

THE SELF-DIRECTED LEARNING OF MEN WITH PROSTATE CANCER

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Abstract

The purpose of this qualitative study is to describe the self-directed learning experiences of men who have been diagnosed with prostate cancer. Semi-structured interviews were conducted with 12 prostate cancer patients. The interview transcripts were analyzed using the constant comparative method. The results indicate that the common motivations for their learning were the need to make informed treatment decisions, the need to select doctors, and the desire to find out from survivors what they might be facing. The common problems they described concerned the time pressure they experienced and the complexity of some of the material they accessed. The results of their learning assisted them in making treatment decisions, in choosing doctors, were somewhat useful in dealing with the side effects of their treatments, and prepared them to help other newly diagnosed men. The findings are discussed in regard to the literature on self-directed learning and prostate cancer as well as in regard to gender differences that emerge when contrasting the results with prior research on self-directed learning and breast cancer.

The Self-Directed Learning of Men with Prostate Cancer

Prostate cancer affects one in six American men, making it the most common form of cancer found in men, other than skin cancer. The American Cancer Society (2005) estimates that 232,090 new cases will be diagnosed this year, and 30,350 men will die of the disease. Although engaging in self-directed learning appears to be a common response of men who are diagnosed with prostate cancer, very little is known about the motivations, processes, resources used, and outcomes of their experiences. The purpose of this study is to describe, from their perspectives, the self-directed learning experiences of these prostate cancer patients.

Background and Theoretical Foundation

Self-Directed Learning

Self-directed learning is the most common form of adult learning (Merriam & Caffarella, 1999). Tough (1973) estimated that 70% of adults participate in self-directed learning;

EDITORS' NOTE: This article was accepted under the previous editorship

*The Canadian Journal for the Study of Adult Education/
La Revue canadienne pour l'étude de l'éducation des adultes
20,1 November/novembre 2007 32–49*

ISSN 0835-4944 © Canadian Association for the Study of Adult Education/
L'Association canadienne pour l'étude de l'éducation des adultes

more recently, Livingstone (1999) gauges participation at over 95%. The works of Houle (1993), Knowles (1970, 1975), and Tough (1973) are generally credited with generating keen interest in this form of learning. Although recent research by Brockett et al. (2000) suggests that there has been some decline in the number of studies and articles on the subject, self-directed learning, andragogy, and transformational learning are identified as the hallmarks of the field of adult education (Merriam & Caffarella, 1999).

Synonyms for self-directed learning are self-education, independent learning, and self-teaching. However, the definition of self-directed learning in the natural setting that is most commonly cited comes from Knowles (1975): It is “a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating goals, identifying human and material resources, choosing and implementing learning strategies and evaluating learning outcomes” (p. 18).

Tough (1973) was the first to provide a thorough description of self-directed learning as a form of study. He defined a learning project as “a series of related episodes, adding up to at least seven hours” (p. 6). This later became known as self-directed learning. His findings included the fact that most people engage in a minimum of one or two major self-planned learning projects per year, but that some adults undertake as many as 15 or 20. He also determined that the range in the time spent on learning projects was from a high of 2000 hours to less than 100 hours.

Tough also investigated the motivation behind learning projects. He found that it included the need to make a good decision; to make something; to do something related to job, home, family, sport, or hobby; for curiosity; or for enjoyment. A fewer number of learning projects were motivated to complete a certificate or degree. The emphasis for all learning projects was on the anticipated use or application of what was learned. Finally, in exploring the major benefits derived from learning projects, Tough found they included pleasure or positive feelings and increased self-esteem or confidence.

Livingstone (1999) studied the extent and distribution of self-directed learning by Canadian adults. He found that over 95% of his sample engaged in some type of informal learning for an average of 15 hours per week, and that three quarters of the respondents in his general interest category were involved in learning about health and well-being.

Significantly, a study by Spear and Mocker (1984) found that “self-directed learners, rather than preplanning their learning projects, tend to select a course from limited alternatives which occur fortuitously within their environment, and which structures their learning projects” (p. 4). Spear and Mocker called this concept the *organizing circumstance*. They identified three elements as essential for understanding the process: “1) the expectations of the learner, 2) the individual’s inventory of skills and knowledge, and 3) the particular resources present within the environment” (p. 4). Spear and Mocker found that in regard to self-directed learning, demographic characteristics were not as important as the specifics of the learner’s circumstances.

Self-Directed Learning and Personal Health

The link between self-directed learning and personal health is gaining in importance. Studies suggest that more and more patients are assuming the responsibility to conduct their own information searches and are not relying purely on the advice of health

professionals. According to Gray, Fitch, Labrecque, and Klotz (1999), “This seems to be the result of converging influences, including a growing distrust of medical authority, historical failures by the healthcare system to provide adequate information, and the ascension of a consumerist philosophy” (p. 134).

Technology is also a major factor in the link between self-directed learning and personal health. It has provided viable treatment options for many illnesses, including prostate cancer, and has necessitated patient involvement in making critical treatment choices. As Curtis and Juhnke (2003) report, “Although treatment protocol for some cancer diagnoses is clear, prostate cancer patients must choose among several viable options” (p. 162). These include watchful waiting, surgery, radiation therapy, hormonal therapy, and chemotherapy, as well as alternative therapies.

Additionally, technology has provided the Internet and the World Wide Web. Blumenthal (2002) cites a February 2002 survey by Harris Interactive (www.harrisinteractive.com) indicating that 137 million Americans use the Internet and the Web, with 110 million reporting using it at least three times a month to look for health care information. Ziebland et al. (2004) assert that “the Internet is changing the way that people learn about health and illness. Health sites and discussion lists are among the most popular resources on the web” (p. 565).

Although a tremendous amount of research has been conducted regarding prostate cancer, no studies have focused on both prostate cancer and self-directed learning. However, other areas of prostate cancer research—which include studies focused on support group participation (Breau & Norman, 2003; Krizek, Roberts, Ragan, Ferrara, & Lord, 1999); coping (Curtis & Juhnke, 2003; Steginga et al., 2001); quality of life issues (Herr, 1997; Lepore, Helgeson, Eton, & Schultz, 2003); marital impact (Gray, Fitch, Phillips, Labrecque, & Fergus, 2000; Harden et al., 2002); information seeking (Dale, Jatsch, Hughes, Pearce, & Meystre, 2004; Rozmovits & Ziebland, 2004; Ziebland, 2004); and gender issues (Broom, 2005; Kiss & Siegfried, 2001)—validate the importance of information and learning to prostate cancer patients. Although these studies did not focus on self-directed learning, it was clearly evident as an important aspect for many prostate cancer patients, particularly in view of the fact that they are often not given adequate information by their medical providers. For example, Rozmovits and Ziebland (2004) report that:

Respondents said their information needs had been complex and changed over time while the information they had been given was often patchy, inconsistent, contradictory and haphazard. Access to practical and experiential information from other patients was highly valued. (p. 57)

Significantly, this study addresses a gap in the literature regarding the self-directed learning experiences of men who are faced with a medical crisis: prostate cancer. How these patients become knowledgeable about their disease is an important issue for adult educators.

Research Questions

The questions examined in this study concern what patients are doing to help themselves learn about their disease. Specifically, the following research questions guided this study:

1. Are there common motivations, process elements, resources, and problems in the experiences of these prostate cancer patients in their self-directed learning efforts? If so, what are they?
2. Are there common outcomes, either intended or unintended, from the perspective of these cancer patients that come from their self-directed learning experiences? If so, what are they?
3. What are the recommendations of the participants, if any, for helping others who choose to use self-directed learning in dealing with their prostate cancer?

Methodology

A qualitative research paradigm was used for this study. Purposeful sampling was employed to locate information-rich subjects. Selection criteria included being male, being English speaking, being within five years of prostate cancer diagnosis, and having engaged in a minimum of seven hours of self-directed learning about prostate cancer. Individual interviews were conducted by the researcher with 12 men from the Wichita, Kansas, area.

The strategies used to ensure the credibility of the findings of this study were prolonged engagement, peer debriefing, referential adequacy, and member checking. Contact was made with the local chapter of Us Too!, a prostate cancer support group that holds monthly meetings at a local hospital. A 12-year prostate cancer survivor who is active in the local prostate cancer network served as a resource to the researcher and facilitated the establishment of valuable contacts.

Sample size was determined by the researcher's sense that the point of saturation had been reached, in that "no new information is forthcoming from new sampled units; thus redundancy is the primary criterion" (Lincoln & Guba, 1985, p. 202).

Interviews with the 12 participants ranged in duration from one to two hours with the average length being one hour and fifteen minutes. Follow-up meetings, e-mails, or telephone calls to the participants in this study were used to verify information and for member checking. A semi-structured interview format following an interview guide was used to gather data for the study. Each interview was tape-recorded and then transcribed by a professional transcriptionist. The resulting 268 pages of interview transcripts were analyzed using the constant comparative method to identify the common patterns in the prostate cancer and self-directed learning experiences of the participants.

Findings

The men in this study were chosen as participants because self-directed learning was a critical aspect of how they coped with their prostate cancer. Background information on the 12 men who participated in the study is presented in Table A, including age, occupation, education level, marital status, and number of children.

Motivations for Learning

There were three common motivations, as perceived by these men, for their self-directed learning about prostate cancer. The common motivations were the need to make informed decisions in regard to their treatment or to validate their doctors' recommendations, the need to select the doctors who would treat them, and the desire to find out from other men who had been through treatment what they might be facing.

David's response was typical. "This was the first time I can remember having options. That plus the Internet articles I read indicated that patients do have a choice in this. And so I thought, if that's the case, I better find out what these choices are and how that's going to affect me." Eric talked about taking responsibility for his own health care. In talking about his motivation for learning, he said, "I think first of all, it was to make a treatment choice and to make sure that I made that decision based on my own analysis—not just the doctor's."

Choosing the doctor who would administer treatment also emerged as a strong motivating factor for engaging in self-directed learning. According to George, "It's not the treatment. It's how good the artist is in giving the treatment. And that seems to be an overwhelming theme in all the research that everybody talks about. Treatment is okay but who is giving it to you is what's really important." Kevin's perspective on doctors and his need to learn was more negative:

What I'm looking for is information that I cannot get from a doctor . . . You know when you go into it you think they [doctors] know everything and you're in their hands and your life is in their hands. All of a sudden, you find out they could care less, really.

A third common motivation was to learn from the experiences of survivors. As Larry said:

I went out and tried to find my own data and arrive at my own conclusions. So I tried to be proactive and [look] not only in the literature, what I could read, but when people would say, 'oh yeah, my uncle or I have a friend who had prostate cancer' . . . I would find out who that friend was and call them . . . My approach was to try to understand the data but then to interview people who actually lived through it and find out how did they do.

Absence of Planning

The participants indicated that they did not plan their learning to any large extent. For the most part, they were reacting to their situations. Clint's point of view was representative of the group. "I would talk to somebody and that would kind of lead to something else . . . So I just kind of stumbled through it." Jack said his learning was "like an explosion" that occurred after diagnosis, whereas George called his "winging it but organized winging." It was obvious that their self-directed learning in this context was based largely on what was happening to them as they progressed in their journeys with prostate cancer as opposed to having been preplanned. All of the participants, except for Ivan, indicated that they had had previous experiences with self-directed learning. Most examples cited were related to work, other health issues, and making purchases.

Amount of Time Spent

The most difficult question for all of the participants to answer was regarding how much time they had spent learning about prostate cancer since diagnosis. It was challenging to capture this information retrospectively. The estimates, ranging from a low of 10 hours to a high of 1,053 hours, are presented in Table B along with a summary of information about their prostate cancer, including date of diagnosis, time elapsed since diagnosis, and type of treatment.

Henry, who spent the least amount of time, is a skilled researcher who benefited from his ability to locate and assimilate information efficiently. He also has not had serious side effects from his radical prostatectomy and has put the experience behind him. George, who it is estimated spent the most time engaged in self-directed learning, is also the participant whose diagnosis is oldest. He is a retired general who has continued learning because he doesn't think anyone ever beats cancer. "I think you may tie it because if you did win, you would never be going back taking tests to see if it had come back. And you do, all the rest of your life, you take those tests." George is referring to the Prostate-Specific Antigen (PSA) blood test, which is generally accepted as an indicator of the presence of cancer, cancer reoccurrence, infection, or benign prostatic hyperplasia (NIH, 2000).

Three things are clear regarding these participants and the amount of time they spent learning in regard to their prostate cancer. First, the time spent, for the most part, greatly exceeded the minimum of seven hours that had been established by Tough (1973) to be considered a learning project. Second, it was difficult to reconstruct accurately how much time was spent. Third, the most intense period of learning was generally from diagnosis until treatment.

Learning Strategies and Resources

The common strategies used to learn about prostate cancer were reading print materials, using the Internet, networking, and attending support groups. It should be noted that most of the participants were identified through contacts with Us Too!, a prostate cancer support group. Only 2 of the 12 participants had never attended a support group. As Henry explained, "I'm sort of a very private person and so I do not do well in those group things . . . I just do not like discussions with people I don't know and I'm not friendly with."

Art's endorsement of support groups was more typical of most of the participants. "I've learned much more information from Us Too! than I ever learned from many of the doctors." Brent expressed his view by saying, "I went to my Us Too! meeting and I looked around and there were 70 to 80 men and they all had . . . everybody's got a different problem and I visited and talked after the meeting. It motivated me to make sure I took care of my problem." Fred, too, called it "the best place to go." He said, "They're more knowledgeable and they have experiences. Whether they're the doctors that come in or experienced people that get this . . . I think you learn more."

Print materials were used by all of the participants. The sources of print materials varied. Some were obtained from doctors' offices, libraries, bookstores, friends, the American Cancer Society, and the support group. Art explained why a specific book

about prostate cancer was the most helpful resource to him. "It's written in layman's terms to where it's just, you know, real easy reading, but it does describe everything." David found Lance Armstrong's book inspiring. "He was a role model that I could really identify with. And his life after his diagnosis was not a bed of roses. He went through a lot of tough times but he overcame them. And that was the thing I picked up out of these books . . . such tremendous odds that he overcame to keep going and stay motivated."

Not everyone used the Internet as a major resource in their self-directed learning; of those who did, not everyone had positive things to say about it. Access and skill level were mentioned as factors in this regard. Clint reported, "We haven't had a computer very long and so maybe the information she [his wife] got wasn't the best. Maybe if she'd have been really a computer gal, she could have gotten different stuff that would have registered better with me." Jack commented, "And I teach computer and I look at the Internet as a junkyard; that if I was going to go to the junkyard to get a water pump, I need to look at all the water pumps and see which one's good and which one isn't; same with the rubbish out there on the Internet."

George, on the other hand, identified the Internet as the most helpful resource to him because of the sites that put him in contact with other prostate cancer survivors. He talked of posting a question about an issue or treatment option that he was researching. "And you'd get 10 or 15 responses back immediately within hours, of what they had experienced with it and who was good at it and like if you're going to send your slides out to have them reevaluated for pathology, who was the best in the United States." Henry reported that, "The first thing I did was search the Web and I immediately looked at places that I thought might be reputable and that was like the American Cancer Society and so forth." Neither he nor Larry opted to go to chat rooms.

All of the participants networked to gain information about which doctors were the best, what treatment was like, what to expect regarding side effects, what resources were helpful, and what other survivors had experienced. Family members, friends, acquaintances, friends of friends, doctors, nurses, church members, and survivors were mentioned frequently as part of the network that these men used in their self-directed learning.

Jack identified survivors as the most helpful resource to him, because "they've been there; they've done that." Larry also thought that personal contact with survivors was the most useful to him:

I felt the more personal . . . not going necessarily just with the doctor's advice. I'd try to find someone who had a similar condition and research to see what their outcomes were . . . I actually interviewed people. I talked to a guy in Hawaii. I talked to a guy in Atlantic City. Whenever I would call and get a name, I would follow up to see first-hand their reaction.

Brent and others, however, suggested that "we're all afraid to talk about it."

Survivors were also instrumental, in some cases, in connecting participants with the prostate support group. In two cases, the men reported being taken to their first meetings by survivors and about how that act of kindness had impressed them.

Ironically, most of the interviews for this study took place in a cancer resource centre that has been developed at one of the local hospitals. Most of the participants did not know it existed until their interviews.

The participants were also asked to identify the person who was the most helpful in their self-directed learning. There was no consistent pattern to their answers, but what was clear was that their learning was not solitary. The men identified themselves, their wives, survivors, other relatives, friends, and doctors.

The role of doctors in the self-directed learning experiences of these participants ranged from being central to the process to being insignificant. Doctors were identified as “very receptive,” “very supportive,” “neutral on learning,” having a “negative reaction,” and “not receptive to a lot of questions.” Participants’ perceptions of how rushed their doctors seemed during office visits appeared to play a significant role in the communication process with these patients and influenced how open they perceived the doctor to be regarding their self-directed learning. Jack believes that his doctor’s attitude “maybe pushed me into reading more on my own quickly.” He accepted that his doctor did not have the patience for “dumb questions” and had “no bedside manner.” He summed it up by saying, “I’m glad I don’t have to work for him, but I’m glad he operated on me.” Larry was not so forgiving. He reported, “I selected doctors because they were willing to offer that information . . . I think you’ve got to be ready to almost demand that the doctor answer your questions . . . I think some doctors feel they’re God.” Jack reported that he walked out after waiting an hour and a half for an appointment, maintaining that his time was valuable, too.

Resource Evaluation

The participants were also queried about how they evaluated the various resources and information they uncovered in their self-directed learning. They generally articulated that careful attention had been given to evaluation and that multiple strategies had been used in the process. These included identifying multiple sources that were saying the same thing, common sense, the reputation or credentials of sources, comparison of a survivor’s experience with the participant’s particular set of circumstances, and an ongoing analytical process that included consideration of personal values. Fred talked about using a chart on which he plotted the pros and cons of each treatment option based on what he had learned. “And that’s the way I made my decision. I guess it was a chart or something like that.”

Problems

The participants were, for the most part, very positive when queried about their self-directed learning efforts. However, two common problem areas that emerged from their descriptions dealt with the time pressure they felt and with difficulties in understanding complex medical information.

Eric reported, “I just couldn’t seem to get enough information yet I felt like I didn’t have that much time. I needed to get a decision made and get some kind of a treatment started. I felt a super urgency.” In looking back, Kevin feels that he was rushed into the operating room. He wishes that he had taken more time to learn about his options and about the possible side effects before surgery. He said:

Had I known then what I know today, I would have felt like I picked my destiny. The way I feel right now, it was picked by others. I had no control. I know where I'm headed but I didn't pick it. I didn't have a hand in it. I would have felt better if I'd been in on the very beginning and understood. You know, you're going to end up like today but at least I would have understood it . . . As it turned out, I ended up somewhat surprised with how I am today.

Kevin indicated that his long-term prognosis is not good and that he is dealing with side effects of incontinence and impotence.

Some of the respondents reported that they had difficulty understanding the material they accessed. Peter reported that he didn't read everything in the *Us, Too!* newsletters. He said:

Some of those are so technical that I don't understand all the terminology in those studies that they report so I just hit some of the articles that I like Some of the other studies with the different terms of the seed levels and hormonal treatments and stuff, I don't understand enough of those to really get too much out of those.

In referring to the material that Eric found in medical journals, he said, "It was just so far over my head that I just didn't feel like I gained anything from it." Fred indicated that the material he accessed through his library, as opposed to other sources, was the best because it was "easy to understand."

A strong majority of the participants also indicated that they were satisfied with their self-directed learning in regard to their cancer. Brent's comment is representative of the group: "I'm confident in how I handled it I wouldn't as I look back over it, I wouldn't have done it any other way." Jack was one of the exceptions. He indicated that talking to survivors earlier in his process would have been helpful. "I wish that I would have met a couple before that I could have talked to." Art's response was similar in that he wished that he had found *Us, Too!* sooner.

Learning Outcomes

The common outcomes that emerged from analyzing the interview transcripts suggest that these men were successful in achieving the goals that had motivated them to engage in self-directed learning in regard to their prostate cancer. Their learning assisted them in their decision-making concerning treatment options, doctors, and, to a more limited extent, to the impact of the side effects that might accompany their treatments.

David reported:

Well, I think it helped me make decisions and to look at it realistically and to become more positive . . . I'm not any better than anybody else and probably not worse than anybody else. It's just something that happens to some people and that I just have to accept it and go on with my life.

Eric talked about how his experience taught him to be more responsible for his own health. He emphasized that he learned that doctors are "practising" medicine. There

are no clear-cut answers and, therefore, it was really up to him to decide what to do. Fred also talked about how his learning resulted in confidence in his decision-making. “You’ve got to know what you want to do in your heart and be honest with yourself. If that’s what you want to do then you’ll be happy with what the result is afterwards.”

A common response was how their learning had helped in selecting their doctors. Ivan learned that the head of Koch Industries had used a local doctor. “This doctor had treated several people who could have gone anywhere in the world to have treatment. So I had the utmost faith in the way I was going.”

The unanticipated outcome of the self-directed learning experiences of the men in this study was the desire to use what they learned to help other prostate cancer patients. This was never mentioned as a purpose for their learning initially. However, most of the men indicated that it was one of the ways they intended to use what they had learned. For example, Jack said that he now tries to be a resource to other newly diagnosed men. “I try to be but I don’t advertise it . . . I’m willing to share whatever I’ve learned so that others don’t have to struggle.” Larry explained that through helping others, “I think that you get a sense that you’re not alone . . . it’s not a disease that singled out just you.” Kevin wants to help others because “I just don’t want them to go through what I went through.” However, he added, “You don’t basically walk around with a sign on you that says, ‘I have prostate cancer.’ It’s just one of those macho things.”

In spite of the motivation to be prepared by learning about side effects, it appeared from the comments of the participants that knowing about the side effects and actually living with them are two different things. Larry is currently undergoing hormone treatments that have caused his breasts to enlarge, hot flashes, and a level of emotionality that is uncharacteristic of him. He is struggling to come to terms with these side effects, which, from his point of view, attack his manhood. Art summed it up in this way:

Every single person that’s had prostate cancer, they don’t get out of it free. You’re never like you were before. Most of us have experienced some . . . either ED (erectile dysfunction) or incontinence or depression. We’ve all had it and so you try to learn to live with it and accept it and not let it worry you.

Jack said, “You know some things you’re just not, even though you read it, you’re not ready for it.”

Learning Continues

The desire to help themselves as well as others motivates most of the participants to continue their quest for information about prostate cancer. They also must continue to be tested to see if the cancer reoccurs. If it does, they will be faced with another decision about what to do. As Eric said, “I continue to learn now because of what I’ve learned at Us, Too! and that is, that quite often the cancer comes back.” Art stays involved, because “kind of like the old saying goes, the best defence is a good offence. The more you can educate yourself . . . the better off you are.” David called his continued learning and involvement in Us, Too! a “preventive measure.”

Advice for the Newly Diagnosed

It is not surprising that the participants in this study were unanimous in their support of using self-directed learning in this context. They recommended reading, going to Us, Too!, using multiple sources, researching surgeons, finding an expert you trust, asking questions, involving your family in the decision-making, talking to survivors, using the Internet, and taking the time you need in making treatment decisions. Clint's comment was, "You've got to take charge and do what's right for you." Eric's remark was representative of the group when he said, "I guess my advice would be to get as well-informed as you can."

Discussion

The importance of self-directed learning in this context is evident from the descriptions of the participants in this study. The experiences of these men support findings by Breau and Norman (2003) that prostate cancer patients "are satisfied with their outcome when they have a thorough understanding of treatment choices before medical intervention" (p. 603). These men felt that they had to take responsibility for their information needs. Their experiences are consistent with the findings of Dale et al. (2004) that "men with prostate cancer place considerable importance on a broad range of information needs, most of which are being inadequately met" (p. 67).

It was apparent that some of the men in this study struggled with both prostate cancer and their learning processes. There appeared to be a range in the self-directed learning abilities of the participants. As Spear and Mocker (1984) suggested, their inventory of skills and knowledge were critical to their self-directed learning experiences. For example, Henry, who is a university vice president, and George, who is a retired air force general, appeared to be the most sophisticated in regard to their ability to locate, assimilate, and evaluate information. On the other hand, Clint reported struggling with the Internet and with material that was difficult to understand. It appeared that his inventory of skills and knowledge hampered his efforts, just as Henry's and George's positively impacted theirs.

The experiences with self-directed learning as described by the prostate cancer patients in this study are largely consistently with Tough's (1973) original process description. They all exceeded his criteria of a minimum of seven hours in six months, and their motivations included the need to make good decisions. Also consistent with Tough's findings was the emphasis on making use of what they learned to help themselves and their positive feelings about their learning.

From the men's descriptions of their experiences, easy access to current, reliable, understandable, and relevant information was critical to the success of their self-directed learning efforts—and was also problematic. The participants reported that they struggled with the need to make decisions quickly and with material that was too technical for them to understand. The fact that many of the men in this study reported that they were expected to be active participants in their treatment decisions made access to quality resources that would help them an important ethical issue. It was surprising to find that many of these men were not given information through their doctors' offices, but rather were on their own to locate resources that could help in their decision-making.

The men in this study who had access to the Internet and the knowledge and skills necessary to tap into this resource were at an advantage in their quest for information. Their experiences suggest that, for some, the Internet is changing Spear and Mocker's (1984) concept of the organizing circumstance. It eliminates geographic location as a factor in access to information and, in a sense, provides everyone who can use it with the same environment. Spear and Mocker found that self-directed learners "tend to select a course from limited alternatives which occur fortuitously within their environment, and which structures their learning projects" (p. 4). Now, however, a computer, Internet access, and the appropriate skills provide individuals with the ability to tap into the vast resources that are electronically available about any subject, including prostate cancer. The Internet offers the great potential to equalize access to information and can assist in addressing the need to access reliable information quickly and easily. However, Ziebland (2004) suggests that "an inverse information law operates whereby those who are in the greatest need of information about preventable or treatable conditions are least likely to have access to new technologies" (p. 1784). Among those cited as having the greatest need are the poor, minorities, and the uneducated, who also frequently suffer from poor or inadequate health services.

Moreover, because quality controls do not exist in regard to information that is available on the Internet, the issue of evaluating electronically accessed material is currently left to the individual. Consistent with findings by Rozmovits and Ziebland (2004), the participants in this study indicated that they were aware of this problem, and they dealt with it in various ways.

What was also evident in this study was the benefit of anonymity that the Internet affords. The experiences of the men in this study reflected findings by Ziebland (2004) that "some users greatly value this ability to seek information about troublesome symptoms or side effects that may be difficult to discuss in person" (p. 1784).

Perhaps the most significant contribution of this study is found by contrasting its findings with a similar study concerning self-directed learning and breast cancer (Rager, 2003, 2004). The current study replicated the breast cancer research in regard to geographic location, methodology, and researcher. Significant differences were found in the descriptions of the breast cancer and prostate patients' experiences with self-directed learning that appear to reflect characteristics related to gender. This is consistent with findings reported by Kiss and Siegfried (2001) that "differences in psychosocial aspects of prostate and breast cancer are mainly based on gender issues. Gender differences are evident not only in the physical impact but also on sex, quality of life, psychosocial differences, coping and patients' partners" (p. 5).

Additionally, Nicholas (2000) asserts that "men and women experience cancer differently. More men than women get cancer, more men than women die from cancer, and men usually adapt less well than women after a cancer diagnosis . . . the consequences of male gender-role socialization may explain some of these differences" (p. 27).

The role of emotions was a significant factor in the self-directed learning of the breast cancer patients. They reported that the lessening of their fears was a motivator for their self-directed learning and that the learning did help them to be less afraid and better prepared to deal with the reality of breast cancer. They also spoke of support groups as

significant in meeting their emotional as well as psychological needs to connect with other survivors who could truly understand what they were feeling and experiencing. The descriptions of the breast cancer patients appeared to reflect Gilligan's (1982) characterization of women's lives as reflecting interdependence as opposed to independence and connection rather than separation, as well as Belenky, Clinchy, Goldberger, and Tarule's (1986) concept of connected knowing.

The men in this study, on the other hand, appeared to minimize the role their emotions had played in their experiences with prostate cancer. Most of the participants indicated that they didn't have feelings about their cancer, and yet two broke down into tears during the interviews. Gray et al. (2000) suggest that:

Thus, ill men are in a psychological bind. They may feel vulnerable, and may experience more intense emotions than they are accustomed to feeling. Consequently, they may also feel a greater need for emotional support. But these experiences run counter to their identities as men. To express distress or to actively seek support has the potential for undermining their sense of self. Minimization of impact thus becomes understandable. (p. 545)

These prostate cancer patients primarily focused on the informational benefits of support groups. They reported that their emotions were not a problem in their learning, and they characterized many prostate cancer patients as reluctant to talk about their experiences. Their descriptions support Kiss and Siegfried (2001), who state, "During stressful times most women with breast cancer want to talk about it and share their feelings with others – most men with prostate cancer would rather not . . . Men in support groups prefer to share information whereas women prefer to share emotion" (p. 4).

The women also spent more time learning about their cancer. Their time estimates ranged from 26 to 1,392 hours, whereas the men reported engaging in self-directed learning for 10 to 1,053 hours. This difference is amplified by the fact that the criteria for participation was within three years from diagnosis for the breast cancer patients and within five years for the prostate cancer patients.

Another contrast concerns the evaluation of the information accessed through their self-directed learning efforts. Weber, Roberts, and McDougall (2000) state that:

Men are expected to be logical and analytical in their thinking, and decisions typically are based on careful analysis . . . Because men often make decisions based on solid analytical evidence, much of the primary support they seek is informational. Men may seek to clarify their experiences with others who share similar circumstances. (p. 3)

The men in this study were very clear about how they evaluated what they were finding, whereas the women were vaguer in this regard. The answers of the breast cancer patients ranged from saying that everything was credible to a few more sophisticated responses involving triangulation. In general, however, the answers of the women indicated that they had paid less attention than the men to critically evaluating the resources that were used in their medical decision-making and that their emotions were a factor in this context. If the material was too frightening, it was discarded.

Finally, although both the breast cancer patients and prostate cancer patients indicated that an outcome of their self-directed learning was the desire to help other newly diagnosed individuals, the women were much more actively engaged in this process. The men indicated that they would respond when asked for help but that they would not be proactive in this regard. They suggested that men tend not to talk about health problems and that they didn't want to "broadcast it" or "wear a sign that says 'I have prostate cancer.'" This was in stark contrast with the breast cancer patients who often talked about having a mission to help the newly diagnosed through support groups, raising money for research, and even working to change insurance coverage.

The differences that emerged from the findings of the breast and prostate cancer studies suggest that gender is a factor impacting self-directed learning in this context. Areas of difference include the roles of emotions and support groups, the amount of time spent, the evaluation of resources, and privacy issues. These differences may have repercussions for the design and delivery of support services for these cancer patients.

Conclusion

In this study, 12 men described their experiences with self-directed learning in a crisis situation. The findings indicate that the process was beneficial to them. However, one of the limitations of the study is the fact that their experiences may not be representative of the many prostate cancer patients who, according to these participants, are unwilling to talk about their experiences. More inclusive forms of research, especially those that require no face-to-face contact, might produce different findings.

However, for the participants, self-directed learning was an important component in their efforts to help themselves deal with their cancer. Their stories fill an existing gap in the knowledge base regarding self-directed learning and prostate cancer and contribute important information on the use of self-directed learning in regard to personal health.

Finally, given the current climate in health care, the descriptions of the self-directed learning experiences of these prostate cancer patients provide valuable information to adult educators, health care providers, the cancer support community, and individuals who will face similar health crises.

Table A

Participant Information Summary

Participant	Age	Occupation	Education Level	Marital Status	Children
Art	80	Retired manufacturing plant manager, railroad tank cars	One and a half years of college	Married	Two sons
Brent	61	Manager, utility company, tree trimming operation	High school	Widowed	Two daughters
Clint	72	Retired business owner	High school	Married	Three sons, one daughter
David	66	Realtor	Master's degree	Married	One son, one daughter
Eric	64	Investment banker	College degree	Married	Three daughters
Fred	71	Retired retail manager	Master's degree	Married	Two sons, two daughters
George	67	Retired air force general officer	College degree	Married	One daughter
Henry	61	University associate vice president	Doctorate	Married	Two sons
Ivan	72	Retired bread salesman	High school	Married	Two sons, one daughter
Jack	57	College Professor	Doctorate	Married	Two sons
Kevin	67	Retired television broadcast engineer	Two and a half years of college technical school	Married	Three sons, two stepsons, one daughter
Larry	64	Aircraft manufacturing engineering manager	Master's degree	Married	One son, two daughters

Table B

Prostate Cancer Information Summary

Participant	Age	Date of Diagnosis	Time Since Diagnosis, in Months	Type of Treatment	Hours Spent Learning
Art	80	February 2003	22	Hormonal drug therapy; external beam radiation; rachytherapy	300
Brent	61	October 2003	13	Radical prostatectomy	156
Clint	72	October 2001	37	Radical prostatectomy	390
David	66	August 2001	40	Radical prostatectomy	146
Eric	64	January 2003	23	Radical prostatectomy	126
Fred	71	March 2004	8	Radical prostatectomy	440
George	67	November 2000	49	Radical prostatectomy	1,053
Henry	61	April 2004	10	Radical prostatectomy	10
Ivan	72	March 2004	9	Hormonal drug therapy; external beam radiation; rachytherapy is planned	12
Jack	57	November 2003	16	Radical prostatectomy	207
Kevin	67	April 2004	10	Hormonal drug therapy; radical prostatectomy; external beam radiation	384
Larry	64	September 2001	42	Radical prostatectomy; external beam radiation; hormonal drug therapy	1,008

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