

Perceptions of Healthcare Seekers on Universal Health Coverage in Lubero Territory and Butembo City in Democratic Republic of Congo

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Abstract

This study aims to contribute to the implementation of universal health coverage in the Democratic Republic of Congo and to assess the implementation of UHC through the level of perception of healthcare seekers. The study is descriptive, cross-sectional, comparative, and correlational. It was conducted from March to August 2025. A survey was carried out using an interview guide submitted to 1, 068 heads of households in nine health zones in Lubero Territory and Butembo City. After data analysis, the findings read as follows: First, expectations regarding the UHC were positive in Lubero ($M= 3.50 \pm 0.85$) and in Butembo ($M=3.30 \pm 0.82$). Second, perceptions in terms of fears were considered negative in Lubero Territory ($M= 2.68 \pm 0.94$) and in Butembo City ($M= 2.74 \pm 0.86$). Third, the expectations of healthcare seekers differ according to place of residence ($t =3.75$; $p=0.000$), whereas fears do not ($t=-1.01$; $p=0.310$). Fourth, the expectations of healthcare seekers do not differ according to main profession ($F=0.500$; $p=0.776$), while fears do ($F=5.052$; $p=0.000$). Fifth, perceptions of UHC differ according to marital status ($F=3.806$; $p=0.010$) but not according to gender ($F=-0.696$; $p=0.486$). Sixth, there was no significant relationship between expectations of UHC and characteristics such as age, level of education, household size, and household income. Indeed, fears about UHC are influenced by educational level ($r=0.117$; $p=0.000$), household size ($r=-0.125$; $p=0.000$), and household income ($r=-0.101$; $p=0.001$).

Keywords: *Expectation, Fear, Healthcare Seeker, Perception, Universal Health Coverage (UHC).*

Introduction

To achieve universal health coverage, every human being has the right to quality health services without financial hardship, as stipulated by the Sustainable Development Goals set for 2030 [20]. Most countries in sub-Saharan Africa face a high burden of disease and insufficient financial resources to fund the provision of quality health services [14].

In 2019, world leaders adopted a declaration seeking strengthening health systems to ensure that they are equitable, resilient, and capable of meeting everyone's needs. This declaration

restated that everyone deserves access to quality health services, both in crisis and peace times [16, 2]. Accordingly, Universal health coverage (UHC) is a means of fulfilling the right to healthcare and the right of every person to enjoy the highest possible level of physical and mental health, as recognized by international law [19].

Several countries have demonstrated that measures can be taken to achieve UHC, even with limited resources. This is the case in countries such as Cambodia, Chile, China, Colombia, Ghana, Indonesia, Mexico, the Philippines, Rwanda, Thailand, and Vietnam

[19]. A study conducted in the Sahel showed that health coverage gradually increased from 23% to 50% in Mali and from 2% to 100% in Chad [4].

Universal health coverage is being extended in many countries, particularly in the area of healthcare and the establishment of national social protection floors, expanded access to cash transfers, and universal social pensions [3]. UNAIDS [21] reports that in 2017, less than half of the world's population was covered by essential health services, and it is estimated that only 60% of the world's population will have universal health coverage by 2030.

In the Democratic Republic of Congo (DRC), it is estimated that 60% of the population does not have access to the healthcare system. The Democratic Republic of Congo has had its 2019-2022 strategic plan for universal health coverage in place since 2018. Law No. 18/035 of December 13, 2018, establishing the fundamental principles relating to the organization of public health in the DRC, stipulates in Article 41 that a universal health coverage system based on the principles of equity, quality assurance of care, and financial protection for all shall be established in the Democratic Republic of Congo a universal health coverage system based on the principles of equity, quality assurance of care, and financial protection for all [22].

The Democratic Republic of Congo has its own strategic plan for universal health coverage, which has not yet been implemented despite having already been announced by the country's authorities. We believe that a study is necessary to properly establish this program. In this respect, this research has been guided by the following general question: Does the current level of awareness among healthcare seekers in Lubero Territory and Butembo City of regarding universal health coverage reflect progress toward its implementation in the Democratic Republic of Congo?

This general question generates the following specific questions:

1. What is the level of awareness among healthcare seekers in Lubero and Butembo regarding universal health coverage in terms of expectations and fears?
2. Does the awareness of UHC differ significantly between the two entities (rural Lubero and urban Butembo)?
3. Do socio-demographic characteristics such as age, education level, gender, household size, marital status, main occupation, and household income significantly influence healthcare seekers' perceptions of universal health coverage?

The study is based on the assumptions that:

1. Perceptions of UHC would significantly differ between the two entities;
2. The socio-demographic characteristics of respondents, such as age, level of education, gender, household size, marital status, main occupation, and household income, would significantly influence the perceptions of healthcare seekers.

This work aims at contributing to the implementation of universal health coverage in the Democratic Republic of Congo and to assess the implementation of UHC through the level of perception of healthcare seekers in Lubero Territory and Butembo City.

More narrowly, the study aims at:

1. Determining the level of perception of healthcare seekers in Lubero and Butembo regarding universal health coverage in terms of expectations and fears.
2. Testing the difference in perception of UHC between rural areas (Lubero Territory) and urban ones areas (Butembo city).

3. Verifying the statistical relationship between socio-demographic characteristics and healthcare seekers' perceptions of UHC.

Three dimensions characterize UHC: population coverage, service coverage, and financial protection [16, 21]. Each dimension is to be supplied with a brief explanation. Population coverage is “the share of the population that can benefit from a range of basic services, whether through public schemes or private primary health insurance” [18]. This implies that each person can access the health services they need when they need them without constraint [7].

Coverage of services implies access to all the health services that applicants need, with quality for all and provided by competent staff. Health services include preventive, curative, and rehabilitative services, health promotion, and access to medicines and technologies [7].

Financial protection entails that healthcare is affordable for everyone. This means that financial difficulties cannot prevent a person from accessing the healthcare and services they need. Financial protection must be as comprehensive as possible. Therefore, health financing systems must evolve in such a way as to avoid large direct payments at the time of service delivery by promoting prepayment of contributions for health care and services. This method of financing should spare the population from catastrophic expenses and the impoverishment of people who need healthcare [6, 7].

Materials and Methods

The study is descriptive, cross-sectional, comparative, and correlational. We used a quantitative approach. It ran from March to August 2025, a period of six months. The study was conducted in Lubero Territory and Butembo City, two entities in North Kivu Province, Democratic Republic of Congo (DRC), in Central Africa. Nine health zones (HZs) were involved. They are: the Urban HZs

of Katwa and Butembo in Butembo city, and the Rural HZs of Masereka, Kayna, Alimbongo, Lubero, Musinene, Biena, and Manguredjipa in Lubero Territory.

The population in our study consisted of heads of households considered to be healthcare seekers in Lubero Territory and Butembo City. Lubero Territory and Butembo City have a population of 2,628,333, and the number of households is estimated at 439,254 spread across nine health zones, including 130,405 in Butembo City and 308,849 in Lubero Territory.

The study has been conducted with a sample of 1,068 heads of households, including 712 in rural areas and 356 in urban areas. It has used non-random sampling with the Politz method to collect data from heads of households. A non-probability sampling method of the Politz type was adopted due to practical and contextual constraints specific to the study setting. Indeed, insecurity in the study area has led to population displacement and the mobility of healthcare providers. These conditions did not allow for the implementation of a probabilistic sampling strategy [23-27].

Data have been collected using an interview guide written in French and translated into Swahili and Kinande. The data collection tool has been validated by seven experts. Prior to data collection, a preliminary study was conducted with 40 participants to assess the reliability of the instrument. Its results were tested using Cronbach's alpha coefficient. The study retained the variable when Cronbach's alpha value was greater than or equal to 0,70 and less than 0,9. In the present study, the overall Cronbach's alpha coefficient was 0,794, indicating satisfactory internal consistency.

The data collection tool has been developed and validated by the ethics committee before conducting a pilot study. To test the validity of our data collection tools, we have used content validity analysis. The test/retest method has been used to test the reliability of the collection tools. The questionnaire has been administered

twice to the same sample, and the results have been compared and interpreted using Cronbach's alpha coefficient.

Data analysis has been performed using SPSS version 20 software. OpenEpi software has been used to determine confidence intervals for proportions at a 5% significance level using Fleiss's exact quadratic method. The study has used frequencies and percentages to analyze socio-demographic characteristics. Means and standard deviations have been used to interpret the level of perception.

The chi-square test was used to compare the proportions of information on UHC to determine whether there was a difference between them. We used Student's t-test to test the difference between the means of two groups. The one-way ANOVA test for an independent sample allowed us to test the difference in means of more than two groups. The mean difference in understanding and/or perception was determined using Scheffe's and Tukey's post hoc tests. Bravais Pearson's r correlation test helped us test the relationship between other variables. Pearson's correlation coefficient was used for the variables age, level of education, household size, and household income due to their quantitative or quasi-quantitative nature and the objective of examining linear relationships with the studied scores. Given the sample size and the approximately normal distribution of these

variables, the use of Pearson's correlation was considered appropriate [28, 29].

Results

Characteristics of Respondents

The results in Table 1 have shown that, among the 1,068 healthcare seekers surveyed, 712 (66.7%) are from Lubero Territory (rural area) and 357 (33.3%) are from Butembo City (urban area); 327 (30.6%) are aged between 30 and 40, and 186 (17.4%) are aged 51 and over; 573 (53.7%) are male and 495 (46.3%) are female; Married people dominate with 660, or 61.8%, and divorced and separated people are the minority with 82, or 7.7%; those who had completed high school are the majority with 327, or 30.6%. Those who had not completed university are in the minority, with 50 (4.7%); 478 (45.8%) are farmers, and 51 (4.8%) are students; 456, or 42.7%, belonged to households with fewer than five people. Those who belonged to households with more than six people number 312, or 29.2%, while those who belong to households with 5 to 6 people number 300, or 28.1%; 808 (75.7%) have a daily income of less than \$2.14 per person per day, while 260 (24.3%) have estimated their income to be greater than or equal to \$2.14 per person per day; 709, or 66.4%, have two meals a day, and 141, or 13.1%, take only one meal a day. Only 219 care seekers, or 20.5%, take three meals a day.

Table 1. Distribution of Healthcare Seekers according to Characteristics

Residence	Frequency (%)
Lubero Territory (rural area)	712 (66.7)
Butembo City (urban area)	356 (33.3)
Total	1,068 (100.0)
Age groups	Frequency (%)
Under 30	292(27.4)
30 to 40	327(30.6)
41 to 50	263(24.6)
51 and over	186(17.4)
Total	1068(100.0)
Gender	Frequency (%)
Feminine	495(46.3)

Masculine	573(53.7)
Total	1068(100.0)
Marital status	Frequency (%)
Single	239(22.4)
Married	660(61.8)
Divorced/Separated	82(7.7)
Widowed	87(8.1)
Total	1068(100.0)
Level of education	Frequency (%)
No level	98(9.2)
Primary school not completed	141(13.2)
Primary school completed	80(7.5)
Secondary school not completed	269(27.2)
Secondary school completed	327(30.6)
University not completed	50(4.7)
University completed	103(9.6)
Total	1068(100.0)
Main occupation	Frequency (%)
Agriculture	478(44.8)
Commerce	219(20.5)
Crafts	87(8.1)
Public service	134(12.5)
Private service	99(9.3)
Student	51(4.8)
Total	1068(100.0)
Household size	Frequency (%)
Fewer than 5 people	456(42.7)
5 to 6 people	300(28.1)
More than 6 people	312(29.2)
Total	1068(100.0)
Daily household income	Frequency (%)
Income less than \$2.14 per person per day	808(75.7)
Income greater than or equal to \$2.14 per person per day	260(24.3)
Total	1068(100.0)
Number of meals	Frequency (%)
One meal per day	140(13.1)
Two meals per day	709(66.4)
Three meals per day	219(20.5)
Total	1068(100.0)

Perception of Universal Health Coverage (UHC)

The level of healthcare seekers' perception of UHC has been measured by their expectations and fears regarding UHC.

Expectations of Healthcare Seekers regarding UHC

Considering the five components selected, healthcare seekers' expectations regarding

access to quality healthcare through UHC has scored highest in Lubero Territory ($A= 3.58 \pm 1.05$), while in the city of Butembo, it has been in terms of free healthcare ($A= 3.56 \pm 1.07$), which is also reflected in the sum of the two entities ($A= 3.50 [3.35; 3.57] \pm 1.07$). In general, healthcare seekers' expectations have been positive in Lubero ($A=3.50 \pm 0.85$) and Butembo ($A=3.30 \pm 0.82$), and across both entities ($A=3.43 [3.38; 3.48] \pm 1.07$), as shown in Table 2.

Table 2. Perception of Expectations Regarding UHC by Healthcare Seekers (n=1068)

Expectations of healthcare seekers	Lubero			Butembo			Total		
	A	SD	VI	A	SD	VI	A [CI]	SD	VI
Belief that with UHC, we will all have equal access to healthcare	3.51	1.09	PP	3.19	1.09	PP	3.41[3.34 ; 3.47]	1.10	PP
Belief that UHC will enable us to receive quality care	3.58	1.05	PP	3.04	1.15	PP	3.41[3.35 ; 3.48]	1.10	PP
Belief that UHC will improve our household income	3.47	1.10	PP	3.23	1.09	PP	3.39[3.32 ; 3.46]	1.10	PP
Belief that UHC will promote free healthcare	3.47	1.60	PP	3.56	1.07	PP	3.50[3.35 ; 3.57]	1.07	PP
Belief that UHC will relieve the financial burden on the population	3.47	1.07	PP	3.42	1.04	PP	3.45[3.39 ; 3.52]	1.07	PP
Overall average	3.50	0.85	PP	3.30	0.76	PP	3.43[3.38 ; 3.48]	0.82	PP

Note: PP = Positive perception if the average is > 3, I = Indifference if the average is equal to 3, NP = Negative perception if the average is < 3, VI = Verbal interpretation, P = Perception, A = Average, SD = Standard deviation; CI = Confidence interval.

Seekers' Fears about UHC

Of the three components selected, healthcare seekers in Lubero Territory have expressed the greatest concern about the decline in the quality of healthcare due to UHC ($A= 2.75 \pm 1.15$). In contrast, those in Butembo City have most been concerned about discrimination against patients due to UHC ($A= 2.76 \pm 1.10$). Overall,

healthcare seekers' perceptions of fear in the Lubero territory ($A= 2.68 \pm 0.94$) and in the city of Butembo ($A= 2.74 \pm 0.86$) have been considered negative. The perception of healthcare seekers in terms of fears in the two entities combined ($A= 2.70 [2.64; 2.76] \pm 0.91$) has also been considered negative, as detailed in Table 3.

Table 3. Perception of Fears about UHC among Healthcare Seekers (n=1068)

Fears of healthcare Seekers	Lubero			Butembo			Total		
	A	SD	VI	A	SD	VI	A [CI]	SD	VI
Concerned that UHC will lower the quality of healthcare	2.75	1.15	NP	2.72	1.09	NP	2.74 [2.67; 2.81]	1.13	NP
Concerned that managers divert the funds allocated to institutions	2.67	1.06	NP	2.75	1.05	NP	2.70 [2.63; 2.76]	1.06	NP
Concerned that healthcare workers may discriminate patients because of UHC	2.62	1.10	NP	2.76	1.10	NP	2.67 [2.59; 2.73]	1.10	NP
Overall average	2.68	0.94	NP	2.74	0.86	NP	2.70 [2.64; 2.76]	0.91	NP

Note: PP = Positive perception if the average is > 3, I = Indifference if the average is equal to 3, NP = Negative perception if the average is < 3, VI = Verbal interpretation, P = Perception, A = Average, SD = Standard deviation; CI = Confidence interval.

Summary of Healthcare Seekers' Perceptions

Considering the two components of perception of UHC, healthcare seekers in Lubero Territory have come out on top (M=3.09 ± 0.63) with a perception deemed

positive, compared to those in Butembo City (M=3.01 ± 0.55) with a perception also deemed positive. The mean of the respondents from both entities (M=3.06 [3.03; 3.10] ± 0.60) indicates that healthcare seekers have a positive perception of UHC, as shown in Table 4.

Table 4. Summary of Perceptions among Healthcare Seekers (n=1,068)

Perception	Lubero			Butembo			Total		
	A	SD	VI	A	SD	VI	A [CI]	SD	VI
Expectations of care seekers	3.50	0.85	PP	3.30	0.76	PP	3.43[3.38; 3.48]	0.82	PP
Fears of care seekers	2.68	0.94	NP	2.74	0.86	NP	2.70[2.64; 2.75]	0.91	NP
Overall average	3.09	0.63	PP	3.01	0.55	PP	3.06[3.03; 3.10]	0.60	PP

Note: PP = Positive perception if the average is > 3, I = Indifference if the average is equal to 3, NP = Negative perception if the average is < 3, VI = Verbal interpretation, P = Perception, A = Average, SD = Standard deviation; CI = Confidence interval.

Differences in Perceptions of UHC

This section covers healthcare seekers' perceptions of UHC in the two entities. It concludes with perceptions among healthcare seekers.

Differences in Healthcare Seekers' Perceptions of UHC in the Two Entities

In terms of expectations, a comparison of the average scores between healthcare seekers in Lubero (A=3.50 ±0.85) and those in Butembo (A=3.30 ±0.76) yields a t-value of 3.75 (p=0.000). In terms of fears, a comparison of

healthcare seekers in Lubero ($A = 2.68 \pm 0.94$) with those in Butembo ($A = 2.74 \pm 0.86$) yielded a t-value of -1.01 ($p = 0.310$). This result suggests a highly significant difference in

the expectations of care seekers in these two entities, whereas the comparison of fears does not suggest a significant difference, as shown in Table 5.

Table 5. Perception of Healthcare Seekers regarding UHC in the Two Entities

Entity	n	Average	Ecart-type	df	T	p	VI
Expectations of healthcare seekers							
Lubero Territory	712	3.50	0.85	1066	3.75	0.000	S
Butembo City	356	3.30	0.76				
Fears of healthcare seekers							
Lubero Territory	712	2.68	0.94	1066	-1.01	0.310	NS
Butembo City	356	2.74	0.86				

Note: n=sample size; df=degrees of freedom; t=Student's t-test difference value; p=significance threshold; VI=verbal interpretation; NS=Not Significant if $p \geq 0.05$; S=Significant if $p < 0.05$.

Differences in Perceptions of UHC According to Profession

The ANOVA test for independent samples has been used to assess differences in understanding and perceptions of UHC. The Scheffé test and Tukey test have been used to identify mean perceptions that have significantly been different from each other after an overall difference was found using ANOVA.

Differences in perceptions among healthcare seekers by main occupation. Healthcare

seekers' perceptions of UHC have been assessed in terms of average expectations and fears. The main occupations considered have been: agriculture, commerce, crafts, public service, private service and student service. The overall average expectation has been 3.4331 ± 0.82345 and the average fear 2.6998 ± 0.91350 . The results have shown that the average expectations of care seekers has not differed according to their main occupation ($F=0.500$; $p=0.776$), while their fears have ($F=5.052$; $p=0.000$), as shown in Table 6.

Table 6. Difference in Perceptions of Care Seekers by Main Occupation

Perception	Occupation	Average	Standard deviation	df	F	p	IV
Expectations	Agriculture	3.4197	0.85446				
	Commerce	3.4247	0.79881				
	Crafts	3.4437	0.61864	5	.500	0.776	NS
	Public service	3.4970	0.81959				
	Private service	3.4848	0.91834				
	Student	3.3098	0.76870				
	Total	3.4331	0.82345				
Fears	Agriculture	2.7462	0.93671				
	Commerce	2.6499	0.86099				
	Crafts	3.0575	0.92651	5	5.052	0.000	S
	Public service	2.5473	0.90980				

	Private service	2.4781	0.87826				
	Student	2.6993	0.77533				
	Total	2.6998	0.91350				

Note: n=sample size; df=degrees of freedom; t=Student's t-test difference value; p=significance threshold; VI=verbal interpretation; NS=Not Significant if $p \geq 0.05$; S=Significant if $p < 0.05$.

Determination of the Average Difference in the Perception of Fears

Applying Scheffé's test has revealed statistically significant differences in the

average level of fear among the craft trades and professions, such as retail ($p=0.018$), public service ($p=0.005$), and private service ($p=0.002$), as shown in Table 7.

Table 7. Determination of the Average Difference in the Perception of Fears

(I) Principal occupation	(J) Principal occupation	Difference in averages (I-J)	p
Agriculture	Commerce	-0.09624	0.889
	Craft	0.31131	0.122
	Public service	-0.19890	0.410
	Private service	-0.26805	0.207
	Student	-0.04682	1.000
Commerce	Agriculture	0.09624	0.889
	Craft	0.40755	0.028
	Public service	-0.10266	0.957
	Private service	-0.17181	0.783
	Student	0.04942	1.000
Craft	Agriculture	-0.31131	0.122
	Commerce	-0.40755	0.028
	Public service	-0.51021	0.005
	Private service	-0.57936	0.002
	Student	-0.35812	0.412
Public service	Agriculture	0.19890	0.410
	Commerce	0.10266	0.957
	Craft	0.51021	0.005
	Private service	-0.06915	0.997
	Student	0.15208	0.959
Private service	Agriculture	0.26805	0.207
	Commerce	0.17181	0.783
	Craft	0.57936	0.002
	Public service	0.06915	0.997
	Student	0.22123	0.847
Student	Agriculture	0.04682	1.000
	Commerce	-0.04942	1.000
	Craft	0.35812	0.412
	Public service	-0.15208	0.959
	Private service	-0.22123	0.847

Perception according to Socio-Demographic Characteristics

Difference in Perceptions of Healthcare Seekers according to Gender

The overall average perception of healthcare seekers regarding UHC has been 3.05 ± 0.65 for

female healthcare seekers and 3.08 ± 0.57 for male healthcare seekers. The results showed that healthcare seekers' average perceptions did not differ by gender ($F = -0.696$; $p = 0.486$). Details are provided in Table 8.

Table 8. Difference in Perceptions of Care Seekers by Gender

Gender	Average	Standard deviation	df	t	p	VI
Feminine	3.05	0,65	1066	-0,696	0,486	NS
Masculine	3.08	0,57				

Note: N=sample size; df=degrees of freedom; t=Student's t-test difference value; p=significance threshold; VI=verbal interpretation; NS=Not significant if $p \geq 0.05$; S=Significant if $p < 0.05$.

Difference in Perceptions of Healthcare Seekers according to Marital Status

The average score for healthcare seekers' overall perception of UHC has been 3.07 ± 0.60

in both entities. The results indicate that healthcare seekers' average perceptions differ by marital status ($F=3.806$; $p=0.010$), as shown in Table 9.

Table 9. Difference in Perceptions of Care Seekers according to Marital Status

Marital status	Average	Standard deviation	df	F	p	VI
Single	3.06	0.62				
Married	3.04	0.57	3	3.806	0.010	S
Divorced/Separated	3.28	0.63				
Widowed	3.08	0.76				
Total	3.07	0.60				

Note: df= degrees of freedom, F= Snedescor file or value of the difference in variances, p= significance, VI= verbal interpretation, NS= Not significant if $p \geq 0.05$, S= Significant if $p < 0.05$.

Determination of the Average Difference in Perception according to Marital Status

The application of Scheffé's test revealed statistically significant differences in

perception averages between divorced/separated individuals and married individuals ($p=0.010$) and single individuals ($p=0.046$), as shown in Table 10.

Table 10. Determination of the Average Difference in Perception according to Marital Status

(I) Marital status	(J) Marital status	Difference in averages (I-J)	p
Single	Married	0.01844	0.983
	Divorced/Separated	-0.21865*	0.046
	Widowed	-0.02530	0.990
Married	Single	-0.01844	0.983
	Divorced/Separated	-0.23709*	0.010
	Widowed	-0.04374	0.939
Divorced/Separated	Single	0.21865*	0.046
	Married	0.23709*	0.010

	Widowed	0.19335	0.227
Widowed	Single	0.02530	0.990
	Married	0.04374	0.939
	Divorced/Separated	-0.19335	0.227

Socio-Demographic Characteristics and Expectations of Healthcare Seekers

The results has indicated that there is no statistically significant relationship between

healthcare seekers' expectations of UHC and socio-demographic characteristics such as respondent age, educational attainment, household size and household income, as detailed in Table 11.

Table 11. Relationship between Socio-demographic Characteristics and Care Seekers' Expectations

Characteristics	Expectations of healthcare seekers regarding UHC		
	<i>r</i>	<i>p</i>	<i>VI</i>
Age of the respondent	0.023	0.459	NS
Level of education	0.057	0.065	NS
Household size	0.035	0.257	NS
Monthly household income	-0.039	0.206	NS

Note: *r*=Pearson coefficient, *p*=significance threshold, *VI*=verbal interpretation, *NS*=non-significant if $p \geq 0.05$, *S*=significant if $p < 0.05$.

Socio-Demographic Characteristics and Fears of Healthcare Seekers Regarding UHC

The results have shown that there is a statistically significant relationship between the fears of healthcare seekers and characteristics such as: level of education ($r=0.117$; $p=0.000$),

household size ($r=-0.125$; $p=0.000$) and household income ($r=-0.101$; $p=0.001$), i.e. fears about the three objectives of UHC increase not only with the level of education but also with decreasing household size and income. The relationship between fears and the respondent's age is insignificant, as shown in Table 12.

Table 12. Relationship between Socio-demographic Characteristics and Fears of Healthcare Seekers

Characteristics	Fears of healthcare seekers regarding the UHC		
	<i>r</i>	<i>p</i>	<i>VI</i>
Age of the respondent	-0.027	0.386	NS
Level of education	0.117	0.000	S
Household size	-0.125	0.000	S
Monthly household income	-0.101	0.001	S

Note: *r*=Pearson coefficient, *p*=significance threshold, *VI*=verbal interpretation, *NS*=non-significant if $p \geq 0.05$, *S*=significant if $p < 0.05$.

Discussion

This section presents the discussion of the results according to the three research questions. These are the level of perception of

healthcare seekers regarding UHC, differences in perception, and the influence of socio-demographic characteristics on perception.

Perception of Healthcare Seekers Regarding Universal Health Coverage

Expectations of Healthcare Seekers Regarding UHC

The results in Table 2 indicate that healthcare seekers in Lubero Territory and Butembo City are convinced that UHC will promote free healthcare ($A=3.50[3.35; 3.57] \pm 1.07$) and lessen the financial burden on the population ($A=3.45[3.39; 3.52] \pm 1.07$), that UHC will enable them to receive quality care ($A=3.41[3.35; 3.48] \pm 1.10$), and that with UHC, they will all have equal access to healthcare ($A=3.41[3.34; 3.47] \pm 1.10$) and that it will improve their household income ($A=3.39[3.32; 3.46] \pm 1.10$). In general, the perception of healthcare seekers in terms of expectations has been positive in Lubero ($A=3.50 \pm 0.85$) and Butembo ($A=3.30 \pm 0.82$) and across both entities ($A=3.43 [3.38; 3.48] \pm 1.07$).

These results are consistent with those of the 2020 survey conducted in 37 OECD countries, which showed that average satisfaction with the availability of quality health services was 71%. The most satisfied populations were those in Northern Norway (93%), Belgium and the Netherlands (92% each), while the least satisfied were those in Poland (26%), Greece (38%) and Chile (39%) [18].

Although respondents reported a positive perception of the free healthcare that UHC could offer the population, Senegal's experience with the Sésame plan shows that free healthcare can negatively affect the quality of care. Fortunately, people aged 60 and over who benefited from this care were satisfied with it [5]. At this point, we would like to emphasise that poverty and ignorance about the quality of care and services can positively influence perceptions. A population living in extreme poverty, such as that of the DRC, can only view the promised and, above all, free healthcare in a positive sense. We will see below what healthcare providers' expectations and fears are.

The results of the study conducted by Alkodaymi et al. [1] have shown that 57.3% expected that the Saudi Arabian healthcare system provides effective and appropriate healthcare services to its entire population.

In terms of perception, the study conducted by Heikel [10] suggests that Moroccans are not satisfied with the quality of care provided by public healthcare services in their country. It is worth noting that when asked about future healthcare, only 37.6% would like to receive treatment in public facilities, compared to 54.9% who would like to receive treatment in ones and 1.5% of respondents who would like to receive treatment abroad. Moroccan respondents hope that with the Compulsory Health Insurance (AMO) scheme, there will be an improvement in the general condition of healthcare facilities and an increase in basic equipment. They hope that with the AMO, corruption and clientelism within healthcare facilities will be combated.

The expectations expressed by respondents indicate that the Moroccan healthcare system does not meet the needs of those seeking treatment. This can be viewed as a negative perception based on expectations of UHC. We conclude that this judgment was influenced by the Moroccan respondents' level of knowledge or understanding of the quality of healthcare services. In Mali, the results of Nana's doctoral thesis [15] showed that 82.7% of patients were satisfied with the courtesy at the entrance to the university hospital and 77.6% with the orientation at the hospital. However, it was observed that 38.7% of patients did not feel comfortable. A study conducted in South Africa, in the Ugu district, found that 61.92% of respondents had a positive perception of national health insurance [8].

A study conducted in Uganda on health workers' awareness and perceptions of UHC found that 66% of health professionals had a good understanding of UHC, while 34% had no knowledge of it. Out of 233 respondents, 85% had a good understanding of the definition of

Universal Health Coverage [9]. The study led by Nkuoh and his colleagues [17], conducted in southwestern Cameroon, found that health professionals had a good understanding of the definition of Universal Health Coverage. However, some points of the definition and its components were misunderstood.

Fears of Healthcare Seekers Regarding the USC

Regarding healthcare seekers' fears about the USC, the results in Table 3 show that healthcare seekers' perceptions in the Lubero Territory ($A = 2.68 \pm 0.94$) and in Butembo City ($A = 2.74 \pm 0.86$) are negative. The perception of healthcare seekers regarding fears in the two entities combined ($A = 2.70 [2.64; 2.76] \pm 0.91$) is also considered negative. They reported a negative perception that UHC would lower the quality of healthcare ($A = 2.74 [2.67; 2.81] \pm 1.13$), they fear that healthcare providers may discriminate against patients because of UHC ($A = 2.70 [2.63; 2.76] \pm 1.06$) and that the funds allocated to healthcare facilities may be diverted by managers ($A = 2.67 [2.59; 2.73] \pm 1.10$).

Considering the two components of perception of UHC, the results in Table 4 indicate that healthcare seekers in Lubero Territory have come out on top ($A = 3.09 \pm 0.63$) with a perception deemed positive, compared to those in Butembo City ($A = 3.01 \pm 0.55$) with a perception also deemed positive. The sum of the respondents from both entities ($A = 3.06 [3.03; 3.10] \pm 0.60$) shows that healthcare seekers have a positive perception of UHC.

A study conducted in France on the social categorization of beneficiaries of universal mutual coverage by physiotherapists showed that access to healthcare was unequal depending on people's socio-economic status [11]. This demonstrates healthcare inequality, in contrast to the positive perception reported by healthcare seekers in the present study. Indeed, given the critical situation facing the population in eastern DRC, some people have

high hopes for the UHC program, especially as they had already experienced a period of free healthcare during the Ebola virus disease and COVID-19 epidemics. A study conducted in four rural districts in Tanzania that evaluated the implementation of healthcare interventions concluded that healthcare recipients considered the quality of care poor. Only 47.9% of women were very satisfied with the care provided [13]. The results of the present study support those of Ismail [12], who examined the economic evaluation of health insurance reform in Tunisia. That study concluded that healthcare consumption is influenced by the living environment.

Socio-Demographic Characteristics and UHC

Differences in perceptions among healthcare seekers according to main occupation. The results in Table 6 show that the average expectations of healthcare seekers do not differ by main occupation ($F = 0.500$; $p = 0.776$), whereas fears do differ by main occupation ($F = 5.052$; $p = 0.000$). The application of Scheffé's test in Table 7 shows statistically significant differences in average fears between craftsmen and occupations such as traders ($p = 0.018$), public service ($p = 0.005$), and private service ($p = 0.002$).

These results partially confirm the research hypothesis that sociodemographic characteristics, such as age, educational level, gender, household size, marital status, main occupation, and household income, significantly influence the understanding and perceptions of healthcare seekers and providers regarding UHC. This difference in perception may be due to fears, as artisans are often self-employed and therefore responsible for their own affiliation with a social protection scheme, such as mutual health insurance. This is in contrast to traders, who are also self-employed but may have better accounting systems. They may also be better informed or connected to networks.

Difference in perceptions of care seekers by gender. The results in Table 8 indicate that the perceptions of care seekers do not differ by gender ($F=-0.696$; $p=0.486$). These results partially refute the research hypothesis that sociodemographic characteristics such as age, educational level, gender, household size, marital status, main occupation and household income significantly influence the understanding and perception of healthcare seekers and providers regarding UHC. The lack of difference in perceptions between men and women may be due to their all having access to the same basic services under UHC. However, men and women also receive the same information, which promotes a common understanding and perception.

Differences in perceptions of healthcare seekers by marital status. The results in Table 9 show that healthcare seekers' perceptions of UHC differ according to marital status ($F=3.806$; $p=0.010$). The Scheffé test (Table 10) indicates statistically significant differences in mean perceptions between divorced/separated individuals and those who are married ($p=0.010$) or single ($p=0.046$).

These results partially confirm the research hypothesis that presupposes that socio-demographic characteristics such as age, educational level, gender, household size, marital status, main occupation and household income would significantly influence the understanding and perception of healthcare seekers and providers regarding UHC. This difference in perception of UHC between divorced individuals (who have a more positive perception) and married or single individuals can be explained by the fact that divorce often leads to a decrease in income, especially for women, and a loss of health coverage that was previously linked to the spouse's employment. UHC then becomes a resource for maintaining access to healthcare.

Socio-demographic characteristics and expectations of healthcare seekers. The results in Table 11 show that there is no statistically

significant relationship between healthcare seekers' expectations of UHC and socio-demographic characteristics such as respondent age, educational attainment, household size and household income. These results partially refute the research hypothesis that socio-demographic characteristics such as age, educational attainment, gender, household size, marital status, main occupation, and household income would significantly influence the understanding and perception of healthcare seekers and providers regarding UHC.

These results do not corroborate those of Heikel [10], who found that UHC beneficiaries' expectations are linked to their socio-economic status and level of education. This difference in results may be due to the tests used by the researchers. Indeed, the present study used Pearson's correlation coefficient r , whereas Heikel used the Pearson chi-square test. Accordingly, expectations regarding UHC do not appear to be strongly influenced by age, level of education, household size, and household income, as health is a fundamental need shared by all.

Socio-demographic characteristics and healthcare seekers' fears about UHC. The results in Table 12 show that there is a statistically significant relationship between healthcare seekers' fears about UHC and characteristics such as: level of education ($r=0.117$; $p=0.000$), household size ($r=-0.125$; $p=0.000$), and household income ($r=-0.101$; $p=0.001$). Although the observed correlation was statistically significant, the effect size remains weak, suggesting a limited association in practical terms. In other words, fears about the three objectives of UHC increase with level of education and with decreasing household size and income. The relationship between fear and respondent age is not significant.

These results partially confirm the research hypothesis that socio-demographic characteristics such as age, educational attainment, gender, household size, marital status, main occupation and household income

would significantly influence the understanding and perception of healthcare seekers and providers regarding UHC. Fear of UHC often increases with age, as older people are more dependent on the health system and fear that it will no longer meet their specific needs. This is compounded by a poor understanding of UHC. Fear of UHC tends to increase as household size decreases and vice versa, due to social isolation and a lack of support or resources to understand and interpret health systems. This lack of communication and support can reinforce concerns about a system that is perceived as uncertain.

Conclusion

Universal health coverage must attract the attention of decision-makers, as its success is a factor in national development. Countries that are in the process of implementing it, such as the Democratic Republic of the Congo, should draw inspiration from others' experiences. This study, conducted in the Territory and the city of Butembo, has shown that healthcare seekers have a positive perception of UHC expectations. This is an indicator that the population expects satisfaction in the three dimensions that characterize UHC, namely: population coverage, service coverage and financial protection [16, 21]. As for fears, the population holds a negative perception, particularly regarding discrimination against healthcare seekers, a decline in the quality of care, and the fear that funds allocated to sanitary structures will be misused by managers. Decision-makers should therefore

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take these fears into account and address them in the implementation of this program.

Conflict of Interest

The author declares no conflict of Interest.

Data Availability

Data will be made available on a reasonable request.

Approval and Consent to Participate

This study was conducted in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration and its later amendments. Ethical approval was obtained from the Adventist University of Lukanga, approval number SGR001/CER/04/CR2025. Written informed consent was obtained from all individual participants included in the study.

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Author Contributions

Both Paluku Kahuko and Katembo Kambere, authors, dealt with all phases of the study, from the formulation of the research protocol to the gathering of data and the analysis of results.

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