ORIGINAL RESEARCH ARTICLE

Lived experiences of prostate cancer patients in an urban metropolis in North Central, Nigeria

DOI: 10.29063/ajrh2023/v27i6s.14

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Abstract

Prostate cancer (PCa) is currently the second most prevalent cancer in the world and the most common type of cancer among Nigerian men. This study explored the lived experiences of patients with PCa at the General Hospital in Ilorin, Kwara State, Nigeria. A mixed-method design was adopted. Purposive and consecutive sampling techniques were employed to recruit 50 and 10 participants for the quantitative and qualitative aspects respectively. Qualitative data was analyzed using thematic content analysis while quantitative data was analyzed using descriptive and inferential statistics. All participants were above the age of 50 years, 72% earned about $100 monthly while 68% were diagnosed in less than five years. Majority of the participants utilized adaptive coping styles and also found the strategies moderately helpful while living with the effects of radical prostatectomy. Participants also found the high cost of treatment severely challenging. Government and other stakeholders may need to subsidize the cost of PCa management thereby encouraging early accessibility to care, improved adherence to treatment and also reduce the economic burden of the disease on patients and their families. *(Afr J Reprod Health 2023; 27[6s]: 116-128).*

Keywords: Cancer, mixed-method, coping, helpfulness, management

Résumé

Le cancer de la prostate (PCa) est actuellement le deuxième cancer le plus répandu au monde et le type de cancer le plus courant chez les hommes nigérians. Cette étude a exploré les expériences vécues de patients atteints de PCa à l'hôpital général d'Ilorin, dans l'État de Kwara, au Nigéria. Une conception de méthode mixte a été adoptée. Des techniques d'échantillonnage raisonné et consécutif ont été utilisées pour recruter respectivement 50 et 10 participants pour les aspects quantitatifs et qualitatifs. Les données qualitatives ont été analysées à l'aide d'une analyse de contenu thématique tandis que les données quantitatives ont été analysées à l'aide de statistiques descriptives et inférentielles. Tous les participants avaient plus de 50 ans, 72 % gagnaient environ 100 $ par mois tandis que 68 % avaient été diagnostiqués en moins de cinq ans. La majorité des participants ont utilisé des styles d'adaptation adaptatifs et ont également trouvé les stratégies modérément utiles tout en vivant avec les effets de la prostatectomie radicale. Les participants ont également trouvé le coût élevé du traitement très difficile. Le gouvernement et d'autres parties prenantes peuvent avoir besoin de subventionner le coût de la prise en charge de l'APC, encourageant ainsi un accès précoce aux soins, une meilleure observance du traitement et réduisant également le fardeau économique de la maladie sur les patients et leurs familles. *(Afr J Reprod Health 2023; 27[6s]: 116-128).*

Mots-clés: Cancer, méthode mixte, coping, serviabilité, prise en charg

Introduction

Prostate cancer (PCa) is marked by the uncontrolled malignant growth of cells in the prostate gland[1]. The prostate is a walnut-sized gland found in men right below the bladder, it surrounds the urethra which transports urine from the bladder. Prostate cancer is the most frequent cancer in males and it often presents with late symptoms[1,2]. Though prostate cancer has no known cause, the risk factors include age usually above 50 years, family history, race or ethnicity, country, genetic factor, and dietary factors. Prostate cancer is most often diagnosed in men aged 65-74 years; median age at diagnosis is 66 years and the diagnosis can be done through digital rectal examination, prostate-specific

antigen (PSA) test, and prostate biopsy[3,4]. PCa screening tests are widely used in both developed and developing countries, with the primary goal of lowering mortality, facilitating early treatment initiation and improving quality of life[5].

Prostate cancer incidence increases as men age; as many as 60% of men over 65 years of age may be diagnosed with prostate cancer[4,6]. Globally, the incidence of prostate cancer has increased in men aged 15 to 40 years at a steady rate averaging 2% per year since 1990. In the United States, this age group was 6 times more likely than older men to have metastasis at diagnosis[7]. Significant racial disparity in the incidence and mortality exists, with prostate cancer-specific mortality over 2-fold higher in Blacks than in Whites, while the incidence is highest in countries with the highest socioeconomic index[8,9].

Available literature indicates that PCa and its treatments greatly affect the quality of life of the patients. However, the identified effects vary across studies, the stages of the disease, and the type of treatment. The management of prostate cancer include the typical treatments for clinically localized prostate cancer, watchful waiting, radiation treatment, active surveillance, and radical prostatectomy. Targeted therapy and whole-gland ablation are two new treatments with limited long-term data. After decisive local therapy, prostate cancer can return in up to a third of men. Although these diseases are rarely curable, recent developments in the understanding of salvage radiation therapy, chemo-hormonal therapy, androgen blockade, as well as poly (ADP-ribose), polymerase (PARP) suppression have significantly prolonged lives. Effective prostate cancer treatment is currently only attainable with early detection of the illness while it is still localized[10,11].

Patients experience deep psychological and functional impacts from prostate cancer, as well as significant financial burden[12]. Patients with metastatic prostate cancer, in particular, have a lower health-related quality of life, and have more psychological discomfort and adjustment issues than those with localized prostate cancer[12,13]. The psychological ramifications of a prostate cancer diagnosis are inevitable[14], they are concerned with the treatment's adverse effects, mood swings that come with testosterone deficiency[4]. Patients with prostate cancer suffer from worry, anxiety, distress and longed for their previous healthy lives[15]. Postoperatively, radical prostatectomy leads to changes in bodily functions such as urine incontinence, erectile dysfunction with loss of sexual life thereby resulting in lowered self-esteem[16-18].

Depending on the development of the disease and the possibilities of adaptation used, patients develop strategies that may help in coping with the changes[19]. Higa *et al*[18] stated that prostatectomized patients utilized defense mechanisms focused on promoting effective management to improve their quality of life and adaptive processes. Coping strategies revolved around acceptance, but most patients after surgery only coped with the predicament because they had no other option than to accept the reality of their conditions[20]. Many patients in this category may not have received proper pre- and post- operative counselling resulting in lack of confidence and poor knowledge on how to properly manage themselves[21]. Thus, patients with prostate cancer do experience multifaceted difficulties such as financial burden, psychological, emotional and mental burdens which are enough to weaken their quality of life. Also, patients may experience postoperative complications such as loss of blood, infection, urinary incontinence as well as erectile dysfunction which affect their social life. This study explored the lived experience of patients with prostate cancer at the General Hospital, an urban metropolis in northcentral Nigeria

Methods

Research design, setting and population

A mixed-method of research design was used. This study employed a convergent triangulation research design which involved collecting and analysing quantitative and qualitative data separately with equal weight. The results from the various methods were converged compared and contrasted and overall interpretation and conclusions were made. The study was conducted among patients with prostate cancer at a General Hospital in Ilorin, Kwara State Nigeria. The hospital serves as a referral centre for patients with Urology diseases within the surroundings.

Sample size and technique

Consecutive sampling technique was adopted to recruit 50 respondents for the quantitative aspect of the study. Purposive sampling was employed to recruit participants for the qualitative aspect of the study with the sample size determined by saturation of data. Saturation was attained after 8 interviews. However, 2 more interviews were conducted to ensure there were no new or lost information. Inclusion criteria included being a patient attending care in the urology clinic and at least one-month post- prostatectomy. Seriously ill patients or patients with speech and hearing disabilities are excluded.

Instrument and data collection

The Jaloweic Coping Scale[22] which measures the frequency of coping styles utilized by individuals in stressful situations was adapted for quantitative data collection. The questionnaire consisted of two sections: Section A focused on the participants' demographic profile while section B assessed the frequency of coping styles utilized by the participants. The questionnaire cut across the subscales of the Jaloweic Coping Scale which was designed in “A” and “B” templates. The “A” aspect answers "How often do you use this method of coping?” With a rating scale of 1- 4 with index scores of 1 being "Never used" 2 “Seldom used”, 3 “Sometimes used” and 4 "Often used", it was also rated as 0 – 40 =1, 41 – 80 =2, 81 – 120= 3 denoting (good ‘3’, moderate ‘2’, and poor ‘1’). B part of the questions says " If you have tried this method (A), indicate how helpful it was" with a scale of 1- 4, 1 being "Not helpful" 2 **“**Slightly helpful” 3 “Fairly helpful” and 4 " Very helpful". This questionnaire addressed the researcher’s objectives and research questions in relation to the literature review.

The qualitative aspect involved the use of an interview guide to explore the participants' lived experience, with digital and field notes recording. The interview guide contained sections: A and B. Section A contained demographic information of the patients, while section B contained interview questions based on the objectives of the study. The interview was conducted mostly in Yoruba and English based on the language preference of each participant.

Face and content validity were determined ensured while data reliability was determined using the test-retest method**.** The questionnaire was pre-tested on 5 participants with similar characteristics to the study population. However, the results were not included in the final data presentation. To ensure reliability, data triangulation was facilitated.

The truthfulness of the qualitative data was determined by ensuring the credibility, transferability, dependability and confirmability. To ensure credibility, only participants who met with the inclusion criteria were selected for the study. For transferability, a thick description of data collection process was documented in the data report.

After obtaining ethical permissions, participants were met every Wednesdays after their clinics for three months (October 2021 to January 2022). All participants who met the inclusion criteria and are willing to participate in the study were requested to fill out the questionnaire, having obtained their informed consent. The questionnaires were completed within a space of 30 to 60 minutes by participants. Semi-structured audio-taped interviews that lasted about 30-60 minutes were incorporated for the qualitative aspect. The interview continued until data saturation was attained. Privacy and confidentiality were maintained. Member check was done after each interview.

Data analysis

Data was analyzed using descriptive statistics which included frequency and proportion to summarize the respondents' socio-demographic and clinical characteristics. One-way Analysis of Variance (ANOVA) and Chi-square tests were used to test for significance of means and relationships at 95% confidence interval. The qualitative data were analysed according to Tesch's approach[23].

Ethical considerations

Prior to the commencement of the study, ethical approval was obtained from the Institutional Review Committee of the Kwara State General Hospital, Ilorin, Ministry of Health, Kwara State, Nigeria, with reference number GHI/ADM/134/VOL.II/397. Participants’

informed consent for data collection and audio recording of responses was obtained. Measures to minimize risks were ensured throughout the data collection process.

Results

Quantitative findings

Socio-demographic and clinical characteristics of the respondents

Respondents' age ranged from 60-69 years (48%), majority were married (76%) and with highest educational level of secondary school (44%). The majority (68%) have had PCa for less than 5 years duration. More than half (64%) had either primary or secondary relatives with the disease. The majority (88%) had co-morbidities, with urinary retention (82%) being the major associated disease (Table 1).

With regards to coping use and helpfulness, a total of 2%, 86% and 12% of the respondents were observed to have low, mild and high coping use respectively. In contrast, 8%, 66% and 26% were found to have low, mild and high coping helpfulness, respectively. However, religion (X^2= 9.30, p= 0.010), was found to have significant relationship with coping helpfulness level (Table 2).

Among the clinical characteristics, the status of surgery (X^2= 24.90, p <0.010), reason for surgery (X^2= 18.69, p= 0.001) and comorbidity (X^2= 8.16, p= 0.017) showed significant association with coping use. Only status of surgery (X^2= 15.78, p= 0.003) was however observed to be significantly associated with coping helpfulness (Table 3).

A comparison of the coping use and coping helpfulness scores employed by the respondents revealed higher coping use values for confrontative and supportive coping categories. Higher values were however recorded for coping helpfulness scores in the evasive, optimistic, fatalistic, emotive, palliative and self-reliant copings categories (Table 4). Despite the differences between the coping use and coping helpfulness scores, none of the differences was observed to be significantly different (p≤ 0.005).

Qualitative findings

The themes generated from the qualitative findings were the followings:
Living with prostate cancer diagnosis
Reaction to the treatment plan
Feelings about the surgery
Physical challenges after radical prostatectomy
Sexual challenges after radical prostatectomy
Social challenges faced after prostatectomy

Theme 1: Living with prostate cancer diagnosis

Participants claimed that they experienced various emotional responses including shock, panic, fear of the unexpected and denial at the point of diagnosis while few received the diagnosis with faith. A few selected responses were:
".....I was indeed disturbed, panicked and shocked at the mention of prostate cancer diagnosis ***(P4, 70 yrs. retiree and widow)****.... Why me! He nodded his head* ***(P2, 69 yrs. retiree)*** *.... I was persuaded and convinced of the right choice of a treatment plan which led me to the next step which was signing the consent form* ***(P7, 69 yrs. businessman)".***
. *....."It was until I suffered lower abdominal pains and could not urinate normally that I sensed big trouble before I ran to see the doctor who later told me it was cancer of the prostate"(****P5, 66yrs retiree)****.* A few (3 of 10) of the participants experience haematuria.
" *It was after a random check-up that I was told of having raised PSA, I asked "what do you mean by that doctor? where he said raised PSA was one of the bio-makers of prostate cancer, confusion set in, what is the way forward?* ***(P10, 68yrs businessman)***

Theme 2: Reaction to treatment plan

Following the physician's extensive explanations, participants expressed that they agreed to treatment plans and options such as radical prostatectomy, orchidectomy, chemotherapy and radiotherapy in combination with chemotherapy if the need arises. Some of their comments were thus

"After lots of explanation by the doctor on my treatment plan such as radical prostatectomy,

Table 1: Demographic and clinical characteristics of the participants (N= 50)

Demographic characteristics			**Clinical characteristics**		
	No	**%**		**No**	**%**
Age			**Body mass index (BMI)**		
50-59 years	5	10.0	Normal	21	42.0
60-69 years	24	48.0	Overweight	11	22.0
> 69 years	21	42.0	Underweight	18	36.0
Marital status			**Duration of prostate cancer**		
Married	38	76.0	<5 years	34	68.0
Divorced	1	2.0	5-9 years	15	30.0
Widowed	9	18.0	15-20 years	1	2.0
Separated	2	4.0	**Family history of prostate cancer**		
Religion			1st degree relatives	11	22.0
Christianity	29	58.0	2nd degree relatives	17	34.0
Islam	21	42.0	Both 1st & 2nd degree Relatives	4	8.0
Level of education			No history	18	36.0
No formal Education	12	24.0	**Type of treatment**		
Primary Education	6	12.0	Prostatectomy	3	6.0
Secondary Education	22	44.0	Radical prostatectomy	28	56.0
Tertiary Education	10	20.0	Orchiedectomy	17	34.0
Occupation			Chemotherapy	2	4.0
Trading/Business	18	36.0	**Status of surgery**		
Skilled artisan	6	12.0	Sub-total prostatectomy	2	4.0
Unemployed	2	4.0	Total prostatectomy	32	64.0
Self employed	3	6.0	Orchiedectomy	14	28.0
Civil servant	5	10.0	Chemotherapy	2	4.0
Retiree	16	32.0	**Reason for surgery**		
Average monthly income			Prostate cancer	45	90.0
≤N10000	15	30.0	Bladder cancer	4	8.0
N11000 - N30000	21	42.0	Epididymo-orchitis	1	2.0
N31000-N50000	9	18.0	**Comorbidity**		
>N50000	5	10.0	Yes	44	88.0
Cigarette smoking			No	6	12.0
Yes	18	36.0	**Associated** disease		
No	32	64.0	Urethritis	1	2.0
Alcohol intake			Urinary retention	41	82.0
Yes	26	52.0	No associated disease	5	10.0
No	24	48.0	Others	3	6.0

orchidectomy, chemotherapy and radiotherapy respectively with the advantage of one over the other as well as their effects, I chose to go for radical prostatectomy ***(P10, 68 yrs. businessman)"****.*

I totally accepted the treatment plan since there was no better option ***(P4, 70 yrs. retiree)*** *....I tried as much as possible to prevent it but now that it has come I have to move on with my life* ***(P1, 85 years old retiree)***

Theme 3: Feelings about the surgery

Two-thirds of the participants explained that though they received their treatment plan reluctantly but hoped it will be a permanent solution which unfortunately was not so. Participants experienced many complications after undergoing radical prostatectomy including changes in their bodily structures and functions, such as urinary incontinence and erectile dysfunction. Other complications experienced included decreased social activities and having to remain indoors. In spite of these, some participants claimed that they held on to their faith in God while some resolved to accept the condition as part and reality of life. Some of their comments are thus:

"*...I thought going through the surgery will give me a lasting solution to my problems, but my first worry was the catheter I carried about, as well as other side effects such as urinary leakages, non-*

Table 2: Relationship of participants' socio-demographic characteristics with coping use level

	Coping use					Coping helpfulness				
Variables	**Low**	**Mild**	**High**	**X^2**	**p**	**Low**	**Mild**	**High**	**X^2**	**P**
Age										
50 – 59	0	4	1	1.74	0.74	2	2	1	7.93	0.940
50- 69	1	21	2			1	16	7		
Above 59	0	18	3			1	15	5		
Marital status										
Married	1	33	4	8.00	0.24	3	25	10	8.82	0.184
Divorced	0	0	1			0	0	1		
Widowed	0	8	1			0	7	2		
Separated	0	2	0			1	1	0		
Religion										
Christianity	0	24	5	3.05	0.218	1	16	12	9.30	0.010
Islam	1	19	1			3	17	1		
Level of education										
No formal Edu.	1	9	2	5.20	0.520	2	9	1	9.93	0.230
Primary Edu	0	6	0			0	4	2		
Secondary Edu	0	20	2			0	13	9		
Tertiary Edu	1	8	2			2	7	1		
Occupation										
Trading /Business	1	16	1	8.30	0.60	2	9	7	13.501	0.197
Skilled artisan	0	6	0			0	5	1		
Unemployed	0	2	0			0	2	0		
Self employed	0	3	0			0	2	1		
Civil servant	0	3	2			2	2	1		
Retiree	0	13	3			0	13	3		
Average monthly income										
Less than 10,000	0	13	2	3.15	0.74	1	10	4	3.28	0.773
11,000-30,000	1	19	1			2	15	4		
31,000-50,000	0	7	2			0	6	3		
More than 49,000	0	4	1			1	2	2		
Cigarette smoking										
Yes	1	16	1	2.78	0.25	2	13	3	1.45	0.49
No	0	27	5			2	20	10		
Alcohol intake										
Yes	1	22	3	0.95	0.62	2	19	5	1.37	0.50
No	0	21	3			2	14	8		
Coping level (%)	**2**	**86**	**12**			**8**	**66**	**26**		

X^2 and p represent chi-square and probability values, respectively

functioned manhood ***P9, 53 yrs. businessman and separated).***

I have been missing my social relationship with friends, no active travelling, even most times, no prayer because of body odour from leakage ***(P5, 66 yrs. retiree).***

*. ...I surrender all to God who owns healings (****P8, 75 yrs. retiree and widower)***

Theme 4: Most uncomfortable/difficult experience with radical prostatectomy

Most participants reported urine incontinence, urine leakage and offensive body odour as the uncomfortable experience that have greatly affected their quality of life while some were uncomfortable with erectile dysfunction. Below are some of their comments:

"Huuunm'', my only regret was that I didn't get enough information at the beginning, or, hey, maybe I did, but I was never comfortable with the fact that I was destabilized from the onset of the care ***(P3, 74 years, retiree****). .... the most horrible experience was erectile dysfunction and urinary incontinence* ***(P2, 69 years retiree)****, ...* ***P10, 68 years businessman*** *also complained of back pains. ...I also experienced occasional leakage of urine to*

Table 3: Relationship of participants' clinical characteristics with coping use level

	Coping use					Coping helpfulness				
	Low	**Mild**	**High**	**X^2**	**P**	**Low**	**Mild**	**High**	**X^2**	**P**
Body mass index (BMI)										
Normal weight	0	17	4	5.35	0.25	2	15	4	1.15	0.886
Overweight	1	9	1			1	7	3		
Underweight	0	17	1			2	11	6		
Duration of prostate cancer										
<5years	0	28	6	5.33	0.26	3	23	8	1.06	0.900
5 - 9 year	1	14	0			1	9	5	4.23	0.645
15 – 20 years	0	1	0			0	1	0		
Family history of prostate cancer										
1st degree relatives	0	11	0	6.01	0.42	0	7	4	5.61	0.468
2nd degree relatives	0	13	4			2	10	5		
Both 1st & 2nd degree Relatives	1	4	0			0	4	0		
No history		15	2			2	12	4		
Type of surgery										
Prostatectomy	0	3	0	2.02	0.92	0	2	1	7.97	0.240
Radical prostatectomy	1	24	3			2	18	8		
Orchiedectomy	0	14	3			1	12	4		
Chemotherapy	0	2	0			1	0	0		
Status of the surgery										
Subtotal prostatectomy	1	1	0	24.90	<0.01	1	1	0	15.78	0.003
Total prostatectomy	0	28	4			1	22	9		
Orchiedectomy	0	12	2			2	8	4		
Chemotherapy	0	2	0			0	2	0		
Reason for surgery										
Prostate cancer	0	41	4	18.69	0.001	2	32	11	2.72	0.56
Bladder cancer	1	1	2			1	1	2		
Epididymo-orchitis	0	1	0			1	0	0		
Comorbidity										
Yes	0	38	6	8.16	0.017	3	28	13	1.65	0.949
No	1	5	0			1	5	0		
Associated disease										
Urethritis	0	1	0	1.08	0.98	0	1	0		
Urinary retention	1	35	5			4	26	11		
No associated disease	0	4	1			0	4	1		
Others	0	3	0			0	2	1		

X^2 and p represent chi-square and probability values, respectively

*my body (**P5, 66 years retiree**). But I have learnt to live by them till one day when things shall get better (**P1, 85 years retiree**).*

Theme 5: Physical challenges caused by the effect of radical prostatectomy or orchidectomy

Participants expressed various physical changes post-surgery, these included loss of fertility, erectile dysfunction, and swellings in the lower limbs and groins. Another challenge mentioned by some participants alopecia, weight loss and struggling to live a better life.

*…hunnnm, I experienced some physical challenges such as swellings at my groin (**P1, 85 years retiree**),*

*…loss of manhood, …loss of two testes (**P3, 74 years retiree**) **…** the hairs of my head are almost gone **P1, 85 years retiree**, …. erectile dysfunction and infertility (**P9, 53 years businessman, separated**)*

Theme 6: Sexual challenges faced by the effect of radical prostatectomy

It was observed that most radical prostatectomy is non-nerve sparing because of the extent to which the tumour is sited. However, majority of the participants exhibit loss of libido, erectile

Table 4: Comparison of coping use and coping helpfulness scores employed by the respondents

Coping category		Mean	Std. Deviation	95% Confidence Interval for Mean Lower Bound	Upper Bound	P
Confrontive	Coping use	32.7400	3.16105	31.8416	33.6384	0.592
	Coping helpfulness	32.3200	4.53305	31.0317	33.6083	
Evasive	Coping use	31.7400	3.82158	30.6539	32.8261	0.135
	Coping helpfulness	33.1600	5.45991	31.6083	34.7117	
Optimistic	Coping use	30.4000	3.97954	29.2690	31.5310	0.622
	Coping helpfulness	30.8200	4.49803	29.5417	32.0983	
Fatalistic	Coping use	6.4800	2.74969	5.6985	7.2615	0.185
	Coping helpfulness	7.1800	2.48826	6.4728	7.8872	
Emotive	Coping use	8.0600	3.05334	7.1923	8.9277	0.085
	Coping helpfulness	9.0800	2.81280	8.2806	9.8794	
Palliative	Coping use	16.3200	2.70630	15.5509	17.0891	0.076
	Coping helpfulness	17.4200	3.39321	16.4557	18.3843	
Supportive	Coping use	18.7800	2.46021	18.0808	19.4792	0.908
	Coping helpfulness	18.7200	2.70329	17.9517	19.4883	
Self-reliant	Coping use	19.8600	3.58005	18.8426	20.8774	0.904
	Coping helpfulness	19.9600	4.62451	18.6457	21.2743	

Table 5: Socio-demographic characteristics data of the participants

PATIENTS	OCCUPATION	AGE (Year)	MARITAL STATUS	RELIGION	ETHNICITY	AVERAGE MONTHLY INCOME (N)	INDICATION
P1	Retiree	85	Married	Christianity	Yoruba	< 10000	Prostate cancer
P2	Retiree	69	Married	Christianity	Yoruba	30000-50000	Prostate cancer
P3	Retiree	74	Married	Christianity	Yoruba	11000-30,000	Prostate cancer
P4	Retiree	70	Widow	Islam	Yoruba	< 10000	Prostate cancer
P5	Retiree	66	Married	Islam	Hausa	< 10000	Prostate cancer
P6	Retiree	68	Married	Islam	Yoruba	11000-30000	Prostate cancer
P7	Business	69	Married	Christianity	Ibo	>50000	Prostate cancer
P8	Retiree	75	Widow	Islam	Yoruba	< 10000	Prostate cancer
P9	Business	53	Separated	Islam	Yoruba	< 10000	Prostate cancer
P10	Business	68	Married	Christianity	Yoruba	11000-30000	Prostate cancer

dysfunction, ejaculatory problem and orgasmic dysfunctions. Hence, participants need attention in relation to the physical, psychological and informational aspects of their care. Consequently, neglecting their sexual health can affect their self-esteem and psychological health. Erectile dysfunction associated with RP has been linked to diminished manhood. Consequently, some participants in the study exhibited maladaptive coping strategies such as taking of alcohol, back to cigarette smoking and drugging.

*….It was not funny for a sexually active person that I am not to have sex again, "Oh my God," me! In a good time, I have women friends (**P 9, 53 years businessman, separated)** …, I also felt somehow to socialise myself with friends as a result of body odour from urinary leakage despite using an expensive perfume (**P7, 69 years businessman).***

Theme 7: Social challenges faced by prostate cancer patients

This aspect of the interview is cardinal in knowing how prostate cancer has affected the respondents' social lives such as work life, relationship with family and friends and how they are being treated generally by family, friends and other people in the society. The majority of the participants expressed limited social activities due to having indwelling catheters. Below are some of their comments.

***P4, 70 years retiree** said …. there is limit to my social activities, so long am still carrying urinary*

catheter about. ...I cannot attend any social gathering ***(P9, 53 years businessman separated)*** *I cannot attend the church though my church*

*members do visit me at home and pray for me (**P1, 85 years retiree)**. I cannot attend to some of my daily needs, this makes me depend on others for my usual activities (**P8, 75 years retiree widow)**. I enjoy the company of my friends and family because they rally around me in my point of need. They treated me nicely because they are closer to supporting me (**P6, 68 years retiree).***

Discussion

The results of this study suggest that most cases of prostate cancer seen in the hospital occur in individuals above the age of 50 years and above. Over two-thirds of the study participants' monthly income is between 11,000 - 30,000 Nigerian naira, this is less than $100 a month, indicating that they are of low socioeconomic status. Socioeconomic status, particularly in the absence of health insurance coverage have been found to be a barrier to seeking early intervention, appropriate patient evaluation, treatment selection and post-treatment follow-up, all these can have negative effect on disease prognosis and patient survival[24]. These findings were consistent with previous findings[25,26]. Pearce and Reif[25] revealed that age, educational attainment, marital status, occupational and monthly income were significantly associated with prostate cancer.

Similarly, Stangelberger *et al*[26], found that prostate cancer was significantly high among patients aged 60-69 and did not differ by economic status. The study further revealed that the most common indication for radical prostatectomy and orchidectomy was prostate cancer which could be traced to some predisposing factors such as heredity, diet, and race, but the most cardinal was heredity as was rightly found in this current study. Other risk factors to PCa are cigarette smoking and alcohol consumption, particularly among the aged. Evidence suggests that 32% of the men in their early fifties still engage in cigarette smoking and alcohol consumption[27]. This is not surprising as more than half of the participants in the study took alcoholic brewages and more than one-third smoked cigarettes.

On coping mechanisms used by participants, this study revealed that more than half of the participants utilized adaptive coping styles while living with the effects of radical prostatectomy. The study showed that the majority utilized coping strategies moderately and also found the strategies to be moderately helpful. This finding is similar to that of Higa *et al*[18] who reported that this category of patients utilized defence mechanism that focused on promoting effective management so as to improve their quality of life and adaptive processes. Moreover, such coping strategies revolved around acceptance as equally found in this study. Body mass index of the participants in the study revealed that about one-third were either underweight or overweight. This finding substantiates the finding of Yu *et al*[28] which revealed that overweight, underweight and obesity have significant impact on the vulnerability of prostate cancer.

At the point of prostate cancer diagnosis, almost all participants in the study experienced shock, panic, depression, denial and fear of unexpected. Major clinical symptoms experienced were urinary retention, urethritis with severe supra-pubic pains which made them seek medical attention and eventual acceptance of the surgery. These findings corroborated the earlier studies by Chad *et al*.[1], Azevedo *et al*.[16], Sena,[29] and Araujo *et al*.[30,] on prostate cancer in which participants also experienced panic and fear of the unexpected which dampened their morale and eventually reduced their self-esteem. At a point, some went into immediate depression; others claimed that they accepted the surgery as a last resort. Evidence reported that the illness may have a negative impact on the patient's life that result in distress, a range of difficulties, anxiety and worries about disease progression and other physical problems associated with treatment side effects[12].

After the radical prostatectomy, patients' focus gradually changed from mere survival to living with the consequences of radical prostatectomy on daily basis. More than two-third of the participants in the current study experienced notable decrease in the quality of life as they battle

with various complications such as urine leakage, erectile dysfunction, alopecia, weight loss, stigma, ejaculatory problems, loss of libido, depression and low self-esteem of the surgery. This is not surprising as earlier studies have reported similar post-surgical effects on patients which included suffering from incontinence and having sexual related problems which affected their sexuality[12, 29, 31,32, 33]. In addition to the emotional, physical, psychological and social problems encountered by patients following radical prostatectomy, there are also fear of illness stigma and retraction of friends. These feelings may force them into a life full of anxiety as experienced by some participants in this study[30]. Some similar studies[2,15] also reported anxiety, depression, feelings of being a mutilated man and loss of masculinity as being common in patients with radical prostatectomy and orchidectomy.

The psychosocial effect of prostatectomy on patients are enormous as revealed in this study. This is similar to the finding of Oberlin *et al.*[34], where patients confessed that people treat them differently, at times avoid them and at other times being overly solicitous. Thus, post- prostatectomy patients often have difficulty returning to their daily activities and interactions with people because of body odour from the urinary leakages. Thus, they become introverted and eventually socially isolated in attempt to conceal their secrets. Furthermore, patients with radical prostatectomy also experience uncertainties regarding their sexual attractiveness, some individuals have a decreased confidence level and as such do not feel comfortable having sexual relations with their sexual partners[16].

At this juncture, patients may need professional attention in relation to the physical, psychological and informational aspects of their care so as to enable positive coping, treatment adherence and ultimately improved quality of life. Previous research has shown that a holistic sexual rehabilitation that includes the partner and involves a clinical sexologist is better than isolated penile rehabilitation for improving the ability to have regular sexual activity and penetrative sex after radical prostatectomy[35]. Older men tend to refer to their age as a reason for being sexually inactive, whereas younger men still feel the need to perform as usual to satisfy their partner[36].

In line with the erectile dysfunction, some participants went the extra mile for a solution, but at a point where these were unsuccessful, some accepted their fate mostly the elderly ones, only age 50 and below that struggle to regain their potency[37]. As shown by previous studies, the current study also confirmed the need for patients to find motivations that will enable them manage their self-care needs and take command of their everyday life. The motivation for self-care activities was enhanced by the capability and willingness to comply with recommendations from healthcare workers. Wennerberg *et al.*[38] revealed that when emphases on self-care were impressed by healthcare professionals during follow-up care, patients are motivated to persist with self-care. Hence, the need for frequent communication cannot be overemphasized as this often-allowed patients' free expression on all issues that troubled their quality of life. However, motivation could also be strengthened by families and friends.

The study further revealed patients struggle to finance their treatment and care due to poor socio-economic status as more than two-third of the participants earned about a $100 monthly. Some participants have resorted to borrowing and begging for alms in their pursuit to seek and continuing with treatment. The study lends credence to the finding of Forsmark *et al.*[39] who stated that patients in this category have gone far in financial spending because the financial implications of managing patients with prostate cancer could not be overestimated; therefore, resulting in serious emotional stress. Considering the cost of surgery, the numbers of radiotherapy, drugs, and frequent clinical visits, their income per capital as well as the financial position of their significant others, all these culminate to have weighed them down structurally[39].

Strengths of the study

The study revealed the biophysical and psychosocial burdens of the PCa and its treatments on the patients which eventually culminate into the patients' loss of quality of life.

It highlighted the need for improved communication after a radical prostatectomy which includes more structured sexual education and

involving the partner in pre-and postoperative information as a form of health education and motivation.

The study also highlighted the economic burden of men living and coping with the prostatic cancer which calls for necessary support from the government and other stakeholders in the society.

Limitations

Conducting the study in only one facility could have hampered the generalizability of the findings. Another limitation is the small sample size utilized for the quantitative study. This was due to the few eligible patients available during the study period.

Conclusion

The study revealed that all participants were 50 years and above with less than five years diagnosis. Most of the participants utilized adaptive coping styles while living with the effects of radical prostatectomy and majority utilized coping strategies moderately and also find the strategies moderately helpful. On diagnosis of prostate cancer, participants in the study experienced shock, panic, many felt depressed, expressed denial and fear of unexpected. Major clinical symptoms experienced were urinary retention, urethritis with severe supra-pubic pains, erectile dysfunction, alopecia, weight loss, offensive odour from urine leakage, low self-esteem and stigma. Participants also faced severe financial challenges due to the high cost of treatment.

Acknowledgement

The authors are grateful to the Management of Afe Babalola University Ado-Ekiti, Ekiti State Nigeria for supporting this investigation. The authors will also like to give gratitude to the all patients who participated in this study.

Competing interest

The author(s) declare no competing interests.

Data availability

The datasets used and/or analysed during the current study are available from the corresponding author on request.

Author contributions

Author 'K.S.K.' was part of the study conceptualisation, carried out literature search, designed the methods, gathered data, analyzed and interpreted the data and contributed to the manuscript draft; Author 'O.A.A.' conceptualized the study, approved the methodology, gathered data, analyzed and interpreted the data carried literature review and contributed to the manuscript draft; Author 'F.A.M.' carried out literature search and data analysis; Author 'O.B.A.' carried out literature search, analysed data and wrote the first draft of the manuscript, Author RIF assited in data interpretation, reviewed and structured the manuscript. While Author OEO assisted in data gathering and literature search. All authors approved the manuscript final draft.

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