) propose that health professionals talk to men about their significant others and all spheres of their lives. These authors emphasize the central role of men's interpersonal relationships in their experiences with prostate cancer.

Finally, the last challenge for professionals relates to collaboration within their own professions and with other health and social professions. It is known that limited professional links between family physicians and urologists erect structural barriers for health care delivery to older men (Greene & Adelman, 2003). It is beyond the scope of this section to suggest that other members of multidisciplinary cancer-care teams change their practice, due to ethical principles. However, we would like to highlight that Zanchetta (2004), at the time an oncology nurse interested in health literacy, made some recommendations to nurses to counteract misconceptions about older men's health literacy. These recommendations may inspire other professionals. Aiming to awake and enhance nurses' awareness of their opportunity, and responsibility, to expand professional knowledge about men's health literacy, Zanchetta (2004) recommended that nurses (a) be aware that functional health literacy is a result of a broad, socially constructed process, rather than a set of abilities comprising reading, counting, and recognition of words, (b) be particularly attentive to the nature and extension of individual men's social networks, (c) encourage men to collaborate with nurses in creating educational materials, (d) invite physicians to co-create educational materials that respond to knowledge gaps and misunderstandings about prostate cancer, (e) redesign, with men, innovative strategies to communicate others' experiences with cancer, and (f) record their clinical observations of the differences among men's information behaviors.

Enhancing the quality of prostate cancer care involves more than advances in science and technology. It requires engaging patients in treatment-related decisions and fostering a health care environment that facilitates health literacy among patients. The patient-centered care approach enables health care professionals to focus on patients as well as their significant others, as they journey through the prostate cancer trajectory. Engaging patients through patient-centered care allows their collaboration with health care professionals to fulfil the goal of *caring with the patient*.

5.4 Reflecting on the complexity of patient-centred care and survival in prostate cancer

Our aim in the following exercise is to present some insights into the complexity of patient centred care and men's experience of prostate cancer literacy as a survival tool. While reading each clinical vignette, we suggest that readers consider how difficult it is for men to decode medical information in order to make decisions, as well as how challenging it is for professionals to promote men's health and prostate-cancer literacy.

5.4.1 Clinical vignettes

- Juan, a 49-year-old elementary school teacher, comes into the clinic for a follow-up appointment with his urologist/oncologist after undergoing a prostatectomy and radiation therapy. He has been having his PSA level monitored regularly since he was diagnosed and underwent surgery and treatment. Juan's doctor tells him that his PSA level remains unchanged following radiation therapy and that they will continue to monitor it over time. Juan is not satisfied with this report and wants the doctor to tell him conclusively whether his cancer is cured. The doctor responds that time will tell.
- Hassan, a 55-year-old car salesman, is diagnosed with prostate cancer. His urologist discusses possible treatment options, including surgery and radiation. Hassan was recently remarried, to a much younger woman, and explains that their sex life is quite active. They have been discussing the possibility of having a baby. Hassan is concerned that prostate-cancer treatment could lead to erectile dysfunction, which could end his happy, active sex life. He is unwilling to take a chance that his sex life will be affected and that he could jeopardize his chance of having a baby with his new wife.
- Roberto, a 45 year-old Crown attorney, receives a diagnosis of prostate cancer. He is devastated. His father died of advanced prostate cancer at the age of 55. Roberto reports that he has a strong faith in God and that he plans on praying for a miracle. He refuses any and all treatment that is offered to him, because he believes that, through prayer, he will be healed. Roberto's physician attempts to convince him that, if he refuses treatment, he risks the same outcome as his father. The physician tells Roberto that, because he is a young man and the cancer was detected early, the outcome could be favorable if he considers treatment.

5.4.2 Reflection questions

- What factors contribute to men's difficulty in understanding prostate cancer information and utilizing the health care system?
- What impact can men's experience of prostate cancer have on significant others, and how can that impact be attenuated by new professional attitudes and practices?
- What changes in professional practice relating to prostate cancer literacy will acknowledge the importance of different perceptions of masculinity?
- How could education, social, and health professionals collaborate to develop age- and gender-appropriate, sensitive educational tools?
- How do you foresee education about prostate cancer focusing on aspects of men's lives other than sexuality?

6. Conclusion

In this chapter, we presented a multidisciplinary view of men's health literacy in prostate cancer, drawing from the disciplines of medical anthropology, education, and nursing. We intended to expand readers' vision of health literacy beyond measurable personal skills toward a view of health literacy as a personal asset that individuals build throughout social interactions within the multiples spheres of their lives. We also intended to portray men's experience of prostate cancer as an experience that goes beyond failures and improvement in sexual performance to a much broader and more significant masculine experience. Health literacy for older men with prostate cancer can preserve their moral integrity, social identity, and self-perception of masculinity. Health education for men with prostate cancer should expand their awareness of health challenges, guide them in correctly interpreting prostate cancer information, and create new ways of enjoying life after prostate cancer. Uncertainties, challenges, and doubts are shared with significant others, who may also have difficulty talking openly about the impacts of prostate cancer, present and future, on the men they love and care for. For this reason, significant others should also be educated about prostate cancer. To create collaboration among men, health educators, social and health professionals, and significant others to improve men's prostate cancer literacy, it will be necessary to redesign current communication approaches. Communication needs to be innovative, creative, and sensitive to men's social networks, age, cultures, general literacy, and, of course, gender. Men differ in the way they understand and live their own masculinity. Not all men are equally health literate; health literacy depends on the collective project of health education. The kind of prostate cancer literacy that we envision is one that will liberate men from any sense of powerlessness and hopelessness, enabling men to transcend any limitations imposed by prostate cancer.

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In this book entitled "Prostate Cancer - Diagnostic and Therapeutic Advances", we highlight many of the significant advances made in our treatment armamentarium of prostate cancer. The book is subdivided into four sections termed: 1) novel diagnostic approaches, 2) surgical treatments options, 3) radiation therapy and its potential sequelae, and 4) medical management and its treatment complications. After reading the present book, readers will be very familiar with the major clinical advances made in our multifaceted treatment approach to prostate cancer over the past decade. This book is a tribute to our pioneering urologists and allied healthcare professionals who have continually pushed forward our traditional therapeutic envelope.

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