
An integrative review exploring black men of African and Caribbean backgrounds, their fears of prostate cancer and their attitudes towards screening

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Abstract

Evidence suggests that black men are disproportionately more affected than any other ethnicity by prostate cancer. The aim of this review is to identify studies exploring black men of African and Caribbean descent, their fears of prostate cancer and their attitudes towards screening. Four databases were searched and reference lists of relevant papers were hand searched. The inclusion criteria were studies exploring attitudes towards screening and fear of prostate cancer in black men of African and Caribbean backgrounds, peer-reviewed research, qualitative studies, surveys, questionnaires and English language publications. Qualitative findings were synthesized using a thematic framework to which quantitative findings were integrated. Of the 16 papers, 10 were quantitative and 6 were qualitative, all of which were conducted in the United States of America. Poorer and less educated black men were reluctant to seek help for prostate cancer. They may not visit their doctors for fear of intrusion into their personal lives. Moreover, they were fearful of being emasculated as a result of the digital rectal examination. The review identifies a paucity of UK literature on black men's fears and perceptions of prostate cancer. Further studies are needed in the United Kingdom to address this gap in the literature.

Introduction

In many developed countries, cancer of the prostate is the most common type of tumour affecting men of all

ethnicities. In the United Kingdom, for the last 20 years the incidence of prostate cancer has significantly increased [1]. Black men in the United Kingdom, are three times more likely to be diagnosed with this condition than their white United Kingdom counterparts [2]. Similarly, in the United States African-American men have higher mortality rates than any other ethnic group [3]. It has been recommended in the United States by the American Cancer Society and American Urological Society that African-American men aged 45 or over are screened for prostate cancer [4]. In the United Kingdom, any asymptomatic man aged 50 or over can ask to be screened, although this is not proactively offered by the National Health Service (NHS) [5].

Background

Prostate cancer screening is controversial [6–8]. A primary reason for this controversy is that there is insufficient evidence that the act of screening leads to better health outcomes [7]. Despite the controversies surrounding prostate cancer screening, currently it is the only method recognized to combat prostate cancer in men and, indeed, black men [9]. In the United Kingdom there are no screening programmes for prostate cancer [10]; however, if men perceive they are at risk of developing the condition or have indicative symptoms, testing can be sought [11]. Such screening tests could be either the digital rectal examination (DRE) or the prostate-specific antigen (PSA) or both [12].

Research [13] has shown that very few black men participate in prostate cancer screening and

therefore they are more likely to see a healthcare provider for prostate cancer at a later stage. There are several influencing factors for the poor up take of screening in black men. These factors include cultural beliefs, as well as knowledge [14]. Research conducted in the United Kingdom showed that black men's knowledge of prostate cancer was lower than that of their white UK counterparts [15]. Similarly, in the United States black men's knowledge of prostate cancer was less than European-Americans [16]. However, Magnus [17] reported no differences in prostate cancer education among men from African-American backgrounds.

Drawing on evidence from the United States, Gelfand *et al.* [18] found that black men were frightened of prostate cancer and the screening process, in particular the DRE, for fear of being emasculated. However in a later study, Brown *et al.* [19] reported that older black men were less worried of the screening process. According to Kleier [20] black men in the United States were fearful of the PSA test and the DRE. They felt that the outcomes of the test could have an impact on their lives, so they opted not to take these tests and live with the consequences of their actions. Evidence suggests that black men who have high cultural mistrust tend to have more negative views and expectations of healthcare services [21]. Additionally, they are less likely to seek help from healthcare providers who are of different cultural and ethnic backgrounds [22]. All of these could account for their low participation in prostate cancer screening.

The literature suggests that there are many influencing factors impacting on the low participation of black men in prostate cancer screening. Therefore, it is timely to conduct an integrative review which identifies studies exploring black men of African and Caribbean descent, their fears of prostate cancer and their attitudes towards screening.

Materials and methods

Search strategy

This integrative review used Whittemore and Knaf's [23] framework as a guide. This

methodological approach allows the simultaneous synthesis of both quantitative and qualitative studies [23]. A systematic search was conducted using search terms as identified below. Studies included in this integrative review were from January 1990 until February 2017 in order to gain as much data as possible that would be relevant to this topic. A total of four databases were searched: CINAHL, Medline, Cochrane and PsycInfo. A systematic search strategy was formed using key search terms and Boolean Operators: [prostat* neoplasm* OR prostat* cancer OR prostat* tumor*] AND [African OR black* OR nonCaucasian OR ethnic groups OR ethnic minorit*] AND [social perception* OR identity OR opinion* OR attitude* OR social value* OR social norm* OR knowledge OR culture OR understanding* OR fear*] AND [Man OR men OR masculin* OR male] AND [Screen*].

Study selection criteria

This review focuses solely on black men of African and Caribbean descent who had never been screened for prostate cancer, or had been screened at some point. The authors devised their inclusion criteria as: studies that explored attitudes towards screening and fear of prostate cancer in black men of African and Caribbean descent, articles from January 1990 to February 2017, peer-reviewed research, qualitative studies, surveys, questionnaires and English language publications. The exclusion criteria were editorials, opinion pieces, conference extracts, review papers, nonEnglish language papers, studies exploring the impact on quality of life, research combining other ethnic groups with prostate cancer, ethnic comparisons, and studies involving families, partners and loved ones.

Selection of articles

A total of 452 articles were deemed appropriate for the review. The titles and abstracts were checked for relevance based on the inclusion and exclusion criteria by the authors. A total of 416 articles were rejected as they did not meet the objectives laid out in the inclusion criteria, and 9 were duplicates. This process yielded 27 articles. The references of

these 27 articles were checked for suitable articles by the authors, and one further article emerged. Following this process, a total of 28 articles were deemed appropriate for the review. Both authors then screened these articles fully for their relevance and, of these, 12 further studies were rejected as they did not meet the inclusion criteria. Ultimately, 6 qualitative and 10 quantitative studies met the criteria for this integrative review (see Fig. 1).

Quality appraisal

It has been suggested by Whittmore and Knaff [23] that there is no gold standard for assessing methodological quality in an integrative review. For this review the quality of each included study was

reviewed by the two authors using the criteria from the validated Critical Appraisal Skills Programme (CASP) for qualitative [24] and quantitative tool [25]. The CASP tool is comprised of 10 questions which were used to appraise the qualitative studies (see Table I). The quantitative tool is based on 12 questions and these were used to assess the quality of the papers (see Table II). All 16 papers scored high and therefore were acceptable for analysis.

Data abstraction and synthesis

Of the 16 papers selected, 6 used a qualitative approach and 10 adopted a quantitative methodology. Among the quantitative studies, 7 used surveys,

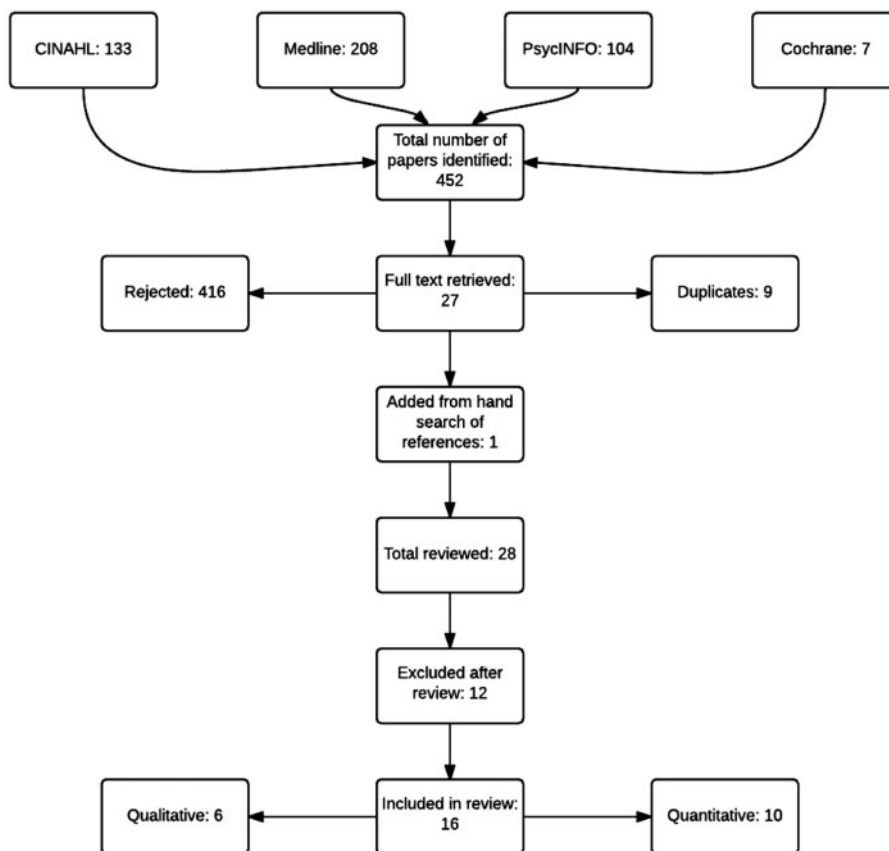


Fig. 1. Flowchart of study selection.

Table I. Methodological quality of qualitative studies

| Study | Criteria | | | | | | | | | | Total | % |
|--------------------------------|----------|---|---|---|---|---|---|---|---|----|-------|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Ford <i>et al.</i> (2006) | Y | Y | Y | Y | Y | N | N | Y | Y | Y | 8/10 | 80 |
| Forrester-Anderson (2005) | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | 9/10 | 90 |
| Jones <i>et al.</i> (2009) | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | 10/10 | 100 |
| Ogunsanya <i>et al.</i> (2016) | Y | Y | Y | Y | Y | N | N | Y | Y | Y | 8/10 | 80 |
| Oliver (2007) | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | 10/10 | 100 |
| Robinson <i>et al.</i> (1996) | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | 9/10 | 90 |

1—Clear statement of research aims, 2—Qualitative method appropriate, 3—Research design appropriate for aims, 4—Recruitment strategy appropriate for aims, 5—Data collected addressed research issue, 6—Relationship with participants considered, 7—Ethical issues considered, 8—Data analysed sufficiently, 9—Clear statement of findings, 10—Research of value.

Table II. Methodological quality of quantitative studies

| Study | Criteria | | | | | | | | | | | | Total | % |
|--------------------------------|----------|---|---|---|---|---|---|---|---|----|----|----|-------|-------------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | |
| Akpuaka <i>et al.</i> (2013) | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | Y | Y | 11/12 | 91.3 ³ |
| Ashford <i>et al.</i> (2001) | Y | Y | Y | Y | N | Y | Y | Y | Y | Y | Y | Y | 11/12 | 91.3 ³ |
| Cobran <i>et al.</i> (2013) | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | 12/12 | 100 |
| Kleier (2010) | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | 12/12 | 100 |
| Lehto <i>et al.</i> (2010) | Y | Y | N | Y | N | Y | Y | Y | Y | Y | Y | Y | 10/12 | 83.3 ³ |
| Ogunsanya <i>et al.</i> (2017) | Y | Y | Y | Y | N | Y | N | Y | Y | Y | Y | Y | 10/12 | 83.3 ³ |
| Odedina <i>et al.</i> (2008) | Y | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | Y | 11/12 | 91.3 ³ |
| Parchment (2004) | Y | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | Y | 11/12 | 91.3 ³ |
| Patel <i>et al.</i> (2010) | Y | Y | Y | Y | N | Y | Y | N | Y | Y | Y | Y | 10/12 | 83.3 ³ |
| Ukoli <i>et al.</i> (2013) | Y | Y | Y | Y | N | Y | Y | N | Y | Y | Y | Y | 10/12 | 83.3 ³ |

1—Clear abstract, 2—Study purpose identified, 3—Research progresses logically, 4—Literature review, 5—Theoretical framework, 6—Aims are easily identified, 7—Sample size, 8—Ethical issues considered, 9—Operational definitions, 10—Methodology, 11—Data analysed sufficiently, 12—Clear statement of findings.

whilst 3 utilized a questionnaire. A breakdown of the methodology, sample size and outcomes can be found in Table III. Each paper was read and re-read by both authors to gain an overall understanding of the study findings. To facilitate analysis, both qualitative and quantitative data were extracted into an evidence table (see Table III). The tabulation of both quantitative and qualitative findings within a single matrix supported the fusion of narrative and statistical data [26]. The data was categorized, which involved a process of identifying common meanings including both similarities and differences [27]. This provided a basis for analysis of common themes arising from the studies. Both authors discussed

the emerging categories with each other. The purpose of this was to develop more refined categories and concepts. After completion, these categories were aggregated into synthesized themes which formed the basis of the findings. These emergent themes were knowledge of prostate cancer, fear, personal factors and access to treatment. Figure 2 details the characteristics of each individual theme. They will be explored in further detail below.

Participants

There were a total of 227 men who took part in the qualitative studies, ranging from 9 [28] to 104 [29]. The quantitative studies attracted 2211, with a

Table III. General description of the included papers

| No | Title | Author (s), year, country | Aim | Methods | Sample size | Results |
|----|--|---|--|---------------|---|---|
| 1 | Knowledge and perceptions of prostate cancer among Nigerian male immigrants | Akpuaka <i>et al.</i> (2013), United States | To explore Nigerian male immigrant's knowledge, attitudes, health practices and beliefs towards prostate cancer and screening. | Questionnaire | Convenience sample of 22 Nigerian men, aged 35–56 years. | Participants did not perceive themselves to be susceptible to prostate cancer and did not discuss their concerns with their families. |
| 2 | Prostate carcinoma knowledge, attitudes, and screening behaviour among African-American men in Central Harlem, New York City | Ashford <i>et al.</i> (2001), United States | To identify screening behaviour, knowledge of prostate cancer and attitudes towards screening. | Survey | Community sample of 404 African-American men, aged 50–74 years. | Self-reported PSA screening was associated with age, education, favourable attitudes towards screening, and knowing someone who had prostate cancer. |
| 3 | Perceptions of prostate cancer fatalism and screening behaviour between United States-born and Caribbean-born black males | Cobran <i>et al.</i> (2013) USA | To compare perceptions of prostate cancer fatalism and screening with PSA testing between U.S-born and Caribbean-born black males. | Questionnaire | 211 African-American and Caribbean men, aged 39–75 years. | Age, education, spirituality and access to private/public health insurance were significant predictors for screening. |
| 4 | Factors influencing behavioural intention regarding prostate cancer screening among older African-American men | Ford <i>et al.</i> (2006), United States | To assess factors associated with perceptions of prostate cancer screening among African-American men aged 55 years+. | Focus groups | Random sample selection of 21 African-American men, aged 55–87 years. | Lack of knowledge regarding cancer, fear of cancer, confusion, lack of health insurance and limited availability of screening clinic hours during nonworking hours prevented treatment. |
| 5 | Prostate cancer screening perceptions, knowledge, and behaviours among African American men: focus group findings | Forrester-Anderson (2005), United States | To explore the knowledge, perceptions, attitudes and behaviour of African-American men concerning prostate cancer and screening. | Focus groups | Snowball sampling of 104 African-American men, aged 40–80 years. | Various barriers exist including limited knowledge about the disease, lack of access to treatment, embarrassment and fear of a positive diagnosis. |
| 6 | How African American men decide whether or not to get prostate cancer screening | Jones <i>et al.</i> (2009), United States | To explore how and why African American men decided about prostate cancer screening. | Interviews | Convenience sampling of 17 African-American men, aged 40–71. | Most participants said they had screening due to knowledge of the disease, support from family and friends, and having a trusted relationship with their healthcare provider. |

(continued)

Table III. Continued

| No | Title | Author (s), year, country | Aim | Methods | Sample size | Results |
|----|---|---|---|--------------|---|--|
| 7 | Fear of and susceptibility to prostate cancer as predictors of prostate cancer screening among Haitian-American men | Kleier (2010), United States | To examine if perceived susceptibility to prostate cancer was congruent with the objectively measured disease risk in Haitian-American men | Survey | Convenience sample of 143 Haitian-American men, aged 40–87 years. | Participants did not recognise their increased risk, so were less likely to seek screening. |
| 8 | Factors influencing prostate cancer screening in African American men | Lehto <i>et al.</i> (2010), United States | To identify social ecological factors that affect screening behaviours in African-American men | Survey | Convenience sample of 60 African-American men, aged 38–79 years. | African-American males with higher positive health values were more likely to obtain screening. |
| 9 | Personal factors affecting African-American men's prostate cancer screening behaviour | Odedina <i>et al.</i> (2008), United States | To identify personal factors influencing African-American men's participation in prostate cancer screening | Two surveys | Convenience sample of 191 African-American men, aged 40–80 years. | The key detriments of intention to undergo screening were attitude, perceived behavioural control, past behaviour and perceived susceptibility. |
| 10 | Belief Regarding Prostate Cancer Screening Among Black Males Aged 18 to 40 Years | Ogunsanya <i>et al.</i> (2016), United States | To identify the salient behavioural beliefs of young Black men toward prostate cancer screening. | Focus groups | Convenience sample of 20 African-American men, aged 18–40 years | Understanding the beliefs of Black men of pre-screening age may be crucial to the effectiveness of future interventions to improve screening. |
| 11 | Knowledge of Prostate Cancer and Screening Among Young Multiethnic Black Men | Ogunsanya <i>et al.</i> (2017), United States | To assess the knowledge of prostate cancer and screening and its associated factors in young Black men aged 18 to 40 years. | Survey | Convenience sample of 267 African-American, African and Caribbean men, aged 18–40 years | It is important that these men be educated more on these important domains of prostate cancer and screening so that the decision to screen or not will be an informed one. |
| 12 | Attitudes and Beliefs about Prostate Cancer and Screening among rural African American men | Oliver (2007), United States | To assess attitudes and beliefs about prostate cancer and screening amongst rural African-American men. | Interviews | Convenience sample of 9 African-American men, aged 43–72 years. | Fear threat to their manhood and distrust of health care providers kept participants from screening activities. |
| 13 | Prostate cancer screening in African American and Caribbean males: detriment in delay | Parchment (2004), United States | To investigate health beliefs surrounding prostate cancer and identify reasons for delaying or avoiding prostate screenings. | Survey | Convenience sample of 100 African-American and Caribbean men, aged 37–89 years. | Fear of impotence, incontinence and a dislike of the digital rectal exam prevented regular screenings. |
| 14 | Factors influencing prostate cancer screening in low-income African Americans in Tennessee | Patel <i>et al.</i> (2010), United States | To examine demographic and lifestyle factors that influenced decisions to get screened for prostate cancer in low-income African Americans. | Survey | Convenience sample of 293 African-American men, aged 45+ years. | Participants who were older, obese and who had health insurance were more likely to have been screened. |

(continued)

Table III. Continued

| No | Title | Author (s), year, country | Aim | Methods | Sample size | Results |
|----|---|--|---|--------------|--|---|
| 15 | Attitudes of African Americans regarding screening for prostate cancer | Robinson <i>et al.</i> (1996), United States | To identify attitudes associated with the willingness of African Americans to participate in prostate cancer studies. | Focus groups | Convenience sample of 56 African-American men, 40+ years. | The middle socioeconomic respondents expressed a greater willingness to participate in screening due to having greater knowledge of the disease and enhanced access to health care. |
| 16 | A tailored prostate cancer education intervention for low-income African Americans: impact on knowledge and screening | Ukoli <i>et al.</i> (2013), United States | To identify knowledge and screening of low-income African Americans. | Survey | Non-randomised sampling of 539 African-American men, aged 42+ years. | Barriers to screening included health insurance, discomfort of digital rectal exam and fear of cancer diagnosis. |

sample size ranging from 22 [30] to 520 [31]. Twelve of these studies included African-American men [12, 28, 29, 31–39], with one also drawing in African-born and Caribbean-born men [37]. One study focussed on Haitian-American men [40] and another on Nigerian male immigrants [30]. Two other studies incorporated African-American men and Caribbean men [41, 42]. Some of the participants had been previously screened for prostate cancer, either by PSA or DRE. Others had never undergone screening.

Results

Knowledge of prostate cancer

Numerous studies [29, 30, 33, 34, 40] uncovered that a lack of knowledge and education on prostate cancer led to misconceptions about the disease. Most men, usually with less than a high school education, did not know much about prostate cancer, and were not aware that African-Americans were at a higher risk of developing prostate cancer, or could die from it [40]. One study shared an opinion that black men have a ‘If it don’t hurt don’t fix it’ attitude, and didn’t talk to anyone unless they felt something was wrong [29]. This was echoed in a study of Nigerian male immigrants who did not perceive themselves to be susceptible to developing prostate cancer and mistakenly believed that screening would prevent them from getting cancer [30]. A similar response was given by Haitian-American men, who did not recognize their increased risk and thus were less likely to be screened [34]. Some focus group participants had no knowledge of PSA tests, but did have an awareness of prostate cancer risk factors [33]. Those who’d previously had positive health screening experiences had been more highly educated, and majored in healthcare and natural sciences, and were found to have higher prostate cancer knowledge than their counterparts [37].

Fear

An expression of fear over receiving a positive diagnosis, and what occurs during a prostate cancer screening prevented some black men from seeking

| THEMES | | | |
|---|--|--|--|
| Knowledge of prostate cancer | Fear | Personal Factors | Access to treatment |
| <ul style="list-style-type: none"> • Lack of knowledge regarding cancer. • Limited education about prostate cancer. • Limited knowledge about the disease. • Some participants did not recognise their increased risk. • Some participants did not perceive themselves to be susceptible to prostate cancer. • Greater efficacy and knowledge offsets the negative impact of fear of screening. | <ul style="list-style-type: none"> • Fear of screening. • Fear of cancer. • Fear of positive diagnosis. • Fear of invasion of their privacy and bodies. • Fear of impotence and incontinence. | <ul style="list-style-type: none"> • Threat to their manhood. • Confusion about types of testing. • Support from family and friends. • Knowing someone who had prostate cancer. • Embarrassment. • Distrust of healthcare providers. • Lack of health insurance. • Discomfort of digital rectal exam. • Attitude, perceived behaviour, control, past behaviour and perceived susceptibility. • Trusted relationship with healthcare provider. • Age, education, favourable attitudes towards screening. • African-Americans with high positive health values were more likely to obtain screening. | <ul style="list-style-type: none"> • Enhanced access to healthcare. • Lack of access to treatment. • Limited availability of screening clinic hours. • Middle socioeconomic expressed a greater willingness to participate in screening. • Participants who were older, obese and who had health insurance were more likely to have been screened. • Age, education, spirituality and access to public/private health insurance were significant predictors for screening. |

Fig. 2. Themes development.

treatment [28, 31, 36, 39]. A fear of going to see the doctor was also a contributing factor [29]. Talking about cancer was taboo, with men afraid to discuss the topic with their peers [33]. This contributed to feelings of shame and embarrassment associated with a prostate cancer diagnosis [33]. There was further anxiety about a loss of sexual function, unable to perform intercourse entirely, and painful ejaculation [29]. Some men voiced their concerns regarding the fear of impotence [36]. The perceived risk of impotence and incontinence from a positive diagnosis was a feared side effect and prevented black men from receiving further screenings [42].

Personal factors

A number of common factors had a negative effect, or a positive influence, on black men seeking treatment. There was distrust from some black men regarding healthcare provision, and they feared that they would not get a thorough examination [28]. Scandals such as the Tuskegee Syphilis study [43] had given rise to the impression that blacks were used as guinea pigs, increasing suspicion and eroding personal trust in the system [28, 39] and lending weight to views that the healthcare system is set up against black men's health [29]. On the other hand, one study showed that men who had a trusting

relationship with their healthcare provider were more likely to seek treatment [40]. Another factor that stopped screening was a discomfort of the DRE [31], or a general dislike of the procedure altogether [42]. One study cited that it was felt to be humiliating, and caused one participant to question their sexuality [35]. The DRE was described by some men as an invasion of privacy and an assault on their manhood [36]. A minority indicated that they would prefer a blood test, but the embarrassment of receiving a positive diagnosis was also a cause of distress [29, 39]. A number of Nigerian males believed other men would go after their wives for sex if they disclosed their condition [30]. The thought of undergoing screening was equated with losing street credibility [36] and to some would make them feel unmanly [30]. It was determined in one study that African-Americans over the age of 50, who were more conscious about their health, were more likely to obtain screening [12]. This was reinforced by two other papers, one which discovered that self-reported PSA was associated with age, education and favourable attitudes towards screening [32, 41]. One paper showed that a perceived threat to their manhood prevented black men from participating in prostate cancer screening, and a sense that they were being violated [28]. The notion of being touched in a sensitive area was

something that was uncomfortable for them [36]. Some men expressed confusion between prostate cancer screening and prostate cancer diagnostic tests [33]. An important contributor involved in the decision-making process was the support of family and friends, with African-Americans more likely to trust the advice of family members with their health concerns [40]. Additionally, those who knew someone who had prostate cancer were more likely to seek PSA screening [32].

Access to treatment

Insurance coverage played a crucial role in getting tested. Black men found the tests to be too expensive [29, 36], or struggled to afford health insurance coverage [33]. Those from a low socioeconomic background received their healthcare in public clinics and emergency rooms, rarely receiving cancer screening procedures during their medical visits [39]. On the other hand, men who were from middle socioeconomic backgrounds had enhanced access to preventative healthcare treatments [39]. Men from poorer areas worried more about money than their health [38]. One study found that participants who were older, obese and had health insurance were more likely to have been screened [38]. Another highlighted that those from the middle socioeconomic backgrounds expressed a greater willingness to participate in screening [39] and were more likely to access treatment. One author discovered that a lack of health insurance was a barrier [31], whilst black men with access to public/private health insurance, who were educated beyond a high school degree, or who were more spiritual, were more likely to undergo PSA testing [41]. One study found that the limited availability of screening clinic hours during non-working hours for working men was a detrimental factor for screening opportunities [33].

Discussion

This integrative review examined the fears and perceptions of prostate cancer amongst black men of African and Caribbean backgrounds, and their

attitudes towards screening. The literature obtained was of high quality, and a broad emergence of themes became apparent. The current data revealed that men from lower socioeconomic backgrounds had less knowledge of prostate cancer and a greater fear of being tested and being found positive. In contrast, men who were better educated and could afford health insurance coverage were more inclined to undergo PSA treatment. As the results originate entirely from the United States, it should be worth taking into consideration that access to healthcare is regulated by the patient's financial income [44]. In the United Kingdom, testing for prostate cancer in the NHS is not based on socioeconomic backgrounds, but on clinical symptoms. However, evidence suggests that black men from higher socioeconomic backgrounds in the United Kingdom were more likely to request to be screened for prostate cancer than their counterparts of lower socioeconomic status [13]. A recent study in the United Kingdom contradicted the belief that men are deterred from getting checked because of fears of being emasculated by testing [45]. Out of the sample size, only 7 out of the 30 interviewees actually participated in the study, leading the authors to question if the educational and socioeconomic profiles of the other 23 men played a part in their absence [45].

In this review, the thought of undergoing screening and receiving a positive diagnosis led to cognitive and psychological feelings of becoming emasculated [28]. This was epitomized in several ways. There was some dislike of the DRE [31, 42] and the thought of being violated [28]. One study showed that men associated the DRE with emasculation and its perceived impact on their masculinity, without any cross-reference to homosexuality [36]. In contrast, findings by Oliver [28] found that some African-Americans in rural settings viewed the DRE as being associated with homosexuality and did not request it for this reason. Furthermore, there is a belief that a stigmatising 'cancer' label is permanently attached to survivors of prostate cancer treatment [46]. As such, there is great reluctance to share a prostate cancer diagnosis and treatment with others due to the thought of being stigmatised [47].

Some men feared a positive diagnosis would make them unable to perform sexual intercourse [29] and were unnerved at being impotent and losing their manhood [42]. There is a clear worry about the DRE and its outcome being perceived as a threat to their manhood; however, it was the prostate cancer diagnosis itself that caused greater feelings of shame and embarrassment. Indeed, black men did not discuss their diagnosis with loved ones and family members because of the impact that such discussion could have on their sense of masculinity [29, 30]. Greater fear is equated with lower screening, as discovered in a study that compared DRE with PSA [48]. The author noted that there is an exaggerated impact of fear on DRE with PSA [48]. A lack of knowledge creates fear, which increases the likelihood that an individual will not access information on preventative methods [49]. It was felt that strong support from family and friends could help counteract this taboo [40].

It is well documented in the literature that there are disparities in access to healthcare services for black men and indeed minority ethnic groups [50]. These persistent inequalities have resulted in general lower levels of trust in the healthcare system in the United Kingdom as highlighted in Keating's [51] report into mental health needs of black men and Thompson's [3] report into the reality of prostate cancer in black men of African and Caribbean backgrounds. In addition, there are considerable challenges of navigating the NHS care system and these may compound the difficulty and fear in seeking healthcare for their symptoms [52–54].

Drawing on evidence from the United States, it is clear that a deeply rooted mistrust exists between African-American men and the health service, damaged by scandals such as the Tuskegee Syphilis Study [29, 30] and that of Henrietta Lacks and the HeLa cells debacle [55]. Evidence suggests that there are still racial boundaries between black and white communities in the United States, with black men feeling the system is set up against them and that racism serves only to devalue African-American life resulting in fear of seeking healthcare for their prostate symptoms [29]. In addition, the need to pay for health insurance was a

luxury some black men from poorer backgrounds could not afford [29, 33]. This problem is exacerbated with a lack of support and out of hours treatment for working men [33] which may account for black men choosing to ignore screening for prostate cancer.

The literature suggests that using 'local champions', such as black men who are already living with prostate cancer, can raise awareness alongside supporting other black men in making informed choices regarding PSA testing, helping to alleviate fears that some black men may have regarding prostate cancer screening [53]. As this review highlighted, men who already knew men with the disease were more likely to be prompted to take part in screening [32]. However, black men from poorer backgrounds may not necessarily access public clinics in the community as they may be fearful of the outcome following screening [41]. Therefore, it stands to reason that further outreach work, including education and support, are required in the community to enable black men to be less apathetic in seeking prostate cancer screening. Sensitising younger men early on would serve as a way to dispel the myths around examinations and prepare them for what they may encounter later in life [38].

It is clear from this review that men from lower socioeconomic backgrounds knew less about the disease and did not know that they carried a greater risk of developing prostate cancer [29, 30, 33, 34, 40]. Furthermore, as they could not afford access to healthcare, they would forgo being tested [39]. This contrasted with results that showed older black men who were better educated and had health insurance were more likely to seek treatment [38, 41]. The reasoning is due to older men having a longer relationship with their provider, and thus developing a more trusting relationship [40]. It was noted that younger men had a greater difficulty in understanding or discussing the disease [30, 40]. The exact reason for this is likely to stem from the DRE being seen as a threat to their masculinity, as mentioned earlier, and the fear of being left impotent from a positive diagnosis at a young age. On the other hand, older men, although more prone to being tested, were less likely to benefit from early

detection [32]. The importance of regular physical exams is not instilled in men [36]. Thus, education and economics played two crucial roles, with an increase in both needed to fuel more cooperation.

Limitations of the study

The use of four databases was a limitation of this study. Had more databases been used, more papers could have been yielded. There may have been a language bias as nonEnglish studies were excluded. For this study, grey literature was not captured or used in this review and therefore this adds to the limitations of the review. Studies were all from the United States, with none occurring outside of the country. The American spelling of the keyword ‘tumor’ was adopted in the search strategy as opposed to the English variant. The authors would have preferred drawing on studies from the United Kingdom, but there were none that met the inclusion criteria.

Conclusion

It is evident that poorer and less educated black men are fearful of seeking help for prostate cancer. A total of 16 empirical studies published in the United States were sourced for an integrative review. This article applies a systematic approach to reviewing black men of African and Caribbean backgrounds fear of prostate cancer and their attitudes towards screening. The results of this review offer insights into African and Caribbean men who are living with a diagnosis of prostate cancer. The key themes that emerged from the analysis indicate that black men are fearful of seeking support and may not always visit their doctors for fear of intrusion into their personal lives and of being emasculated as a result of the DRE test for prostate cancer. Although men are beginning to overcome some of the challenges of screening, there is a need to educate and to highlight how important it is to seek the advice of doctors for symptoms related to prostate cancer for black men. Our work suggests that more education and information are needed to alleviate black men’s fears and anxieties about prostate cancer. There needs to be better access to healthcare

and more community-based approaches. We recommend that there should be more UK-based research looking at black men’s perceptions and fears of prostate cancer and screening methods.

Conflict of interest statement

None declared.

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