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Patient and Systemic Barriers to Cancer Care: Implications for Delayed Prostate Cancer Detection in Tanzania

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Abstract

Prostate cancer is a leading cause of cancer-related mortality among men in Tanzania, with most cases diagnosed at advanced stages. This study explores the interplay of patient-level and systemic barriers that contribute to delayed prostate cancer detection within a tertiary hospital context. Conducted at Bugando Medical Centre in Mwanza, the research employed in-depth interviews with 25 purposefully selected participants, including patients, oncologists, spouses and traditional healers. Thematic analysis was used and guided by Paul Farmer's structural violence model and Courtenay's theory of gender and health to interpret how cultural, economic, and structural factors shape health-seeking behaviours. Findings reveal that delays are influenced by limited awareness, geographic and financial barriers, reliance on traditional healers, diagnostic bottlenecks, untimely referrals, and fragmented care coordination. Masculinity norms further discourage early engagement with biomedical services. The study underscores the need for culturally sensitive health education, strengthened diagnostic capacity at peripheral health facilities, gender-responsive interventions, and integrative approaches bridging biomedical and traditional care. Addressing these patient and system-level barriers is critical to improving timely detection and reducing prostate cancer mortality in Tanzania.

Keywords: *Prostate cancer, Delayed detection, Biomedical practices, Traditional healers, Masculinity, Health systems.*

1. Introduction

Prostate cancer (PCa) represents a pressing global health concern, ranking as the second most commonly diagnosed malignancy among men and the fifth leading cause of cancer-related mortality worldwide (Wang et al., 2022; Benedict et al., 2023). In 2020 alone, over 1.4 million new cases and approximately 375,000 deaths were reported, with projections indicating an alarming increase to 2.3 million new cases and 740,000 deaths by 2040, largely due to population aging (Culp et al., 2020). This burden is disproportionately felt in low- and middle-income countries (LMICs), where fragile health systems limit access to early detection, timely diagnosis, and comprehensive cancer care.

In Africa, prostate cancer incidence has risen sharply from 15% in 1970 to 56% in 2008, with forecasts estimating it could reach 70% by 2030 (Ramaliba et al., 2020). In East Africa, PCa constitutes 9% of all cancers and 8.5% of male cancer-related deaths (Adibe et al., 2017). Within Tanzania, it is the second most common cancer, accounting for 10.7% of all new cases

and 9.4% of cancer-related deaths (Ferlay et al., 2024). Despite improvements in healthcare coverage, life expectancy, and cancer awareness initiatives, the majority of Tanzanian men continue to be diagnosed at advanced stages. Up to 80% of patients are detected at stage III or IV, leaving few eligible for curative treatment (Cross et al., 2024; Bugoye et al., 2019; Makene et al., 2022).

This delayed detection is not merely a clinical issue but a multidimensional sociocultural and systemic problem. Evidence suggests that delays in diagnosis are shaped by an interplay of patient-level constraints such as low knowledge, stigma, health-seeking behaviours, and financial insecurity and systemic barriers like weak diagnostic capacity, limited specialist services, and centralization of oncology care (Bugoye et al., 2019; Makene et al., 2022; Nyongole et al., 2024). In Tanzania, medical pluralism is especially significant. Traditional, spiritual, and biomedical practices coexist, and while traditional healing provides culturally resonant avenues of care, it can also prolong time to biomedical diagnosis (Cant, 2020; Mwaka et al., 2020; Asante et al., 2023). Parallel to this, entrenched sociocultural constructions of masculinity reinforce men's avoidance of healthcare, as illness is often equated with weakness (Connell & Messerschmidt, 2005; Courtenay, 2000; Henke, 2022). Fear of invasive diagnostics such as digital rectal examination (DRE), myths about treatment and virility, and broader gendered disparities in healthcare utilization further exacerbate late presentation (Odedina et al., 2004; Ogunsanya et al., 2016; Ngowi et al., 2024; TDHS, 2016; NBS, 2022).

Although the Tanzanian government has initiated awareness campaigns and subsidized services through institutions like the Ocean Road Cancer Institute (ORCI), uptake of prostate-specific antigen (PSA) testing and DRE remains limited (Bugoye et al., 2019; ORCI, 2023). Screening coverage across Africa is estimated at only 0–15%, and many men are diagnosed only when presenting with advanced urinary complications (Bugoye et al., 2019; Makene et al., 2022). Moreover, systemic inequities, limited oncology facilities, high out-of-pocket costs, geographic isolation, and shortages of oncologists and pathologists, continue to restrict early access to care, particularly in rural settings (Makungu & Mweya, 2023; Nyagabona et al., 2021). Existing research has identified barriers to cancer care in Tanzania and the broader sub-Saharan African region, but most studies such as katabalo et al., 2022, Maladze et al., 2023 and Mboera et al., 2018, emphasize clinical or epidemiological aspects rather than examining the sociocultural and systemic dynamics that shape men's health-seeking behaviours and care pathways. While previous scholarship has demonstrated that low awareness, traditional healing practices, and weak diagnostic capacity contribute to delayed presentation (Bugoye et al., 2019; Makene et al., 2022), few studies integrate these patient-level and systemic factors into a sociological analysis of how prostate cancer detection is embedded within broader structures of gender, culture, and inequality. This study addresses that gap by situating prostate cancer delays within both the social context of medical pluralism and masculinity norms and the structural context of under-resourced health systems.

2. Conceptual Framework

This study is guided by Paul Farmer's *Structural Violence Model* (2004) and Courtenay's *Theory of Gender and Health* (2000). Together, these frameworks offer a sociological lens for examining how structural inequities and gendered norms converge to shape men's health-seeking behaviors and contribute to delayed prostate cancer detection in Tanzania. The combination of the two approaches allows for a multi-level understanding of how health outcomes are produced at the intersection of individual agency, cultural scripts, and systemic constraints.

2.1.Structural Violence Model

The concept of *structural violence* was first articulated by Johan Galtung (1969) to describe the social structures that harm individuals by preventing them from meeting their basic needs. Paul Farmer later expanded and applied this concept to global health, arguing that illness and suffering often arise not merely from biological processes but from entrenched social, economic, and political arrangements that place specific populations in harm's way (Farmer, 1996; 2004). For Farmer, violence is "structural" because it is embedded in the political and economic organization of society, and "violent" because it systematically injures or disadvantages people.

In this study, Farmer's framework is used to interpret delayed prostate cancer detection as an outcome of historically rooted and institutionally reproduced inequalities. Structural violence manifests in the Tanzanian context through underfunded health systems, uneven decentralization of cancer care, limited diagnostic infrastructure, and the marginalization of non-communicable diseases within the national health agenda. These systemic inequities disproportionately affect rural and low-income men, constraining their access to information, timely diagnosis, and affordable treatment. Within this structural arrangement, vulnerability to late-stage diagnosis is not accidental but socially patterned, produced through the ways health systems are organized and resources are distributed.

Farmer's model thus shifts attention from individual "choices" to the social and institutional structures that shape those choices. It helps uncover how barriers such as cost, distance, referral bottlenecks, and limited cancer awareness are not random obstacles but manifestations of deeper forms of inequality embedded in the health system.

2.2.Courtenay's Theory of Gender and Health

While Farmer's framework explains the structural context of vulnerability, Courtenay's (2000) *Theory of Gender and Health* illuminates the cultural and behavioural dimensions that mediate men's engagement with healthcare. Courtenay argues that health-related behaviours are performative acts through which men construct and sustain hegemonic masculinity. Within this gender order, help-seeking is often equated with weakness, dependence, or loss of control, while self-reliance and endurance are valorised as masculine ideals (Connell & Messerschmidt, 2005).

In relation to prostate cancer, these norms are especially salient because the illness is closely tied to sexuality, virility, and aging; domains central to masculine identity. Studies have shown that men's reluctance to undergo digital rectal examinations (DREs), their fear of sexual dysfunction, and their tendency to normalize or conceal symptoms reflect the social pressures of maintaining a masculine image (Henke, 2022; Ngowi et al., 2024; Ogunsanya et al., 2016). In the Tanzanian context, these cultural expectations could discourage early engagement with biomedical care and encourage alternative pathways, such as reliance on traditional healers, home remedies, or prayer.

Courtenay's theory therefore situates help-seeking behaviours within gendered power relations. Men's apparent "non-compliance" with medical advice can be read not as ignorance but as a gendered performance shaped by broader social expectations. Masculinity becomes a cultural lens through which men interpret symptoms, illness, and medical authority.

2.3.Conceptual Synthesis and Contribution

While Farmer and Courtenay approach health from different vantage points, their frameworks intersect in meaningful and complementary ways. Structural violence identifies the macro-structural and institutional arrangements that constrain access to healthcare, while Courtenay's theory reveals how cultural constructions of masculinity shape men's responses to those

constraints. In this sense, gender operates as both a mediator and a mechanism of structural violence, translating systemic inequities into everyday practices and experiences of health.

This integrated framework, here referred to as the *Gendered Structural Vulnerability Model*, provides a comprehensive sociological understanding of prostate cancer delays in Tanzania. It highlights how the intersection of structural inequities and gendered identities produces distinct patterns of exclusion within cancer care. In doing so, it advances theoretical dialogue between medical sociology and global health by showing that delayed detection is both a cultural and a structural phenomenon.

Therefore, the framework foregrounds the argument that timely cancer detection cannot be achieved solely through awareness campaigns or clinical reform. Rather, it requires gender-responsive strategies that challenge masculine norms, equitable resource allocation that decentralizes diagnostic services, and systemic reforms that address the historical and institutional roots of structural violence. By linking individual experience to social structure, the Gendered Structural Vulnerability Model deepens understanding of how inequality becomes embodied as delayed diagnosis, and provides a conceptual foundation for interventions that are culturally resonant, gender-sensitive, and systemically feasible.

3. Methods

This study employed a qualitative approach with a phenomenological research design to explore patient and systemic barriers contributing to delayed detection of prostate cancer in Tanzania. The study was conducted at Bugando Medical Center (BMC), a tertiary referral hospital in Mwanza region that serves as a major oncology centre for both urban and rural populations. The focus was on participants from Sengerema district. Twenty-five participants were purposively selected, including prostate cancer patients, traditional healers, spouses, and healthcare providers (oncologists), based on their experience with cancer care and their ability to reflect on systemic and patient-level barriers.

Data were collected through in-depth interviews (IDIs) conducted in Swahili, lasting 45–60 minutes, and audio-recorded with consent. Interviews were transcribed, translated where necessary, and analysed thematically. Coding combined inductive insights from the data with deductive concepts derived from the theoretical frameworks. Themes were refined iteratively and interpreted through the lens of Structural Violence model and Courtenay's health and gender theory, emphasizing the intersection of cultural, structural, and gendered factors in shaping delayed detection.

Ethical approval was obtained from the Catholic University of Health and Allied Sciences (CUHAS, Certificate No. AB3/12(B)) and research clearance from the University of Dar es Salaam. Additional permission was sought from regional, district and community authorities. Written consent was obtained from all participants, with verbal consent for those unable to read or write.

4. Findings and Discussion

The study revealed a complex interplay between patient-level and systemic barriers that shape delayed prostate cancer detection in Tanzania. Sociodemographic factors such as older age, low educational attainment, limited income, and rural residence were consistently associated with reduced knowledge and awareness of prostate cancer, echoing previous findings in the Tanzanian context (Makene et al., 2022; Bugoye et al., 2019). However, these characteristics alone do not explain delay. Participants' experiences revealed that cultural beliefs, gendered norms, and structural limitations interact in patterned ways to shape men's health-seeking behaviour and engagement with biomedical care.

Guided by Farmer's (2004) structural violence model, which situates illness within historically rooted inequities, and Courtenay's (2000) theory of gender and health, which highlights masculinity's influence on help-seeking, this analysis locates delay at the intersection of cultural, economic, and institutional contexts. The following thematic discussion captures these dual layers of influence, patient-level experiences and system-level constraints; interpreted through the integrated lens of gendered structural vulnerability, where masculinity mediates the embodiment of systemic inequality.

4.1.Patient-Level Barriers:

4.1.1. Low Awareness and Knowledge

Many participants described early urinary or back symptoms as ordinary signs of ageing rather than indicators of disease, often seeking advice from relatives, neighbors, or traditional healers before visiting a hospital. As one participant explained:

> *"Honestly, when these problems started, frequent urination and backache I didn't think it was something serious. We don't really know where to go or what to do when these symptoms start. I asked some relatives, and they said it was probably just aging. By the time I came here, I was already in pain, and it had spread"* ***(IDI, 70 years, Patient, BMC).***

This narrative reflects a *lay explanatory model* in which symptoms are interpreted through everyday social meanings rather than biomedical categories. However, applying Paul Farmer's structural violence model, shifts the interpretation from individual ignorance to a recognition of how broader structural inequities shape such explanations. The normalization of illness as *"aging"* arises within contexts where health education on male cancers is minimal, diagnostic services are concentrated in urban centers, and costs of accessing screening remain prohibitive for most men (Makene et al., 2022; Cross et al., 2024; Bugoye et al., 2019). Within this framework, limited awareness is not simply a cognitive deficit but a *structurally produced form of vulnerability*, the outcome of unequal access to information, poverty, and policy neglect of non-communicable diseases in Tanzania's health agenda (Farmer, 2004). Farmer's model illuminates how social arrangements such as economic marginalization, health system underfunding, and geographic exclusion, become embodied as delayed detection and advanced-stage disease, constituting a silent form of violence against those with the least access to care.

At the same time, Courtenay's (2000) theory of gender and health helps explain how masculinity shapes men's interpretation of bodily changes: dominant ideals of toughness, stoicism, and independence discourage help-seeking, framing illness as weakness or failure (Connell & Messerschmidt, 2005; Henke, 2022). In this context, when a man's social network reassures him that urinary symptoms are *"just aging,"* it reinforces masculine expectations of endurance and self-reliance, delaying the acknowledgment of vulnerability and the pursuit of care. The intersection of these frameworks reveals that men's low awareness is neither purely cultural nor solely structural but an expression of *gendered structural violence*, where masculinity norms intersect with systemic neglect to constrain men's capacity to act on early symptoms. Similar findings in Tanzania and other Sub-Saharan contexts show that men's health behaviors are shaped by intertwined cultural and systemic barriers, including limited outreach on male cancers, poor diagnostic decentralization, and stigma surrounding sexual health (Ngowi et al., 2024; Henke et al., 2022). Consequently, low awareness operates both as a cultural rationalization and as a structural outcome, illustrating how the performance of masculinity and the design of health systems collectively reproduce inequities in prostate cancer detection.

4.1.2. Preference for Traditional Healers

Many men first consulted traditional healers, whose culturally grounded explanations often delayed biomedical engagement. A healer described:

> *"Illness is not just a physical thing. We heal the soul, and the body follows. Sometimes the problem comes from a curse, or from breaking family taboos. We treat the cause, not just the pain."* ***(IDI, 67 years, Traditional Healer, Sengerema).***

This view reveals a cosmology in which illness is socially and spiritually embedded, offering explanations that resonate with everyday experiences of suffering and moral order. Through the structural violence lens, the reliance on traditional healing should not be misinterpreted as ignorance or resistance to modern medicine but rather as an adaptive response to systemic exclusion, where geographic distance, poverty, and weak health infrastructure constrain biomedical access (Farmer, 2004; Farmer et al., 2006). For many men, traditional healers are accessible, affordable, and culturally affirming, filling gaps left by inequitable healthcare systems. This pattern of medical pluralism thus reflects both cultural continuity and structural necessity (Mwaka et al., 2020; Asante et al., 2023). At the same time, Courtenay's (2000) theory helps interpret the gendered dimension of this preference: men's engagement with traditional healers aligns with masculine ideals of control, autonomy, and privacy. Biomedical encounters, especially those involving intimate examinations or discussions of sexual function, may be perceived as emasculating or shameful (Connell & Messerschmidt, 2005; Sileo et al., 2018). Traditional healing, by contrast, allows men to assert agency and maintain dignity in health-seeking, avoiding public admission of vulnerability.

However, this reliance can inadvertently prolong the diagnostic pathway, as healers address illness in moral or spiritual terms rather than identifying biomedical indicators of prostate disease. Yet, dismissing traditional healers as obstacles overlooks their social authority and trust within communities. In alignment with Farmer's argument that equity in health requires addressing both cultural and structural dimensions of care (Farmer et al., 2006), integrative approaches that engage traditional practitioners in early referral and patient education could bridge cultural divides while countering structural exclusion. In due course, the turn to traditional healers exemplifies how systemic inequities and masculine cultural codes intersect to shape patterns of care-seeking and delay in prostate cancer detection in Tanzania.

4.2.Healthcare System-Level Barriers:

4.2.1. Limited Diagnostic Capacity

Participants and healthcare providers reported insufficient imaging, testing and treatment equipment, limiting early detection:

> *"We know what needs to be done, but the machines are insufficient. We know of the technological advancements in curing cancer such as, immunotherapy but, they are too expensive to adopt in our country at the moment. Waiting lists are also long, and by the time we get to diagnose, patients come too late, sometimes there's nothing much we can offer."* ***(IDI, 48 years, Oncologist, BMC).***

This statement by a medical practitioner captures the profound structural deficiencies that constrain early prostate cancer detection in Tanzania. Through Paul Farmer's (2004) lens of structural violence, such systemic shortages, scarce diagnostic equipment, outdated technology, and prohibitive treatment costs, are not incidental gaps but patterned consequences of historical, political, and economic marginalization. The scarcity of advanced imaging modalities such as multiparametric MRI and reliable PSA testing in public facilities mirrors broader global health inequities, where access to life-saving technologies is stratified along lines of geography, class, and global power (Farmer et al., 2006; Ringborg et al., 2024). These

deficiencies translate into clinical delays that disproportionately affect men in low-resource settings, turning curable conditions into fatal ones. The structural violence framework compels recognition that such barriers are embedded in social arrangements, underfunding of public health systems, dependency on donor priorities, and weak policy investment that perpetuate unequal health outcomes (Makungu & Mweya, 2023; Nyongole et al., 2024).

Interpreted alongside Courtenay's (2000) theory, these systemic failures intersect with gendered health dynamics: men, already socialized to delay care-seeking, are further disadvantaged when biomedical systems fail to provide timely and accessible diagnostic options. The inability of the health system to deliver efficient diagnostic care reinforces masculine narratives of fatalism and stoic endurance, where late presentation becomes normalized as an unavoidable fate rather than a preventable outcome (Connell & Messerschmidt, 2005; Sileo et al., 2018). Consequently, delayed detection emerges not from ignorance or neglect, but from the convergence of structural deprivation and gendered expectations within a fragile healthcare system. As evidence from Tanzania and across sub-Saharan Africa demonstrates, inadequate diagnostic capacity remains one of the most visible expressions of systemic inequality in cancer care (Makungu & Mweya, 2023; Maladze et al., 2023; Nyongole et al., 2024; Ringborg et al., 2024), highlighting the urgent need for equity-oriented health investments that dismantle the structural roots of late detection.

4.2.2. Untimely Referrals and Misdiagnosis

Patients experienced repeated misattribution of symptoms to benign conditions, consistent with systemic weaknesses at primary care levels. One patient reported prolonged encounters with primary healthcare providers who misattributed symptoms:

> *"They kept giving me painkillers. I went back many times. Each time, they said it was just old age or back strain. Nobody thought it was cancer until I came here, and by then, it was already advanced."* ***(IDI, 70 years, Patient, BMC).***

The participant's account reveals the cumulative effects of structural and institutional failures in primary healthcare. Viewed through the framework of structural violence, repeated misdiagnosis and delayed referrals are not isolated errors but manifestations of deeper systemic inequities in resource allocation, clinical training, and institutional accountability (Farmer, 2004). Primary-level providers, often overburdened and under-resourced, operate within systems that normalize diagnostic uncertainty, where older men's symptoms are dismissed as "natural aging" rather than possible malignancies. Such normalization is itself a structural product; an outcome of historical neglect of men's health and chronic underinvestment in diagnostic capacity and continuing medical education (Bugoye et al., 2019; Makene et al., 2022). The structural violence perspective thus situates these lapses within broader political-economic conditions that produce unequal vulnerability to disease progression.

Moreover, Courtenay's (2000) theory of gender and health helps explain how gendered expectations compound these systemic gaps. Masculine ideals of stoicism and endurance may discourage men from challenging medical authority or seeking second opinions, particularly when their early symptoms are trivialized by clinicians (Connell & Messerschmidt, 2005; Sileo et al., 2018). This interaction between masculine self-presentation and institutional indifference reinforces a cycle of delay: men internalize the dismissal of their symptoms as confirmation that their suffering is ordinary or inevitable. Consequently, late-stage presentation becomes a predictable outcome of intersecting structural and cultural forces rather than personal neglect. As studies across sub-Saharan Africa show, weak referral mechanisms, fragmented diagnostic pathways, and low provider awareness remain critical barriers to early cancer detection (Maladze et al., 2023; Makene et al., 2022; Bugoye et al., 2019). Interpreted through Farmer's

model, these failures are expressions of systemic inequity, forms of social suffering produced when institutional fragility meets cultural expectations of masculine resilience. Addressing such delays therefore requires not only clinical training reforms but also gender-sensitive communication that rebuilds men's trust in primary healthcare systems.

4.2.3. Fragmentation and Delays in Treatment Initiation

Bureaucratic hurdles and uncoordinated referrals led to delayed therapy, discouraging adherence and reinforcing late presentation (Courtenay, 2000).

> *"Everything takes time in cancer care; referrals, results, even starting treatment. Sometimes it takes weeks just to confirm the diagnosis, and more time to schedule surgery or radiotherapy. And time is what cancer doesn't wait for."* ***(IDI, 55 years, Oncologist, BMC).***

This narrative captures a lived frustration with systemic inefficiency that transforms curable disease trajectories into fatal ones. Through the lens of Farmer's model of structural violence, such bureaucratic and infrastructural delays exemplify how social structures, bureaucracy, resource scarcity, and institutional disorganization translate into bodily suffering and premature death (Farmer, 2004). Here, violence is not overt but embedded in the slow, normalized dysfunction of institutions that manage illness. The fragmentation of care is thus not a random failure but an outcome of historical and economic inequalities that determine who receives timely treatment and who does not. When patients navigate multiple, disconnected units for diagnosis, referral, and therapy, their illness experience becomes prolonged and uncertain, an experience that is structurally produced rather than individually chosen.

Moreover, Courtenay's (2000) gender theory deepens this analysis by showing how masculine ideals of endurance and control intersect with institutional barriers to reinforce delayed engagement. Men socialized to tolerate pain or mistrust medical dependency are disproportionately disadvantaged in fragmented systems that require persistence, patience, and bureaucratic negotiation. Taken together, these frameworks reveal that late-stage presentation in prostate cancer care is not simply a matter of patient irresponsibility but an embodiment of structural violence: where institutional weakness, social inequality, and gender norms converge to produce systematic disadvantage. The quotation, therefore, is not merely descriptive but diagnostic; it exposes how the political economy of healthcare delays becomes inscribed onto men's bodies as advanced disease and preventable mortality (Farmer, 2004; Courtenay, 2000).

5. Conclusion and Recommendations

This study demonstrates that delayed prostate cancer detection in Tanzania is shaped by a combination of patient-level factors including low awareness, masculine norms, reliance on traditional healers, and economic vulnerability; and systemic barriers such as limited diagnostic capacity, fragmented referrals, and inequitable access to care. Addressing these challenges requires multifaceted, contextually informed interventions, including the expansion of culturally tailored health education targeting men in rural areas, strengthening diagnostic infrastructure at peripheral health facilities, increasing access to health insurance and financial protection mechanisms, integrating biomedical and traditional health systems to leverage trust networks while ensuring timely referral, and promoting gender-sensitive strategies that encourage men's engagement with preventive and diagnostic services. By situating delayed detection within the intersection of cultural, economic, and structural determinants, this study contributes a sociological perspective to prostate cancer research in low- and middle-income countries, emphasizing that effective interventions must simultaneously address systemic inadequacies and culturally embedded health-seeking behaviors to improve early detection and reduce mortality.

Conflicts of Interest

The author declares no conflicts of interest.

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