Published in final edited form as:

J Cancer Surviv. 2011 June ; 5(2): 132–141. doi:10.1007/s11764-010-0157-3.

The experiences of unpartnered men with prostate cancer: a qualitative analysis

Meredith Wallace Kazer,

Fairfield University School of Nursing, Fairfield, CT, USA

Janet Harden,

Wayne State University School of Nursing, Detroit, MI, USA

Matthew Burke,

Yale University School of Nursing, New Haven, CT, USA

Martin G. Sanda,

Division of Urology, Beth Israel Deaconess Medical Center, Boston, MA, USA

Jill Hardy,

Survey Research Center, Michigan State University, East Lansing, MI, USA

Donald E. Bailey, and

Duke University School of Nursing, Durham, NC, USA

PROSTQA Study Group

Meredith Wallace Kazer: mkazer@fairfield.edu

Abstract

Purpose—The purpose of this study was to examine how men without partners make decisions about prostate cancer treatment, manage treatment side effects, and obtain information and support.

Background—In 2009, it was projected that over 230,000 men were diagnosed with prostate cancer. While treatment options vary, these options result in changes within the man that can affect his quality of life. Research has shown that often spouses play a central role in men's choice of treatment and in maintaining men's quality of life. In addition, spouses are the major providers of emotional support and physical care. However, little is known about how men without partners cope with prostate cancer. Prior research seldom addresses how diagnosis and treatment for prostate cancer affects the quality of life of men without partners.

Methods—Because very little is known about the needs of men without partners managing prostate cancer, qualitative analysis of data obtained during semi-structure interviews provided respondents with an opportunity to share the lived experience of prostate cancer. A semi-structured interview was conducted with selected, consenting men. The sample was drawn from the ongoing R01 study of men with prostate cancer (PROSTQA).

Results—The sample for this study included 17 unpartnered prostate cancer survivors. The ages of participants ranged from 47 to 72 with a mean age of 63. The participants had between zero and two co-morbidities with an average of one co-morbidity per participant. The sample was 82% Caucasian and 17% Black. A total of 35% of the participants reported “some college” ($n = 6$), 30% graduated from college ($n = 5$), and 23% went to graduate school ($n = 4$). One participant

reported that he was a high school graduate and one had less than a high school education. Five themes emerged from the data: going it alone, diagnosis and prostate cancer treatment decision-making, sources of information and support, the aftermath of prostate cancer, and coping strategies.

Conclusions—This study provides information about unpartnered men's prostate cancer experience. This information will help health care professionals to meet the needs of unpartnered more effectively and help them to assist men as they adapt to living with this chronic illness.

Keywords

Prostate cancer; Male cancers; Survivorship

Cancer is a major life stressor that can disrupt the lifestyles of patients. In 2009, it was projected that over 230,000 men will be diagnosed with prostate cancer [1]. While treatment options vary, these options result in changes that can affect a man's quality of life [2–8]. Research has shown that spouses play a central role in men's choice of treatment and in maintaining men's quality of life. In addition, spouses are the major providers of emotional support and physical care [8–10]. However, little is known about how men without partners cope with prostate cancer. Prior research seldom addresses how diagnosis and treatment for prostate cancer affects the quality of life of men without partners. The purpose of this study was to examine how men without partners make decisions about treatment, manage treatment side effects, and obtain information and support. The results of the study will help to provide improved understanding of the needs of unpartnered men with prostate cancer so that healthcare providers can provide informational and support interventions to meet these needs.

Background and significance

Prostate cancer is the most common form of cancer affecting men. The Prostate Cancer Progress Report from National Cancer Institute indicates that over 80% of men diagnosed with prostate cancer in 1990 were still alive in 2000 [11]. Because prostate cancer is typically a disease of older men, the number of men and their partners living with their disease and the outcome of treatment is increasing as our population continues to age. The Prostate Cancer Research Plan (FY2003–2008) indicates that understanding the long-term impact of prostate cancer, with an emphasis on enhancing survivorship and improving quality of life of these survivors is a major research priority [12].

While there is a significant amount of literature documenting the outcomes, needs and support programs of married men with prostate cancer, little is known about the needs of unpartnered men with prostate cancer. In 1996, Krongrad et al. [13] performed a landmark study evaluating 146,979 prostate cancer patients using SEER data from 1973 to 1990. The authors performed survival analysis and multivariate proportional hazard modeling in an effort to estimate the relative risk of mortality from prostate cancer. This study was the first to consider marital status as a predictor of mortality in prostate cancer and demonstrated that married men with prostate cancer have a statistically significant longer median survival than unmarried men, regardless of stage ($p = 0.0001$). These data showed that married patients had the longest (69 months) median survival, and separated and widowed patients had the shortest (38 months) median survival time. After controlling for age, race, stage, and treatment, married patients still had a better survival rate than their unmarried counterparts.

Denberg, et al. in 2005 [14] performed a study that considered marriage and ethnicity as a means of predicting treatment for localized prostate cancer based on SEER data from 1995–1999. The researchers used bivariate and multinomial logistic regression data of 27,920

prostate cancer patients without comorbidities to determine the medical and sociodemographic predictors for various treatment modalities. This study demonstrated that those who were married were more likely to undergo curative treatment when compared to other study participants. The strongest predictors of treatment were younger age and higher tumor grade; however the influence of marriage as a predictor was at least as strong as race/ethnicity.

A study conducted by Perczek et al. [15] examined coping styles and how these styles could potentially be adaptive in the context of a prostate cancer diagnosis. In this multi-center study that enrolled men at the time of a prostate biopsy, a sample of 101 men were enrolled; almost half (47%) did not identify as married. Of these participants, 38 received a cancer diagnosis and 63 did not. The age range was 46–87 years old. The sample completed the Life Orientation Test (LOT), the Brief COPE scale and the Profile of Mood States (POMS). Multiple linear regression modeling revealed that avoidant coping was predictive of poor adaptation and levels of distress, independent of optimism. Enhanced understanding of coping styles used by men with prostate cancer may help improve education and care throughout the trajectory of cancer treatment and survivorship.

In summary there is a gap in the research regarding unpartnered men's responses to diagnosis of and treatment for prostate cancer. Prior research seldom addresses the quality of life of these unpartnered men. Given the lack of information available regarding response to treatment outcomes, there is an immediate need to broaden our understanding of the factors that may affect the quality of life of unpartnered men with prostate cancer over the cancer survivorship trajectory.

Methods

This qualitative study was designed to expand the understanding of the phenomena of living with prostate cancer for unpartnered men. A semi-structured qualitative interview was used to explore the experience of these men living with prostate cancer. The primary purpose of this study was to try to understand how men without a partner manage a prostate cancer illness. The sample included prostate cancer patients from an existing prospective, longitudinal multi-site study of men treated for early stage prostate cancer [16]. Within the original parent population of 1,371, 235 identified themselves as single 1095 married, 38 living with partner and 9 unknown. All patients who identified themselves as unpartnered (not married or living with a significant other) participating in the PROSTQA study were eligible for the interviews. Patients also met the inclusion criteria for the parent study and had the ability speak and understand sufficient English to participate in the telephone interviews. Stratified purposive sampling was used to ensure that there were equal numbers of participants from each treatment option (prostatectomy, radiation therapy, and brachytherapy). A total of 53 men were asked to participate in the study and 26 agreed for a 49% enrollment rate.

The interview topics explored diagnosis and treatment decisions, the experience of living through treatment and the resulting side effects without a partner, and men's perceptions of the effect of the prostate cancer on their quality of life (Table 1) Interview questions were developed by the investigators of this study. The questions were purposely broad and open ended to encourage participants to share their own perspective. Focused questions were asked during the discussion to clarify information, guide the discussion back to the topic, and ensure participation by the patient.

In the parent study, interviewers from the Computer Assisted Telephone Center (CATI) queried subject interest in participating in this qualitative interview. During the regularly

scheduled annual follow-up interview, participants were invited to participate in this IRB-approved companion research study. The CATI center then notified the researchers of those men who gave verbal consent to participate in this study and provided the researcher with the patient's name, telephone number and a good time to contact him. The research interviewer then contacted the patient and arranged for a time for the detailed interview to be completed. Prior to the start of the interview the interviewer reaffirmed the participant's willingness to be in this study and obtained permission to audiotape the interview session. Interview sessions lasted between 20 and 40 min. A formal and annotated process to manage any participant that voiced distress during a phone interview was in place in the parent study and was available for use in this study, although none was needed.

Interview data were transcribed and analyzed separately by three separate investigators with expertise in qualitative research in order to identify preliminary coding schemas. Researchers read the transcripts independently, adding preliminary codes in the margins. The researchers then met to discuss, refine and modify themes. Potential themes were developed and then further reduced. Explicit quotes were extracted to provide a foundation for understanding the themes.

Results

The target sample was 20 men without partners drawn from the ongoing study of men with prostate cancer. Data analysis began after the 17th patient completed his interview. Analysis revealed data saturation had been reached so data collection was stopped at this point. Ages of the sample participants ranged from 47 to 72 with a mean age of 63. The participants had between zero and two co-morbidities with an average of one co-morbidity per participant. The sample was 82% Caucasian and 17% Black. A total of 35% of the participants reported "some college" ($n=6$) 30% graduated from college ($n=5$), and 23% went to graduate school ($n=4$). One participant reported that he was a high school graduate and one had less than a high school education. Of the total sample, seven had undergone external beam radiotherapy, six had radical prostatectomy surgery and four had brachytherapy. Participants in this study had received their treatment for prostate cancer between June 2003 and April 2006, making the time interval between treatment and interview approximately five to eight years. The following five themes emerged from the data: going it alone, diagnosis and prostate cancer treatment decision-making, sources of information and support, the aftermath of prostate cancer, and coping strategies.

Theme 1: going it alone

As a group, men in this study appeared to be very self-reliant both in managing the emotional responses associated with prostate cancer and managing the day to day tasks associated with disease management (such as medical appointments and control of adverse treatment effects) and self-care.

One 49 year old black man remarked that:

I began to try to handle things myself so I would say myself was probably the biggest problem. Again, in the beginning I should have gone more to support groups and been with other people who were having the same problem but I guess that was...I call it a private issue. You don't really let them know your business.

Another older gentleman talked to his cats. Six participants stated they didn't need others and just "dealt with it".

A 47 year old man commented:

There was nobody. I had nobody in a support network. I was single at the time. Two young children, ages, uh, 5 and 6. Ex-wife that I was not on good terms with so it was just something I dealt with alone.

Six of the men chose not to turn to friends in the absence of a partner and managed as best they could alone.

Theme 2: diagnosis and prostate cancer treatment decision-making

Prompted by the interviewer, participants began the interview with their prostate cancer story. In the majority of cases, men discussed their diagnosis and the influences on their prostate cancer treatment decision. Several men reported a moment of shock.

A 71 year old white man remarked that:

The diagnosis was uneventful but when he tells me on the phone by the airport that I have it [prostate cancer] then it was kind of one moment of shock I couldn't afford more than a moment because I was driving in traffic.

A 56 year old white man stated:

My initial reaction was probably a kind of scared...

Two main influences resulted in the creation of subthemes for Theme 2; The power of the PSA (Subtheme 2a), and the Role of the Healthcare Team (Subtheme 2b). The theme centers on these influences and men's description of how they made the decision to undergo prostate cancer treatment.

Subtheme 2a: effects of the PSA blood test—The majority of participants in this study discussed their Prostate Specific Antigen (PSA) readings in relation to their decision to seek prostate cancer treatment.

A 72 year old white man described:

And, and uh then when the PSA moved to a higher level, I decided that it was time to uh go in and take the aggressive action.

A 56 year old white man commented:

My dad had prostate cancer, so I always had it checked regularly and my doctor called me right after Christmas and said um he was concerned because the PSA went over 4 and at that time I made an appointment... So I had the surgery.

A 55 year old white man explained that:

I felt like something was wrong with my body, didn't know what it was, went in for some tests and the PSA came back real high. Then they did the biopsy and found it and wasn't sure what exactly, you know, it meant and that and this is through my local doctor and then he sent me to a local urologist and, um, that guy wanted to do surgery. I did a little bit of checking and I guess that would have been...I would have been his 13th patient so I said nah, I don't think so. A friend of mine is in pathology at the Cleveland Clinic. She said send it up here. Let me take a look at it and then she hooked me up with some Cleveland Clinic doctors and I decided to go with the radiation treatment.

A 61 year old white man remarked that

My general physician and internist (cough) noted an elevation in my PSA at a regular examination date. He recommended that I see a urologist here in town. The

urologist did a needle biopsy and the biopsy results were positive for um prostate cancer ...

and it was found to have a reading that suggested that not emergency action but prompt action be taken and I asked for a referral ...I guess my preference was for surgical treatment and the uh I met with surgeons and they said they did not think I was a good candidate for surgery and referred me to a, an oncologist who um set me up with a regimen of uh um x-ray um an x-ray program and I entered that program.

Elevated PSA levels were turning points for these men.

Subtheme 2b: role of the healthcare team—The role of the participant's physicians in deciding prostate cancer treatment varied. Some participants did not mention their health care providers at all. However, the majority of participants remarked on the role their healthcare team had on their prostate cancer treatment decision.

A 63 year old white man remarked that:

It was based on the physician's recommendations and you know I've spoken since to other people and it seems like unless they have someone [practically] a friend or a support group there's no information about what the options are because my experience was and other people that I have spoken to usually they see a urologist and usually the urologist is a surgeon and so that's the course of treatment that's suggested.

A 72 year old white man stated:

Uh, well, I went to a specialist on treating it with the radiation and he was pretty much convinced that in my case where I had had bypass surgery and a few other things in the past that I might be better off with the therapy than I would with going with the operation.

A 63 year old white man informed researchers:

that [seeds} was recommended by the...my doctor

While treatment options vary, these men most often chose the treatment their physician suggested.

Theme 3: sources of information and support

Participants in the study turned to a number of resources for information and support about prostate cancer, including books, the internet, and most frequently family and friends. Two of the participants attended support groups to gather information and support about prostate cancer. Several participants also turned to church or God for help during their prostate cancer experience. A 72 year old white participant found a book on prostate cancer to be helpful saying "he gave me a great book that was very consoling". He spoke highly of the information this book provided and referred to it several times during the interview.

Seven participants turned to the internet for information on prostate cancer. Some found the information helpful while others found it overwhelming.

A 64 year old white man related that

I had done sort of incomplete research on the Internet and was sort of bewildered by all that was available and by that time I had sort of decided on the course of treatment

A 69 year old white man stated:

Well, I had got a lot of information off the internet as to the pros and cons of all the types of surgery.

Eleven of the participants turned to family and friends for both information and support during diagnosis, treatment and the aftermath of prostate cancer. In some cases present or old girlfriends helped during this time, while in others adult children were sources of support.

A 56 year old white man described:

I had a relatively close friend who was a girlfriend but more of an ex-girlfriend so it was a little bit different situation. We weren't currently involved but as a friend. She was, you know, helping me.

A 72 year old white man shared:

Um reading literature, discussion with my family... My son was very active in that procedure....Um well my uh my best friend and confident and uh had, had uh ovarian cancer and uh we were very supportive of one another.

A 60 year old black man explained that:

I had my regular support system, my daughter, my girlfriend, my grandchild.

Only two men spoke of finding help through support groups.

A 64 year old white man described:

I joined a support group and only then learned about all the different options and um how to select a physician once you decide on a particular course of treatment and lots of things I would have done differently but there isn't much education even up here about looking at the options.

Older men referred to support received from going to church.

A 72 year old white man remarked:

My church is taking care of my soul so...I don't have any emotional problems with it.

Theme 4: the aftermath of prostate cancer treatment

Men in this study were dealing with the many adverse effects of prostate cancer treatment, including bowel, sexual, and urinary problems.

A 72 year old white man explained his experience after treatment:

The fact that the radiation destroyed everything running over the prostate that would tell me...that controlled my bowel movement. It's tough operating without that internal information. Makes me have to run fast a lot. So I have to...you know, arrange my life around my bowel habits. So that's workable.

A 56 year old white man remarked that:

"It takes a lot more to make things happen", and "like an irritable bowel type syndrome thing happening and I've had some issues with that".

Men spoke of changes in the quality of their erection and how they managed this. One elderly gentlemen stated:

No. She tells me I don't have any sexual problems. It takes longer for me. My erections are not as firm as they used to be but I manage finally to make her happy

A 49 year old black man described:

My erections are not what I would like them to be... Partly, partly remedied not completely with pills.

Several men described problems with urinary incontinence and urgency.

A 62 year old white man stated:

It's just mainly, you know, controlling the urine

A 69 year old white man said:

I'll urinate in my...my britches

A 67 year old white man explained:

Um, my bladder and my bowels, when it's time for them to move, they want to move. I can't hold like I used to be able to hold.

These treatment outcomes created challenges in the lives of the study participants.

Theme 5: coping strategies

Participants were asked how they coped with their prostate cancer experience. Two main coping mechanisms resulted in the creation of subthemes for Theme 5; Positive Attitudes (Subtheme 5a), and Confidence in the Healthcare Team (Subtheme 5b). The theme centers on these coping strategies and men's description of how they assisted in coping with their prostate cancer.

Subtheme 5a: positive attitudes—Four participants in the study discussed the role of their positive thoughts in getting through the prostate cancer experience.

A 72 year old white man stated:

No I think uh that anybody going through it should just uh maintain that positive attitude.... And uh my uh belief that I was going to survive this.

A 49 year old black man remarked that

I think I should be happy that I'm still alive...

A 57 year old white man said:

Well the thing that helped me cope with the prostate cancer is the things that helped me cope with life in general and that's um having uh having a positive outlook on life. Um I'm not a person that isolates, although I live by myself. I think having the support of friends and family and um I think understanding that you have to deal with life uh as it comes you know you.

For these men, there was power in a positive attitude.

Subtheme 5b: confidence in healthcare team—Other participants felt that it was their confidence in the healthcare team that was a critical factor in their successful coping with prostate cancer.

A 56 year old white man remarked that:

Um first and foremost, I think it was my doctors and my medical friends. ...The doctors certainly played a very important role.

A 69 year old white man described:

Good doctors, good, you know

Another 69 year old white man said:

making sure you have a physician that you have a lot of confidence in.

For these men, having confidence in their health care team was an important means of coping with their illness.

Discussion

The purpose of this study was to examine how men without partners make decisions about treatment, manage treatment side effects, and obtain information and support. The findings of the study lend considerable insights into the experiences of unpartnered men with prostate cancer. Some of these experiences are similar to men with partners, but some of the findings from this study underscore the unique needs of men without partners as they process the prostate cancer diagnosis, make treatment decisions and process through treatment and the aftermath of prostate cancer.

The results of this study reveal that the experience of unpartnered men with prostate cancer is unique in some ways, and similar to that of partnered men in other ways. As a group, men in this study appeared to be very self-reliant both in managing the emotional responses associated with prostate cancer and managing the day to day tasks associated with disease management. The substantial role of physicians in the decision-making process may be unique to unpartnered men as they do not have wives or intimate partners with whom they can discuss the treatment options and underscores the need for enhanced education after diagnosis to enhance patient autonomy in selecting treatments. In the absence of partners, participants in this study identified a number of alternate sources of information and support to which referrals should be considered when caring for unpartnered men. Moreover, the adverse effects of prostate cancer treatment are likely to be very embarrassing to unpartnered men as they pursue new intimate relationships and should be given special consideration in this population. Finally, the need to cope with the diagnosis of prostate cancer is not unique to the experience of unpartnered men. However, as a coping strategy, self-reliant men as seen in this study may have the potential for enhanced coping in comparison to partnered men.

In the theme *going it alone*, men reported on the independent management of their emotions related to prostate cancer diagnosis and disease management. Six of the participants felt that prostate cancer was a private matter. Men appeared to not want to bother others, and managed the disease alone. Whether this was by choice, or imposed by their unpartnered status is unknown. It is important to note here that misclassification bias is an important issue to consider when interpreting data and building programs for men with prostate cancer [17]. Participants in this study were traditionally classified as “unpartnered” yet, may have had family or friend who could have accompanied them to their doctor’s appointments, provide them with supportive care as they recovered from treatment, and acted as an advocate, if they chose. The literature supports that men and women experience cancer in different ways [18–20]. Despite their partnered status, most men who develop prostate cancer never attend a support group and they view information and advice from medical staff as more helpful than from family and friends [21]. Hegemonic masculinity, which is a belief that there is a normative ideal of male behavior, may also help to explain the male

response to illness [22]. The issue of embodiment and notion of masculinity, particularly in the context of seeking help during the prostate cancer experience, is a relatively unknown area [22]. While the study provides good insight into the experiences of unpartnered men, given the differences in men and women's experience with cancer and the literature that supports men's response to the disease, this theme should not be over-interpreted to represent that going it alone is an experience unique to unpartnered men.

Two participants in this study remarked on a period of "shock" or fear upon cancer diagnosis. This is consistent with the diagnosis of prostate cancer in other studies [23–25]. Wallace and Storms [26] in a focus group study of the needs of men with prostate cancer, reported that words such as "shock," "blindsided;" "body blow," "fear," "anger" and "roller-coaster," were used to describe their feelings upon receiving the diagnosis. In other studies participants described confusion in trying to make treatment decisions and sorting out the choices when newly diagnosed [7]. They felt overwhelmed and unable to process the information. Participants in this study remarked repeatedly on the role of their physician in making treatment decisions related to prostate cancer. The substantial role of physicians in the decision-making process may be unique to unpartnered men as they do not have wives or intimate partners with whom they can discuss the treatment options. However, yielding to the judgment of healthcare providers is a common clinical occurrence, especially among older adults, such as seen in this study. Research has suggested that reluctance to participate in treatment decision-making may relate to lack of knowledge [27]. Enhanced education after diagnosis may enhance patient autonomy in selecting treatments among unpartnered men[28].

The role of PSA values in the diagnosis and treatment decision making process is common clinical practice. However, The American Urological Association (AUA) recently updated their guidelines for PSA testing. Baseline PSA testing should be begin at the age of 40 years. Elevated PSA values may be followed by biopsy, but should consider several factors including family history, and co-morbidities. Given the documented high rates and consequences of overtreatment for prostate cancer, the AUA recommends that practitioners inform patients of both the benefits AND risks of screening [29]. Given the lack of evidence supporting the role of PSA measures in reducing mortality relative to over-diagnosis [30] the substantial role of PSA values among participants is of concern and worthy of further study.

The literature has consistently shown that married men with prostate cancer turn to their wives for support and to assist with information seeking [26]. Thus, it is important to determine sources of information and support for men who do not have partners. Men in this study uncovered a number of resources for information and support about prostate cancer, including books, the internet, and family and friends. Two of the participants attended support groups to gather information and support about prostate cancer. Three participants also turned to church or God for help during their prostate cancer experience. The information and support seeking patterns of men in this study are consistent with other studies. The use of books and articles has been a common method of gaining disease-related information for decades. The rising number of reports on the use of the internet to gain disease-related information is consistent with previous work and will likely have expanded use in the future [31]. Turning to family and friends was a common strategy for both information and support in this study and has been seen consistently in the literature. Wallace and Storms [26] also found in their focus group study, that men with prostate cancer were highly influenced by family members in making their treatment decision. While men with prostate cancer do not always attend support groups, two participants in this study, found that attendance at a support group provided them with good information about prostate cancer. Broom [32] reports that online support groups may also allow men to benefit from "lurking", and in essence benefit from men who are more active in posting

questions and responses. The benefit of online support groups accommodates for basic elements of masculinity like shyness and sharing.

Men in this study reported on the continued management of the many adverse effects of prostate cancer surgery and radiation therapies. Most notably, five men (35%) reported problems with urinary continence, seven had erectile dysfunction (29%) and three (18%) described bowel problems. These problems are consistently found in the literature among men treated for prostate cancer, but may have particular significance for unpartnered men who may be in new intimate relationships. Urinary incontinence (UI) is seen in at least 50% of patients after radical prostatectomy [33]. The rate of erectile dysfunction (ED) in men after radical prostatectomy has been reported to be greater than 80% [34]. Bowel changes following radiation therapy for prostate cancer have been seen in less than 20% of patients [35]. These adverse effects of treatment are likely to be very embarrassing to unpartnered men as they pursue new intimate relationships and should be given special consideration in this population.

Coping is not static, but rather a dynamic state of adjustment based on what is attended to, given that the disease and the threats change throughout the course of the survivorship trajectory [36]. The need to cope with the diagnosis of prostate cancer is not unique to the experience of unpartnered men. Participants in this study identified positive attitudes and confidence in the healthcare team as two essential coping strategies. Coping is also essential in regulating emotions and problem solving and given the contextual role of coping, unpartnered men, in particular those men who lack social support, may be at the highest risk for ineffective coping and its associated morbidity. Ben-Tovim et al. [20] supported the role of positive attitudes in coping with prostate cancer in their study of 80 prostate cancer patients. The researchers determined that positive problem solving, self-reliance, emotional availability, distress (including brooding and self-pity), and solace account for over 54% of the variance in coping. Research has also supported that healthcare providers play a critical role in how patients cope [37].

Limitations

As with any research, this study has some limitations. The most obvious limitation is that as a companion study to an ongoing prospective, longitudinal study, data collection was planned to take place well after treatment had been completed. Information obtained from participants was based on long term memory. The lack of baseline data regarding earlier post treatment is a limitation. However, because of the lack of information available about unpartnered men's responses to prostate cancer, this study can add substantially to the body of knowledge. Second, this study used a convenience sample. While we recognize this as a limitation of the study, this work serves as a feasible starting point to provide information that will facilitate better understanding of the unpartnered man's response to treatment for prostate cancer; an area not well understood. As six participants in this study stated that they did not turn to others to manage the disease, a final limitation lies in the possibility that more self-reliant men may have self-selected for the study.

Summary

In summary, this study was innovative in its approach to access an understudied population to address a specific aim. This study proposed an efficient use of available resources to obtain a sample from a large ongoing study. The study drew participants from three major types of treatment used in prostate cancer illness (prostatectomy, external beam radiation, and brachytherapy) and examined how the unpartnered patient managed treatment and side effects. This research is significant because extensive information about how unpartnered men experience prostate cancer was obtained and it provides information about factors

associated with unpartnered men's appraisal of a prostate cancer illness experience into survivorship. Results of this study will provide information that health professionals can use in patient education and in helping improve patients' outcomes following treatment. Further, findings can be used as the basis for the design and implementation of future interventions for unpartnered prostate cancer patients.

Acknowledgments

Funding NIH R01 CA95662

PROSTQA Consortium study group

The PROSTQA Consortium includes contributions in cohort design, patient accrual and follow-up from the following faculty: John T. Wei, Rodney L Dunn, and David Wood (University of Michigan); Eric A Klein and Jay Ciezki (Cleveland Clinic); Jeff Michalski and Adam Kibel (Washington University, St. Louis, WA); Mark Litwin and Chris Saigal (University of California—Los Angeles Medical Center, Los Angeles, CA); Louis Pisters and Deborah Kuban (MD Anderson Cancer Center, Houston, TX); James Hu (Brigham and Women's Hospital, Boston, MA) Douglas Dahl and Anthony Zeitman (Massachusetts General Hospital, Boston, MA), Irving Kaplan (Beth Israel Deaconess Medical Center, Boston, MA and), Howard M. Sandler (Cedars-Sinai Medical Center, Los Angeles, CA) and Larry Hembroff (Michigan State University, East Lansing, MI)

References

1. Jemal A, Siegel R, Ward E, Hao Y, Xu J, Murray T, et al. Cancer statistics. *CA Cancer J Clin.* 2009; 59(4):225–249. [PubMed: 19474385]
2. Litwin MS, Sadetsky N, Pasta DJ, Lubeck DP. Bowel function and bother after treatment for early stage prostate cancer: a longitudinal quality of life analysis from CaPSURE. *J Urol.* 2004; 172:515–519. [PubMed: 15247718]
3. Hu JC, Elkin EP, Pasta DJ, Lubeck DP, Kattan MW, Carroll PR, et al. Predicting quality of life after radical prostatectomy: results from CaPSURE. *J Urol.* 2004; 171:703–708. [PubMed: 14713791]
4. Hedestig O, Sandman P, Tomic R, Widmark A. Living after external beam radiotherapy of localized prostate cancer. *Cancer Nurs.* 2005; 28(4):310–317. [PubMed: 16046895]
5. Ward-Smith P, Kapitan D. Quality of life among men treated with radiation therapy for prostate cancer. *Urol Nurs.* 2005; 25(4):263–268. [PubMed: 16225343]
6. Novan L, Morag A. Advanced prostate cancer patients' relationships with their spouses following hormonal therapy. *Eur J Oncol Nurs.* 2003; 7:73–80. [PubMed: 12849558]
7. Harden J, Schafenacker A, Northouse LL, Mood D, Smith D, Pienta K, et al. Couples' experiences with prostate cancer: focus group research. *Oncol Nurs Forum.* 2002; 29(4):701–709. [PubMed: 12011916]
8. Harden J, Northouse LL, Mood D. Qualitative analysis of couples' experience with prostate cancer by age cohort. *Cancer Nurs.* 2006; 29(5):367–377. [PubMed: 17006110]
9. Maliski SL, Heilemann MV, McCorkle R. From “death sentence” to “good cancer”: couples' transformation of a prostate cancer diagnosis. *Nurs Res.* 2002; 51(6):391–397. [PubMed: 12464759]
10. Jakobsson L, Hallberg IR, Loven L. Experiences of daily life and life quality in men with prostate cancer: an exploratory study. Part 1. *Eur J Cancer Care.* 1997; 6:108–111.
11. National Cancer Institute. Prostate Cancer Progress Report. Washington: Author; 2004. Retrieved from <http://planning.cancer.gov/library/2004prostateProgRpt.pdf>
12. National Cancer Institute. Prostate cancer research plan FY 2003–2008. Washington: Author; 2002. Retrieved from <http://planning.cancer.gov/pdfprgreports/prostateplan.pdf>

13. Krongrad A, Lai H, Burke MA, Goodkin K, Lai S. Marriage and mortality in prostate cancer. *J Urol.* 1996; 156(5):1696–1700. [PubMed: 8863573]
14. Denberg TD, Beaty BL, Kim FJ, Steiner JF. Marriage and ethnicity predict treatment in localized prostate carcinoma. *Cancer.* 2005; 103(9):1819–1825. [PubMed: 15795905]
15. Perczek RE, Burke MA, Carver CS, Krongrad A, Terris MK Facing a prostate cancer diagnosis: who is at risk for increased distress? *Cancer.* 2002; 94(11):2923–2929. [PubMed: 12115380]
16. Sanda MG, Dunn RL, Michalski J, Sandler HM, Northouse L, Hembroff L, et al. Quality of life and satisfaction with outcome among prostate-cancer survivors. *N Engl J Med.* 2008; 358(12):1250–1261. [PubMed: 18354103]
17. Newell GR, Pollack ES, Spitz MR, Sider JG, Fueger JJ. Incidence of prostate cancer and marital status. *J Natl Cancer Inst.* 1987; 79(2):259–262. [PubMed: 3474458]
18. Vaartio H, Kivineimi K, Suominen T. Men's experiences and their resources from cancer diagnosis to recovery. *Eur J Oncol Nurs.* 2003; 7(3):182–190. [PubMed: 12932480]
19. Korfage IJ, de Koning HJ, Roobol M, Schroder FH, Essink-Bot ML. Prostate cancer diagnosis: the impact on patients' mental health. *Eur J Cancer.* 2006; 42(2):165–170. [PubMed: 16326098]
20. Ben-Tovim DI, Dougherty MLG, Stapleton AMF, Pinnock CB. Coping with prostate cancer: a quantitative analysis using a new instrument, the centre for clinical excellence in urological research coping with cancer instrument. *Urology.* 2002; 59(3):383–388. [PubMed: 11880075]
21. Thaxton L, Emshoff JG, Guessous O. Prostate cancer support groups: literature review. *J Psychosoc Oncol.* 2005; 23(1):25–40. [PubMed: 16492642]
22. Connell RW, Messerschmidt JW. Hegemonic masculinity: Rethinking the concept. *Gend Soc.* 2005; 19(6):829–859.
23. Crighton FL. University Kansas research paper. 2002:165.
24. Harden J, Schafenacker A, Northouse L, Mood D, Pienta K, Hussain M, et al. Couples experiences with prostate cancer: focus group research. *Oncol Nurs Forum.* 2002; 29:701–709. [PubMed: 12011916]
25. Lintz K, Moynihan C, Steginga S, Norman A, Eeles K, Huddart R, Dearnaley D, Watson NM. Prostate cancer patient's support and psychological care needs: Survey from a Non-Surgical Oncology Clinic. 2002:50.
26. Wallace M, Storms S. The needs of men with prostate cancer. *Appl Nurs Res.* 2007; 20(4):181–187. [PubMed: 17996804]
27. Robinson A, Thomson R. Variability in patient preferences for participating in medical decision making: implication for the use of decision support tools. *Qual Health Care.* 2001; 10(Suppl 1):34–38.
28. Whitney SN, McGuire AL, McCullough LB. A typology of shared decision making, informed consent, and simple consent. *Ann Intern Med.* 2004; 140:54–59. [PubMed: 14706973]
29. American Urological Association. Prostate specific antigen best practice statement. 2009 Retrieved June 29, 2009 from <http://www.auanet.org/content/guidelines-and-quality-care/clinical-guidelines/main-reports/psa09.pdf>.
30. Schröder FH, Hugosson J, Roobol MJ, Tammela TL, Ciatto S, Nelen V, et al. Screening and prostate-cancer mortality in a randomized European study. *N Engl J Med.* 2009; 360(13):1320–1328. [PubMed: 19297566]
31. Pew Internet & American Life Project. Seeding the cloud: what mobile access means for usage patterns and online content. 2008 Retrieved September 20, 2008. From http://www.pewinternet.org/pdfs/PIP_Users.and.Cloud.pdf.
32. Broom A. The eMale: prostate cancer, masculinity and online support as a challenge to medical expertise. *J Sociol.* 2005; 41(1):87–104.
33. Smither AR, Guralnick ML, Davis NB, See WA. Quantifying the natural history of post-radical prostatectomy incontinence using objective pad test data. *BMC Urology.* 2007; 7(2)
34. Siegel T, Moul JW, Spevak M, Alvord WG, Costabile RA. The development of erectile dysfunction in men treated for prostate cancer. *J Urol.* 2001; 165(2):430–435. [PubMed: 11176390]

35. Yoshioka Y. Current status and perspectives of brachytherapy for prostate cancer. *Int J Clin Oncol*. 2009; 14:31–36. [PubMed: 19225921]
36. Lazarus RS. Coping theory and research: past, present, and future. *Psychosom Med*. 1993; 55(3): 234–247. [PubMed: 8346332]
37. Link LB, Robbins L, Mancuso CA, Charlson ME. How do cancer patients choose their coping strategies? A qualitative study. *Patient Education and Counseling*. 2005; 58(1):96–103. Retrieved from <http://dx.doi.org/10.1016/j.pec.2004.07.007>. [PubMed: 15950842]

Table 1

Exploring how men without partners cope with a prostate cancer illness

Qualitative interview guide	
1	Describe your experience of being diagnosed with prostate cancer. Describe your experience with the treatment process.
2	How did you go about choosing your treatment? Who, if anyone, influenced you decision? Did you turn to anyone for support? If yes, who?
3	During your treatment, did you have a relative or friend who helped you in the following areas: <ul style="list-style-type: none"> a. deal with any treatment side effects? b. cope with any emotional difficulties? c. obtain information about prostate cancer or your treatment? d. do everyday activities and chores (like food shopping, laundry, meals, cleaning, etc.)? e. get around by car or public transportation? f. deal with the medical system (medical appointments, insurance claims?) (if help was received) Was the help adequate or did you need more help than you received? If no, what was it like going through this experience without any help?
4	What problems are you experiencing in your life now due to having had cancer? Physically?...who or what has helped you with these problems? Sexually?...who or what has helped you with these problems? Emotionally?...who or what has helped you with these problems? Socially?...who or what has helped you with these problems? In everyday activities?...who or what has helped you with these problems? Has the help been enough? If not, what type of help did you need?
5	What did you find helpful during the prostate cancer experience? What did you find to be difficult? Is there anything or anyone else that helped you during your prostate cancer treatment? After treatment was finished?
6	Do you look for any person or type of assistance to help you cope with the impact of cancer on your life? For example, <ul style="list-style-type: none"> • support groups, • meeting with friends, • social activities, • counselor for any emotional problems, • using the Internet
7	Did you talk with other men who had prostate cancer? If yes, who and was it helpful?
8	Did you use the internet as a source of information or support?
9	What are the three most important things that helped you cope with having prostate cancer?
10	Anything else you want to share?