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RESEARCH ARTICLE

INDIVIDUAL-RELATED FACTORS INFLUENCING THE UTILIZATION OF PUBLIC PRIMARY HEALTHCARE FACILITIES IN TETU SUB-COUNTY, NYERI COUNTY, KENYA

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Abstract

Background: According to Oyeyemi et al. (2023), Primary Health Care facilities serve as the initial point of contact for all patients and are frequently used as havens by healthcare service users in both urban and rural communities within any fully operational healthcare system worldwide.This is a result of people in these communities seeking medical attention. According to Onguyemi et al. (2024), PHC facilities are in a good position to provide person-centered, community-based treatment that is necessary to prevent or delay aging-related morbidities and lessen their effects on people, facilities, and health systems.

Objective: This study determine the individual-related factors influencing the utilization of public primary healthcare facilities in Tetu Sub-County, Nyeri County, Kenya.

Methods: The study was carried out in Tetu Sub County. An analytical cross-sectional survey research design comprising both quantitative and qualitative data collection methods was used in the study. The study targeted adults living in Tetu Sub County. The Cochran's Sample Size Formula was used to calculate a sample size of 271 respondents. Multistage sampling was used to draw respondents in the study. The study collected both quantitative and qualitative data using a questionnaire and a focus discussion guide respectively.Descriptive statistics and chi-square tests were used in the analysis.

Results: The study found that was a significant relationship (p=0.01) between sex and utilization of public primary healthcare facilities. Similarly, there was a significant relationship (p<0.01) between education and utilization of public primary healthcare facilities. However, there was no significant relationship (p=0.350) between age and utilization of public primary healthcare facilities. Similarly, there was no significant relationship (p=0.945) between marital status and utilization of public primary healthcare facilities.

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Conclusion: Respondents who had low level of education (primary) were more likely to utilise primary healthcare facilities. The study recommends the quality and accessibility of primary healthcare services to be upgraded to make them more attractive to individuals with higher educational backgrounds.

Introduction:-

Primary health care (PHC) is defined as "essential health care based on practical, scientifically sound and socially acceptable methods and technology, made universally accessible to individuals and families in the community, through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination" (WHO, 2020).Basic health units, regional health centres, mother and child health centres, civil dispensaries, TB centres, sub-health centres, and any other public health service delivery point that provides primary, preventive, or any other linked service are all included in this category.

The origins of PHC are rooted in community-based approaches, global health goals, and the inspiration drawn from initiatives like the Barefoot Doctors in China. Various countries and organizations were experimenting with community-based health programs. With an emphasis on prevention, health education, and basic curative treatment, these programs sought to bring health services closer to the general public. Kenya has made great strides in bringing its health systems into line with PHC principles throughout the years. With the theme "Reversing the Trends," the Kenyan government's Health Sector Strategic Plan for 2005–2010 established six levels of health care delivery and prioritized community-based services at level 1.

PHC utilization improves health outcomes, reduces the burden system on health care and lowers the overall expenditure on health. Despite these advantages, few people use it; most patients go to the hospital for mild illnesses. As of 2019, 5–7% of PHC was being used worldwide. In Sub Saharan African region, utilization varies from country to country but varies between 8% -20%. Mahmood and Saleh (2023) note that while a large number of individuals go to PHC facilities, the majority of them only do so as a preventive strategy, and only a small percentage of them go there to get fundamental medical treatment. According to Olago (2023), patients in Kenya choose to seek medical attention elsewhere, often at higher-level institutions that are seen to be of better quality, rather than at lower-level health facilities and community health workers who are located closer to their homes. However, the use of basic healthcare institutions in Kenya has received little attention in prior research, and the available data is limited.

Regarding the utilisation of PHC facilities, there are a lot of factors that are connected. PHCutilisation is significantly influenced by a number of factors, including the accessibility of public facilities, the availability of equipment for private users, and the geographic and financial accessibility of public facilities. According to Grustam et al. (2020), the use of specialised care is solely driven by characteristics such as wealth, higher education, and poor health with a chronic disease. These factors are all considered to be influential. According to Tao et al. (2021), PHCutilization was substantially correlated with three predisposing variables, three enabling factors, and one need factor. The goal of the present research was to evaluate the variables affecting Tetu Sub-County, Nyeri County, Kenya, and inhabitants' use of PHCservices.

Methods:-

The study was carried out in Tetu Sub County. An analytical cross-sectional survey research design comprising both quantitative and qualitative data collection methods was used in the study. The study targeted adults living in Tetu Sub County. Therefore, a sample of 271 was used. Multistage sampling was used to draw respondents in the study. The study collected both quantitative and qualitative data using a questionnaire and a focus discussion guide respectively. A semi-structured questionnaire developed by the researcher was used to collect quantitative data from the participants.Qualitative data was collected in a focus group discussion (FGD). A discussion guide was used to collect qualitative data. The data was then coded and entered into a computer using Statistical Package for the Social Sciences (SPSS) version 28. Descriptive statistics such as frequency distribution, percentages, mean and standard deviation were used to describe and organize quantitative data. Chi-square tests were used to test for relationships such as influence of individual-related factors on PHC facility utilization and influence of health facility-related factors on PHC facility utilization. Logistic regression analysis was then performed to reveal the factors associated with PHC facility utilization.

Results:-

The mean age of the participants was 32+10 years with most of the participants (52.2%, n=84) aged 21-30 years. Majority of the participants (66.7%, n=180) in the study were female. Slightly above half 53.3% (n=144) had acquired secondary education while 32.2% (n=87) had acquires tertiary education. Most participants (58.9%, n=159) were married. As indicated in the table below.

Table 1:- Individual-Related Factors

		N	%
Sex	Male	90	33.3%
	Female	180	66.7%
Age	Below 20	15	5.6%
	21-30	141	52.2%
	31-40	84	31.1%
	41-50	11	4.1%
	51-60	9	3.3%
	61-70	7	2.6%
	Over 70	3	1.1%
Highest level of education	Primary	39	14.4%
	Secondary	144	53.3%
	Tertiary	87	32.2%
Marital status	Never married	89	33.0%
	Married	159	58.9%
	Divorced/separated	22	8.1%
Religion	Catholic	114	42.2%
	Protestant	131	48.5%
	Muslim	11	4.1%
	Other	14	5.2%
Income	< 5000	62	23.0%
	5,000-9,000	49	18.1%
	10,000-14,000	63	23.3%
	15,000-19,000	39	14.4%
	>20,000	57	21.1%

There was a significant relationship (p=0.01) between sex and utilization of public primary healthcare facilities. Similarly, there was a significant relationship (p<0.01) between education and utilization of public primary healthcare facilities. However, there was no significant relationship (p=0.350) between age and utilization of public primary healthcare facilities.

Table 2:-Association of Individual-Related Factors Level of Utilization of Public Primary Healthcare Facilities.

Individual-Related Factor		n	%	Chi-square ($\chi 2$)	Degrees of Freedom (df)	Significance (p)
Sex	Male	66	24	6.607	1	0.010
	Female	39	141			
Age	Below 20	9	6	6.690	6	0.350
	21-30	51	90			
	31-40	34	50			
	41-50	7	4			
	51-60	3	6			
	61-70	1	6			
	Over 70	0	3			
Highest level of education	Primary	19	20	26.165	2	0.000
	Secondary	64	80			
	Tertiary	22	65			
Marital status	Never married	38	51	0.113	2	0.945
	Married	58	101			
	Divorced/separated	9	13			

In terms of distance, most participants (48.5%, n=131) indicated that the distance to the dispensary/health centre was below 2 kilometres while for 36.7% (n=99) it was between2 to 4 kilometres. Slightly above half 59.2% (n=157) reported that the last time you attended a dispensary/health centre, they waited for less than 30minutes to be served while 32.1% (n-85) waited for between 30 minutes and an hour.

Table 3:-Health facility-related factors.

		N	%
How far is the dispensary/health centre from your home?	< 2km	131	48.5%
	2-4 km	99	36.7%
	5-9 km	37	13.7%
	>10 km	3	1.1%
The last time you attended a dispensary/health center, how long did you wait to be served?	<30 min	157	59.2%
	30 min-1 hour	85	32.1%
	>1 hour	23	8.7%
How would you rate the attitude of the staff who served you?	Good	214	79.3%
	Undecided	34	12.6%
	Bad	22	8.1%
How was the cost of the health care services?	Affordable	218	80.7%
	Undecided	29	10.7%
	Expensive	23	8.5%
How would you rate the quality of service delivered?	High	175	66.5%
	Undecided	54	20.5%
	Low	34	12.9%
Were the drugs and supplies you required available?	Yes	53	20.00%
	No	212	80.0%
Did you get all the services you needed?	Yes	65	25.1%
	No	194	74.9%
On a scale of 1 to 5, with 1 being "not satisfied at all" and 5 being "completely satisfied", how satisfied are you with the primary healthcare services available in this village?	1	158	58.5%
	2	44	16.3%
	3	48	17.8%
	4	11	4.1%
	5	9	3.3%
Would you recommend others to use the dispensary /health centre?	Yes	34	14.1%
	No	207	85.9%

Chi-square tests were also used to compare health facility-related factors and participants' utilization of public primary healthcare facilities. Availability of medication ($p<0.001$) was significant. However, distance ($p=0.065$), waiting time ($p=0.546$), staff attitude ($p=0.206$) and quality of care ($p=0.790$) were not significant.

Table4:- Association of Health Facility-Related Factors Level of Utilization of Public Primary Healthcare Facilities.

Health-Facility Related Factor		n	%	$\chi 2$	df	p
Distance	< 2km	56	75	7.237	3	0.065
	2-4 km	31	68			
	5-9 km	17	20			
	>10 km	1	2			
Waiting time	<30 min	69	88	1.212	2	0.546
	30 min-1 hour	27	58			
	>1 hour	9	14			
Staff attitude	Good	86	128	1.597	1	0.206
	Undecided	10	24			
	Bad	9	13			
Availability of medication	Yes	40	13	22.412	1	0.000
	No	65	147			

Quality of care	High	73	102	0.071	1	0.790
	Undecided	20	34			
	Low	12	22			

The omnibus tests of model coefficients indicated that the overall model was statistically significant, $\chi^2(3) = 31.064$, $p < .001$. This result suggests that the predictors significantly improved the fit of the model in explaining the likelihood of public primary healthcare utilization.

Table5:- Omnibus Tests of Model Coefficients.

		Chi-square	df	Sig.
	Step	31.064	3	.000
	Block	31.064	3	.000
	Model	31.064	3	.000

Individuals with low education levels were approximately 2.5 times more likely to utilize the facilities. However, sex was not a significant factor in this model (p = .108).

Table 6:- Regression of selected factors and utilization of public primary health care facilities.

	B	S.E.	Wald	df	Sig.	Exp(B)
What is your sex?	.780	.485	2.586	1	.108	2.181
What is your highest level of education?	.914	.345	6.999	1	.008	2.494
Were the drugs and supplies you required available?	1.690	.402	17.710	1	.000	5.422
Constant	.518	.818	.402	1	.526	.595

Discussion:-

Women used public PHC facilities 1.14 times more often than men, indicating a statistically significant correlation between the sexes (p=0.01). These findings are consistent with those of Pillay and Mahomed (2019) in South Africa, who also found a correlation between gender and visits to primary care clinics. On the other hand, studies by Grustam et al. (2020), Lin et al. (2020), and Mokaya (2021) found no significant influence of gender on the variables' relationships. These differences in health-seeking behaviour between men and women might be attributed to cultural or societal variables that impact health-seeking behaviour differently. It is possible that males are more likely to seek medical treatment in PHC facilities than women are because they have more autonomy in decision-making or because they have less duties when it comes to the family (Pillay&Mahomed, 2019).

A further observation that was made was that there existed a statistically significant correlation ($p<0.01$) between the amount of education and the utilisation of public PHC programs. Approximately 2.5 times more often than those with higher levels of education, people with lower levels of education used the facilities. The results of this research are consistent with those of an examination conducted in Indonesia, which discovered an association between greater levels of education and the use of PHC in the Java Region of that country (Wulandari et al., 2023). In addition, according to a research that was carried out in Ethiopia (Abere et al., 2021) individuals who had previously completed some sort of formal education were more likely to self-refer to general hospitals than patients who had not completed any formal education. On the other hand, a research that was conducted in South Africa did not uncover any association between the educational attainment of patients and the use of basic healthcare services (Pillay&Mahomed, 2019).This result contradicts the conclusions of the first study.Those with secondary education or less might also have fewer resources or knowledge about higher-level facilities, leading them to utilize nearby dispensaries and health centres. Conversely, individuals with tertiary education may have greater awareness of specialized care or the perceived quality differences in higher-tier health facilities, prompting them to seek services elsewhere.

Conclusion:-

The level of education was the individual-related factor influencing the utilization of public primary healthcare facilities in Tetu Sub-County, Nyeri County, Kenya. Respondents who had low level of education (primary) were more likely to utilise primary healthcare facilities.The study recommends the quality and accessibility of primary healthcare services to be upgraded to make them more attractive to individuals with higher educational backgrounds.

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Competing Interests
The authors declare that they have no competing interests whatsoever.

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