

Prostate Cancer in African American Males: Psychological Effects of Diagnosis and Prostatectomy

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Abstract

Prostate cancer is the most common cancer in men regardless of race or ethnicity, but it is more common in African American men than in white men (American Cancer Society 2008). It is less common in Hispanic, Asian, Pacific Islander, and Native American men. Several studies have reported diminished and poorer quality of life (i.e., disease-specific physical health and functional status) for African American men who have undergone standard treatments for prostate cancer when compared to white men. However, limited research is available on psychological adjustments to prostate cancer and even less is known about racial differences in psychological functioning after treatment.

Problems most often reported by African American men after prostate cancer diagnosis or a radical prostatectomy are impotence, sexual dysfunction, erectile dysfunction, urinary frequency and psychological problems related to sadness, worry, nervousness, loneliness, loss, and diminished perceptions of “manhood”. Treatment for prostate cancer requires thoughtful decision making, which often is influenced by patient age at diagnosis, tumor stage, co-morbidities and treatment choice; because the type of treatment chosen may lead to adverse effects and modification in sexual behavior, especially after a radical prostatectomy.

Introduction

In 2007 in the United States (most recent data available), 223,307 men developed prostate cancer, and 29,093 men died from the disease (American Cancer Society 2008). This represents 10 percent of those affected by prostate cancer. From 2000 to 2006 the number of new cases of prostate cancer among men in the United States decreased by 2.4 percent per year. The number of deaths from prostate cancer has decreased by 4.1 percent per year from 1994 to 2006 (Andersen 2002).

Each year thousands of men continue to be diagnosed with prostate cancer. It was estimated that about 192,280 men would be diagnosed with this disease in 2009 (American Cancer Society, 2008). African American men have the highest incidence of prostate cancer among all men in the world and have substantially greater mortality compared with white men (American Cancer Society, 2008). In addition to being at increased risk for developing prostate cancer and dying from this disease, African American men also have an increased risk of experiencing poorer quality of life (QOL) after diagnosis than do white men. For example, Eton and colleagues (2001) found that after controlling for treatment type, comorbidities, and age, African American men reported significantly lower levels of physical functioning when compared with white men. Similar findings

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were reported by Lubeck and colleagues (Borm, Fransen, and Lemmens 2007) who found that after controlling for demographic factors, African American men reported significantly lower physical functioning when compared with white men. Consistent with these findings, Campbell and colleagues (Borm, Fransen and Lemmens 2007) found that African American men were associated with lower emotional and physical functioning in a sample of men who were newly diagnosed with prostate cancer (Campbell et al. 2004).

Among men who undergo radical prostatectomy, the primary complication is impotence (Andersen 2002; Borm, Fransen, and Lemmens 2007) which occurs in 20 percent - 50 percent of patients who had a nerve procedure done. Approximately 15 percent - 20 percent of patients experience stress incontinence and < 2 percent experience permanent incontinence after undergoing nerve-sparing procedures (Ukoli, Lynch, and Adams-Campbell 2006; Table 1 and 2). A primary symptom associated with metastatic disease which occurs in 50 percent-75 percent of patients is pain (Clark, Wray, Brody, Ashton, and Watkins 1997; Classen, Butler, Koopman, Miller, DiMiceli, and Giese-Davis 2001; D'Amico, Whittington, and Malkowicz 1998; DiBlasio et al. 2008). Among 40 percent-55 percent of patients with advanced disease, fatigue and decreased physical function are reported (Classen et al. 2001; D'Amico, Whittington, and Malkowicz 1998). Hence, patients must engage in thoughtful decision-making regarding treatment; and physician and patient must consider age at diagnosis, tumor stage and co-morbidities (Gehlert et al. 2008; Gray, Fitch, Phillips, Labrecque, and Fergus 2000; Holland 2003). There is a need for more intensive research on the effects of radical prostatectomy on the quality of life of African American men.

Literature Review

Most prostate cancer literature focuses on health-related quality of life (HRQOL). A recent prospective study of 1,201 patients at nine university-affiliated medical centers found that type of treatment resulted in different patterns in QOL outcomes (Sanda et al. 2008). Hormonal therapy in combination with either radiotherapy or brachytherapy was associated with the least effective outcomes as measured by QOL domains using the Expanded Prostate Cancer Index Composite (EPIC-26); also added was sexual function, urinary irritation, vitality and hormonal function (Sanda et al. 2008). Nerve-sparing techniques that leave the nerves controlling erection intact were associated with better prostatectomy outcomes, but all forms of treatment had some adverse effects on sexual functioning (Sanda et al. 2008). Urinary incontinence and bowel function also were among the QOL outcomes affected by prostate cancer treatment in this study. The QOL results reported in the Sanda et al. 2008 study are consistent with the pattern of difficulties related to sexual, urinary, and bowel function reported in previous studies in the prostate cancer literature (Eton, Lepore, and Helgeson 2001; Litwin, Hays, Fink, and Ganz 1995; Purnell et al. 2010; Wei et al. 2002).

Among the limited literature comparing QOL by race and ethnicity, African American men report more problems with urinary function and being more irritated by their sexual impairment than non-Hispanic white men do 5 years after diagnosis, despite the fact that their sexual functioning was actually better than that of whites (Johnson et al. 2004). Similar results were found in a previous study of 1,178 (14 percent

black) newly diagnosed patients from the national, observational Cancer of the Prostate Strategic Urologic Research Endeavor (CaPSURE) database, which also showed lower baseline health-related quality of life for African American patients and slower improvements in functioning after treatment when compared to whites (Lubeck, Kim, Grossfeld, Ray, Penson, and Flanders 2001). The latter study also observed younger age, less income and educational attainment, and more advanced disease in African American patients than in white patients (Lubeck, Kim, Grossfeld, Ray, Penson, and Flanders 2001). African American patients also showed significantly less health-related quality of life factors even after controlling for age, education, and income in multivariate analyses. Advanced prostate cancer is usually treated with hormonal therapy rather than surgery, and is associated with extremely poor QOL outcomes (Lubeck et al. 2001; Sanda et al. 2008). Hence, it is possible that African American health-related QOL post-treatment is a function of poorer pre-morbid functioning that is associated with advanced disease. In addition to QOL, the study by Sanda and colleagues (2008) assessed satisfaction with treatment outcomes and found that African American patients were significantly less satisfied with their treatment than are patients from other racial and ethnic groups (Sanda et al. 2008). Collectively these studies suggest that African American men are experiencing greater disruption in HRQOL and are less satisfied with their prostate cancer treatment when compared to white men.

Health-related quality of life is the psychological impact of cancer diagnosis and treatment in prostate cancer survivors. The multiple adverse effects of prostate cancer and its treatment can cause considerable distress. As Kunkel and colleagues (2000) observed, "Faced with the diagnosis of a deadly disease, men simultaneously must confront threats to their sexuality and masculinity" and "must deal with treatment-related complications in the context of other age-related losses: health, energy, retirement, and deaths of peers and family members" (Kunkel, Bakker, Myers, Oyesanmi, and Gomella 2000). An estimated 10 percent to 33 percent of prostate cancer patients have clinically significant psychological distress and depression (Pirl and Mello 2002; Roth et al. 1998; Zabora, BrintzenhofeSzoc, Curbow, Hooker, and Piantadosi 2001) including major depression and anxiety. Men treated for prostate cancer are at increased risk of developing clinical depression (Jenkins, Carmody, and Rush 1998; Pirl and Mello 2002; Rosenblatt and Mellow 1995), and this increased risk appears to be of particular concern in men undergoing androgen deprivation therapy (DiBlasio et al. 2008). Anxiety also is common in prostate cancer patients (Clark, Wray, Brody, Ashton, and Watkins 1997; Roth et al. 1998), with peak anxiety reported following diagnosis and just prior to treatment. Symptoms related to traumatic stress (i.e., Posttraumatic Stress Disorder) also have been reported in prostate cancer patients, including intrusive thoughts that remind the patient of the trauma of cancer. Often cancer patients attempt to avoid thinking about the trauma of cancer as a means of coping (Kornblith, Herr, Ofman, and Scher 1994).

Several factors make it difficult to identify and treat prostate cancer patients for psychological distress. For all cancer patients, a lack of communication between oncologists and their patients about emotional concerns (Pollak et al. 2007), stigmatization and devaluation of mental health treatment (Holland 2003), and the belief that psychological problems are a "natural" part of the cancer experience (Spiegel 1996) represent barriers to appropriate assessment and intervention for psychological distress. For men with

prostate cancer a particular barrier is the tendency to underreport emotional distress and refuse psychiatric treatment because of the social stigma attached to a cancer that affects sexual functioning (Kunkel, Bakker, Myers, Oyesanmi, and Gomella 2000). For African American men who may already be dealing with the affects of sexual dysfunction and their perception of diminished "manhood", to compound these emotions with the admission of psychological trauma and or depression frequently is more than they are willing to handle. Consequently, denial and or rejection of these emotions frequently surface. Prostate cancer patients also are unlikely to disclose their illness due to low perceived need for support, fear of stigmatization, attempts at avoidance coping (i.e., minimizing the impact of illness), and concern about burdening others (Gray, Fitch, Phillips, Labrecque, and Fergus 2000). There also is some evidence that there is stigma attached to seeking emotional support for African American cancer patients (Matthews, Sellergrren, Manfredi, and Williams 2002).

While several studies have described psychological distress in prostate cancer patients in general, very little is known about the psychological adjustment of African American men to prostate cancer. However, the poorer health-related quality of life that has been reported in the literature suggests that psychological functioning may be worse for African American men than it is for white men. In their study, Lubeck and colleagues (2001) found that in addition to poorer health status and physical functioning including by more bodily pain, African American prostate cancer patients had poorer emotional functioning and self-esteem and more health-related distress than white men did. Both African American and white patients saw improvements in physical and mental health functioning 1 year following treatment, though pain remained worse for African American men, and they had slower rates of improvement. This latter finding is significant because pain has been associated with increased risk of depression and anxiety (Kunkel, Bakker, Myers, Oyesanmi, and Gomella 2000), and African American cancer patients have been shown to receive inadequate pain management treatment (Payne, Medina, and Hampton 2003; Smedley, Stith, and Nelson 2003). In another study that examined quality of life in African American prostate cancer patients, Campbell and colleagues found that cancer-related self-efficacy (i.e., confidence in one's ability to manage disease-specific symptoms) was positively associated with physical and mental health functioning (Campbell et al. 2004; Campbell et al. 2007). In a small number of research studies, African American prostate cancer patients have been shown to experience significantly poor health-related quality of life that includes psychological functioning, but more research is needed to confirm these findings.

In light of the documented psychological and other quality of life needs of men with prostate cancer, several researchers have noted a relative dearth of studies that reported on effective interventions to address these needs (Campbell et al. 2007; Weber and Sherwill-Navarro 2005). However, most of the literature in this area has been conducted with female breast cancer patients (Andersen 2002). There are studies that report on the effectiveness of national prostate cancer support groups founded in the early 1990s, such as "Us Too" and "Man to Man" (Watson et al. 2003), (Thaxton, Emshoff, and Guessous 2005) although there is evidence that men with cancer are much less likely to participate in these groups than are women (Krizek, Roberts, Ragan, Ferrara, and Lord 1999). Men who do attend these groups are often educated, older, and white.

When men do participate in support groups they generally report positive outcomes like increased knowledge about prostate cancer, decreased uncertainty, and support from other group members (Watson et al. 2003; Wei et al. 2002). These groups typically provide information on disease and cancer treatment and provide participants the opportunity to engage in shared problem-solving, which facilitates a sense of group cohesiveness and offers tools for coping (Weber and Sherwill-Navarro 2005). There also is some research evidence that men place greater value on content and information provided in these groups rather than on emotional support (Watson et al. 2003). Self-help groups led by laymen who usually have had experience with prostate cancer are very different from theoretically-based supportive-expressive or cognitive behavioral therapy groups that have been tested using randomized, controlled designs (Classen et al. 2001). In one of the few group therapy studies on prostate cancer patients, Penedo and colleagues (2006) reported that a group-based, cognitive-behavioral, stress management intervention group increased participants' understanding and coping strategies, and improved quality of life for a diverse group of 191 prostate cancer patients. In a separate analysis, they reported improved stress management. While cognitive behavioral therapies tend to emphasize the correction of maladaptive thoughts and beliefs in order to alleviate symptoms of distress, supportive-expressive therapy focuses on "the creation of a supportive environment in which participants [are] encouraged to confront their problems, strengthen their relationships, and find enhanced meaning" (Classen et al. 2001). In a study of 125 women with metastatic breast cancer, women in the supportive-expressive group therapy arm exhibited significant reduction in traumatic stress symptoms; and when their final assessment prior to death was removed from the research analyses, reductions in both traumatic stress and total mood disturbance were observed (Classen et al. 2001). Women with the greatest mood disturbance at baseline saw the greatest improvement in the 12 months following randomization. These promising results suggest that supportive-expressive group therapy also may be beneficial for men with prostate cancer. However, there are no studies reporting on supportive-expressive group therapy in prostate cancer patients and no studies on racial differences.

Purnell and colleagues (2010) reviewed a nationally controlled, randomized clinical trial conducted by the University of Rochester Cancer Center Community Clinical Oncology Program Research Base, which was designed to test supportive-expressive group therapy intervention in prostate cancer patients (Purnell et al. 2010). They compared the baseline psychological functioning of African American and white prostate cancer patients and examined the effect of supportive expressive group therapy on psychological adjustment for African American men. They found racial disparities in baseline psychological adjustment to prostate cancer, with African American men reporting higher levels of traumatic stress (Impact of Events Scale), coping through cognitive avoidance (Mini-MAC Cognitive Avoidance), and exhibiting hopelessness/helplessness (Mini-MAC Hopelessness/Helplessness) when compared to white men in the clinical trial. African American men in the intervention also reported higher coping through cognitive avoidance, a result that was replicated in an additional analysis showing that cognitive avoidance in African American men was higher than in any other patient groups. These results suggest that African American men have poorer psychological adjustment to prostate cancer and that targeted interventions are needed to address their specific needs (Purnell et al. 2010).

Discussion

The purpose of this review article was to determine the baseline psychological functioning of African American men who have prostate cancer. The research literature supports baseline racial differences in psychological functioning on reports of poorer emotional functioning and health-related distress in African American men when compared to white men (Lubeck et al. 2001). The limited research in this area addresses the specific impact of traumatic stress and coping difficulties in psychological functioning for prostate cancer patients. Studies show that African American men are less likely to report emotional distress. Mood disturbance (i.e., depression and anxiety) often abates for cancer patients within one year of diagnosis and treatment. In addition, in relatively low levels of mood disturbance, there also is no evidence that intervention had any effect on mood disturbance in African American men. This finding is consistent with results on metastatic breast cancer patients before their final assessment prior to death was removed from study analyses (Classen et al. 2001). African American men generally are not comfortable sharing personal information with strangers or in a mixed-race setting. This addresses the importance of culturally appropriate, targeted interventions for African American male cancer patients in order to address their interpersonal needs (Powe et al. 2007). African American men may be in greater need for these interventions because of poorer psychological functioning. Specific interventions to address psychological distress and overall quality of life for African American prostate cancer patients should be tailored to meet the specific needs of African American men. The same principle holds for interventions involving men in general. It already is known that men with cancer are less likely to seek help from support groups than women do; and that those men who do participate are primarily interested in content and education rather than emotional support for the disease (Krizek, Roberts, Ragan, Ferrara, and Lord 1999; Watson et al. 2003; Weber and Sherwill-Navarro 2005). To the extent that group interventions are desirable for their efficiency, their [group] effectiveness with men may be enhanced by an emphasis on the provision of information and education rather than on the expression of emotion. When African American men are the targets of such intervention, the information should be specific to their experience and should potentially address the psychosocial stressors associated with race that likely compound the immediate stressor of cancer diagnosis and treatment. Culturally appropriate suggestions for coping (i.e., use of familiar community resources like churches, social and fraternal organizations for support) also might be incorporated with opportunities for individual psychotherapeutic intervention when individuals express interest. Such culturally appropriate, targeted interventions need to be tested for effectiveness in African American and other racial and ethnic minority male cancer populations.

An emphasis on stress and coping is inherently relevant to emerging theoretical models that propose a role for psychosocial stressors in the development of both breast and prostate cancer in African Americans (Ellison et al. 2001; Gehlert et al. 2008). Specific to prostate cancer, Ellison and colleagues (2001) suggested that the chronic stress associated with experiences of racism and discrimination may compound the physiological responses that predispose African American men to higher rates of prostate cancer. They also noted that inadequate coping resources result in the subjective perception of stress. African American men appear to react to the diagnosis of prostate cancer as a significant

stressor akin to traumatic events experienced by individuals with Posttraumatic Stress Disorder (Kornblith, Herr, Ofman, and Scher 1994). This may be due to the extent to which individuals with cancer experience unwanted thoughts regarding their disease and/or try to avoid thinking about cancer. This pattern of behavior is consistent with a traumatic stress response. In addition, African American men have fewer resources to cope with stress, have greater cognitive avoidance and exhibit a sense of helplessness and hopelessness. While each of these coping difficulties are shown to negatively impact adjustment in prostate cancer patients (Roesch, Adams, Hines, and Palmores 2005), helplessness and hopelessness also are consistently linked to depression in cancer patients (Brothers and Andersen 2008; Reich, Lesur, and Perdrizet-Chevallier 2008).

African American men that underwent radical prostatectomy consistently reported sexual and urinary symptoms (Krizek, Roberts, Ragan, Ferrara, and Lord 1999; Kunkel, Bakker, Myers, Oyesanmi, and Gomella 2000; Litwin, Hays, Fink, and Ganz 1995; Lubbeck et al. 2001; Matthews, Sellergren, Manfredi, and Williams 2002; Payne, Medina, and Hampton 2003) and have demonstrated that irrespective of the treatment, progressive disease is related to more bodily pain, less vitality/energy and poorer social and emotional well-being than diseases in remission. Pain and fatigue are physical symptoms that are significant predictors frequently reported among older age men at diagnosis; occur more in advanced stages of the disease; and often lasts for longer duration after prostatectomy in African American males (Penedo et al. 2004; Penedo et al. 2006). While entirely speculative and beyond the scope of this review, it is possible that increased stress response and negative coping styles also may contribute to prostate cancer severity and recurrence, including psychological distress. Research examining biological pathways involved in the stress response and cancer progression of African American men is needed to confirm this hypothesis.

Conclusion

With 98 percent of African American men expected to survive at least five years after their diagnosis with prostate cancer, it is vital to understand how they adjust to and cope with the disease. The literature suggests that African American men have poorer physical and functional QOL following standard treatments for prostate cancer. Studies have revealed potentially significant disparities in psychological functioning at baseline between African American and white prostate cancer patients. Supportive-expressive therapy as an intervention for psychological distress experienced by African Americans with prostate cancer appears to be a viable option. However, a multi-integrative approach is needed to improve the understanding of psychological adjustment to prostate cancer in a particularly vulnerable group such as African American men. This review solidifies the need for additional research on QOL, psychological adjustment, and psychosocial interventions to improve long-term functioning in African American male prostate cancer survivors. In particular, these results point to the potentially efficacious use of informational and educational interventions that are culturally appropriate and targeted towards African American men.

Table 1:
Frequency of Symptoms and Problems in African American Men after Radical Prostatectomy (N = 100)

Symptoms/Problems	Frequency (%)
Erection Failure	84.7
Urinary Incontinence and Frequency	63.3
Pain	54.1
Fatigue	53.1
Sleep and Appetite	39.8
Psychological Problems	32.6

(Ukoli, Lynch, and Adams-Campbell 2006)

Table 2: Problems Reported by African American Men after Radical Prostatectomy

Symptoms/Problems	Severity of Symptoms*	
	Mild (%)	Moderate to Severe (%)
Sex life	27.6	67.3
Erection failure	14.0	50.0
Sexual dysfunction	—	55.7
Urination (combined)	29.6	33.7
Frequency	16.3	40.8
Incontinence	—	21.7
Pain	42.9	11.2
Fatigue	27.6	25.5
Sleep/appetite (combined)	12.2	27.6
Sleep	11.5	15.6
Appetite	12.2	13.3
Psychological (combined)	17.3	15.3
Sadness	10.2	9.2
Worry	5.1	9.2
Loneliness	2.0	8.2
Co-morbidity	59.2	20.4

* Mild response categories 1–2; Moderate-severe response categories: 3–4

Co-morbidity (number of self-reported health conditions):

1 or 2 conditions = mild; 3 or more conditions = moderate-severe

(Ukoli, Lynch, and Adams-Campbell 2006)

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