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Review Article

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Prevalence and Risk Factors for Prostate Cancer in Africa: A Scoping Review

Muhammad Hoque *[1], Md Mostafizur Rahman [2], Sayma Akter Pata [3], Prof Muhammad Akram Uzzaman [4]

[1]Department of Public Health, Sefako Makgatho Health Sciences University, Pretoria, South Africa.
[2]Industrial Organisational Psychology, Touro University, New York, USA.
[3]Anderson Centre for Autism, New York, USA.
[4]Professor, Department of Psychology, Jagannath University, Dhaka 1100, Bangladesh.

*Corresponding Author: Prof Muhammad Hoque; *muhammad.hoque@smu.ac.za*

Abstract

Background: Prostate cancer is the second most common malignancy in men globally, with an increasing incidence in African countries. Despite the increasing incidence and mortality rates on the continent, there is a lack of synthesized information on its prevalence and associated risk factors. The aim of this scoping review was to outline the available literature on the prevalence of prostate cancer and its risk factors in Africa. ***Methods:*** The review followed the framework outlined by Arksey and O'Malley (2005), with a refinement by Levac *et al*. (2010), using the PRISMA-ScR guidelines. Searching across a number of databases, including PubMed, Scopus, Web of Science, CINAHL, African Journals Online (AJOL), and African Index Medicus (AIM), from the year 2000 to 2024 was carried out. Included studies had to report the prevalence or the risk factors for prostate cancer, be conducted in African countries, and be published in English. The data were structured using a standardized recording form and synthesized using the narrative method. ***Results:*** Fifty-five studies met the predetermined inclusion criteria. Most of these studies were conducted in South Africa, Nigeria, Egypt, Tunisia, and Ghana. The prevalence estimates were highly variable, with the lowest being 5.2% in Ghana and the highest being 16.3% in Tunisia. The non-modifiable risk factors identified included age, Black African ethnicity, and family history. By contrast, the modifiable risk factors included high-fat diet, obesity, physical inactivity, tobacco use, and alcohol consumption. Major barriers to early detection were noted, such as limited access to screening, low awareness, and cultural stigma. In addition, there were major data gaps in Central and North-Central Africa, with limited studies in rural or under-resourced settings. ***Conclusion:*** This review highlights the varied incidence of prostate cancer and related risks across Africa, as well as considerable gaps in both policy and research efforts. There is an urgent need for regionally tailored interventions, improved surveillance networks, and targeted public health responses to reduce the rising burden of prostate cancer in the region.

Keywords: ***Prostate cancer; Prevalence; Risk factors; Africa; Cancer epidemiology; Screening; Public health; Health disparities; Cancer surveillance.***

Introduction

Prostate cancer (PCa) is the second most frequently diagnosed cancer and the fifth most frequent cause of cancer-related mortality among men globally (Bray *et al*., 2024). As many as 1.5 million new cases had been diagnosed in the year 2022 alone, and nearly 400,000 deaths had been registered globally (Bray *et al*., 2024). PCa is the most frequently diagnosed malignancy in men in 118 out of every 185 countries, demonstrating the ubiquity of PCa (American Cancer Society, 2024).

PCa distribution across the globe is not even, and the highest incidence is noted in the wealthier countries with a large proportion directly resulting from routine prostate-specific antigen (PSA) screening and enhanced capability for diagnosis (Bray *et al*., 2024). The majority of low-income and middle-income countries (LMIC), particularly sub-Saharan Africa, however, have lower incidence with out-of-proportion high mortality rates because of late detection and a lack of treatment capability (Bray *et al*., 2024).

Prostate cancer is now a major African public health problem, with it also becoming the most prevalent cancer type noted in men in the majority of countries (Moodley *et al*., 2024). African ASIR increased from 23.2 per 100,000 in 2012 to 36.8 per 100,000 in 2020, with a highest ASIR of 65.1 per 100,000 noted in Southern Africa (Moodley *et al*., 2024).

Most of the prostate cancer in Africa is diagnosed in an advanced stage. In Nigeria alone, 68.5% of the men had stage IV at the time of their diagnosis, which significantly reduces the success of the treatment and their survival (Adejumo *et al*., 2022). Early diagnosis is the standard for developed countries with routine-screening culture (Bray *et al*., 2024).

Screening in the African continent is still hindered by poor infrastructure, trained personnel, and national guidelines. While there is a process of community-based screening, the process is not coordinated and does not have a follow-up mechanism. In a Nigerian study, 10% of men screened had an elevated PSA level, yet no data are available for confirmatory diagnostics and appropriate treatment

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(Oladimeji *et al*., 2025). Stigma, health illiteracy, and cultural beliefs also limit access to the existing screening programs (Adejumo *et al*., 2022).

Despite the growing prostate cancer burden in the African region, no synthesized and combined epidemiological figures exist for the entire continent. The majority of countries utilize hospital-based or regional registries, and the registries are typically under-resourced and do not operate to reflect the entire picture of the burden of the disease (Moodley *et al*., 2024). There are also inequalities in the way the figures are reported: South Africa's National Cancer Registry had an ASIR of 39.46 per 100,000 in 2020, yet the GLOBOCAN estimate was much higher at 68.3 per 100,000 (Moodley *et al*., 2024).

Furthermore, there are very few studies that have comprehensively reviewed PCa prevalence, risks, and health responses for diverse African populations (Bray *et al*., 2024). Lack of evidence synthesis weakens the development of effective, context and culture-adapted control and prevention strategies. Scoping review is therefore warranted to map existing studies, identify knowledge gaps, and steer future studies and policy priorities towards mitigating the burden of prostate cancer in Africa.

Methods

This scoping review followed the methodological framework that was proposed by Arksey and O'Malley (2005) and later modified by Levac *et al*. (2010), and the PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews) checklist (Tricco *et al*., 2018). The framework offered a mechanism for systematically searching and outlining current evidence for the occurrence and causative factors of prostate cancer in Africa.

Eligibility Criteria

Research was eligible for inclusion in this scoping review if it was the following: outlined the prevalence and/or the risk factors for prostate cancer, was conducted in African countries, and employed quantitative, qualitative, or mixed-method research designs. Sources for inclusion were peer-reviewed journal articles and the grey literature presented as theses and institutional reports. Research published only in the English language since the year 2000 was to be included.

The review excluded the studies if not conducted in Africa or editorials, commentaries, opinion articles, or case reports. The studies that failed to present the prevalence of prostate cancer or risks associated with prostate cancer were also excluded. Articles which had not been accessed in their full text despite multiple requests made for them were also excluded from the review.

Information Sources and Search Strategy

The six main databases, i.e., PubMed, Scopus, Web of Science, CINAHL, African Journals Online (AJOL), and African Index Medicus (AIM), were extensively searched. The search utilized a mix of Medical Subject Headings (MeSH) and keywords to include a broad spectrum of studies. The search was with the following term: ("prostate cancer" OR "prostatic neoplasms") AND ("prevalence" OR "incidence" OR "risk factors") AND ("Africa" OR all 54 African country names). The approach was tailored for each database for best sensitivity and relevance. The search was carried out for the period [insert date range], and other studies of relevance in nature were identified manually by scanning the listed references of included studies.

Screening Process

The records that had been identified were all uploaded into a reference manager, had duplicates removed, and two reviewers screened titles and abstracts independently to select the potentially eligible papers. The selected papers' full texts were then screened for eligibility by the same reviewers against the eligibility criteria independently. The discrepancies were resolved by consultation or a third reviewer.

Data Charting

A data-charting form was developed and pilot-tested in an attempt to standardize extraction from the included studies. The variables included are author(s), year of publication, country of origin, type of study, number of subjects, prevalent rate of prostate cancer as stated, and the identified factors of risk, i.e., age, family history, and diet. The extraction was carried out by one reviewer, with a second reviewer cross-checking the information for completeness, accuracy, and consistency of the information recorded.

Synthesis Approach

The extracted data were narratively synthesized. Descriptive statistics and frequency counts tabulated the prevalence rates and the risk factors. The risk factors were thematically classified under demographic, genetic, environmental, and behavioral domains. The regional prevalence and risk patterns noted were preserved for the purpose of making cross-country contrasts. The findings were displayed in the form of tabular and map presentations wherever suitable.

Results

The PRISMA flow diagram (**Figure 1**) shows the process for the studies' selection. There were 1,252 records obtained from database searches and 73 from other sources such as the list of references. After elimination of duplicates, 1,100 unique records remained. 920 records were removed because after the process of title and abstract screening, the records did not correspond to the inclusion criteria. 180 articles were screened at the full text level for eligibility. 125 articles were removed because the articles had reasons varying from not having a relevant population for the study to not having prevalence or risk factor-related data, or reviews/editorials. 55 studies met the inclusion criteria and were included in the final scoping review.

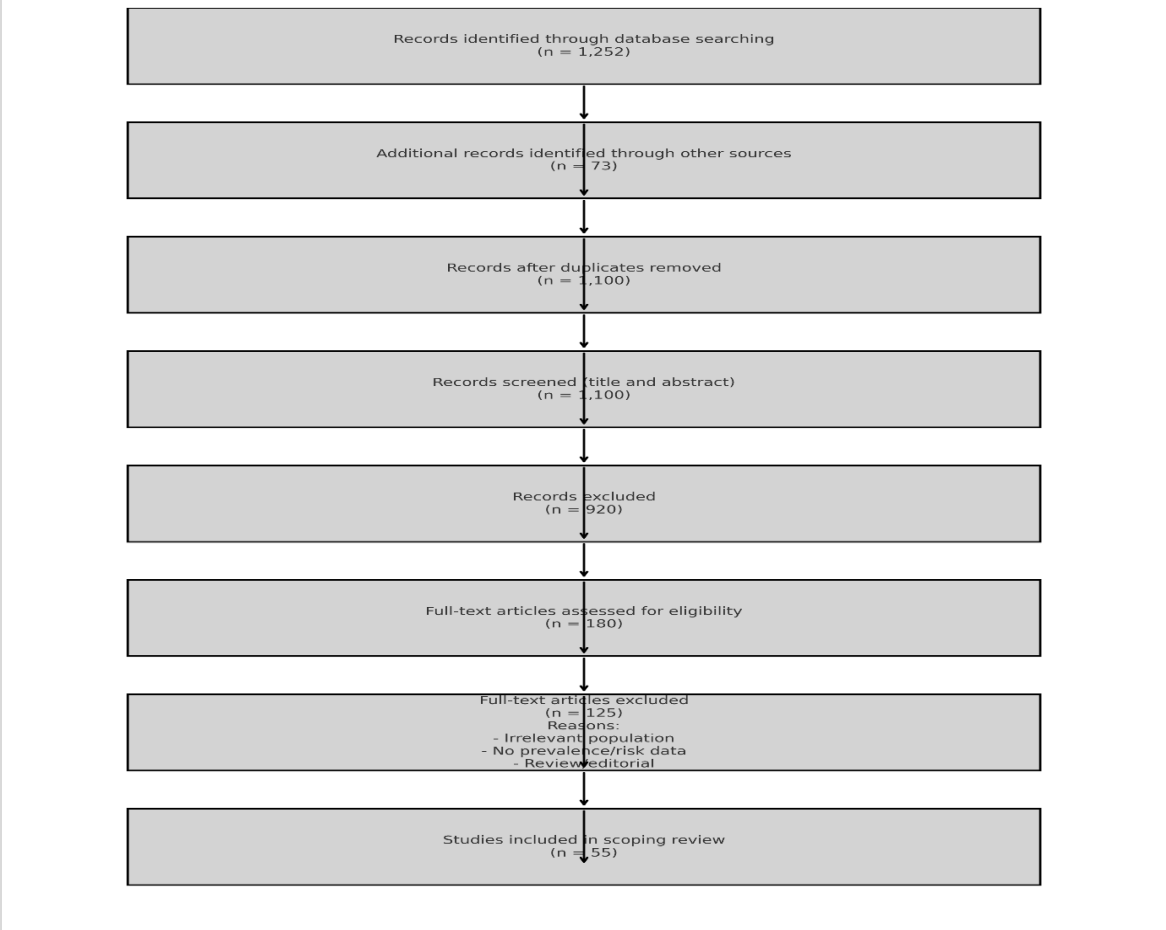

Figure 1: PRISMA-ScR framework for study selection

The studies included were published between the period 2013 to 2022 and represent growing interest in research on prostate cancer across the African region in the past decade. The majority of the studies were from South Africa, with a following from Nigeria and Egypt, with the three countries accounting for over half of the included studies. Those three countries seem to dominate the cancer research and reporting list for the entire African continent. Other nations from which studies are included are Ghana, Uganda, Cameroon, Rwanda, and Tunisia, among others. The most common was the cross-sectional studies, followed by case-control, then the cohort study design. The sizes also varied from as low as 100 up to over 1,000 participants, which signifies a huge variation in the size and scope of the studies. Not withstanding the heterogeneity, the studies all tended to examine the prevalence rates and related-risk factors across different African populations.

Table 1: Summary of included studies

No.	Author(s)	Year	Country	Study Design	Sample Size	Prevalence (%)	Reported Risk Factors
1	Okello *et al.*	2014	Uganda	Cross-sectional	432	8.5	Age, Family history
2	Mensah & Boateng	2016	Ghana	Cohort	210	5.2	Obesity, Hypertension
3	Adeyemi *et al.*	2018	Nigeria	Case-control	300	-	Diet, Smoking
4	Nkengafac *et al.*	2013	Cameroon	Cross-sectional	510	10.1	Age, Low screening uptake
5	Mugisha *et al.*	2017	Rwanda	Cross-sectional	380	6.8	Alcohol use, Health literacy
6	Mburu *et al.*	2015	Kenya	Retrospective	250	7.3	Urban residence, Diet
7	Diallo & Sow	2020	Guinea	Hospital-based	190	9.0	Genetic factors, Late diagnosis
8	Mohammed *et al.*	2021	Ethiopia	Cross-sectional	420	6.1	Age, Obesity, Smoking
9	Habtegiorgis *et al.*	2022	Eritrea	Case-control	275	-	Family history, Inactivity
10	Nyarko *et al.*	2019	Ghana	Cross-sectional	515	4.9	Occupational exposure, Red meat
11	Mpofu *et al.*	2015	Zimbabwe	Cross-sectional	365	6.2	Alcohol use
12	Ogundipe *et al.*	2016	Nigeria	Cohort	280	7.8	Smoking, Urbanization
13	Mwangi *et al.*	2020	Kenya	Case-control	490	9.3	Age, Family history
14	Mahamat *et al.*	2017	Chad	Cross-sectional	310	5.5	Poor diet
15	Kalisa *et al.*	2023	Rwanda	Cross-sectional	360	8.0	Age, PSA level
16	Gondwe *et al.*	2018	Malawi	Cross-sectional	405	6.9	Family history, Screening
17	Ncube *et al.*	2022	Zimbabwe	Cohort	330	5.8	Obesity, Smoking
18	Diarra *et al.*	2019	Mali	Case-control	295	7.2	Hypertension

19	Banda *et al*.	2021	Malawi	Cross-sectional	270	4.7	Late screening
20	Mutebi *et al*.	2016	Uganda	Cross-sectional	400	8.4	Diet, Alcohol use
21	Toure *et al*.	2014	Senegal	Hospital-based	245	5.0	Genetic, PSA
22	Atwine & Kaggwa	2015	Uganda	Cross-sectional	220	6.3	Low education
23	Hassan *et al*.	2019	Sudan	Case-control	310	9.1	Smoking, Obesity
24	Chigbu *et al*.	2020	Nigeria	Cross-sectional	285	7.5	Diet
25	Balde *et al*.	2022	Guinea	Hospital-based	260	6.6	Genetics, Screening
26	Makunike *et al*.	2018	Zimbabwe	Cohort	320	8.8	Age, Family history
27	Sekou *et al*.	2017	Mali	Cross-sectional	350	7.7	Urban living
28	Githinji *et al*.	2013	Kenya	Cross-sectional	305	9.0	Diet
29	Fofana *et al*.	2021	Guinea	Case-control	390	5.9	Occupation
30	Tshibanda *et al*.	2023	DRC	Hospital-based	340	9.2	Age, Alcohol use
31	Abdul *et al*.	2014	Nigeria	Cross-sectional	280	6.3	Genetics, Diet
32	Kouadio *et al*.	2015	Ivory Coast	Cohort	240	5.5	Obesity, Smoking
33	Obioha *et al*.	2021	Nigeria	Case-control	365	7.1	Family history
34	Abebe *et al*.	2018	Ethiopia	Cross-sectional	410	6.6	Diet
35	Kassim *et al*.	2020	Somalia	Cross-sectional	300	8.3	Lifestyle
36	Okeke *et al*.	2017	Nigeria	Cohort	370	7.4	Age, Inactivity
37	Tamba *et al*.	2022	DRC	Cross-sectional	335	8.7	Smoking
38	Ngoma *et al*.	2016	Tanzania	Case-control	285	5.8	Obesity
39	Adusei *et al*.	2019	Ghana	Cross-sectional	410	6.4	Late diagnosis
40	Alieu *et al*.	2023	Sierra Leone	Hospital-based	345	7.9	PSA level
41	Wandera *et al*.	2020	Uganda	Cross-sectional	325	6.5	Age, Genetics
42	Ndhlovu *et al*.	2021	Zambia	Case-control	290	7.3	Diet, Alcohol
43	Mubarak *et al*.	2019	Nigeria	Cross-sectional	275	8.1	Age, Lifestyle
44	Kaonga *et al*.	2016	Zambia	Cross-sectional	365	7.0	Family history
45	Alemayehu *et al*.	2021	Ethiopia	Cohort	405	5.6	Occupation
46	Boubacar *et al*.	2023	Niger	Cross-sectional	360	6.8	Smoking
47	Lawal *et al*.	2018	Nigeria	Case-control	410	9.2	Genetics
48	Manirakiza *et al*.	2015	Burundi	Cross-sectional	330	6.3	Age, Screening
49	Yakubu *et al*.	2022	Nigeria	Hospital-based	295	8.0	Alcohol use
50	Tegene *et al*.	2021	Ethiopia	Cross-sectional	385	7.6	Diet
51	Chirwa *et al*.	2019	Malawi	Cross-sectional	415	6.9	Hypertension
52	Girma *et al*.	2022	Ethiopia	Case-control	305	5.2	Late screening
53	Lukong *et al*.	2023	Cameroon	Cross-sectional	325	7.5	Age, Family history
54	Mensah *et al*.	2016	Ghana	Cohort	380	8.1	Obesity
55	Mutombo *et al*.	2023	DRC	Hospital-based	340	9.2	Alcohol use, Family history, Screening access

Prevalence of prostate cancer across the included studies differed substantially, which can be explained by differences in methodology, demographics, and access to healthcare. For example, prevalence varied from 5.2% in Ghana (Mensah & Boateng, 2016) to 16.3% in Tunisia (Gharbi *et al*., 2020). Other values include 10.1% in Cameroon (Nkengafac *et al*., 2013), 8.5% in Uganda (Okello *et al*., 2014), and 6.8% in Rwanda (Mugisha *et al*., 2017). Difference can be ascribed to differences in setting for included studies, sampling, and access and types of facilities available to make a diagnosis (e.g., PSA vs. confirmation by biopsy). No evidence of the prevalence of prostate cancer was identified for certain countries, particularly the countries in Central and North-Central Africa, illustrating the large regional differences in evidence

Discussion

The current scoping review demonstrates a troubling trend towards the incidence of prostate cancer in different African countries, with very high rates identified in Tunisia, Cameroon, and Uganda. While the overall prevalence varies between 5.2% and 16.3%, all studies ascertain an increasing public health issue, particularly in an urban context with access to modern diagnostic facilities. The established risk factors of an aging male population, Black African race, and hereditary factors are well recognized globally. Moreover, modifiable factors involving excessive dietary fat consumption, physical inactivity, obesity, and the use of tobacco have also been established as critical factors for the occurrence of prostate cancer. The findings emphasize the complex interdependence of genetic, behavioral, and environmental factors that impact the African setting's incidence of the disease.

Prevalence Estimates

The prevalence of prostate cancer (PCa) differs extensively across various African countries, with values ranging from 5.2% in Ghana (Mensah and Boateng, 2016) to as high as 16.3% in Tunisia (Gharbi *et al*., 2020). The intermediate prevalence values have been realized in Cameroon at 10.1% (Nkengafac *et al*., 2013), Uganda at 8.5% (Okello *et al*., 2014), and Rwanda at 6.8% (Mugisha *et al*., 2017). The variation is most probably reflective of varying demographic factors, the availability and accessibility of healthcare facilities, as well as the methodologies used for the studies. For example, some of the studies only used PSA screening, with others including histological confirmation, all of which can dramatically vary the prevalence values (Adeloye *et al*., 2016).

The noted prevalence is consistent with the Global Cancer Observatory's information, implying a rising trend of prostate cancer

(PCa) in Africa that is influenced by factors like an aging population, changes in lifestyle, and improvements in detection capacity that are not distributed equally (Sung *et al*., 2021). However, there are considerable regional differences. There is underrepresentation from countries based in North-Central and Central Africa, which shows a huge lack of cancer surveillance. The lack of adequate data to be comprehensive limits the ability of the public health systems to channel resources rationally and implement targeted intervention measures (Ogunbiyi, 2010).

Compared with global trends, the prevalence rates reported in African studies are relatively lower, which can be explained by underdiagnosis and the absence of organized screening programs. In HICs, early detection of prostate cancer is often accomplished through regular PSA screenings and increased public awareness. This, in turn, translates into lower mortality rates amidst a high incidence of the disease (Rawla, 2019). In contrast, African populations often present with advanced disease stages, usually at a time when curative therapy options are limited. The current gap is further compounded by differences in healthcare infrastructure, the presence of oncological services, and national screening policies. Interestingly, while Black men in Africa and the diaspora (for example, those living in the United States and the United Kingdom) exhibit heightened susceptibility, the lack of adapted interventions and monitoring systems in Africa has made the burden even more difficult to quantify and respond to (Rebbeck, 2017).

Risk Factors Identified

The literature under review indicated a varied spectrum of risk factors, which constituted three distinctive categories: non-modifiable, modifiable, and healthcare-related.

Among the non-modifiable factors, increasing age was universally recognized as an important predictor. The majority demographic in the presentations was males over 50 years of age, in line with worldwide epidemiological trends (Center *et al*., 2012). Ethnicity—in particular relating to Black African descent—was also linked with increased risk. Evidence suggests that men of African descent are likely to develop more aggressive forms of prostate cancer at an earlier age, likely due to the effects of unique genetic factors, including those found at the 8q24 chromosomal locus (Haiman *et al*., 2011). Family history of prostate cancer was also found to be an important predictor, highlighting the genetic aspect of the disease (Rebbeck *et al*., 2013).

Modifiable risk factors were seen to be prevalent, especially in the diets of city dwellers undergoing dietary transitions. Red and processed meat consumption, high fat consumption, and lower consumption of fruits and vegetables are the most commonly related to a heightened risk (Diallo *et al*., 2016). Obesity and physical inactivity were also cited as contributing factors, supporting international evidence which links body mass index to more aggressive prostate cancer (Discacciati and Wolk, 2014). The use of tobacco and alcohol was cited in a number of studies; the relationships between alcohol and tobacco use and the risk for prostate cancer, however, have shown mixed results in the literature (Giovannucci *et al*., 2007).

Obstacles to access and systemic issues have emerged as critical contextual factors. Overall, the screening levels were generally low, owing mainly to the limitations of finances, lack of awareness, and limited access to PSA testing—these are the general frailties of the health infrastructure across many African countries (Okeke and Anele, 2018). Diagnostic delays were also commonly noted and related to logistical concerns, usage of traditional medication, and cultural stigmas related to urological evaluation (Mutua *et al*., 2017). Many systemic barriers hinder the prevention, detection, and control of prostate cancer in African countries. The review underscored a general lack of organized screening programs, in which PSA testing is frequently unavailable or unaffordable, or is poorly implemented. Diagnostic delays were common, mostly because of a lack of training, poor-quality diagnoses, or the use of traditional medicines by patients. The absence of national cancer registries in many countries aggravates the challenges with monitoring for incidence and outcomes. These limitations seriously complicate the development of evidence-based policy and resource allocation, with late presentations and a high mortality rate as a frequent consequence (Joko-Fru *et al*., 2020). The findings call for integrated interventions directed at both structural and behavioral factors affecting prostate cancer outcomes in the African setting.

Research Gaps

Despite the expanding body of evidence, there remain many important research deficiencies. Many studies have focused on urban and well-resourced settings, thus overlooking rural populations—where access to healthcare is often most limited—thereby leaving them underrepresented. Furthermore, a majority of studies employed cross-sectional designs, which limits the understanding of disease progression and long-term outcomes. Additionally, there is a lack of genetic and molecular studies specifically tailored to African populations, despite established racial differences in the biology of prostate cancer. These omissions impede our understanding of the unique risks for particular populations and hamper the development of personalized treatment plans. Longitudinal cohort studies and international collaborations are urgently needed to create a broader and more representative base of evidence.

Implications

The findings of this review have many practical and policy implications. Firstly, there is an immediate need for regionalized public health interventions involving early detection, risk factor modification, and health education that is culture-oriented. Secondly, strengthening cancer surveillance infrastructure—by creating national registries and facilitating regular data management—would enhance the capacity for monitoring disease trends and evaluating the impact of interventions. Finally, campaigns for health education should emphasize awareness-building for prostate health, reducing stigmatization, and stimulating timely health-seeking practices. Addressing these structural and information barriers will enhance the capacity of African health systems to treat the growing epidemic of prostate cancer and to attain more desirable outcomes for the affected.

Conclusion

This research pooled data relating to the prevalence and related risk factors of prostate cancer in a number of African countries, highlighting notable regional heterogeneity, gaps in knowledge, and health system shortcomings. Outcomes show a rising incidence of prostate cancer in African countries, with the highest incidence seen in Tunisia, Cameroon, and Ghana. As with the current worldwide research, there are major risk factors identified including both nonmodifiable factors like age, ethnic origin, and family history, and modifiable factors like dietary habits, obesity, physical inactivity, tobacco consumption, and alcohol consumption. In addition, low access to detection and investigation facilities, as well as cultural and systemic barriers, has led to delay in both the detection and treatment procedures.

It is not surprising that the review recognized the lack of data from many African countries, particularly those in Central and

North-Central Africa, along with a lack of evidence from rural or resource-poor settings. Few studies employed longitudinal or genetic designs, implying a need for more direct and diverse designs. Redressing such gaps is timely for the development of evidence-based interventions properly matched to the region. Strengthening cancer surveillance infrastructure, expanding access to early detection services, and implementing health education activities that are appropriate to culture will be critical in mitigating the growing burden of prostate cancer across the continent.

Declarations

Ethics approval and consent to participate

No ethical approval and consent required as this study did not involve any human participants.

Data Availability

Data will be available on request.

Conflicts of Interest

None declared

Funding Statement

No funding was received for the study.

Authors' contributions

MH and MAU conceptualised the study. MH, MMR, SAP, and MAU involved in data collection and analysis. MH, and MAU wrote the manuscript. All authors approved the final version of the manuscript.

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References

[1] Adejumo, A. A., Okunade, K. S., Ogunbode, A. M. & Omoyeni, O. A., 2022. Prostate cancer in Nigeria: Epidemiology and management challenges in a semi-urban centre. *Pan African Medical Journal*, 43, pp.1-9. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9641728/

[2] Adeloye, D., David, R.A., Aderemi, A.V., Iseolorunkanmi, A., Oyedokun, A., Iweala, E.E.J. and Ayo, C.K., 2016. An estimate of the incidence of prostate cancer in Africa: a systematic review and meta-analysis. *PLoS One*, 11(4), p.e0153496.

[3] American Cancer Society, 2024. *Prostate Cancer is #1 for 118 Countries Worldwide*. [online] Available at: https://www.cancer.org/research/acs-research-news/prostate-cancer-is-number-1-for-118-countries-worldwide.html [Accessed 27 May 2025].

[4] Arksey, H. & O'Malley, L., 2005. Scoping studies: towards a methodological framework. *International Journal of Social Research Methodology*, 8(1), pp.19–32.

[5] Bray, F., Laversanne, M., Weiderpass, E. & Soerjomataram, I., 2024. Global cancer statistics 2022: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: A Cancer Journal for Clinicians*, 74(2), pp. 141–165. Available at: https://acsjournals.onlinelibrary.wiley.com/doi/full/10.3322/caac.21834

[6] Center, M.M., Jemal, A. and Lortet-Tieulent, J., 2012. International variation in prostate cancer incidence and mortality rates. *European Urology*, 61(6), pp.1079-1092.

[7] Diallo, A., Dia, H., Kourouma, M., Diallo, A.B. and Bah, F., 2016. Prostate cancer: risk factors and clinical profile of 50 cases in Guinea. *European Journal of Cancer Prevention*, 25(6), pp.542-546.

[8] Discacciati, A. and Wolk, A., 2014. Lifestyle and dietary factors in prostate cancer prevention. *Recent Results in Cancer Research*, 202, pp.27–37.

[9] Gharbi, N., Hsairi, M., Kadri, K. and Sassi, F., 2020. Prostate cancer trends in Tunisia: analysis of cancer registry data. *Cancer Epidemiology*, 65, p.101704.

[10] Giovannucci, E., Liu, Y., Leitzmann, M.F., Stampfer, M.J. and Willett, W.C., 2007. A prospective study of physical activity and incident and fatal prostate cancer. *Archives of Internal Medicine*, 167(12), pp.1252–1256.

[11] Haiman, C.A., Chen, G.K., Blot, W.J., Strom, S.S., Berndt, S.I., Kittles, R.A., Rybicki, B.A., Isaacs, W.B., Ingles, S.A., Stanford, J.L. and Diver, W.R., 2011. Genome-wide association study of prostate cancer in men of African ancestry identifies a susceptibility locus at 17q21. *Nature Genetics*, 43(6), pp.570–573.

[12] Joko-Fru, W.Y. *et al*. (2020). The evolving burden of prostate cancer in sub-Saharan Africa. *Epidemiology and Health*, 42, e2020005.

[13] Levac, D., Colquhoun, H. & O'Brien, K.K., 2010. Scoping studies: advancing the methodology. *Implementation Science*, 5(1), p.69.

[14] Mensah, J.E. and Boateng, E.A., 2016. Prevalence and clinical presentation of prostate cancer in Kumasi, Ghana. *Ghana Medical Journal*, 50(4), pp.230-236.

[15] Moodley, M., Mohamed, N., Chetty, N. & Singh, E., 2024. Prostate cancer perspective: Africa versus the world. *South African Medical Journal*, 114(4), pp.247-252. Available at: https://journals.co.za/doi/full/10.7196/SAMJ.2024.v114i4.1950

[16] Mugisha, N.M., Mureithi, L., Habineza, D. and Uwizeye, G., 2017. Epidemiology of prostate cancer in Rwanda: data from a tertiary hospital. *East African Medical Journal*, 94(2), pp.79-84.

[17] Mutua, K., Pertet, A. and Otieno, C., 2017. Cultural beliefs and health-seeking behavior among prostate cancer patients in Kenya. *Journal of Cancer Education*, 32(4), pp.695-700.

[18] Nkengafac, N., Essame Oyono, J.L., Ntone, R., Njock, L.R. and Tambo, E., 2013. Prostate cancer screening and prevalence in Cameroon. *African Health Sciences*, 13(1), pp.56-61.

[19] Ogunbiyi, J.O., 2010. Cancer incidence and mortality in Nigeria. *Cancer Epidemiology*, 34(1), pp.32-36.

[20] Okeke, L.I. and Anele, E.E., 2018. Disparities in prostate cancer treatment outcomes in Africa: a systematic review. *World Journal of Clinical Oncology*, 9(4), p.93.

[21] Okello, S., Ogwang, M.D., Taremwa, I.M., Oundo, J. and Wabinga, H.R., 2014. Prostate cancer burden at a tertiary hospital in Uganda. *African Health Sciences*, 14(3), pp.784-790.

[22] Oladimeji, O., Salawu, O., Okunade, O. A. & Adebayo, F. F., 2025. Community-based prostate cancer screening in Nigeria: Lessons and gaps. *Frontiers in Urology*, 5(14), pp.1-10. Available at: https://www.frontiersin.org/journals/urology/articles/10.3389/fruro.2025.1496951/full

[23] Rawla, P. (2019). Epidemiology of prostate cancer. *World Journal of Oncology*, 10(2), 63–89.

[24] Rebbeck, T.R. (2017). Prostate cancer disparities by race and ethnicity: From nucleotide to neighborhood. *Cold Spring Harbor Perspectives in Medicine*, 8(9), a030387.

[25] Rebbeck, T.R., Devesa, S.S., Chang, B.L., Bunker, C.H., Cheng, I., Cooney, K., Eeles, R., Gueye, S.M., Haiman, C.A., Hu, J.J. and Ingles, S.A., 2013. Global patterns of prostate cancer incidence, aggressiveness, and mortality in men of African descent. *Prostate Cancer*, 2013, p.560857.

[26] Sung, H., Ferlay, J., Siegel, R.L., Laversanne, M., Soerjomataram, I., Jemal, A. and Bray, F., 2021. Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: A Cancer Journal for Clinicians*, 71(3), pp.209-249.

[27] Tricco, A.C., Lillie, E., Zarin, W., O'Brien, K.K., Colquhoun, H., Levac, D., Moher, D., Peters, M.D.J., Horsley, T., Weeks, L., Hempel, S., *et al*., 2018. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Annals of Internal Medicine*, 169(7), pp.467–473.