

Understanding Satisfaction with Health care Services among Congolese Refugees in Bujumbura, Burundi

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Abstract

Background

3502 Congolese refugees based in Bujumbura possess the United Nations Higher Commissioner for Refugees (UNHCR) health insurance covering primary health care needs offered by CMC SOLIS clinic. This study sought to assess the quality of health care services received by Congolese refugees and determine factors affecting satisfaction.

Methods

A cross-sectional survey was conducted on 400 refugees visiting CMC SOLIS for health care from June to August 2018. A questionnaire based on SERQUAL tool composed of five health quality dimensions was used to collect data on reliability, tangibility, assurance, responsiveness, and empathy. Logistic models were used to determine factors affecting satisfaction.

Results

Overall, 43% of refugees reported satisfaction with health care services. Age and gender significantly determined overall satisfaction. Other determinants such as education did not have significant effects.

Conclusions

Overall, results from this study claim that CMC SOLIS does not offer quality health care services to Congolese refugees living in Bujumbura. Most importantly, the quality of health care services worsened with an increasing age as older ages were associated with less likelihood of satisfaction. Also, health care services offered to females seem to be deficient.

Trial registration: N/A

Introduction

Worldwide, refugees face increased health risks than the general population (1). They are prone to mental trauma as well as infectious diseases such as hygienic-born epidemics (2-4). Chronic diseases including diabetes and hypertension have also been cited among refugees, this being a result of stressful conditions and poor and unhealthy diets (5). Despite efforts to improve the health status of refugees, their increasing in numbers forms a huge challenge to humanitarian response (6, 7). For instance, in 2015, the number of international migrants reached 244 million worldwide, representing nearly 3% of the world's population (7). As the number of migrants increases, the number of humanitarians increases with an aim to meet health and other basic needs of the entire migrant population (8). Among other vital services such as food and housing, humanitarians provide emergent health care needs (8). Often, the provision of health care services is done through purchase of services and other forms of agreements with local health care providers (9). Such agreements, which enable refugees to benefit health care

services as local residents, exist for refugees in developed and in developing countries including in Burundi (9).

As of 2018, Burundi hosted an estimated 66.000 refugees and asylum seekers mainly from the Democratic Republic of the Congo (DRC) (10). Nearly 41% of Congolese refugees are based in the capital city of Burundi while the remaining 59% are scattered countrywide (10). While refugees in the countryside are grouped into refugee camps, those in the city carry independent life. The latter receive regular allowances but live in communities (10). Moreover, they possess a special fully subsidised health insurance paid for by The United Nations High Commissioner for Refugees (UNHCR) which, however, is only valid for a given health facilities with which UNHCR has contracted. Among health facilities providing health care for Congolese refugees in Bujumbura includes CMC SOLIS where 3.502 Congolese refugees are enrolled. The agreement is that CMC SOLIS provides high-quality primary health care services to enrolled refugees in accordance with international health quality guidelines such as the SERVQUAL tool which was developed by the World Health Organization (WHO) to guide better practice in health settings (11). The SERVQUAL tool has five dimensions namely tangibility, responsiveness, assurance, reliability, and empathy. Each dimension is assessed using a five-scale satisfaction rate from *strongly disagree*, *disagree*, *neutral*, *agree* to *strongly agree*. By definition, tangibility refers to the appearance of physical facilities and that of the personnel and the equipment. Reliability pictures the ability of health care providers to provide tailored and accurate services. Empathy features the capability of health care providers to showcase caring and individualised attention to patients and assurance depicts the overall knowledge and courtesy of providers as well as their aptitude to inspire trust and confidence. The providers' willingness to assist patients in ensuring prompt care translates into responsiveness. There exists a wealth literature where SERVQUAL tool has been used to assess the quality of health care services especially in low- and middle-income countries (12, 13).

Until today, the quality of health care services provided by CMC SOLIS remains unstudied as little evidence on the subject matter exists. Therefore, this study sought to assess the quality of health care services offered by CMC SOLIS to Congolese refugees and to further unpack determinants that affect patients' satisfaction with health care services.

Methods

Quality of health care services

We employed the SERVQUAL guideline to construct the model for consumer perceived quality of services (14). Five dimensions namely assurance, empathy, reliability, responsiveness, and tangibility were assigned a score based on a number of questions to assess consumer satisfaction. Each patient scored between 5 and 25. Each question received a scale from 1 to 5; with 1 corresponding to the worst satisfaction. In the first instance, dichotomous outcomes were constructed for each dimension; taking value 0 if individual *i* responded unsatisfaction; and value 1, otherwise. Unsatisfaction was coded for either strongly disagree, disagree, or neutral. In the second time, all dimensions were merged together to

yield a dichotomous overall satisfaction; taking value 0 if individual i responded unsatisfaction; and value 1, otherwise. Discrete logistic models were then implemented.

Logistic models

We used logistic regressions to understand the likelihood of satisfaction with health services conditional on sociodemographic characteristics and other individual-level determinants evidenced in the literature. The model specification is provided below:

$$\log \left[\frac{p_{i1}}{p_{i0}} \right] = \beta_0 + \beta_1 X_{ij} + \varepsilon_{ij}^1 \quad (1)$$

The outcome variable is the log odds that patient i will choose alternative j relative to alternative 0, where 0 means unsatisfaction; and 1 implies satisfaction with health care services. Predictors are represented by a standard vector of covariates X. The model includes β_0 which captures fixed effects and β_1 which detects random effects on the probabilities of being satisfied with health services.

Independent variables

Individual-level determinants were categorised as detailed in Table 1 below.

Table 1. Individual-level determinants

N = 400

Variable	n (percent)
Age	
18-35 years	139 (43.75)
36-55 years	189 (47.25)
Older than 55 years	72 (18.00)
Gender	
Female	220 (55.00)
Male	180 (45.00)
Education attainment	
None	95 (23.75)
Primary	137 (34.25)
Secondary	129 (32.25)
Tertiary	39 (9.75)
Health status before	
Good	371 (92.75)
Poor	29 (7.25)
Health status present	
Good	291 (72.75)
Poor	109 (27.25)
Health history*	
Yes	275 (68.75)
No	125 (31.25)

***Health history** means living with either hypertension, diabetes, asthma, arthritis, cancer or a history of surgery

Data source

Data was obtained from a cross-sectional survey conducted on 400 Congolese refugees who received health care from Bujumbura CMC SOLIS (Centre Medico-Chirurgical SOLIS) between June and August

2018. The study participants were recruited consecutively among Congolese refugees who attended CMC SOLIS during the data collection period.

Ethics considerations

The study obtained the ethics clearance certificate no FM/CE/01/2018 from the Institutional Review Board based in the Faculty of Medicine, University of Burundi. Informed consent form was also obtained from participants.

Results

1. The level of satisfaction of patients with health care services

Table 2 summarises results on the level of satisfaction of patients with health care services. Overall, nearly half of respondents (47%) were neutral while an additional 10% of participants reported dissatisfaction. With respect to each isolated component, the vast majority of patients reported satisfaction. For instance, more than 80% of patients agreed that they received adequate care in relation to assurance, tangibility and empathy components. However, across components, the vast minority strongly agreed with satisfaction questions. Also, while more than thirty respondents reported unreliability of health care services, none of the patients reported strong dissatisfaction irrespective of components.

Table 2. Level of satisfaction

N = 400

Component	n (percent)
Reliability	
Strongly agree	1 (0.25)
Agree	270 (67.50)
Neutral	98 (24.50)
Disagree	31 (7.75)
Responsiveness	
Strongly agree	5 (1.25)
Agree	236 (59.00)
Neutral	140 (35.00)
Disagree	19 (4.75)
Assurance	
Strongly agree	12 (3.00)
Agree	343 (85.75)
Neutral	42 (10.50)
Disagree	3 (0.75)
Tangibility	
Strongly agree	19 (4.75)
Agree	361 (90.25)
Neutral	19 (4.75)
Disagree	1 (0.25)
Empathy	
Strongly agree	6 (1.50)
Agree	356 (91.25)
Neutral	27 (6.75)
Disagree	2 (0.50)
Overall	
Strongly agree	1 (0.25)

Agree	171 (42.75)
Neutral	188 (47.00)
Disagree	40 (10.00)

2. Likelihood of satisfaction with health care services

Patients' age, gender, and health status strongly determined the likelihood of satisfaction with health care services. The older patients were, the less likely they reported satisfaction with health services. In comparison with younger patients, those aged between 36 and 55 years were five times less likely to be satisfied with health services (OR = 0.24 [0.11 – 0.53]). Above 55 years, satisfaction was ten times less likely (OR = 0.10 [0.02 – 0.38]). Evidence showed that patients presenting fragile health status were more than two times more likely to appreciate health care services than others (OR = 2.42 [1.07 – 5.44]). In contrary, education and health history have no significant impact on the likelihood of satisfaction with health care services.

Table 3. Overall likelihood satisfaction with health care services

Determinants	Base = disagree	
	e^{β}	CI
<i>Age (base = 18 – 35 years old)</i>		
36 – 55 years old	0.24	[0.11 – 0.53]
Older than 55 years	0.10	[0.02 – 0.38]
<i>Gender (base = Male)</i>		
Female	0.01	[0.00 – 0.01]
<i>Education attainment (base = None)</i>		
Primary	1.29	[0.50 – 3.27]
Secondary	1.23	[0.43 – 3.51]
Tertiary	0.88	[0.16 – 4.64]
<i>Health status before (base = Good)</i>		
Poor	1.18	[0.36 – 3.86]
<i>Health status present (base = Good)</i>		
Poor	2.42	[1.07 – 5.44]
<i>Health history (base = Yes)</i>		
No	1.74	[0.81 – 3.73]

Looked at separately, older patients were less likely to report that health care services were reliable than their younger counterparts (Table 4). Furthermore, as can be seen in Table 5, female patients were found to be more than five times less likely to appreciate the willingness of health care providers in providing prompt health care services (responsiveness). Also, Table 6 shows that female patients were nearly 10 times less likely to recognise knowledge and courtesy of health care providers as well as their ability to

inspire trust and confidence (assurance). Respondents' health status was a significant predictor of empathy. Specifically, the likelihood of patients to report that health care providers proved the ability to provide caring and individualized attention to patients was 5 times more for patients in good health status (Table 8).

Table 4. Likelihood for reliability satisfaction with health care services

Reliability (base = disagree)	e^{β}	CI
<i>Age (base = 18 – 35 years old)</i>		
36 – 55 years old	0.32	[0.17 – 0.60]
Older than 55 years	0.39	[0.15 – 0.98]
<i>Gender (base = Male)</i>		
Female	10.33	[5.95 – 17.93]
<i>Education attainment (base = None)</i>		
Primary	0.87	[0.42 – 1.76]
Secondary	1.11	[0.49 – 2.50]
Tertiary	1.65	[0.54 – 4.97]
<i>Health status before (base = Good)</i>		
Poor	1.08	[0.36 – 3.20]
<i>Health status present (base = Good)</i>		
Poor	0.89	[0.48 – 1.64]
<i>Health history (base = Yes)</i>		
No	1.56	[0.83 – 2.90]

Table 5. Likelihood for responsiveness satisfaction with health care services

Responsiveness (base = disagree)	e^{β}	CI
<i>Age (base = 18 – 35 years old)</i>		
36 – 55 years old	0.48	[0.22 – 1.02]
Older than 55 years	0.40	[0.12 – 1.29]
<i>Gender (base = Male)</i>		
Female	0.17	[0.00 – 0.03]
<i>Education attainment (base = None)</i>		
Primary	1.12	[0.45 – 2.79]
Secondary	0.45	[0.16 – 1.25]
Tertiary	0.73	[0.18 – 2.86]
<i>Health status before (base = Good)</i>		
Poor	0.87	[0.22 – 3.45]
<i>Health status present (base = Good)</i>		
Poor	1.35	[0.61 – 2.97]
<i>Health history (base = Yes)</i>		
No	1.92	[0.92 – 3.97]

Table 6. Likelihood for assurance satisfaction with health care services

Assurance (base = disagree)	e^{β}	CI
<i>Age (base = 18 – 35 years old)</i>		
36 – 55 years old	1.93	[0.82 – 4.51]
Older than 55 years	2.93	[0.81 – 10.58]
<i>Gender (base = Male)</i>		
Female	0.10	[0.39 – 0.25]
<i>Education attainment (base = None)</i>		
Primary	0.65	[0.22 – 1.89]
Secondary	1.33	[0.43 – 4.07]
Tertiary	3.07	[0.77 – 12.28]
<i>Health status before (base = Good)</i>		
Poor	4.12	[1.02 – 16.56]
<i>Health status present (base = Good)</i>		
Poor	0.40	[0.14 – 1.09]
<i>Health history (base = Yes)</i>		
No	0.74	[0.32 – 1.71]

Table 7. Likelihood for tangibility satisfaction with health care services

Tangibility (base = disagree)	e^{β}	CI
<i>Age (base = 18 – 35 years old)</i>		
36 – 55 years old	1.79	[0.59 – 3.39]
Older than 55 years	1.83	[0.31 – 10.50]
<i>Gender (base = Male)</i>		
Female	2.08	[0.79 – 5.49]
<i>Education attainment (base = None)</i>		
Primary	1.07	[0.25 – 4.52]
Secondary	0.85	[0.18 – 4.01]
Tertiary	0.90	[0.10 – 7.55]
<i>Health status before (base = Good)</i>		
Poor	1.85	[0.20 – 17.14]
<i>Health status present (base = Good)</i>		
Poor	0.67	[0.21 – 2.04]
<i>Health history (base = Yes)</i>		
No	1.09	[0.36 – 3.28]

Table 8. Likelihood for empathy satisfaction with health care services

Empathy (base = disagree)	e^{β}	CI
<i>Age (base = 18 – 35 years old)</i>		
36 – 55 years old	0.16	[0.42 – 3.19]
Older than 55 years	0.42	[0.11 – 1.59]
<i>Gender (base = Male)</i>		
Female	3.25	[1.36 – 7.77]
<i>Education attainment (base = None)</i>		
Primary	1.27	[0.43 – 3.76]
Secondary	1.29	[0.37 – 4.47]
Tertiary	2.25	[0.33 – 14.96]
<i>Health status before (base = Good)</i>		
Poor	0.22	[0.55 – 0.92]
<i>Health status present (base = Good)</i>		
Poor	4.20	[1.14 – 15.43]
<i>Health history (base = Yes)</i>		
No	1.05	[0.38 – 2.91]

Discussion

This study used cross-sectional information collected from Congolese refugees visiting CMC SOLIS clinic to assess the level of satisfaction with health care services and understand factors affecting satisfaction.

Overall, 10% of refugees were dissatisfied with health services provided by CMC SOLIS clinic. An additional 47% stood in a neutral position which can be interpreted as “unsatisfaction”. Therefore, only 43% of refugees were satisfied with less than 1% reporting strong satisfaction. More than 80% of participants agreed with questions coding for positive assurance, tangibility, and empathy. Conversely, 30% of respondents reported that health services were unreliable. In our study, satisfaction was always mild as strong dissatisfaction as well as strong satisfaction were not significantly represented among answers. Conversely to our results, a similar study conducted in Nepal found a much higher overall satisfaction level (76% of respondents) with nearly 62% of respondents reporting good appearance of physical facilities, personnel and the equipment (15). Satisfaction was again much higher in Ethiopia where 77% of patients reported having fully enjoyed health care services received from the hospital (16). Additionally, in another study in Ethiopia, satisfaction was found to be equally higher than our results with 57,1% of patients believing that health care services they received were either good or very good (17). In our study, lower satisfaction rate can be partly associated with the overall poor of health services as Burundi still struggles with the attainment of international health standards (18).

Additionally, results of our study showed that older patients were less likely to be satisfied with health care services. The satisfaction likelihood decreased with an increase in age and fell to ten times less for patients beyond the age of 55 years. Contrarily; education and health history did not have significant

impact on the likelihood of satisfaction with health care services. Furthermore, the age determined the likelihood of reliability as older patients tended to report that health services were unreliable. Also, gender was found to be an important predictor of both responsiveness and assurance. In both cases, females were more likely to appreciate health services than their male counterparts. Comparable results have widely been cited. For instance, several studies including those conducted in Ethiopia have found that age strongly predicts the level of satisfaction with health care services (16, 17). Also, researches done in Ethiopia and in Saudi Arabia confirmed that gender determines satisfaction with health care services. However, while Ethiopian, Malian, and Bangladeshis females were more likely to report better satisfaction level than males, Saudi Arabian females were rather less likely to report satisfaction in comparison with their males counterparts (19-22). While results from our study did not find impact of education on the likelihood of satisfaction with health care services, contradicting evidence exists. In Ethiopian and Pakistan for example, higher educational levels predicted lower satisfaction rates and vice-versa (23, 24).

Briefly, our results did not depart from existing evidence. Our study sample was made of participants with relatively close educational achievements with less than 10% of the participants having achieved tertiary education level. Therefore, the above fact can partly explain the absence of educational effects on satisfaction with health care services.

We acknowledge strengths and limitations of this study. On the one hand, the study used primary data from a statically representative sample and further used confidence intervals to ascertain significance of coefficients in discrete logistic models (25). On the other hand, the study is not immune for criticism. Generally, though cross-sectional designs offer evidence on associations, they do not allow to understand causality between exposures and outcomes. Also, we did not collect data from health care providers to ascertain accuracy of responses obtained from Congolese refugees.

Conclusions

Overall, results from this study claim that CMC SOLIS does not offer quality health care services to Congolese refugees living in Bujumbura. Most importantly, the quality of health care services worsened with an increasing age as older ages were associated with less likelihood of satisfaction. Therefore, with the ageing population, the above evidence has a strong policy implication to ensure that older refugees receive tailored and adequate integrated care to maintain and improve their full intrinsic and functional abilities (26). Also, health care services offered to females seem to be deficient. Henceforth, CMC SOLIS and UNHCR may need to explore avenues to ensure that females and older refugees receive appropriate health care services to meet their specific needs.

Declarations

Ethics approval and consent to participate

The study obtained the ethics clearance certificate no FM/CE/01/2018 from the Institutional Review Board based in the Faculty of Medicine, University of Burundi. Informed consent form was also obtained from participants.

Consent for publication

Not applicable.

Availability of data and materials

Data collected were retained strictly confidential and solely were used for the study purpose. The dataset is available from the corresponding author. Datasets and materials including STATA command file (dofile) can be obtained by sending a reasonable request to the first and corresponding author.

Competing interests

None.

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Authors' contributions

NM conceptualised the study and wrote the main manuscript, DH supported data analysis and the write-up of the manuscript, AR supervised the study conduct, reporting and the write-up of the manuscript and PB collected data.

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