

ERECTILE DYSFUNCTION

Medical Help-Seeking for Sexual Concerns in Prostate Cancer Survivors



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ABSTRACT

Introduction: Although sexual dysfunction is common after prostate cancer, men's decisions to seek help for sexual concerns are not well understood.

Aim: Describe predictors of actual prior help-seeking and intended future medical help-seeking for sexual dysfunction in prostate cancer survivors.

Methods: A cross-sectional survey of 510 prostate cancer survivors assessed masculine beliefs, attitudes, support/approval from partner/peer networks (subjective norm), and perceived control as predictors of medical help-seeking for sexual concerns. A theory of planned behavior (TPB) perspective was used to examine actual prior and planned future behavior and contributing factors. Statistical analyses included multiple and logistic regressions.

Main Outcome Measures: Intention to see a doctor for sexual advice or help in the next 6 months was measured using the intention subscale adapted from the Attitudes to Seeking Help after Cancer Scale. Prior help-seeking was measured with a dichotomous yes/no scale created for the study.

Results: Men were M_{age} 71.69 years (SD = 7.71); 7.54 years (SD = 4.68) post-diagnosis; received treatment(s) (58.1% radical prostatectomy; 47.1% radiation therapy; 29.4% hormonal ablation); 81.4% reported severe ED (IIED 0–6) and 18.6% moderate–mild ED (IIED 7–24). Overall, 30% had sought sexual help in the past 6 months, and 24% intended to seek help in the following 6 months. Prior help-seeking was less frequent among men with severe ED. Sexual help-seeking intentions were associated with lower education, prior sexual help-seeking, sexual importance/priority, emotional self-reliance, positive attitude, and subjective norm ($R^2 = 0.56$).

Conclusion: The TPB has utility as a theoretical framework to understand prostate cancer survivors' sexual help-seeking decisions and may inform development of more effective interventions. Masculine beliefs were highly salient. Men who were more emotionally self-reliant and attributed greater importance to sex formed stronger help-seeking intentions. Subjective norm contributed most strongly to help-seeking intentions suggesting that health professionals/partners/peers have a key role as support mechanisms and components of psycho-sexual interventions.

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INTRODUCTION

Prostate cancer is the second most common cancer in men with this burden falling more heavily in western countries.¹ Treatments for prostate cancer include surgery, radiation therapy, and hormone therapy, all of which have negative effects on sexual functioning.² Erectile dysfunction (ED) is the most common of these effects, often accompanied by loss of sexual desire and difficulty reaching orgasm.³ Rates of ED are 10- to 15-fold higher in prostate cancer survivors compared with age-matched noncancer peers,⁴ with 56% to 85% of men experiencing ED 1–17 years after treatment,^{2,3,5} 45% reporting low sexual desire, and 65% describing difficulties with orgasm 4–7 years after treatment.³ One-third of prostate cancer survivors experience moderate to high unmet sexuality supportive care needs.^{6–8}

Prostate cancer survivors are reluctant to seek help for ED despite experiencing high unmet sexuality supportive care needs and availability of treatments.³ Treatments for ED include oral phosphodiesterase type 5 inhibitors, penile injections (intracavernous injections), vacuum erection devices, or surgical devices (penile implant),^{9,10} although penile implant utilization among men with prostate cancer is low.¹¹ Miller et al¹² reported only 30% of prostate cancer survivors in their study had used medications or devices for ED. In addition, among prostate cancer survivors who had poor-quality erections and were bothered by their ED, between 24% and 61% across different treatment types had never tried medications or devices to improve their erectile function.¹² Similarly, in a recent study of men with localized prostate cancer, 77.6% had sexual dysfunction for which 40% used medication; 11% used medical devices; and 29% did nothing.¹³ As well, satisfaction and adherence to treatments are often poor.^{3,12} Walker et al¹⁰ reported that most men and their partners stopped using sexual aids within the first 2 years. Men or their partners may have unrealistic expectations about the success of treatment and effort required which result in frustration, disappointment, and loss of confidence, and discourage men from trying other treatment options.^{10,14–16}

Men's reticence to seek help for mental and physical health concerns,^{17–19} including ED^{20–24} is well documented in the general population. However, the factors that influence medical help-seeking for sexual concerns by prostate cancer survivors are less well described.²⁵ Qualitative research suggests that discomfort or embarrassment,^{26,27} believing sexual dysfunction is part of the normal aging process^{13,28,29} or an inevitable outcome of treatment,^{28,29} perceived ineffectiveness of ED treatment,²⁹ and masculine ideals such as stoicism and emotional control^{27,28,30–34} may deter prostate cancer survivors from seeking help. By contrast, facilitators of help-seeking for these men included availability of effective treatment,²⁹ dissatisfaction with sexual function,²⁹ and encouragement from a partner.^{29,35}

To date, only one quantitative study by Schover and colleagues^{25,35} has examined predictors of men's help-seeking for ED after prostate cancer treatment. Their research found that 46% of men had sought help for ED since their diagnosis, and 44% intended to seek help within the next year. Predictors of intended future help-seeking were more recent prostate cancer treatment, increased dissatisfaction with sexual function and distress about ED, and more positive attitudes toward seeking help. However, this study is now a decade old and was empirical rather than theory driven. Reviews on men's help-seeking in general health contexts^{17–19} have proposed the need to consider psychosocial mechanisms underpinning men's help-seeking decisions and the application of well-established theory to guide such explorations.

In this regard, the theory of planned behavior (TPB)³⁶ is an attitude–behavior model which has been used widely in health contexts to understand and predict people's decisions to perform behavior.³⁷ The TPB proposes intention (readiness to act) as the most proximal predictor of behavior. Intention in turn is predicted by three components: attitude (positive or negative evaluation), subjective norm (perceived support from close and broader social networks), and perceived control (perceived ease or difficulty).³⁶ Meta-analytic evidence shows that the TPB explains approximately 39% of the variance in a person's intentions to perform a behavior and 27% of the variance in their actual behavior.³⁸ The TPB has been used to explore men's psychological help-seeking³⁹ and cancer survivor's support service utilization more generally,⁴⁰ and in this study, it will be applied to understand sexual help-seeking in prostate cancer survivors. Importantly, both actual prior help-seeking and planned future help-seeking will be examined in order to more fully understand the decision-making pathway that best facilitates men's medical help-seeking for their sexual concerns after prostate cancer treatment.

METHODS

Participants and Procedure

Members of a state-based prostate cancer support network (N = 2,437) were invited by mail to complete an anonymous self-report questionnaire ([Appendix 1](#)). As this membership list was broad and included carers, members who had not been diagnosed with prostate cancer were requested to disregard the letter or extend the invitation to participate to a man they knew who had been diagnosed. Reminders were sent after 2 weeks. In all, 565 prostate cancer survivors returned questionnaires and of these men, 510 self-reported at least mild ED (scored 0–24) on the Erectile function subscale from the International Index of Erectile Function^{41–43} and were retained for analysis. Ethical approval for the study was obtained from the University Human Ethics Committee prior to study commencement.

The TPB³⁶ was used to examine men's actual prior and planned future medical help-seeking behavior for their sexual

concerns after prostate cancer treatment. One advantage of using the TPB is that the model can be extended to include variables of importance to the behavior studied, with the proviso that there is theoretical or practical justification for doing so and the additions improve the utility of the TPB to predict planned future or actual prior behavior.³⁶ In the current study, sexual importance and emotional self-reliance were included as salient masculine beliefs that may be relevant to men's decisions to seek medical help for their sexual concerns (Figure 1 depicts the proposed model). In line with TPB specifications, it was hypothesized that men would report increased sexual help-seeking intentions (planned behavior) if they viewed help-seeking more positively, perceived more support from partner and peer networks, perceived fewer difficulties with seeking help, valued sex as an important part of their masculine identity, and were less emotionally self-reliant. The sociodemographic and prostate cancer treatment characteristics associated with actual prior help-seeking, sources of help accessed, and prior treatment use for ED by these men were also explored.

Main Outcome Measures

Planned and Actual Sexual Help-Seeking

Planned future help-seeking was measured using the three-item intention scale from the Attitudes to Seeking Help after Cancer Scale.⁴⁰ This scale was adapted for the current study to measure prostate cancer survivor's intentions to see a doctor for sexual advice or help for sexual concerns in the next 6 months. Actual prior

help-seeking was assessed using a self-report measure of whether men had sought help for their sexual concerns in the previous 6 months, the sources of help they had accessed (eg, doctor, family/friends), and their in-person and online prostate cancer support group attendance and engagement with peers diagnosed with prostate cancer outside the support group network.

Erectile Function and Recent Use of Treatment for ED

The six-item Erectile function subscale (IIED) from the International Index of Erectile Function^{41–43} measured self-reported erectile function in the 4 weeks prior to the study. Summed scores between 0 and 6 indicate severe dysfunction, 7–12 moderate dysfunction, 13–18 mild to moderate dysfunction, 19–24 mild dysfunction, and 25–30 no dysfunction.^{42,43} Men also reported whether they had used treatment for their ED in the past 4 weeks (scored 1 *yes*, 0 *no*), and if yes, indicated on a list of treatments (eg, tablets taken by mouth, injections, vacuum device, etc.) whether they had used each treatment (scored *yes/no*). An open-ended response option was provided for men to indicate if they had used a treatment that was not listed.

Sociodemographic and Treatment Characteristics

Men self-reported their country of birth, relationship status, education, income, and medical treatment history (years since diagnosis, years since commencing last treatment, treatment type).

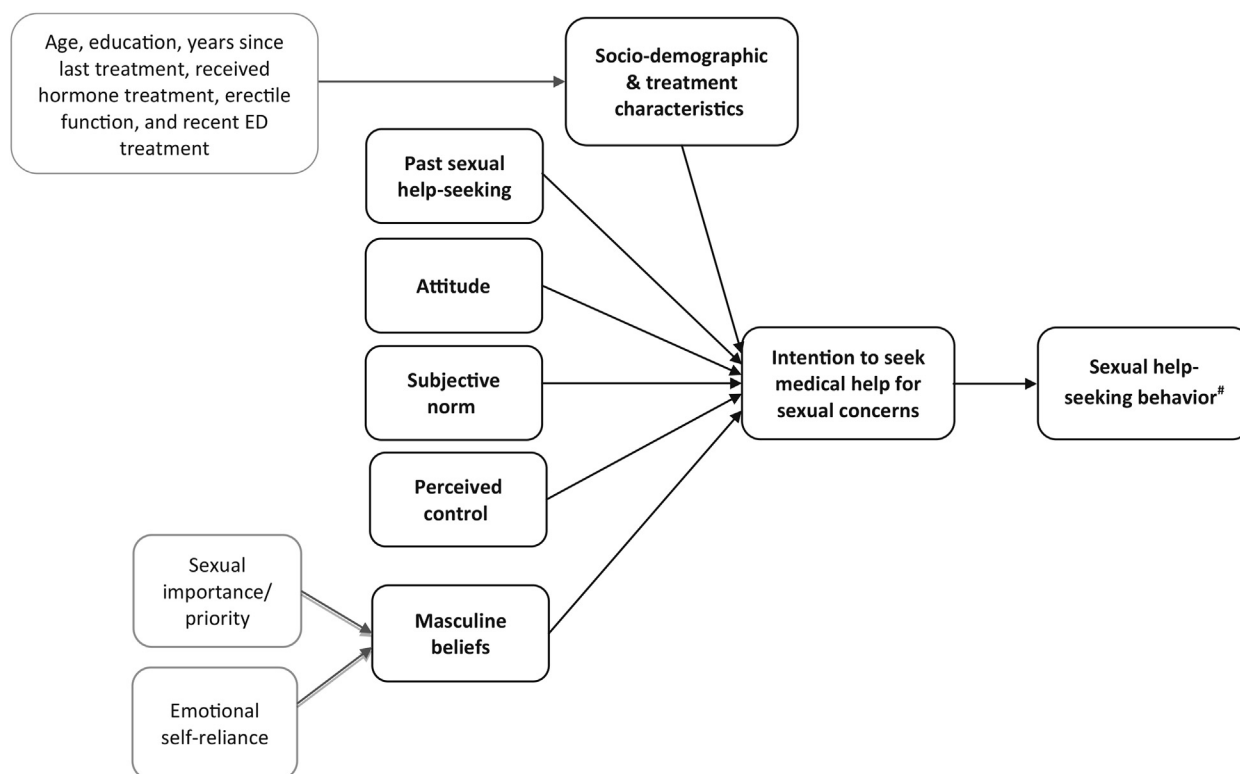


Figure 1. Proposed theory of planned behavior predicting sexual help-seeking intentions. #Prospective sexual help-seeking behavior was not measured in this study.

Masculinity in Chronic Disease Inventory (MCD-I)

The 22-item MCD-I measures internalized masculine beliefs contextualized for men experiencing prostate cancer and associated treatment(s).⁴⁴ In the current study, two subscales from the MCD-I were used. The four-item Sexual importance/ priority subscale captures the degree to which being physically capable of having sex and obtaining an erection are important to men and how much men value sex as an intrinsic part of their self-concept. The two-item Emotional self-reliance subscale encapsulates a man's sense of autonomy in dealing with or expressing their emotions or distress. Higher scores indicate greater salience and importance of these attributes to men.

Attitudes to Sexual Help-Seeking after Prostate Cancer Scale

Attitude, subjective norm, and control items from the Attitudes to Seeking Help after Cancer scale⁴⁰ were adapted to measure seeking medical help for sexual concerns in the next 6 months. Two items measured positive evaluation of sexual help-seeking (Attitude). Seven items assessed perceived support from important others in immediate (eg, partner) and broader (eg, other men they knew with prostate cancer) social networks for sexual help-seeking (Subjective Norm). Three items measured sense of control over and anticipated difficulty seeking help for sexual concerns (Perceived Control).

Statistical Analysis

Descriptive statistics were calculated for background and treatment characteristics, erectile function and recent use of treatment for ED, prior help-seeking for sexual concerns, and sources of help accessed. Logistic regression was used to identify the sociodemographic and treatment characteristics associated with past help-seeking, sources of help accessed (face-to-face peer support groups only), and use of treatment for ED. The relationships between the predictors and sexual help-seeking intentions were explored using bivariate correlations. Hierarchical multiple regression analysis identified predictors of prostate cancer survivor's sexual help-seeking intentions and was performed in five blocks: (i) age, education; (ii) hormone treatment, years since commencing last treatment; (iii) erectile function, recent use of treatment for ED, past help-seeking for sexual concerns; (iv) masculine beliefs (sexual importance/priority, emotional self-reliance); and (v) positive attitude, subjective norm, and perceived control.

RESULTS

Participants

Men (N = 510) ranged in age from 51 to 91 years ($M_{age} = 71.69$; $SD = 7.71$), with most born in Australia (82.3%), educated at trade/technical certificate or diploma (36.2%) or high school level (34.3%), and had a partner (married

or de-facto) (82.2%), with gross household income \leq AUD\$80,000 (79%). On average, men were 7.55 years postdiagnosis ($SD = 4.68$; range 0–24 years). Eighty percent had commenced their last prostate cancer treatment in the previous 9 years (16% in the previous year) ($M = 6.03$, $SD = 4.53$, range: 0–24), with most having received one (64.8%) or more (31.6%) treatments. Majority of men received radical prostatectomy (58.1%), followed by radiation therapy (47.1%). Thirty-one percent had hormonal ablation, with 6.6% on active surveillance or watchful waiting. The average IIED score of 4.27 indicated severe ED ($SD = 5.75$; range 0–24) (Table 1).^{42,43} Twenty-four percent (n = 119) of prostate cancer survivors intended to seek help for their sexual concerns in the next 6 months.

Recent Use of Treatment for ED

Twenty-two percent (n = 112) of prostate cancer survivors had used treatment for ED in the 4 weeks prior to the study. Of these men, most had used tablets (60.7%) or penile injections (27.7%) (Table 1). Prostate cancer survivors who had not received hormone therapy ($B = -0.81$, $\text{Exp}(B) = 0.45$, 95% $CI = 0.22-0.91$, $P = .027$) and had moderate to mild ED ($B = 0.17$, $\text{Exp}(B) = 1.18$, 95% $CI = 1.13-1.24$, $P < .001$) had higher rates of recent treatment use for ED, $\chi^2(5) = 93.93$, $P < .001$ (Nagelkerke $R^2 = 0.31$).

Prior Help-Seeking for Sexual Concerns

Thirty percent (n = 153) of prostate cancer survivors had sought help for their sexual concerns in the previous 6 months. Prostate cancer survivors who were younger ($B = -0.05$, $\text{Exp}(B) = 0.95$, 95% $CI = 0.92-0.98$, $P = .003$), treated more recently ($B = -0.09$, $\text{Exp}(B) = 0.92$, 95% $CI = 0.87-0.97$, $P < .001$), and had moderate–mild ED ($B = 0.07$, $\text{Exp}(B) = 1.07$, 95% $CI = 1.03-1.11$, $P = .001$) had higher rates of sexual help-seeking prior to the study, $\chi^2(5) = 45.61$, $P < .001$ (Nagelkerke $R^2 = 0.15$).

Table 1. Erectile Function (IIED) and Treatment use for ED in the Previous Month

	n (%)
Erectile function (n = 510)	
Severe dysfunction (0–6)	415 (81.4)
Moderate dysfunction (7–12)	44 (8.6)
Mild to moderate dysfunction (13–18)	20 (3.9)
Mild dysfunction (19–24)	31 (6.1)
Use of ED treatment (n = 112)	
Tablets	68 (60.7)
Penile injections	31 (27.7)
Vacuum devices	16 (14.3)
Penile implant	1 (0.9)
Other	9 (8.0)

Sources Accessed for Help with Sexual Concerns

Sources most frequently accessed for help with sexual concerns were a doctor (23.9%) and the internet (7.6%) (Table 2). Men rarely accessed a counseling service for help (1.8%).

Engagement with Peer Support

In the previous 6 months, 39% ($n = 189$) of men attended a face-to-face prostate cancer support group; 5.1% ($n = 26$) an online support group; and 43.5% ($n = 222$) talked to another prostate cancer survivor outside of a support group. Prostate cancer survivors who were younger in age ($B = -0.04$, $\text{Exp}(B) = 0.96$, 95% CI = 0.93–0.99, $P = .007$) and who had not recently commenced prostate cancer treatment ($B = 0.11$, $\text{Exp}(B) = 1.12$, 95% CI = 1.06–1.18, $P < .001$) attended a face-to-face peer support group more frequently, $\chi^2(5) = 24.60$, $P < .001$ (Nagelkerke $R^2 = 0.08$).

Intended Future Help-Seeking for Sexual Concerns

Correlations Between Sexual Help-Seeking Intentions and Predictor Variables

Initial examination of the correlation matrix showed that one attitude item (“It would be beneficial for me to see a doctor for sexual advice or help”) was strongly correlated ($r > 0.75$) with intention items, and inclusion of this item substantially increased the magnitude of the attitude–intention relationship and made all other predictors nonsignificant (except subjective norm). This suggested multicollinearity,^{45,46} and the item was removed, with only the remaining positive attitude item retained for subsequent analyses.

Means, standard deviations, and correlations between outcome and predictor variables are shown in Table 3; correlations between predictor variables were $\leq r \pm 0.45$. The strongest correlates of intention were subjective norm, positive attitude,

Table 2. Sexual Help-Seeking in the 6 Months Prior to the Study

Sexual help-seeking	n (%)
Help-seeking for coping with sexual concerns ($n = 508$)	153 (30.0)
Source of help [†] ($n = 508$)	
Doctor	122 (23.9)
Nurse	13 (2.5)
Family/friends	18 (3.5)
Library	8 (1.6)
Brochures or books provided by doctor	21 (4.1)
Brochures or books provided by family/friends	8 (1.6)
Cancer helpline	20 (3.9)
Counseling service	9 (1.8)
Internet	39 (7.6)
Prostate cancer support group	9 (1.8)
Other	9 (1.8)

[†]Some men accessed more than one source of help.

sexual importance/priority, and past help-seeking. Scale reliabilities (Table 3) were good to excellent, except for the perceived control measure (item-total statistics for this measure did not indicate items for deletion to improve reliability).

Prediction of Sexual Help-Seeking Intentions

Entry of age and education in block one explained 8.9% total variance, and these variables were significantly associated with sexual help-seeking intentions (Table 4). Adding numbers of years since last treatment commenced and receiving hormone treatment in block two explained a further 2.3% variance, and all predictors in this step were significant. Entry of the IIED, recent use of treatment for ED, and past sexual help-seeking in block three increased the explained variance by 17%. All predictors except erectile function and years since last treatment commenced were significant in this step. Including masculine beliefs in block four explained an additional 4.9% variance, and sexual importance/priority, emotional self-reliance, education, recent use of ED treatment, and past sexual help-seeking were significant predictors. Adding positive attitude, subjective norm, and perceived control in block five explained a further 23.1% variance. At this final step, the model explained 56.2% total variance overall with education (high school or below), past sexual help-seeking, masculine beliefs regarding sex as important or a priority, and increased emotional self-reliance, positive attitude, and subjective norm all significantly associated with help-seeking intentions; perceived control over help-seeking (ie, perceiving less difficulty seeking help) approached significance ($P = .06$). Figure 2 depicts the final model.

DISCUSSION

This study applied the TPB to more clearly explicate the factors that contribute to men’s actual prior and planned future help-seeking behavior for sexual concerns after prostate cancer treatment, and to the authors’ knowledge, is the first to do so. This study suggests that the TPB and salient masculine beliefs have efficacy in explaining why men do or do not seek help for sexual concerns after prostate cancer treatment. This theoretical advancement is an important step in developing theory-based interventions to address an intransigent health and well-being problem for the increasing cohort of men living with prostate cancer. In particular, social normative expectations from close personal and peer social networks combined with men’s positive evaluations of help-seeking were most strongly associated with increased sexual help-seeking intentions. Thus, involvement of peer, partner (see also Bronner et al¹⁶), and medical networks to help normalize and positively frame help-seeking for sexual concerns prior to and immediately after treatment may be most effective as strategies to encourage prostate cancer survivors to seek help for their sexual concerns.

In this study, prostate cancer survivors who viewed sex as highly important to their masculine identity formed stronger

Table 3. Correlations Between Planned and Actual Sexual Help-Seeking, Participant Characteristics, TPB, and Masculinity Predictor Variables

	1	2 [†]	3	4 [†]	5	6 [†]	7 [†]	8	9	10	11	12	13
1. Age (in years)	—												
2. Education [†]	-0.12**	—											
3. Years since last treatment commenced	0.34***	0.03	—										
4. Hormone treatment [†]	0.30***	-0.05	-0.07	—									
5. Erectile function (IIED)	-0.28***	0.08	-0.01	-0.33***	—								
6. Recent ED treatment [†]	-0.22***	0.01	-0.06	-0.20***	0.45***	—							
7. Past sexual help-seeking [†]	-0.19***	-0.02	-0.21***	-0.03	0.19***	0.36***	—						
8. Sexual importance/priority	-0.38***	0.04	-0.05	-0.28***	0.44***	0.42***	0.31***	—					
9. Emotional self-reliance	-0.10*	-0.01	-0.02	-0.06	0.08	0.05	-0.04	0.16***	—				
10. Positive attitude	-0.17***	-0.02	-0.08	-0.15***	0.25***	0.32***	0.23***	0.33***	-0.01	—			
11. Subjective norm	-0.20***	0.01	-0.11*	-0.15***	0.15***	0.22***	0.28***	0.33***	0.14**	0.40***	—		
12. Perceived control	0.14**	0.02	0.16***	0.08	-0.19***	-0.12**	-0.12**	-0.06	0.11*	-0.25***	0.09	—	
13. Sexual help-seeking intention	-0.31***	-0.04	-0.18***	-0.21***	0.27***	0.35***	0.39***	0.45***	0.14**	0.53***	0.63***	-0.15***	—
M	71.7	—	6.03	—	4.27	—	—	2.96	3.32	3.16	2.43	2.06	2.39
SD	7.71	—	4.53	—	5.75	—	—	1.38	1.04	1.18	0.67	0.79	1.08
α	—	—	—	—	0.93	—	—	0.93	0.72	0.68	0.76	0.58	0.91

*** $P < .001$; ** $P < .01$; * $P < .05$.

†Spearman's rho was used for categorical variables.

Table 4. Hierarchical Multiple Regression Predicting Planned Sexual Help-Seeking

Predictor variable	Block 1			Block 2			Block 3			Block 4			Block 5		
	B	β	sr ²	B	β	sr ²	B	β	sr ²	B	β	sr ²	B	β	sr ²
Age (in years)	-0.04	-0.29***	0.08	-0.03	-0.22***	0.04	-0.02	-0.11*	0.01	-0.01	-0.06	0.00	-0.01	-0.05	0.00
Education	-0.24	-0.11*	0.01	-0.24	-0.11*	0.01	-0.22	-0.10*	0.01	-0.22	-0.10*	0.01	-0.20	-0.09**	0.01
Years since last treatment commenced				-0.03	-0.10*	0.01	-0.01	-0.06	0.00	-0.02	-0.07	0.00	-0.01	-0.02	0.00
Hormone treatment				-0.33	-0.14**	0.02	-0.25	-0.10*	0.01	-0.14	-0.06	0.00	-0.03	-0.01	0.00
Erectile function (IIED)							0.02	0.08	0.00	0.00	0.02	0.00	0.00	0.01	0.00
Recent ED treatment							0.45	0.18***	0.02	0.35	0.13**	0.01	0.17	0.07	0.00
Past sexual help-seeking							0.71	0.30***	0.07	0.64	0.27***	0.06	0.41	0.17***	0.02
Sexual importance/priority										0.19	0.24***	0.04	0.09	0.12**	0.01
Emotional self-reliance										0.09	0.09*	0.01	0.08	0.08**	0.01
Positive attitude													0.21	0.23***	0.03
Subjective norm													0.66	0.40***	0.11
Perceived control													-0.10	-0.07 [†]	0.00
R ² Δ (block)	0.09***			0.02**			0.17***			0.05***			0.23***		
FΔ (block)	19.23			5.05			30.73			14.13			67.78		
Total R ²	0.09			0.11			0.28			0.33			0.56		
Total F	19.23			12.34			21.82			21.25			41.12		

*** $P < .001$; ** $P < .01$; * $P < .05$; [†] $P = .06$.

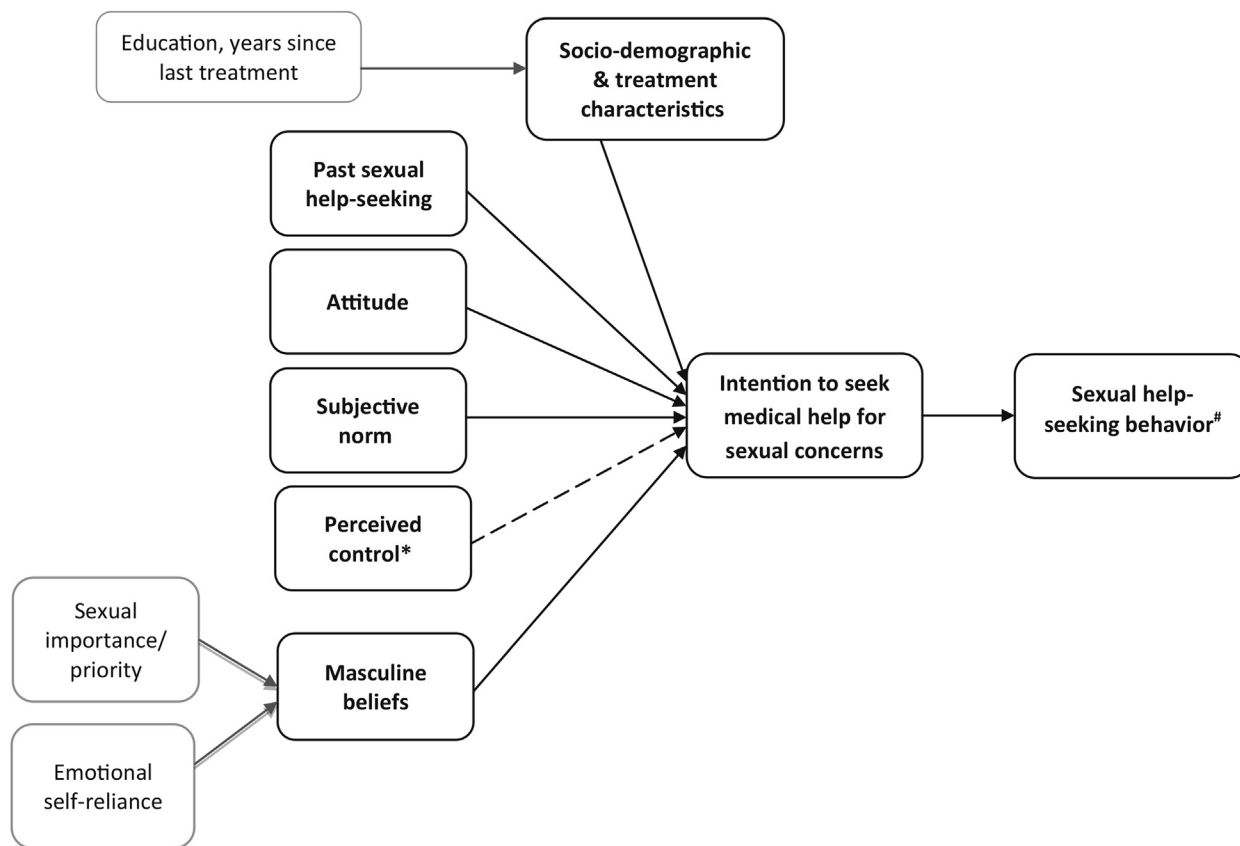


Figure 2. Final theory of planned behavior predicting sexual help-seeking intentions. *Perceived control approached significance ($P = 0.06$) and requires further investigation in future research. #Prospective sexual help-seeking behavior was not measured in this study.

intentions to seek medical help for their sexual concerns. This latter finding is in contrast to Schover et al³⁵ who found that importance of erections did not predict help-seeking for ED. This may be related to a difference in how sexual importance was framed in each study such that a broader conceptualization that extends beyond ED alone is more meaningful. In this regard, there is potential to further extend the scope of the sexual importance subscale to include other aspects of sexuality such as beliefs about a man's ability to satisfy his current or future partner. Overall, this finding supports the importance of masculinity as it is expressed in the context of prostate cancer when examining how men respond to a prostate cancer diagnosis and how they can be helped to return to wellness.

Surprisingly, increased emotional self-reliance contributed to stronger help-seeking intentions for prostate cancer survivors in this sample. This contrasts with prior research where strong endorsement of masculine traits such as stoicism, self-reliance, and emotional control was a barrier to medical help-seeking for men with prostate cancer.^{27,30,32–34} Hence, generalizations about masculine traits as necessarily impeding men's help-seeking may be misdirected. Alternatively, this finding may be consistent with recent cultural and media shifts whereby there is increased awareness of ED and associated treatments, and it is more acceptable and even masculine for men to use treatment to enhance their erectile function.^{10,47} Interventions that purposefully build

on men's preferences for self-reliance may be more acceptable and effective, and this is an area for future research.

Consistent with Miller et al,¹² only one-third of men in the present study reported seeking medical help for sexual advice and concerns. However, by contrast to research with the general male population,⁴⁸ prior help-seeking was lower for men reporting severe ED compared with other participants in this study. While this finding may relate to the older age of the men in this study with severe ED, it does also suggest that the severity of ED may be an additional deterrent to help-seeking. On this basis, interventions seeking to increase men's uptake of sexual interventions may also need to be tailored to ED severity.

Prostate cancer survivors in this study reported high use of peer support both within and outside of the support group context. Although this is likely, at least in part, a reflection of the sampling approach, this suggests an important role for peer support in addressing men's psychosexual needs. Chambers et al⁴⁹ provide recent evidence for this in a randomized control trial of psychosexual care for men with prostate cancer and their partners where peer support led to a threefold increase in use of medical treatment for ED at 12-month follow-up. Men showed high acceptance of the peer-delivered intervention and in particular valued the shared personal experience, having a male support person, empathy, and unique practical advice.⁴⁹ Together, this evidence suggests the involvement of peers as a

key component and support mechanism in future interventions targeting uptake and sustained use of sexual aids for ED following prostate cancer treatment.

Strengths of this study include a large sample size and the application of a widely tested attitude–behavior theory. Limitations include the cross-sectional design which precludes inferences about causality and use of a convenience sample of prostate cancer survivors who were primarily well educated, Caucasian, and married. Hence, socio-cultural differences in help-seeking may not have been captured.²⁵ Sampling limitations prevented separate examinations of help-seeking based on treatment type or recency with these factors controlled for in analyses. However, time since commencing last treatment, receiving hormone treatment, and erectile function did not contribute to sexual help-seeking intentions in this study. These findings suggest that regardless of treatment type, men may consider seeking help for sexual problems well into survivorship. This is consistent with research showing unmet sexuality needs persisting in the long term.^{2,8} Providers should continue to monitor men's interest in sexual recovery regardless of the length of time since they completed treatment or ED severity. This study did not examine help-seeking decisions of gay men who likely need research that specifically considers their experience. In addition, men in this study were members of a support group network and may be more active help-seekers, and so, their patterns of help-seeking may differ when compared with the broader population.

This study focused on men's decisions to seek help from a doctor for their sexual concerns; however, ED also has a psychosocial impact,⁵⁰ and psychosocial providers (eg, sexual health counselor or therapist) play an important role in sexual recovery. It is noted however that few men in this study sought counseling support. Hence, the factors contributing to help-seeking for sexual concerns from a psychosocial provider are an important future research area. In this regard, education received about sexual rehabilitation and a man's expectations about treatment for ED may influence their decisions to seek help, treatment adherence, and willingness to try more than one treatment option.¹⁰ Finally, this study examined help-seeking intentions and not behavior. Although intentions are identified as the strongest link to behavior in social-cognitive models,³⁶ future prospective research is needed with a representative population-based sample including men with diverse sexual orientations.

CONCLUSION

Less than a third of men in the current study had sought help for their sexual concerns, and only one-third planned to do so in future. Normative expectations from partners and peer networks for help-seeking and positive attitudes were important factors contributing to an increased likelihood that men would seek help for sexual concerns in future. These findings suggest a key role for health professionals, partners, and peers as a support mechanism and component of psycho-sexual interventions. Men who were more emotionally self-reliant and viewed sex as highly

important to their identity also formed stronger intentions to seek help suggesting that masculine beliefs are highly salient to decision making in this context. In light of the fact that men are reluctant to seek help for their sexual concerns, the provider needs to initiate conversation about sexual concerns and address these concerns with patients after prostate cancer treatment. Further research is needed to understand the reasons why men do not seek help for their sexual concerns after prostate cancer treatment and how providers can best help patients to ensure sexual concerns are addressed in the future. In this regard, the TPB and masculine beliefs appear to have utility as a guiding theoretical framework to understand prostate cancer survivors' planned future and actual prior sexual help-seeking decisions and may inform development of more effective interventions to encourage this behavior.

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APPENDIX 1. SELF-REPORT QUESTIONNAIRE ITEMS

*Items were preceded by the statement "In the next 6 months, how much do you agree that..."

**Items were preceded by the following blurb: "The following is a series of statements about how men might think or feel about themselves, and about what is important for men. Thinking about you personally, please indicate how true each statement is for you. There are no right or wrong answers. Please give the responses that most accurately describe your personal thoughts and feelings."

Actual Sexual Help-Seeking (Past behavior) and Sources of Help Accessed [scored 1 yes, 0 no]

1. I have sought sexual advice or help in the past 6 months for concerns related to my prostate cancer.
2. In the last 6 months, have you sought help about coping with sexual problems after prostate cancer from any of the following?

- a. Doctor
- b. Nurse
- c. Family/friends
- d. Library
- e. Brochures or books provided by doctor
- f. Brochures or books provided by family or friends
- g. Cancer helpline
- h. Counseling service
- i. Internet
- j. Other (please specify _____)
- k. None

3. In the last 6 months, have you engaged in any of the following activities?

- a. Attended an in-person prostate cancer support group meeting.
- b. Talked to another man with prostate cancer from a support group.
- c. Talked to another man with prostate cancer who was not from a support group.

Planned Sexual Help-Seeking (Intention) [scored 1 strongly disagree to 5 strongly agree]*

1. I intend to see a doctor for sexual advice or help.
2. I plan to see a doctor for sexual advice or help.
3. I will try to see a doctor for sexual advice or help.
4. I intend to seek sexual advice or help in the next 6 months for concerns related to my prostate cancer [scored 1 *yes*, 0 *no*]

Positive Attitude [scored 1 *strongly disagree* to 5 *strongly agree*]*

1. It would be beneficial for me to see a doctor for sexual advice or help.
2. Seeing a doctor for sexual advice or help would be a positive experience.

Subjective Norm [scored 1 *strongly disagree* to 5 *strongly agree*]*

1. Most people who are important to me think I should see a doctor for sexual advice or help.
2. Most people who are important to me would see a doctor for sexual advice or help, if they needed.
3. My partner or close family thinks I should see a doctor for sexual advice or help.
4. My partner or close family expects me to see a doctor for sexual advice or help.
5. My friends or other men I know who have/had prostate cancer know how to see a doctor for sexual advice or help for me.

6. My friends or other men I know who have/had prostate cancer have encouraged me to see a doctor for sexual advice or help.
7. My friends or other men I know who have/had prostate cancer will help me see a doctor for sexual advice or help.

Perceived Control [scored 1 *strongly disagree* to 5 *strongly agree*]*

1. It would be difficult for me to see a doctor for sexual advice or help.
2. I am too tired and unwell to see a doctor for sexual advice or help.

I don't have the time to see a doctor for sexual advice or help.

Sexual Importance/Priority [scored 1 *not at all true* to 5 *very true*]**

1. Being physically able to have sex is important to me.
2. Being able to have an erection is important to me.
3. I like to know I am capable of having sex.
4. Being able to have sex is like being able to run.

Emotional Self-Reliance [scored 1 *not at all true* to 5 *very true*]**

1. I keep my feelings to myself.
2. I tend not to talk about my worries.