ANKARA MEDICAL JOURNAL

Research Article

Ankara Med J, 2025;(3):220-234 // 10.5505/amj.2025.78379

UTILIZATION OF PRIMARY HEALTH CARE SERVICES AMONG ADULTS IN URBAN AND RURAL MARGIBI COUNTY LIBERIA

Ayouba Fofana[1], Nimetcan Mehmet Orhun[2]

[1]Health Policy and Global Health Department, Public Health Institute, Ankara Yıldırım Beyazıt University, Türkiye

[2]Public Health Department, Faculty of Medicine, Ankara Yıldırım Beyazıt University, Türkiye

Correspondence:

Nimetcan Mehmet Orhun (e-mail: nametjan@gmail.com)

Submitted: 25.04.2025 // Accepted: 06.08.2025

Ankara Yıldırım Beyazıt University Faculty of Medicine

Department of Family Medicine

ANKARA MEDICAL JOURNAL

Abstract

Objectives: This study examines factors influencing Primary Health Care (PHC) utilization in Margibi County, Liberia, with a focus on urban-rural disparities.

Materials and Methods: A cross-sectional survey was conducted among 900 adults (urban: 49.7%, rural: 50.3%) who had lived in the county for at least two years. Data were collected using a two-stage cluster sampling technique and structured interviews, then analyzed using descriptive and inferential statistics.

Results: Findings revealed significantly higher PHC utilization in urban areas (79.6%) than in rural areas (62.5%), with 29% of participants not accessing PHC services. Key determinants included residential location, age, employment, income, media exposure, and proximity to health facilities. Rural residents faced barriers such as long travel distances and lower income, leading to reduced vaccination rates, poorer maternal health, and a higher disease burden.

Conclusion: Addressing these disparities requires targeted policies to strengthen healthcare infrastructure and service delivery, particularly in rural areas. Improving PHC accessibility is essential for reducing health inequities and enhancing overall health outcomes in Margibi County.

Keywords: Unequal access, primary health care, urban health, rural health, Liberia.

Introduction

Primary Health Care (PHC) is rooted in a commitment to social justice, equity, solidarity, and participation.[1] PHC Primary Health Care is the first point of contact with health services, facilitating access to the broader health system and addressing most health needs.[2] The importance of primary health care services becomes even more evident for populations with increased health needs, as these services provide accessible, comprehensive, and cost-effective preventive and therapeutic care.[3] However, significant inequalities persist in healthcare delivery, both within and across nations.[4] PHC aligns with universal health coverage goals, aiming to provide safe, effective, and affordable services for all.[5] Despite its importance, PHC utilization in Africa remains low,[6], the greatest MMR, 510 maternal deaths per 100,000 live births, has been reported from Sub-Saharan Africa. [7] Liberia ranks 162 out of 169 on the Human Development Index, with one of the world's highest maternal mortality rates. Infrastructure challenges and limited healthcare access contribute to high morbidity and mortality, particularly in rural areas.[8] Nationally, 70.3% of Liberia's population has access to healthcare. [9] Liberia delivers primary health care through a structured tier system guided by its Essential Package of Health Services (EPHS)[10] and supported by the National Community Health Assistant Program. Clinics and health centers serve as the first points of contact, while community health assistants (CHAs) trained, supervised, and paid extend services to remote populations (>5 km from facilities).[11] These CHAs provide health education, malaria testing and treatment, family planning, and referrals, and are integrated into the formal health system with regular supervision by Community Health Services Supervisors. The poor health outcomes in Liberia reflect challenges in primary health care that extend beyond implementation to the policy level.[12] This study aims to examine the factors affecting Primary Health Care (PHC) utilization in Margibi County, Liberia, with a particular focus on the urban-rural disparities in healthcare access. It seeks to identify the key determinants of PHC utilization and explore the barriers that hinder equitable access to health services in both urban and rural areas.

Materials and Methods

Study design

This cross-sectional study examined factors influencing unequal access to Primary Health Care (PHC) services in urban and rural areas of Margibi County, Liberia, focusing on urban-rural differences in utilization.

Study Area and Population

Conducted in Margibi County, divided into four districts (Kakata, Firestone, Gibi, Mamba Kaba), the study targeted adults aged 18+ residing in the area. The study was conducted in Liberia, where the definition of rural

and urban areas follows a national classification system. Rural areas in Liberia are typically characterized by low population density, limited access to urban infrastructure (such as healthcare, education, and transportation), and economic activities primarily based on agriculture. Urban areas, on the other hand, are those with higher population density and access to more developed infrastructure, primarily concentrated around major cities like Monrovia. For this study, we classified the population based on Liberia's administrative divisions. We included participants from rural counties, which are designated as areas outside the major urban centers. To further refine the classification, rural areas with populations of fewer than 5,000 people were identified based on the census data.[13]

Sampling and sample selection

The quantitative study included individuals aged 18 years and above residing in Margibi County. The sample size was calculated using a formula for comparing two population proportions[14], assuming a 10% difference in PHC utilization between urban (60%) and rural (50%) populations, with 95% confidence and 80% power. The required sample size was 384 per group, which was increased to 450 per group (total n = 900) to account for a 17% non-response rate. Using a two-stage cluster sampling method, 900 participants were selected, 450 from urban areas (266 from Kakata, 184 from Harbel) and 450 from rural villages with and without health facilities. The sample size assumed a 10% difference in PHC utilization, with adjustments for non-response rates. The study includes individuals aged 18 years and above who reside in Margibi County. Participation is limited to those who agree to be part of the survey. Additionally, only adults who either permanently reside in the study area or have lived there for at least two years are eligible. Individuals with severe mental conditions that prevent them from providing informed consent are excluded. Very elderly individuals are also not included in the study. Additionally, children are excluded due to consent-related issues and their inability to independently decide on health-seeking behaviors.

Data Collection Tool

Data were collected using a structured questionnaire adapted from validated instruments in previous studies [15,16] and pre-tested for reliability (Cronbach's alpha = 0.735). The questionnaire consisted of four main sections: 1) Sociodemographic and Socioeconomic Characteristics: This section included items on place of residence, gender, age, educational attainment, marital status, employment status, household income and its sources, family size, media exposure, length of residency, primary water source and purification methods, time required to obtain water, availability of latrines, hygiene practices, access to electricity, and type of housing, 2) Perception of Health and Health-Seeking Behavior: This section assessed participants' self-perceived health status, presence and types of chronic conditions, stage of illness prompting care-seeking, consultation and decision-making processes, preferred sources of care for minor illnesses, discontinuation of medication due to

cost, proximity to health facilities, mode of transportation, recent illness episodes, and related treatment-seeking behaviors, 3) Primary Health Care (PHC) Utilization**:** This section explored awareness of PHC services, mode of transport to PHC facilities, travel time and cost, number of PHC visits in the past six months, reasons for visiting or not visiting PHC facilities, and use of PHC services prior to hospital care, 4)Satisfaction with PHC Services: This section evaluated satisfaction indicators such as involvement in treatment decisions, explanation of side effects and medication adherence, availability of services on weekends, continuity of care, provider attentiveness, out-of-pocket payment for services, provision of lifestyle counseling, and access to prescribed medications.

Data Collection Procedure

Data were gathered through face-to-face interviews conducted by the researcher and assistants from March to May 2022, using systematic random sampling within selected urban and rural communities.

Ethical Considerations:

Ethical approval for this study was obtained from Ankara Yildirim Beyazit University Ethics Committee under the code number (2022-671). Approval from the Margibi County Health Team, which represents the Ministry of Health in the County, was also obtained. Participants received a consent form with the questionnaire, which stated the purpose of the study and their freedom to participate or decline participation.

Data Analysis

Data were analyzed using SPSS (version 20). Descriptive statistics and cross-tabulations summarized the data, while bivariate and multivariate logistic regression assessed correlations and differences in PHC utilization, with a significance level of $p < 0.05$.

Results

Descriptive Statistics

The study included 900 participants, with a near-equal distribution between urban (447, 49.7%) and rural (453, 50.3%) areas. The sample consisted of slightly more males (53%) than females (47%). Most respondents were in the 29-38 age group (48.9%), while 11.8% were 49 years or older. The illiteracy rate was 33.6% overall, with significant urban-rural differences (19.0% in urban areas and 47.9% in rural areas). Rural females had higher illiteracy rates (52.3%) compared to rural males (42.9%). In terms of education, 27.2% of participants completed senior secondary school, primarily from urban areas. Only a small portion had completed higher

education. Over half of the participants were unmarried, and only 1.4% were divorced. The unemployment rate was high (76.1%), with urban areas having a lower rate (64.9%) compared to rural areas (87.2%). Only 16.8% of participants were employed, and 12.8% of those were from rural areas. Female employment in rural areas was lower (10%) than that of males (11.5%). Regarding income, 75.4% of participants earned less than 4500 Liberian dollars (LD), which is equivalent to less than $1 USD per day, placing most respondents below the international poverty line[19]. A significant proportion (62.5%) of rural residents practiced farming, while 49.9% of urban dwellers engaged in business. Over 80% of participants used radio as their main source of information, with fewer using TV (1.1%) or newspapers (1.1%). A substantial proportion (10.2%) did not use any media sources, predominantly from rural areas. (Table 1).

Awareness and Access to Primary Health Care (PHC)

Most participants (82.4%) were aware of the existence of PHC facilities within their health districts, with a larger portion of those unaware residing in rural areas. Transportation to these facilities was typically by motorcycle (72.2%), though a significant portion (27.5%) walked, particularly in rural areas. The majority (52.4%) could reach the PHC facility within 30 minutes, but 8.8% from rural areas reported travel times of more than an hour. Transportation costs were mostly below 150 LD ($1 USD). Regarding PHC visits, 71.0% of respondents had visited a PHC facility in the last six months. A higher percentage of urban residents (79.6%) visited PHCs compared to rural residents (62.5%). The primary reason for visits was treatment for illness (86.8%), while a few visited for checkups, vaccinations, or to collect bed nets. When asked about where they would go first for health issues, nearly half (46%) preferred PHC over hospitals (Table 2).

Table 1. Distribution of the socio-demographic characteristics of the participants (n=900)

Variable	Categories	Area of Residency				Total	
		Urban		Rural			
		n	%	n	%	n	%
	18-28	144	32.2	25	5.5	169	18.8
Age	29-38	197	44.1	243	53.6	440	48.9
	39-48	58	13.0	127	28.0	185	20.6
	49 and above	48	10.7	58	12.8	106	11.8
Gender	Male	265	59.3	212	46.8	477	53.0
	Female	182	40.7	241	53.2	423	47.0
	Illiterate	85	19.0	217	47.9	302	33.6
	Literate/Primary	39	8.7	35	7.7	74	8.2
Education level	Junior secondary	128	28.6	98	21.6	226	25.1
	Senior Secondary	150	33.6	95	21.0	245	27.2
	Undergrad and Postgrad	45	10.1	8	1.8	53	5.9
Marital Status	Single	263	58.8	212	46.8	475	52.8
	Married	104	23.3	153	33.8	257	28.6
	Cohabitating	75	16.8	80	17.7	155	17.2
	Divorced	5	1.1	8	1.8	13	1.4
	Formally employed	93	20.8	58	12.8	151	16.8
	Not Employed	293	65.5	395	87.2	688	76.4
Employment	Student	61	13.6	---	---	61	6.8
	Less than 4500 LD	287	64.2	392	86.5	679	75.4
	More than 4500LD	42	9.4	31	6.8	149	16.6
Income	No income	42	9.4	30	6.6	72	8.0
	Formal work	68	15.2	20	4.4	88	9.8
	Casual work	110	24.6	104	23.0	214	23.8
Source of income	Business	223	49.9	38	8.4	261	29.0
	Farming	37	8.3	283	62.5	320	35.5
	Other(carpenter	9	2.0	8	1.8	17	1.9
Number of family	1 to 5	344	77.0	348	76.8	692	76.9
members	6 to 10	76	17.0	93	20.5	169	18.8
	11 and above	27	6.0	12	2.6	39	4.3
	Radio	365	81.7	367	81.0	732	81.3
Media Source for	Internet	60	13.4	6	1.3	66	7.3
Information	TV&Newspaper	8	1.8	2	0.4	10	1.1
	Nothing	14	3.1	78	17.2	92	10.2

Table 2. Distribution of PHC Utilization (n=900)

Variable	Categories	Area of Residency				Total	
		Urban		Rural			
		n	%	n	%	n	%
Aware of PHC	Yes	398	89.0	344	75.9	742	82.4
Existence	No	49	11.0	109	24.1	158	17.6
	Public transportation	333	83.7	203	59.0	536	72.2
Mode of transport	Taxi	2	0.5	---	---	2	0.3
	Foot	63	15.8	141	41.0	204	27.5
	0- 30 minutes	330	82.9	59	17.2	389	52.4
	31-60 minutes	68	17.1	220	64.0	288	38.8
Time to reach	more than one hour	---	---	65	18.9	65	8.8
	less than 150 LD	376	94.5	211	61.3	587	79.1
Transport cost	more than 150 LD	22	5.5	133	38.7	155	20.9
PHC visit (last 6	Yes	356	79.6	283	62.5	639	71.0
month)	No	91	20.4	170	37.5	261	29.0
	treatment for illness	282	79.2	273	96.4	555	86.8
	Check-up (Pregnancy)	56	15.7	10	3.5	66	10.3
	Other(Bed net, Vaccine)	18	5.0	---	---	18	2.8
Reason of visit							
PHC before hospital	Yes	226	50.6	188	41.5	414	46.0
	No	221	49.4	265	58.5	486	54.0

Reasons for Non-Utilization of PHC

Among the 261 respondents who did not utilize PHC services, the most common reasons were unavailability of drugs (34.5%) and delays in service provision (20.7%). In rural areas, geographic distance (16.9%) and lack of money (13.4%) were also significant barriers. Only a small proportion (1.1%) cited the absence of a resident doctor as a reason, and 10.7% of respondents mentioned the lack of laboratory services (Table 3).

Table 3. Reasons for non-utilizing PHC (n=261)

Why not utilize PHC?	Residency				Total	
	Urban		Rural			
	n	%	n	%	n	%
Insufficient medicine there	21	18.2	69	47.2	90	34.5
No Doctor	2	1.7	1	0.6	3	1.1
Transport cost unaffordable	5	5.5	30	20.5	35	13.4
Low-quality service	2	1.7	2	1.3	4	1.5
Distance	---	---	44	30.1	44	16.9
No Lab test	4	3.4	24	14.1	28	10.7
Delay	54	46.9	---	---	54	20.7
It is only for pregnant women	1	0.8	---	---	1	0.1
No time	2	1.7	---	--	2	0.8

Factors Associated with PHC Utilization

There were significant differences between urban and rural areas in terms of PHC utilization (p=0.001), as well as in age (p=0.005), literacy (p=0.001), marital status (p=0.016), employment status (p=0.009), income (p=0.001), source of income (p=0.001), household size (p=0.003), and media exposure (p=0.001). Transportation access to PHCs (p=0.001), decision-making regarding healthcare (p=0.011), and health worker visits (p=0.011) were also statistically significant factors. No relationship was found between PHC utilization and gender or years of residence (Table 4).

Multivariate Logistic Regression

Binary logistic regression analysis identified several factors that significantly predicted PHC utilization. Rural dwellers were less likely to use PHC compared to urban residents (OR=0.562, CI=0.323-0.978, p=0.042). Participants aged 29-38 years were also less likely to use PHC (OR=0.447, CI=0.236-0.850, p=0.014). Those not employed had 2.9 times higher odds of utilizing PHC compared to employed participants (OR=2.941, CI=1.074-8.058, p=0.036). Respondents with higher monthly incomes (above 4500 LD) were 3.0 times more likely to use PHC (OR=3.017, CI=1.332-6.834, p=0.008). Lack of media exposure was a major barrier, with those who did not use any media being 90.8% less likely to use PHC (OR=0.092, CI=0.032-0.264, p<0.001). Households visited by service providers in the last six months were 2.5 times more likely to use PHC (OR=2.599, CI=1.698-3.980, p<0.001). Participants who reported a walking distance of more than 40 minutes to the nearest healthcare facility were less likely to use PHC (AOR=0.621, CI=1.800-17.550, p=0.003) (Table 5).

Table 4. The association between independent variables and PHC utilization (n=900)

Variable	Categories	PHC VISIT				P – value
		Yes		No		
		n	%	n	%	
Residency	Urban	356	55.7	91	34.9	0.001*
	Rural	283	44.3	170	65.1	
Age	18-28	137	21.4	32	12.3	0.005*
	29-38	295	46.2	145	55.6	
	39-48	136	21.3	49	18.8	
	49- and above	71	11.1	35	13.4	
Gender	Male	334	52.3	143	54.8	0.492
	Female	305	47.7	118	45.2	
Education level	Illiterate	178	27.9	124	47.5	0.001*
	Literate/Primary	45	7.0	29	11.1	
	Junior Secondary	165	25.8	61	23.4	
	Senior Secondary	207	32.4	38	14.6	
	Undergrad and Postgrad	44	6.9	9	3.4	
Marital Status	Single	341	53.4	134	51.3	0.016*
	Married	190	29.7	67	25.7	
	Cohabitating	96	15.0	59	22.6	
	Divorced	12	1.9%	1	0.4	
Employment	Employed	121	18.9	30	11.5	0.009*
	Not employed	471	73.7	217	83.1	
	Student	47	7.4	14	5.4	
Income	Less than 4500L D	464	72.6	215	82.4	0.001*
	More than 4500LD	131	20.5	18	6.9	
	No income	44	6.9	28	10.7	
Source of income	Formal Work	208	32.6	53	20.3	0.001*
	Casual work	150	23.5	64	24.5	
	Business	10	1.6	7	2.7	
	Farming	196	30.7	123	47.1	
	Other	10	1.6	7	2.7	
Number of family members	1 to 5	472	73.9	220	84.3	0.003*
	6 to 10	134	21.0	35	13.4	
	11 and above	33	5.2	6	2.3	
Media Source for Information	Nothing	17	2.7	75	28.7	0.001*
	Radio	556	87.0	176	67.4	
	TV& Newspaper	9	1.4	1	0.4	
	Internet	57	8.9	9	3.4	
Years of residency	1 to 5 years	188	29.4	70	26.8	0.421
	6 to 10 years	214	33.5	82	31.4	
	11years and above	237	37.1	109	41.8	
Transportation to the health facility	It is difficult	384	60.1	188	72.0	0.001*
	It is easy to find	255	39.9	73	28.0	
Who chooses	Husband	62	9.7	28	10.7	0.011*
	Myself	523	81.8	194	74.3	
	Suggestion by	54	8.5	39	14.9	
Health worker visit	Yes	527	82.5	151	57.9	0.001*
	No	112	17.5	110	42.1	
Nearest healthcare facility (by walk)	< 20 min	45	7.0	20	7.7	0.001*
	21-40min	268	41.9	89	34.1	
	>40min	320	50.1	124	47.5	
	I don't know	6	0.9	28	10.7	

*Significant relationship, $p < 0.05$

ANKARA MEDICAL JOURNAL

Table 5. Multivariate analyses of the association between independent variables and PHC utilization (n=900)

Independent	Categories	Dependent Variable (PHC utilized, PHC non-utilized)		
		OR	95%CI	P- value
Residency	Rural	0.562	0.323-0.978	0.042*
	Urban (Ref)			
Age	18-28	0.869	0.394-1.916	0.727
	29-38	0.447	0.236-.850	0.014*
	39-48	0.733	0.364-1.476	0.384
	49- and above(Ref)			
Education level	Illiterate	0.834	0.326-2.133	0.705
	Literate/Primary	0.657	0.233-1.853	0.427
	Junior Secondary	0.806	0.318-2.045	0.650
	Senior Secondary	1.642	0.642-4.199	0.301
	Undergrad and			
Marital Status	Single	1.623	0.988-2.667	0.056
	Married	1.535	0.907-2.598	0.110
	Divorced	4.998	0.566-44.158	0.148
	Cohabitating(Ref)			
Employment	Employed	2.129	0.867-5.230	0.099
	Non-Employed	2.941	1.074-8.058	0.036*
	Student (Ref)			
Income	less than 4500L D	1.485	0.751-2.935	0.256
	More than 4500LD	3.017	1.332-6.834	0.008*
	No income (Ref)			
Source of income	Casual work	1.502	0.436-5.170	0.519
	Farming	1.019	0.298-3.491	0.976
	Formal Work	0.677	0.346-5.136	1.332
	Business	1.606	0.467-5.524	0.452
	Other(Ref)			
Number of family members	1 to 5	0.494	0.180-1.355	0.170
	6 to 10	0.976	0.335-2.844	0.964
	11 and above(Ref)			
Media Source for Information	Radio	0.623	0.259-1.501	0.292
	TV&Newspaper	1.111	0.114-10.816	0.928
	Nothing	0.092	0.032-0.264	0.001*
	Internet(Ref)			
Transportation	It is difficult	1.184	0.742 1.888	0.479
	It is easy to find(Ref)			
Who chooses	Husband	1.319	0.611-2.848	0.481
	myself	0.103	0.909-2.856	0.103
	Suggestion by others(Ref)			
Health worker visit	Yes	2.599	1.698-3.980	0.001*
	No(Ref)			
Nearest healthcare facility (by walk)	<20min	3.401	0.944-12.245	0.061
	21-40min	0.621	1.800-17.550	0.003*
	>40min	8.583	2.788-26.425	0.101
	I don't know (Ref)			

*Significant relationship, $p < 0.05$

Discussion

The findings of this study indicate a higher prevalence of Primary health care utilization in the Urban region (79.6%) compared to the rural region (62.5%). It also suggests that Primary Health care utilization is influenced by the social demographic characteristics of individuals. There is a dependence between socioeconomic factors and primary healthcare utilization, as supported by a study conducted in Riyadh.[17] The study established that younger adults aged 29-38 were less likely to utilize Primary health care compared with older people. This finding is in line with a study conducted in Jordan that indicated a high utilization rate of PHC services among older adults.[18]

The current study suggests that the unemployed population is 2.941 times more likely to consume PHC services as compared to their employed counterparts, with narrow variation. This is supported by a study conducted in Gaza [19], which reported high use of PHC by unemployed participants compared to the employed. Whereas the study conducted in Syria revealed that employed participants were more likely to utilize health care services than the unemployed.[20] This study also indicates that males were more likely to utilize primary health care, 52.3% more than females, 47.7%, though the association between gender and PHC utilization was not statistically significant.

A study conducted in Saudi Arabia[21] supports this finding. The current study confirmed the association between the time involved in traveling to health care facilities and PHC utilization.[22,23] It also established that rural residents have more transportation difficulties and usually travel long distances to health care facilities. It suggests that 90.7% of rural residents had transportation difficulties, and 30.1% reported distance as a barrier to PHC utilization. This is supported by research conducted in Ghana, [24] which reports that distance harms utilization.

Another study conducted in the rural area of Pakistan reported that both men and women who resided more than three kilometers from the health unit were less likely to be high users of PHC compared to those living within less than one kilometer away.[25]

Quality primary health care service delivery requires resources like laboratory, drugs, finances, and modes of transport such as ambulances.[26] This study revealed that the process of healthcare delivery and its organizational structure affect the outcome. Inavailability of drugs and laboratory services was reported by 34.5% of the population as a constraint to PHC utilization. Many people go to health facilities to get drugs. If they can not get drugs, they see going to a health facility as a waste of time. As a result, they end up going to the pharmacy and drugstore for treatment. Furthermore, most of the urban and rural PHC facilities do not have a laboratory, which is required in a PHC facility. Additionally, this study identified laboratory absence as a

hindrance to PHC utilization; 10.7% of non-utilizers reported it as a barrier. A study conducted in Nigeria and Malawi [27,28] reported a positive association between Laboratory availability and PHC performance at the primary care level. Laboratory helps to reduce unnecessary referrals and overload in secondary and tertiary care. Health care costs also influence health-seeking behaviour. This study identified a link between non-use of primary health care (PHC) services and financial barriers, with 13.4% of respondents reporting financial difficulties as a reason for not accessing PHC; this finding is supported by a study conducted in Nigeria.[28] Majority of non utilizers especially from rural area reported dfficulty in undertaking the cost of drugs and service at PHC facilities Service providers play a major role in increasing the PHC utilization rate. This study revealed that Community health care providers' visits in the various communities, raising awareness on the importance of PHC utilization , encouraging defaulters and undecisive population to go to PHC as well as taking PHC services to them such as family planning increases PHC utilization rate. This is supported by a commentary written by A. Witmer et al on the health system of United states [29] which states that Community health workers play important role to make health system function effecientlly as well as primary care. The finding of a reviewed of 26 studies done by Lassi et al revealed community based interventions decrease women and babies morbidity and mortality it also improves care related outcomes especially in low and middle income countries.[30]

A key strength of this study is its use of advanced data collection methods, including community-based interviews conducted by experienced researchers and field assistants. Participants were randomly selected from both urban and rural areas, enhancing the study's representativeness. However, the cross-sectional design limits the ability to establish causality. Additionally, since responses were self-reported, there is a potential risk of recall bias.

In conclusion, in Margibi County, Liberia, significant disparities in Primary Health Care (PHC) utilization were observed, with urban areas demonstrating higher access to healthcare services than rural areas. Key factors such as limited media exposure, long distances to healthcare facilities, and socioeconomic barriers primarily affected rural residents, exacerbating inequalities in healthcare access. Additionally, factors like income level, employment status, and proximity to healthcare providers influenced PHC utilization. Active engagement by healthcare workers, including awareness campaigns and community outreach, emerged as critical in improving PHC access. To reduce these urban-rural health disparities, policymakers need to prioritize strengthening PHC infrastructure, particularly in rural areas. Tailored interventions and targeted healthcare delivery models are necessary to ensure equitable access to essential health services across all communities in Liberia.

ANKARA MEDICAL JOURNAL

Ethical Considerations: Ethical approval for this study was obtained from the Ethics Committee of Ankara Yildirim Beyazit University (Approval Code: 2022-671). In addition, authorization was granted by the Margibi County Health Team, representing the Ministry of Health at the county level.

Conflict of Interest: The authors declare no conflict of interest.

References

1. World Heath Organization. Primary health care [Internet]. World Health Organization. 2023 [cited 2025 Feb 13]. Available from: https://www.who.int/news-room/fact-sheets/detail/primary-health-care
2. Halcomb E, Ashley C. Primary Health Care. In: Handbook of Social Sciences and Global Public Health. Cham: Springer International Publishing; 2023. p. 181–202.
3. Aksungur A, Özturk Emiral G, Bağcı HH. Awareness adult syrian refugee women on family planning methods. Ankara Med J. 2024;24(1):28–39.
4. Action PP. Forster T, Kentikelenis A, Bambra C. Healh inequalities in Europe: setting the stage for progressi-ve policy action. FEPS-TASC, 2018.
5. van Weel C, Kidd MR. Why strengthening primary health care is essential to achieving universal health coverage. Can Med Assoc J. 2018 Apr 16;190(15):E463–6.
6. Nwokoro UU, Ugwa OM, Ekenna AC, Obi IF, Onwuliri CD, Agunwa C. Determinants of primary healthcare services utilisation in an under-resourced rural community in Enugu State, Nigeria: a cross-sectional study. Pan Afr Med J. 2022;42.
7. World Health Organization. Trends in Maternal Mortality: 1990 to 2013 Estimates by WHO, UNICEF, UNFPA. Geneva World Heal Organ. 2014;1–68.
8. Kruk ME, Rockers PC, Tornorlah Varpilah S, Macauley R. Population Preferences for Health Care in Liberia: Insights for Rebuilding a Health System. Health Serv Res. 2011 Dec 21;46(6pt2):2057–78.
9. Republic of Liberia Health Equity and Social Determinants of Health Assessment. 2023;
10. Ministry of Health Republic of Liberia. Essential Package of Health Services for Universal Health Coverage. Minist Heal Repub Lib. 2022;
11. Liberia Ministry of Health, L. Revise National Community Health Services Policy. MINISTRY OF HEALTH Monrovia, Liberia. 2021.
12. Dadzie JE, Kanagasabai U. A Policy Analysis of the Primary Health Care Approach in Liberia. Hygiene. 2022 Feb 13;2(1):44–62.
13. LISGIS. Final Results: 2022 Liberia Population and Housing Census. Liberia Institute of Statistics and Geo-Information Services. 2023.
14. S. K. Lwanga and S. Lemeshow. Sample size determination in health studies : a practical manual. WHO; 1991. p. 1 and 25.
15. Rahman SA. Utilization of Primary Health Care Services in Rural Bangladesh : University of London; 2001.
16. MOUHOUMED HM. Barriers in Primary Healthcare Service Utilization among Adults in Borama in the Northwestern Awdal Region of Somaliland. Ankara Yıldırım Beyazıt University; 2020.

17. Alsubaie AM, Almohaimede KA, Aljadoa AF, Jarallah OJ, Althnayan YI, Alturki YA. Socioeconomic factors affecting patients' utilization of primary care services at a Tertiary Teaching Hospital in Riyadh, Saudi Arabia. 2016;
18. Alkhawaldeh A, Holm MB, Qaddumi J, Petro W, Jaghbir M, Al Omari O. A Cross-sectional study to examine factors associated with primary health care service utilization among older adults in the irbid governorate of jordan. Curr Gerontol Geriatr Res. 2014;2014.
19. Abu-Mourad T, Alegakis A, Shashaa S, Koutis A, Philalithis A. Individual determinants of primary healthcare utilisation in Gaza Strip, Palestine. J Epidemiol Community Health. 1979;62(8):701–7.
20. Ballout K, Mehmet Orhun N. Accessibility to Health Care Services and Treatment for People with Noncommunicable Diseases in Northwest Syria. Int J Soc Determ Heal Heal Serv. 2024 Oct 1;54(4):441–53.
21. Alghamdi K, Aljohani A, Taha J, Qari L, Demyati M, Alzahrani S, et al. Awareness and Utilization of the Primary Health Care Services in Al-Madinah, Saudi Arabia. WORLD Fam Med EAST J Fam Med. 2020;18(2):33–41.
22. Rolle R. Ahuru IJO. Predictors of Antenatal Care Utilization in Primary Healthcare Centers in Eight Rural Communities in Delta State , Nigeria . Background : We examined the socio-demographic factors that influence early timing and an adequate number of ANC visits in Primary. 2019;8(June):1–22.
23. Perry B, Gesler W. Physical access to primary health care in Andean Bolivia. Soc Sci Med. 2000;50(9):1177–88.
24. Buor D. Distance as a predominant factor in the utilisation of health services in the Kumasi metropolis, Ghana. GeoJournal. 2002;56:145–57.
25. Panezai S, Ahmad MM, Saqib SE. A Gender-Based Assessment of Utilization of Primary Health Care Services and Associated Factors in Pakistan. PONTE Int Sci Res J. 2020;76(1):82.
26. Mediterranean WHORO for the E. Quality improvement in primary health care : a practical guide. 2004. (WHO Regional publications, Eastern Mediterranean Series (26), 2004).
27. Dacombe RJ, Squire SB, Ramsay AR, Banda HT, Bates I. Essential medical laboratory services: their role in delivering equitable health care in Malawi. Malawi Med J. 2007 Oct;18(2):33–5.
28. Sule SS, Ijadunola KT, Onayade AA, Fatusi AO, Soetan RO, Connell FA. Utilization of primary health care facilities: Lessons from a rural community in southwest Nigeria. Niger J Med. 2008 Apr;17(1):98–106.
29. Witmer A, Seifer SD, Finocchio L, Leslie J, O'neil EH. Commentary Community Health Workers: Integral Members of the Health Care Work Force.
30. Lassi ZS, Bhutta ZA. Community-based intervention packages for reducing maternal and neonatal morbidity and mortality and improving neonatal outcomes. Cochrane Database Syst Rev. 2015 Mar;2015(3).