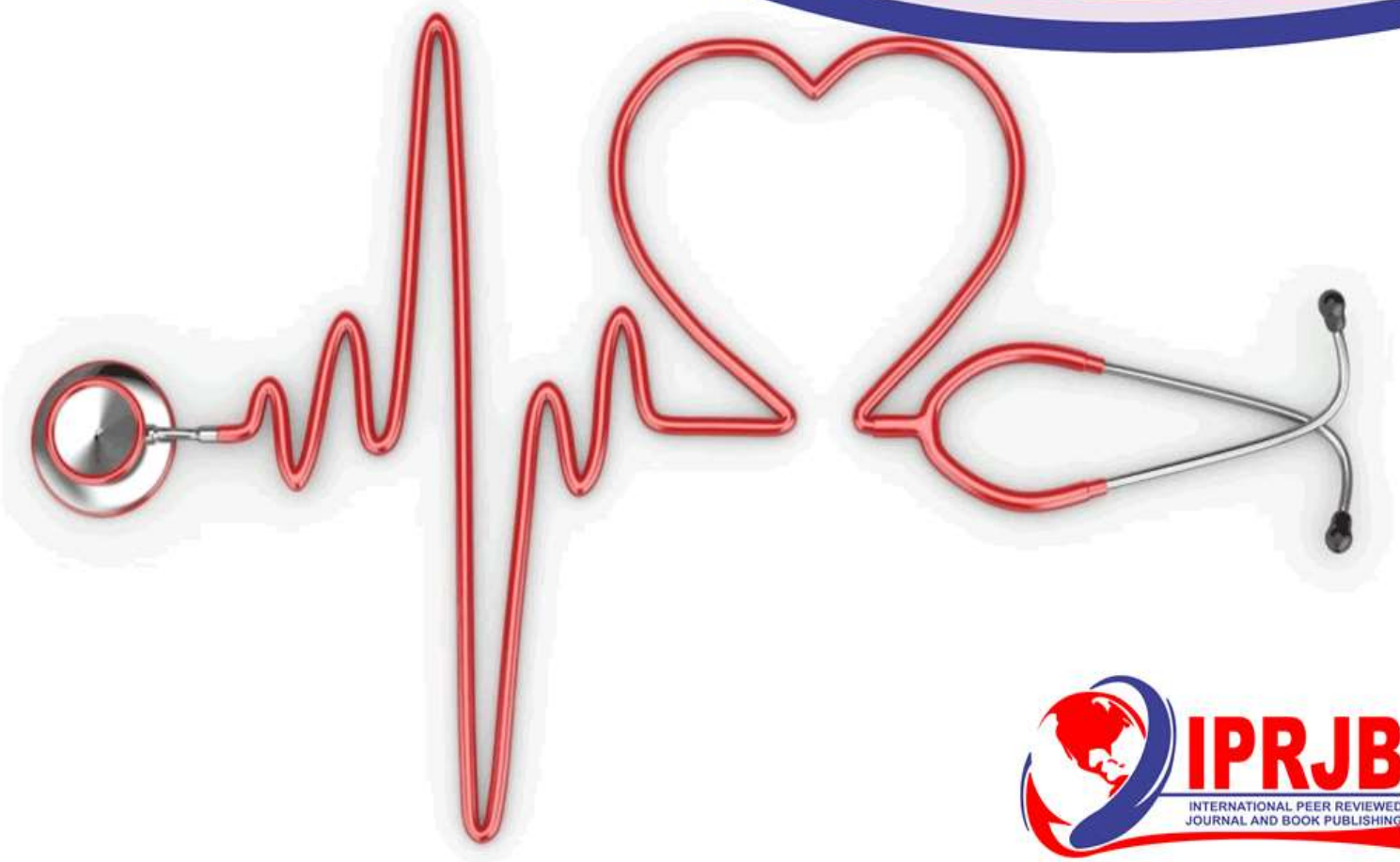
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Individual Determinants of Cancer Health Service Utilization among Newly Diagnosed Adult Cancer Patients in Garissa County, Kenya

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Abstract

Purpose: Cancer remains a major public health challenge in Kenya, particularly in marginalized regions where access to specialized oncology services is limited. Despite increasing investments in cancer prevention, diagnosis, and treatment, utilization of cancer health services remains suboptimal. This study sought to determine the influence of individual factors on utilization of cancer health services among newly diagnosed adult cancer patients attending Garissa County Referral Hospital, Kenya.

Methodology: The study utilized cross sectional study design. Data were collected from 161 newly diagnosed adult cancer patients using structured interviewer-administered questionnaires, Data collection instruments were validated through expert review and pretesting. Quantitative data were analyzed using descriptive statistics, Chi-square tests, and simple linear regression in SPSS version 25.

Findings: The findings revealed that utilization of cancer health services was significantly associated with age (χ^2=49.99, p<0.001), marital status (χ^2=42.46, p<0.001), education level (χ^2=112.94, p<0.001), occupation (χ^2=140.55, p<0.001), household income (χ^2=131.39, p<0.001), distance from the health facility (χ^2=186.08, p<0.001), health insurance status (χ^2=55.11, p<0.001), and mode of payment (χ^2=57.79, p<0.001). Descriptive analysis showed that respondents perceived cultural beliefs (Mean=4.10), treatment adherence awareness (Mean=4.01), gender-related concerns (Mean=4.00), religious beliefs (Mean=3.98), fear of diagnosis (Mean=3.94), and stigma (Mean=3.94) as important determinants of service utilization. Regression analysis established that individual factors significantly influenced utilization of cancer health services (β=0.604, p<0.001), explaining 24.5% of the variation in utilization (R^2=0.245). Qualitative findings corroborated the quantitative results by highlighting the influence of misconceptions about cancer, stigma, cultural beliefs, family decision-making, and trust in healthcare providers on treatment-seeking behaviour.

Unique Contribution to Theory, Policy and Practice: This study found individual factors significantly influenced utilization of cancer health services among adult patients. The findings underscore the need for culturally sensitive cancer awareness programs, strengthened Individual financial protection mechanisms, enhanced patient education, and community-based interventions aimed at reducing stigma and improving timely access to cancer care among vulnerable populations.

Keywords: *Cancer, Healthcare Behavior*

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INTRODUCTION

Cancer is one of the leading causes of morbidity and mortality globally and continues to pose a major public health challenge despite advances in prevention, diagnosis, and treatment. According to Bray et al. (2024), approximately 20 million new cancer cases and 9.7 million cancer-related deaths occurred worldwide in 2022, making cancer a significant contributor to the global burden of disease. Although cancer was historically perceived as a disease affecting high-income countries, recent evidence indicates that low- and middle-income countries now account for a substantial proportion of new cases and deaths due to population growth, aging, urbanization, and changing lifestyles (Ngwa et al., 2022). The increasing burden of cancer has placed considerable pressure on healthcare systems, particularly in resource-constrained settings where access to specialized oncology services remains limited.

In Sub-Saharan Africa, cancer incidence and mortality continue to rise, largely due to late diagnosis, inadequate screening programs, weak referral systems, shortages of specialized healthcare personnel, and limited treatment infrastructure (Ngwa et al., 2022). The region experiences some of the poorest cancer outcomes globally, with many patients presenting at advanced stages of disease when treatment options are less effective and survival rates are substantially reduced. Rick et al. (2021) observed that delayed presentation remains one of the most significant challenges affecting cancer outcomes in Tanzania, while Gakunga et al. (2019) identified inadequate awareness, misconceptions, and health system barriers as important obstacles to timely diagnosis and treatment engagement in Kenya. Similar findings have been reported in Ethiopia, Ghana, and Nigeria, where financial constraints, geographical barriers, and inadequate healthcare resources continue to impede access to cancer services (Shimels et al., 2024; Mensah et al., 2023; Sharma et al., 2021).

Kenya has experienced a steady increase in the burden of cancer over the last two decades, with the disease currently ranked among the leading causes of death in the country. The Ministry of Health (2017) estimates that more than 42,000 new cancer cases are diagnosed annually, with approximately 27,000 cancer-related deaths occurring each year. Common cancers affecting Kenyans include breast cancer, cervical cancer, prostate cancer, esophageal cancer, and colorectal cancer (Macharia et al., 2019). In response to this growing burden, the Government of Kenya has implemented several initiatives, including the National Cancer Control Strategy, National Cancer Screening Guidelines, and National Cancer Management Guidelines to improve prevention, early detection, treatment, and palliative care services (Ministry of Health, 2017; Ministry of Health, 2018). Despite these efforts, utilization of cancer health services remains suboptimal, particularly in marginalized and underserved counties where healthcare infrastructure and specialized oncology services are limited.

Garissa County presents a unique context for examining cancer health service utilization due to its geographical location, predominantly rural population, and limited access to specialized healthcare services. The county is characterized by long travel distances, socioeconomic challenges, low levels of educational attainment, and a predominantly Somali population with strong cultural and religious influences that may affect healthcare-seeking behaviour (Department of Health Garissa County, 2022). Previous studies have suggested that cultural beliefs, financial constraints, fear of diagnosis, stigma, and limited health literacy may influence the utilization of cancer services in similar settings (Omolo, 2022; Ari et al., 2023; Koirala et al., 2021). Understanding how these factors influence utilization among newly

diagnosed cancer patients is critical for informing interventions aimed at improving access to cancer care and treatment outcomes.

Despite increasing investments in cancer prevention, diagnosis, and treatment services in Kenya, utilization of cancer health services remains a significant challenge, particularly among patients residing in marginalized and resource-constrained settings. Evidence suggests that many cancer patients continue to present late for diagnosis, delay treatment initiation, miss scheduled appointments, or discontinue treatment altogether, resulting in poor treatment outcomes and increased mortality (Rick et al., 2021; Gakunga et al., 2019). While national policies such as the National Cancer Control Strategy and National Cancer Screening Guidelines have sought to improve access to cancer services, substantial disparities persist in the utilization of these services across different population groups and geographical regions (Ministry of Health, 2017; Ministry of Health, 2018).

In Garissa County, the burden of cancer continues to increase amidst persistent challenges related to healthcare accessibility, financial constraints, limited specialized services, and sociocultural influences. Although Garissa County Referral Hospital serves as the primary referral facility for cancer patients within the region, there is limited empirical evidence regarding the factors that influence utilization of available cancer health services among newly diagnosed adult cancer patients. Existing studies conducted in Kenya and other countries have largely focused on specific cancers, screening uptake, or health system barriers, with limited attention given to the combined influence of socio-demographic, socioeconomic, and individual factors on cancer health service utilization among newly diagnosed patients. Furthermore, most previous studies have employed quantitative approaches, providing limited insight into the lived experiences and perceptions that shape healthcare-seeking behaviour.

The lack of context-specific evidence on factors influencing cancer health service utilization in Garissa County presents a significant knowledge gap that may hinder the design and implementation of effective interventions aimed at improving access to cancer care. Consequently, this study sought to determine the individual factors influencing utilization of cancer health services among newly diagnosed adult cancer patients attending Garissa County Referral Hospital.

Statement of the Problem

Despite increasing investments in cancer prevention, diagnosis, and treatment services in Kenya, utilization of cancer health services remains a significant challenge, particularly among patients residing in marginalized and resource-constrained settings like Garissa County leading to high morbidity and mortality. Garissa County referral hospital is the sole major referral hub for entire Northern Kenya Region where patients travel long distances and encounter systemic challenges. At Garissa County referral hospital there is delayed initial presentation after diagnosis, treatment drop-out or non- compliance with scheduled Oncology visit contributing to poor treatment outcomes and increased mortality (Rick et al., 2021; Gakunga et al., 2019). Limited data is available on individual factors associated with service utilization among newly diagnosed adult cancer patients attending Garissa County Referral Hospital, Kenya.

LITERATURE REVIEW

Globally studies indicate that delayed diagnosis, inadequate screening uptake, financial constraints, and limited access to specialized oncology services continue to hinder effective cancer management (Ngwa et al., 2022; Gakunga et al., 2019; Rick et al., 2021).

The study was informed by the Health Care Seeking Behaviour Theory developed by Lauver (1992), which postulates that healthcare utilization is influenced by an individual's perceptions of illness, anticipated benefits of treatment, perceived barriers, social influences, and personal characteristics. The theory provides a useful framework for understanding how patients evaluate symptoms, interpret disease severity, and make decisions regarding whether and when to seek care. The Health Belief Model proposed by Becker (1974) further complements this perspective by suggesting that healthcare-seeking behaviour is influenced by perceived susceptibility, perceived severity, perceived benefits of action, and perceived barriers to care. These theoretical perspectives were relevant to the study because they explain how individual beliefs, cultural perceptions, financial considerations, and social support systems may influence utilization of cancer health services among newly diagnosed cancer patients. The theories also provide a basis for understanding the interaction between individual characteristics and broader health system factors in shaping healthcare utilization patterns.

Existing empirical literature demonstrates that cancer health service utilization is influenced by a combination of socio-demographic, socioeconomic, health system, and psychosocial factors. Deng et al. (2022) reported that education, income, employment status, and insurance coverage significantly influenced healthcare utilization among cancer patients in China. Similar findings were reported by Myint et al. (2024), who found that educational attainment and socioeconomic status significantly influenced cervical cancer screening uptake among Filipino women. In Sub-Saharan Africa, Sharma et al. (2021), Shimels et al. (2024), and Afaya et al. (2022) identified financial constraints, limited insurance coverage, long travel distances, and inadequate access to specialized services as major barriers to cancer care utilization. Furthermore, Ari et al. (2023), Omolo (2022), and Koirala et al. (2021) demonstrated that cultural beliefs, fear of diagnosis, stigma, and health literacy significantly influence healthcare-seeking behaviour and treatment engagement. These studies suggest that utilization of cancer services is shaped by a complex interaction of structural, economic, and behavioural factors.

Despite the growing body of evidence on cancer care utilization, important research gaps remain. Conceptually, many previous studies have examined individual determinants such as knowledge, attitudes, stigma, or socioeconomic status in isolation, with limited attention given to the combined influence of socio-demographic, socioeconomic, and individual factors on utilization of cancer health services. Contextually, most studies have been conducted in urban settings or countries outside Kenya, limiting their applicability to marginalized and predominantly pastoralist populations such as those found in Garissa County (Afaya et al., 2022; Rick et al., 2021; Myint et al., 2024). Methodologically, a substantial proportion of existing studies have relied exclusively on quantitative cross-sectional designs, thereby limiting understanding of the lived experiences and contextual realities underlying healthcare-seeking decisions. Few studies have adopted mixed-methods approaches that integrate quantitative and qualitative evidence to provide a comprehensive understanding of factors influencing utilization among newly diagnosed cancer patients. These conceptual, contextual, and methodological gaps necessitated the present study. Religion faith has both potential barriers and enablers. In Garissa majority of people are Islam where when a individual believes that cancer is unlikely, untreatable, or divinely ordained, and who sees barriers as outweighing benefits, will not seek screening or treatment. Majority of people in Garissa are nomadic lifestyle they keep moving with their lifestock looking for grass and water for their lifestock. These factors contribute to challenges in utilization of cancer servicers in Garissa.

Guided by the identified gaps, the study sought to determine the individual factors influencing utilization of cancer health services among newly diagnosed adult cancer patients attending Garissa County Referral Hospital. By addressing the identified gaps, the study contributes to the growing body of evidence on cancer healthcare utilization and provides context-specific insights to inform policy, practice, and future research aimed at improving cancer care access and outcomes in Kenya and similar resource-constrained settings.

METHODOLOGY

A cross-sectional study design was used to investigate the factors influencing utilization of cancer health services among newly diagnosed adult cancer patients attending Garissa County Referral Hospital, Kenya. Data were collected using a structured interviewer-administered questionnaire administered to newly diagnosed adult cancer patients. The data collection instruments were developed based on the study objectives and existing literature and were subjected to expert review and pretesting to establish content validity, clarity, and reliability. Data were coded and analyzed using Statistical Package for Social Sciences (SPSS) version 25, where descriptive statistics, chi-square tests, and linear regression analyses were conducted to determine associations and predictors of cancer health service utilization. Findings were presented using tables, frequencies, percentages, means, standard deviations, regression outputs.

RESULTS

Socio-Demographic Profile of the Participants

A total of 161 newly diagnosed adult cancer patients attending Garissa County Referral Hospital participated in this study. The findings revealed that the study population was predominantly middle-aged, with respondents aged 35–44 years and 45–54 years each accounting for 29.2% of the sample. Together, these age groups represented 58.4% of all respondents, indicating that cancer diagnosis and treatment utilization were most common among economically productive adults. Females constituted a slight majority (52.2%) compared to males (47.8%), suggesting a relatively balanced gender distribution among patients seeking cancer care services. Most respondents were married (65.0%), while 16.0% were divorced, 11.0% were single, and 9.0% were widowed. The study population was overwhelmingly Muslim (83.9%) and predominantly Somali (74.5%), reflecting the socio-cultural composition of Garissa County and the surrounding region. Educational attainment was generally low, with three-quarters of respondents (75.0%) having attained only primary education and 13.0% reporting no formal education. Only 5.0% had attained college or university education, indicating limited formal educational exposure among the majority of patients.

The findings further revealed substantial socioeconomic challenges among respondents. Nearly half (43.0%) were unemployed, while 31.0% depended on farming and pastoralism for their livelihoods. More than half (55.3%) reported monthly household incomes between KES 10,001 and KES 30,000, demonstrating that most respondents belonged to low-income households. Geographically, 64.0% resided in Garissa County, although the hospital also served patients from neighbouring counties. Notably, 61.0% of respondents lived more than 50 kilometres from the hospital, highlighting considerable geographical barriers to cancer care access. Regarding healthcare financing, 56.0% were enrolled in SHA/NHIF, while 44.0% lacked any form of health insurance coverage. SHA was the predominant mode of payment (53.0%),

although a substantial proportion of patients continued to rely on direct out-of-pocket payments (37.0%), exposing them to potential financial hardship during cancer treatment.

Following the descriptive analysis of respondents' socio-demographic characteristics, an assessment was undertaken to determine whether variations in these characteristics were associated with differences in the utilization of cancer health services among newly diagnosed adult cancer patients attending Garissa County Referral Hospital. A Chi-square test of independence was employed to assess the relationship between each socio-demographic characteristic and utilization of cancer health services. The test was considered appropriate because both the predictor variables and the utilization variable were categorical in nature.

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Table 1: Socio-Demographic Profile of the Respondents

Variable	Category	Frequency (n)	Percentage (%)
Age Group	18–24 years	3	1.9
	25–34 years	36	22.4
	35–44 years	47	29.2
	45–54 years	47	29.2
	55 years and above	28	17.4
Sex	Female	84	52.2
	Male	77	47.8
Marital Status	Divorced	25	16.0
	Married	105	65.0
	Single	17	11.0
	Widowed	14	9.0
Religion	Christian	24	14.9
	Muslim	135	83.9
	Other	2	1.2
Ethnicity	Oromo	16	9.9
	Kamba	17	10.6
	Somali	120	74.5
	Other	8	5.0
Highest Education Level	No formal education	21	13.0
	Primary	121	75.0
	Secondary	11	7.0
	College	5	3.0
	University	3	2.0
Occupation	Casual Labour	3	2.0
	Formal Employment	8	5.0
	Business	31	19.0
	Farmer/Pastoralist	50	31.0
	Unemployed	69	43.0
Average Monthly Household Income (KES)	<10,000	12	7.5
	10,001–30,000	89	55.3
	30,001–50,000	48	29.8
	>50,000	12	7.5
County of Residence	Mandera	2	1.2
	Kitui	9	5.6
	Tana River	14	8.7
	Wajir	22	13.7
	Garissa	103	64.0
	Other	11	6.8
Distance from Residence to GCRH	<5 km	12	8.0
	5–20 km	14	9.0
	21–50 km	37	23.0
	>50 km	98	61.0
Health Insurance Status	None	71	44.0
	SHA/NHIF	90	56.0
	Private Insurance	0	0.0
Main Mode of Payment for Treatment	Waiver	5	3.0
	Donor Support	11	7.0
	Cash/Out-of-Pocket	60	37.0
	SHA	85	53.0

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Association between Socio-Demographic Characteristics and Utilization of Cancer Health Services

The Chi-square analysis revealed significant associations between utilization of cancer health services and age category ($\chi^2 = 49.99$, $p < 0.001$), marital status ($\chi^2 = 42.46$, $p < 0.001$), highest education level ($\chi^2 = 112.94$, $p < 0.001$), occupation ($\chi^2 = 140.55$, $p < 0.001$), average monthly household income ($\chi^2 = 131.39$, $p < 0.001$), distance from residence to Garissa County Referral Hospital ($\chi^2 = 186.08$, $p < 0.001$), health insurance status ($\chi^2 = 55.11$, $p < 0.001$), and mode of payment for treatment ($\chi^2 = 57.79$, $p < 0.001$). These findings indicate that utilization of cancer health services is strongly influenced by patients' socioeconomic circumstances and their ability to physically and financially access care. In particular, the significant association with education suggests that individuals with higher levels of educational attainment may possess better health literacy, greater awareness of cancer symptoms, and a stronger understanding of the importance of timely diagnosis and treatment. Similarly, the associations observed for occupation and household income underscore the role of economic capacity in determining whether patients can meet the direct and indirect costs associated with cancer care, including transport, accommodation, diagnostic investigations, and treatment expenses.

The study also sought to assess respondents' perceptions regarding the influence of individual factors on the utilization of cancer health services. Individual factors were operationalized using twelve Likert-scale statements measuring respondents' beliefs, attitudes, perceptions, family support, stigma, financial challenges, treatment adherence, and other personal factors that may influence healthcare-seeking behaviour. The descriptive findings presented in Table 3 indicate that respondents generally perceived individual factors as important determinants of cancer health service utilization. All statements recorded mean scores above the neutral midpoint of 3.0, ranging from 3.76 to 4.10, suggesting overall agreement that personal beliefs, attitudes, social influences, and individual circumstances affect healthcare-seeking behaviour and treatment utilization among newly diagnosed cancer patients.

Table 2: Association between Socio-Demographic Characteristics and Utilization of Cancer Health Services

Variable	Chi-square	DF	P Value	Significant
Age Category	49.99	8	0.0000	Yes
Sex	1.45	2	0.4844	No
Marital Status	42.46	6	0.0000	Yes
Religion	4.55	4	0.3366	No
Ethnicity	2.99	6	0.8105	No
Highest Education Level	112.94	8	0.0000	Yes
Occupation	140.55	8	0.0000	Yes
Average Monthly Household Income	131.39	6	0.0000	Yes
County of Residence	8.24	10	0.6058	No
Distance from Residence to GCRH	186.08	6	0.0000	Yes
Health Insurance Status	55.11	4	0.0000	Yes
Main Mode of Payment for Treatment	57.79	6	0.0000	Yes

Descriptive Statistics for Individual Factors Influencing Behaviors on Utilization of Cancer Health Services

The findings indicate that respondents view individual factors as key determinants of cancer health service utilization, with all related statements scoring above the neutral midpoint of 3.0. The strongest endorsement was for the influence of cultural beliefs on treatment-seeking

behavior (Mean = 4.10), highlighting the significant role of cultural norms in shaping patients' decisions. Other important factors included treatment adherence (Mean = 4.01), gender-related concerns (Mean = 4.00), and religious beliefs (Mean = 3.98), suggesting that personal and social beliefs significantly affect access to services. Additionally, respondents acknowledged the psychological barriers to care, such as fear of diagnosis and stigma, both scoring 3.94. Trust in healthcare providers (Mean = 3.89) and family support (Mean = 3.88) were viewed positively as influences on treatment decisions, alongside beliefs in the benefits of early detection and regular screening. While financial challenges and preference for herbal medicine received the lowest scores (3.79 and 3.76, respectively), they still highlighted persistent barriers affecting treatment choices.

To determine whether individual factors significantly influenced utilization of cancer health services among newly diagnosed adult cancer patients attending Garissa County Referral Hospital, a simple linear regression analysis was conducted. The results of the model summary, analysis of variance (ANOVA), and regression coefficients are presented below. The regression results revealed a correlation coefficient (R) of 0.495, indicating a moderate positive relationship between individual factors and utilization of cancer health services. This suggests that improvements in positive individual characteristics such as trust in healthcare workers, treatment adherence awareness, family support, and positive beliefs about cancer management were associated with increased utilization of cancer health services.

Table 3: Descriptive Statistics for Individual Factors Influencing Behaviors on Utilization of Cancer Health Services

Statement	SD	D	N	A	SA	Mean	SD
I trust healthcare workers providing cancer care services at GCRH.	10 (4.8%)	11 (5.2%)	38 (18.1%)	84 (40.0%)	67 (31.9%)	3.89	1.06
I believe cancer can be treated if detected early.	13 (6.2%)	12 (5.7%)	41 (19.5%)	71 (33.8%)	73 (34.8%)	3.85	1.15
Fear of diagnosis delayed me from seeking treatment.	10 (4.8%)	18 (8.6%)	27 (12.9%)	75 (35.7%)	80 (38.1%)	3.94	1.13
Cultural beliefs influence decisions to seek cancer treatment.	6 (2.9%)	10 (4.8%)	26 (12.4%)	82 (39.0%)	86 (41.0%)	4.10	0.99
Religious beliefs influence my use of cancer services.	13 (6.2%)	13 (6.2%)	25 (11.9%)	74 (35.2%)	85 (40.5%)	3.98	1.16
My family supports my treatment decisions.	14 (6.7%)	8 (3.8%)	33 (15.7%)	90 (42.9%)	65 (31.0%)	3.88	1.10
I believe herbal medicine is more effective than hospital treatment.	9 (4.3%)	16 (7.6%)	42 (20.0%)	92 (43.8%)	51 (24.3%)	3.76	1.04
I feel stigmatized because of my cancer condition.	6 (2.9%)	19 (9.0%)	33 (15.7%)	76 (36.2%)	76 (36.2%)	3.94	1.07
Financial challenges affect my ability to continue treatment.	8 (3.8%)	20 (9.5%)	38 (18.1%)	87 (41.4%)	57 (27.1%)	3.79	1.07
I understand the importance of adhering to treatment schedules.	10 (4.8%)	9 (4.3%)	30 (14.3%)	80 (38.1%)	81 (38.6%)	4.01	1.06
Gender-related concerns affect my comfort in receiving treatment.	6 (2.9%)	13 (6.2%)	31 (14.8%)	85 (40.5%)	75 (35.7%)	4.00	1.01
I believe regular screening improves cancer outcomes.	9 (4.3%)	19 (9.0%)	33 (15.7%)	84 (40.0%)	65 (31.0%)	3.84	1.09

Discussion

The findings of this study found out that cancer health service utilization is significantly associated with age, marital status, educational attainment, occupation, household income, distance from the health facility, health insurance status, and mode of payment among newly diagnosed adult cancer patients in Garissa County. The influence of educational attainment suggests that health literacy plays an essential role in an individual's ability to recognize cancer symptoms, comprehend treatment recommendations, and appreciate the importance of early diagnosis. This relationship has been similarly documented by Deng et al. (2022) and Myint et al. (2024), establishing a precedent for understanding the linkage between education and health-seeking behavior.

The Individual occupation and household income underscores the financial barriers to accessing and maintaining cancer treatment. The substantial costs related to transport, diagnosis, medications, and follow-up care indicate that economic capacity is a crucial determinant of health-seeking behavior. Shimels et al. (2024) corroborate this by suggesting that financial hardship serves as a significant barrier to healthcare access, particularly for cervical cancer patients.

The study also explored the non-significant associations of sex, religion, ethnicity, and county of residence with cancer health service utilization. While it is commonly assumed that demographic characteristics influence healthcare-seeking behavior, the results suggest that these factors may be overshadowed by socioeconomic conditions and accessibility-related challenges once patients enter the cancer care system. The absence of significant differences based on religion and ethnicity may be attributed to the relatively homogeneous composition of the study population, which was predominantly Muslim and Somali. Furthermore, the limited influence of county of residence indicates that access to care is driven more by logistical issues, such as travel distance and transportation availability, rather than administrative boundaries. This perspective aligns with observations made by Sharma et al. (2021) and reinforces the argument that targeted interventions should prioritize overcoming practical barriers rather than focusing exclusively on demographic disparities.

Descriptive findings revealed that respondents perceived individual factors as critical determinants of cancer health service utilization. Cultural beliefs emerged as the most influential factor, followed closely by awareness of treatment adherence, religious beliefs, and fear of diagnosis. These individual perceptions and experiences highlight that healthcare-seeking behavior is influenced by how individuals understand illness and evaluate their treatment options. The strong influence of cultural and religious beliefs suggests that decisions regarding cancer treatment often reside within broader social frameworks, echoing findings from Ari et al. (2023), which noted that cultural norms significantly impacted participation in cervical cancer screening programs. Furthermore, this aligns with Omolo (2022), who also observed how psychosocial and belief-related factors influence cancer prevention behaviors in Kenya.

The regression analysis provided compelling empirical evidence that individual factors significantly influence the utilization of cancer health services, supporting this view, Koirala et al. (2021) found that higher levels of cancer literacy corresponded with improved healthcare utilization, while Gakunga et al. (2019) highlighted that limited knowledge and awareness contributed to delayed healthcare-seeking among breast cancer patients in Kenya.

Understanding the influence of individual factors can be further contextualized through the Health Care Seeking Behavior Theory. This theoretical framework postulates that healthcare utilization is shaped by perceived need, anticipated benefits of treatment, perceived barriers, and social influences. The significant effects of fear of diagnosis, stigma, cultural beliefs, and family support indicate that the decision to seek care is often made within a broader societal context and not solely based on clinical symptoms. Fear of receiving a cancer diagnosis may deter individuals from seeking diagnostic services due to anxieties regarding treatment outcomes or social repercussions. Similarly, stigma can inhibit disclosure and lead to delays in initiating treatment, as documented by Rick et al. (2021). Thus, addressing both individual beliefs and systemic barriers is essential for improving healthcare access.

CONCLUSION AND RECOMMENDATION

Conclusion

This study concludes that the utilization of cancer health services among newly diagnosed adult cancer patients at Garissa County Referral Hospital is significantly influenced by individual factors. Key variables such as age, marital status, educational attainment, occupation, household income, distance to treatment facilities, health insurance status, and payment methods were all closely associated with cancer service utilization, emphasizing the importance of financial resources, social support, and geographical accessibility. Key determinants included cultural beliefs, fears surrounding cancer diagnosis, stigma, family support, trust in healthcare providers, and treatment adherence awareness, along with financial challenges.

Recommendation

The Ministry of Health, Social Health Authority, and county governments should strengthen financial protection mechanisms for cancer patients by expanding insurance coverage and reducing out-of-pocket expenditures associated with diagnosis, treatment, transport, and follow-up care. Policies aimed at decentralizing specialized oncology services should be prioritized to reduce geographical barriers experienced by patients residing far from referral facilities. Additionally, sustained community-based cancer awareness programmes should be implemented to improve knowledge of cancer symptoms, promote early healthcare seeking, dispel myths and misconceptions, and reduce stigma associated with cancer diagnosis and treatment. Healthcare facilities should strengthen patient-centred cancer care by integrating routine counselling, psychosocial support services, and patient education programmes into cancer treatment pathways. A multidisciplinary approach to cancer care should be adopted through the inclusion of social workers, community health promoters, patient navigators, and psychological support personnel to assist patients in overcoming social, financial, and emotional barriers to treatment. Furthermore, healthcare facilities should establish structured follow-up and patient tracking mechanisms, particularly for patients residing in remote areas, to improve appointment adherence, reduce treatment interruptions, and ensure continuity of care throughout the treatment process.

Unique Contribution to Theory, Policy and Practice

This study makes a significant contribution to the theoretical understanding of cancer health service utilization by elucidating the complex interplay of individual determinants that affect newly diagnosed adult cancer patients in Garissa County, Kenya. It emphasizes that factors such as age, marital status, educational attainment, occupation, household income, and health

insurance status are not merely demographic variables but are deeply intertwined with cultural beliefs, stigma, and trust in healthcare providers.

From a policy perspective, the findings advocate for a multi-faceted approach to healthcare reform. By recommending the expansion of insurance coverage and the reduction of out-of-pocket expenses, the study highlights the urgent need for financial protection mechanisms that can alleviate the economic burden on cancer patients. Furthermore, the call for decentralizing specialized oncology services addresses geographical barriers, ensuring that patients in remote areas have equitable access to necessary treatments. This aligns with global health policies aimed at reducing health disparities and improving access to cancer care.

In practice, the study underscores the importance of integrating psychosocial support and patient education into cancer treatment pathways. By advocating for a multidisciplinary approach that includes social workers, community health promoters, and psychological support personnel, the research highlights the need for a holistic model of care that addresses not only the medical but also the emotional and social challenges faced by patients. This approach can enhance treatment adherence and improve overall patient outcomes.

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