

Factors Affecting Utilization of an Urban Community Health Center: A Cross-Sectional Study

Lissa Luz C. Calimag, MD, MPM-HSD and Marifel G. Raymundo, MD, FPAFP, MMHA

Background: The local health center (LHC) is the locus of public health service delivery in the barangays of Makati City. It should be the first-line for consultation and should be able to address most health concerns of the community. Considering the many services offered in the LHC, one must study the reasons why constituents opt to consult in the city hospital or in private institutions rather than the LHC.

Objective: This study sought to determine the correlation between community perception of the LHC and utilization of the LHC in Barangay Rizal and Barangay Southside, and the correlation between demographic variables and the utilization of the LHC in Barangay Rizal and Barangay Southside.

Methods: This is an observational study that utilized a cross-sectional survey. Utilization of the Local Health Center was operationally defined as any consultation in the local health center in the past year, regardless of occurrence of illness. The survey questionnaire had a 5-point Likert Scale and utilized the Patient Satisfaction Questionnaire-18 and added other possible factors affecting utilization based on related literature.

Results: Utilization of the LHC had a weak correlation with barangay (Rizal versus Southside), older age, and having more co-morbid illnesses. Community perception of General Satisfaction, Availability of doctors, and Availability of free medications had a weak correlation with consulting in the LHC and had good community perception ratings.

Conclusion: Patient-Doctor Relationship also showed a weak correlation with consulting in the LHC but merits attention because it had a somewhat low community perception rating.

Key words: health center, urban, utilization

INTRODUCTION

The local health center is the locus of public health service delivery in the barangays of Makati City. It should be the first-line for consultation and should be able to address most health concerns of the community. Rizal Health Center caters to the population of both Barangay Rizal and Barangay Southside. It is a fully air-conditioned facility with the following services: general consultations, consultations for the geriatric population, prenatal check-ups, dental consultation, immunization, family planning, and TB DOTS. There is also a pharmacy in the LHC where Yellow-Card holders can get their free medications. The Yellow Card is a health card issued to Makati citizens that provides benefits such as free medications, laboratories, and hospital admissions. Considering the many services offered in the LHC, we must study the reasons why barangay constituents still opt to consult in the city hospital or in private institutions rather than the local health center.

Utilization of health services may be associated with age, gender differences, educational status, and income level. Other factors also include: poor education about when to seek care, poverty, perceived high cost of services, community perception of inadequacy of available services such as lack of drugs and basic laboratory services, inadequate number of healthcare workers, poor quality of care, and proximity to the facility.¹

In the Philippines, a study conducted in Baguio General Hospital showed that 4 out of 10 patients coming to the outpatient department bypassed their nearby health care facilities in favor of the said tertiary hospital. Participants were also asked to pick one most important factor in choosing a health care facility. The top 3 factors for bypassers were 1) Availability of doctors, 2) Sufficient supply of meds, and 3) Health care service is satisfactory. For non-bypassers the top 3 factors were 1) Availability of doctors 2) Health care service is satisfactory and 3) Adequate facilities (labs, x-ray, etc.). Participants also answered the

Personal Satisfaction Questionnaire 18 (PSQ-18) with regards to the said tertiary hospital. The PSQ-18 is a validated questionnaire developed by Marshall and Hays in 1994 to measure patient satisfaction in medical care. The study by Sy et al. showed that bypassers and non-bypassers have good General Satisfaction while the lowest scores for both groups were under Technical Quality.²

Local healthcare utilization in Makati based on a community diagnosis in Southside showed that out of those who sought consultation in the past year, 65% sought consult at a public hospital, 17% at a private hospital or clinic, and only 11% consulted at a local health center.³ For Rizal, out of those who sought consultation for illness in the past year, 40% consulted at a public hospital, 33% at a local health center, and 24.5% at a private hospital or clinic.⁴ This shows that a minority of the population utilizes the services of the LHC.



Figure 1. Primary health care access framework by Penchansky and Thomas.

This study utilized the concept of access developed by Penchansky and Thomas in 1981. In this framework, the central concept of Access is similar to the concept of Utilization as operationalized in this study. Access to primary health care has five dimensions: Availability, Accessibility, Affordability, Adequacy, and Acceptability. Availability refers to the supply of services, goods, and facilities including types of services and sufficient skilled human resources. Accessibility refers to location, proximity, transportation, and travel time. Affordability refers to the direct and indirect costs of accessing the health care. Adequacy refers to the organization of services and includes the standard of the facilities and meeting user expectations. Acceptability refers to the characteristics of the health care providers matching those of patients and includes aspects of ethical standards, addressing cultural and gender differences, ensuring confidentiality, effective communication, and attitude.⁵ All the factors that affect utilization of community health centers based on the review of the related literature can be categorized under these five dimensions.

This study would provide to the public health department an understanding of how LHC services could be improved, potentially decreasing out-of-pocket costs of patients who would otherwise go to private facilities and promoting efficiency in the use of specialist care in the city hospital.

METHODS

Study Design

This was an analytical observational study that utilized a cross-sectional survey in the adopted community of the Ospital ng Makati Department of Family and Community Medicine (DFCM) under the Community-Oriented Primary Care Program. Utilization was defined as any consultation in the LHC in the past year (regardless of occurrence of illness).

Study Participants

All residents of Barangay Southside and Barangay Rizal, at least 18 years old, were potentially eligible to participate in the study. Residents who are employees or officials of the city/barangay local government unit or related by first degree to any city/barangay local government unit employee or official were excluded.

Sampling Design

The minimum sample size for a cross-sectional study was computed for a population of 98,000 (combined population of Rizal and Southside), with a confidence level of 95%, a magnitude of error of 7%, and a population proportion of 25% (average proportion of respondents who utilized the LHC in Rizal and Southside). The required sample size was 196. Zone Leaders and Street Leaders were recruited to disseminate and collect the survey among their designated households through convenience sampling.

Data Collection Procedures

The survey questionnaire was divided into Sections A, B, and C. Section A asked for demographic information. Section B and Section C utilized a 5-point Likert scale to indicate agreement or disagreement to measure perception of the Local Health Center. Section B utilized the PSQ-18 which has the following subscales: general satisfaction (2 items), technical quality (4 items), interpersonal matters (2 items), doctor-patient communication (2 items), financial aspects of care (2 items), time spent with doctor (2 items), and accessibility and convenience (4 items). Section C measured community perception regarding other possible factors affecting utilization of health centers based on related literature. Factors included in Section C were: availability of doctors, medications, and laboratories; proximity; need for Yellow card; respect for privacy; and cleanliness.

The questionnaire was in Filipino. It was pre-tested among the residents of the DFCM and health staff of the DFCM community clinics. The questionnaire underwent face validation by the consultants of

the DFCM and was then revised in order to provide more clarity and to correct any errors.

Among their designated households, Zone Leaders and Street Leaders facilitated through convenience sampling either the paper survey by visiting homes or the online survey by sending a link to an online version of the questionnaire (Figure 2).

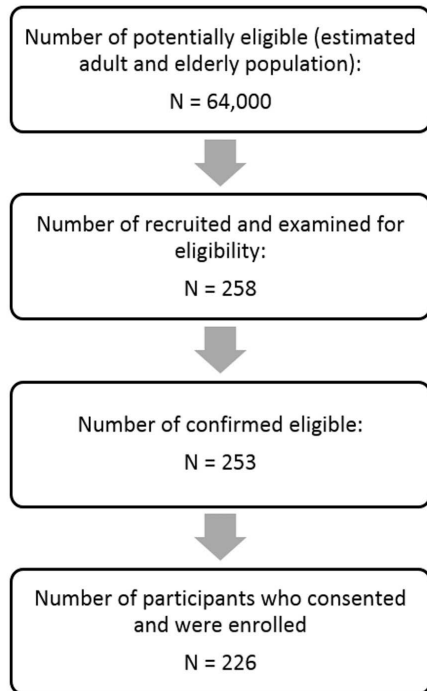


Figure 2. Recruitment and enrolment of participants.

Statistical Analysis

Results were presented as mean values of the Likert scale for the factors affecting utilization of the LHC. Measures of association such as rank-biserial correlation were used to assess the strength of correlation between the demographic factors, community perception of the LHC and utilization of the LHC.

Ethical Considerations

The nature of the research was explained to all participants of the survey. They were asked to sign an informed consent prior to participation in the study and were assured that there will be no repercussions if they choose not to take part in the survey. Privacy and confidentiality were assured by keeping all survey data in a password-protected computer and smartphone. To mitigate the risk of contracting COVID-19 during face-to-face surveys, the Zone Leaders and Street Leaders were instructed regarding proper wearing of face mask and face shield. Those with possible COVID-19 symptoms were not allowed to participate in the study and would have been referred for telemedicine to the DFCM community clinic.

RESULTS

Utilization

Out of 226 participants, only 52 participants (23%) had consulted at the local health center in the past year. To compare the results with the previous definition of utilization accounting only those who got sick, in this study 59 participants had an illness in the past year and out of those, 31 participants (53%) consulted at the LHC. There were 21 participants who consulted the LHC despite not having an illness in the past year. These 21 participants may have availed blood pressure measurement, weight-checking, vaccination, or other services.

Demographics and Utilization of the Local Health Center

Table 1. Demographic profile of participants (N=226)

Barangay	
Rizal	93 (41%)
Southside	133 (59%)
Age	
18-39	117 (52%)
40-59	92 (41%)
60-79	12 (5%)
80 and above	0
No answer	5 (2%)
Sex	
Male	59 (26%)
Female	167 (74%)
Marital Status	
Single	101 (45%)
Married	120 (53%)
Widow/widower	5 (2%)
Educational Attainment	
Elementary School	9 (4%)
High School	128 (57%)
College	70 (31%)
Postgraduate	17 (7%)
No answer	2 (1%)
Employment	
Employed	62 (27%)
Unemployed	164 (73%)
Monthly Household Income	
< 10,000	77 (34%)
11,000 - 20,000	51 (22%)
21,000 - 30,000	5 (2%)
31,000 - 40,000	2 (0.8%)
41,000 - 50,000	1 (0.4%)
No answer	90 (40%)
Yellow Card Holder	
Yes	149 (66%)
No	77 (34%)
Number of Co-morbid Illnesses (Hypertension, Diabetes, Asthma, Heart Disease)	
0	178 (79%)
1	37 (16%)
2	9 (4%)
3	2 (1%)
4	0

Table 2 shows the average community perception ratings of the LHC arranged from lowest to highest. Items with the lowest community perception ratings were Choice of doctor (2.52), Openness to non-yellow card holders (2.72), and Waiting time for consultation (3.04). This shows that participants perceived that they could not choose their doctor in the LHC and that the LHC was not open to non-yellow card holders. The rating for waiting time for consultation was near neutral, but being an item with one of the lowest scores, shows that this can be improved.

Items with the highest community perception ratings were Proximity and location (3.83), Respect for privacy (3.89), Cleanliness (3.92), Doctor's communication regarding medical procedures (3.99), and Availability of free medications (4.08). This shows that participants perceived that the LHC was not too far, that staff respected their privacy, that the LHC was clean, that the doctor's communication regarding medical procedures was sufficient, and that free medications were available.

There was no significant correlation between utilization of the local health center and the following demographics: sex, marital status, educational attainment, employment, and monthly household income. There was a significant but weak correlation with the barangay: participants from Barangay Rizal were more likely to utilize the LHC

Community Perception of the Local Health Center

Table 2. Average community perception ratings of the Local Health Center from lowest to highest (B – PSQ-18 Section B in the survey, C – section C in the survey)

Survey Item	Average Community Perception Rating
C-5 Acceptability: Choice of doctor	2.52
C-3 Open to Non-Yellow card holders	2.72
B-9 Availability: Waiting time for consultation	3.04
B-4 Adequacy: Accuracy of Diagnosis	3.12
B-16 Availability: Ease in getting appointment	3.14
B-10 Acceptability: Patient-doctor relationship	3.15
B-3 Adequacy: General Satisfaction 1	3.33
C-9 Availability: Free laboratories	3.35
B-15 Adequacy: Time Spent with doctor	3.49
C-4 Availability of doctors	3.50
B-2 Availability: Completeness of Equipment	3.50
B-13 Acceptability: Doctor's Communication	3.51
B-12 Adequacy: Time spent with doctor	3.54
B-14 Adequacy: Doctor's Clinical Skills	3.58
B-17 Adequacy: General Satisfaction 2	3.60
B-8 Availability: Referral to Specialists	3.65
C-2 Acceptability: Politeness of staff	3.68
B-7 Affordability 1	3.70
B-11 Acceptability: Respectfulness of doctor	3.73
B-5 Affordability 2	3.75
B-18 Availability of consultation as based on urgency	3.76
B-6 Adequacy: Thorough Diagnosis and Treatment	3.78
C-1 Accessibility: Proximity and location	3.83
C-6 Acceptability: Respect for privacy	3.89
C-7 Adequacy: Cleanliness	3.92
B-1 Acceptability: Doctor's communication regarding medical procedures	3.99
C-8 Availability: Free medications	4.08

than participants from Barangay Southside. There was a significant but very weak correlation with age: older participants were more likely to consult at the LHC. Utilization of the LHC also had a weak correlation with having a Yellow Card and having more co-morbid illnesses.

Table 3 also shows that items under the PSQ-18 with a significant though weak correlation with utilization of the LHC are Patient-doctor relationship (-.200, .003) and General Satisfaction (-.152, .023). The higher the community perception score for patient-doctor relationship, the more likely to consult in the LHC. The lower the community perception score for patient-doctor relationship, the less likely to consult in the LHC. Patient-doctor relationship had an average score of 3.15, which is close to the neutral score of 3.0. The result is similar for Item B-17 for General Satisfaction: the higher the score, the more likely to consult and vice versa, with an average score of 3.60. Other items of the PSQ-18 did not have a significant correlation with utilization of the LHC.

Table 3 shows that among the other factors that could possibly affect utilization of the LHC, Availability of doctors (-.226, .001) and free medications (-.212, .001) showed a significant but weak correlation. The higher the community perception score for Availability of doctors and Availability of free medications, the more likely to consult and vice versa. Availability of doctors had a good score of 3.4 and Availability of free medications also had a good score of 4.08.

The result for Item C-7 for Cleanliness (.226, .001) is unexpected since the higher the score, the less likely to consult in the LHC. The community perception score for Cleanliness was a good score of 3.92. This can be interpreted as despite having a high score for cleanliness, people would still choose to consult elsewhere than the LHC. Other items under Section C of the survey did not show a significant correlation with utilization of the LHC.

DISCUSSION

Utilization of the LHC

Using the definition of utilization used in previous Community Diagnoses by the DFCM (those who consulted among those who had an illness in the past year), there was a higher utilization of 53% versus the previous 11% in Southside and 33% in Rizal. The higher utilization among those who are ill could indicate better accessibility of the LHC due to the opening of telemedicine services. However, the overall utilization (among all participants) of 23% in this study is lower than the utilization of community health centers in other countries such as the utilization rate of 36.1% in South Korea,⁶ 76.8% in a rural community in Southern Nigeria¹ and 73% utilization of at least one clinic service in a province of South Africa.⁷

Utilization and Demographic Factors

Previous studies showed that utilization of health services is sometimes associated with age, sex, educational status, and income level.¹ The results of this study showed that increasing age was correlated with utilizing the LHC more. This could also be related to the number of co-morbid illnesses (hypertension, diabetes, asthma,

Table 3. Correlation between demographics and community perception with utilization of the local health center.

	Correlation Coefficient	Significance
DEMOGRAPHIC FACTOR		
Barangay	-.205	.002
Age	-.153	.022
Sex	.086	.200
Marital Status	-.106	.112
Educational Attainment	.090	.180
Employment	-.043	.524
Monthly Household Income	-.030	.657
Yellow Card Holder	.238	.000
Co-morbid Illness	-.346	.000
SECTION B FACTORS		
1. Doctor's communication regarding medical procedures (Acceptability)	-.058	.386
2. Completeness of Equipment (Availability)	-.109	.103
3. General Satisfaction (Adequacy)	-.101	.131
4. Accuracy of Diagnosis (Adequacy)	.058	.386
5. Without causing financial problems (Affordability)	-.120	.072
6. Thoroughness of Diagnosis and Treatment (Adequacy)	-.092	.168
7. Within capacity to pay (Affordability)	-.044	.507
8. Referral to Specialists (Availability)	-.063	.345
9. Waiting time for consultation (Availability)	.092	.168
10. Patient-doctor relationship (Acceptability)	-.200	.003
11. Respectfulness of doctor (Acceptability)	-.096	.152
12. Doctor is unhurried/Time spent with doctor (Adequacy)	.070	.294
13. Doctor's listening skills (Acceptability)	-.012	.854
14. Doctor's Clinical Skills (Adequacy)	.096	.152
15. Doctor allocates adequate time to the patient/Time Spent with doctor (Adequacy)	-.032	.637
16. Ease in getting appointment (Availability)	-.071	.288
17. General Satisfaction (Adequacy)	-.152	.023
18. Available consultation based on urgency (Availability)	-.063	.348
SECTION C FACTORS		
1. Proximity and location (Accessibility)	.055	.408
2. Politeness of staff (Acceptability)	-.060	.370
3. Open to Non-Yellow card holders (Affordability/Accessibility)	.063	.348
4. Availability of doctor (Availability)	-.226	.001
5. Choice of doctor (Acceptability)	.034	.612
6. Respect for privacy (Acceptability)	-.094	.158
7. Cleanliness of the facility (Adequacy)	.226	.001
8. Free medications (Availability)	-.212	.001
9. Free laboratories (Availability)	-.125	.061

and heart disease) being correlated with utilization of the LHC since it is expected that there would be more of these co-morbid illnesses among older patients. This may also indicate that patients with these co-morbid illnesses do not shy away from consulting at the LHC and have confidence in the ability of the LHC doctors to treat them.

Participants of Barangay Rizal were more likely to utilize the LHC than those from Barangay Southside. Since Item C-1 for Proximity and Location did not show a correlation with utilization of the LHC, the increased likelihood of utilization in Barangay Rizal may be due to a greater sense of ownership of the LHC since it is located in Barangay Rizal. Additionally, although there have been no face-to-face consultations and telemedicine has been used in the LHC for the majority of the past year, those from Barangay Rizal are closer to the LHC which they can visit to gain information on how to consult through telemedicine.

Participants who were Yellow Card Holders were more likely to utilize the LHC. Sixty-six percent (66%) of the participants were Yellow Card Holders and the rest were not. In previous years, the Yellow Card was not a requirement to consult at the LHC. In the advent of telemedicine and the use of the electronic Hospital Information System in the LHC, having a Yellow Card became a requirement for consultation.

Correlation of Community Perception of LHC and Utilization

In a study conducted in Baguio, the top 3 important factors for choosing a health care facility among bypassers of their nearby health facilities were Availability of doctors, Sufficient supply of medicines, and Satisfactory health service.² The results of this study are similar: General Satisfaction, Availability of doctors, and Availability of free medications. In addition, this study shows the importance of Patient-doctor relationship, which also showed a correlation with utilization but stood out for having a low community perception rating. One caveat is that for the majority of the past year, consultation has been conducted through telemedicine due to the COVID-19 pandemic. It may be more difficult to express empathy through telemedicine instead of appearing too formal and business-like.

The results of this study contrast with a few studies in countries such as South Korea, Albania, and rural Southern Nigeria where distance and transportation difficulties were associated with lower utilization of public primary health care facilities.^{6,5,1} Additionally, long waiting time was a barrier to utilization of a community health center in one study¹ but our results showed that long waiting time for consultation was not correlated with utilization of the LHC.

CONCLUSIONS AND RECOMMENDATIONS

The utilization rate of the LHC was 23% of all participants. Utilization of the LHC had a significant but weak correlation with barangay (Rizal versus Southside), older age, and having more co-morbid illnesses. Although Waiting Time for Consultation had one of the lowest community perception ratings, the ratings did not show a correlation with consulting at the LHC. Patient-Doctor Relationship merits attention because it had a somewhat low community perception rating and showed a significant weak correlation with consulting in the LHC. Other factors which showed a significant weak correlation with consulting in the LHC were General Satisfaction, Availability of doctors, and Availability of free medications but these had good community perception ratings.

The results of this study cannot be easily extrapolated to the entire community of Rizal and Southside due to the nonprobability sampling method used. It is recommended that further studies be done using a randomized sampling method to increase the reliability of the results. It is also recommended to assess the LHC through other measures other than community perception such as the World Health Organization Service Availability and Readiness Assessment (SARA) and the Primary Health Care Performance Initiative (PHCPI) Conceptual Framework in order to form a more complete assessment of the local health centers.^{8,9,10}

Conflict of interest

The researcher declares no conflict of interest.

REFERENCES

1. Adam V and Awunor N. Perceptions and factors affecting utilization of health services in a rural community in Southern Nigeria. *J. Med. Biomed Res* 2015; (13): 117-24.
2. Sy EH, Danganang HD, Alunes JL. Factors affecting bypass of local health care facilities in a tertiary hospital: a key to utilization of primary health care services. Poster Presentation of the Philippine Academy of Family Physicians Annual Convention; 2019 March 7-9; Manila, Philippines
3. Ospital ng Makati Department of Family and Community Medicine. Barangay Rizal zones 9-15 & Pabahay community diagnosis. 2021 [unpublished observations]
4. Ospital ng Makati Department of Family and Community Medicine. Barangay Southside community diagnosis. 2018 [unpublished observations]
5. Gabrani J, Schindler C & Wyss K. Factors associated with the utilisation of primary care services: A cross-sectional study in public and private facilities in Albania. *BMJ Open* 2020; (10):e040398.
6. Han KT, Park EC, Kim, SJ. Unmet healthcare needs and community health center utilization among the low-income population based on a nationwide community health survey. *Health Policy* 2016; 120(6): 630–7.
7. Nteta TP, Mokgatle-Nthabu M & Oguntibeju OO. Utilization of the primary health care services in the Tshwane region of Gauteng province, South Africa. *PLoS One* 2010; 5(11): e13909
8. Gage AD, Leslie HH, Bitton A, Jerome JG, Joseph JP, Thermidor R, Kruk ME. Does quality influence utilization of primary health care? Evidence from Haiti. *Global Health* 2018; 14(1): 1–9.
9. Primary Health Care Performance Initiative. The PHCPI conceptual framework. 2018. [cited November 11, 2021]. Available from: <https://improvingphc.org/phcpi-conceptual-framework>
10. World Health Organization. Service availability and readiness assessment (SARA) reference manual version 2.2. 2017, July 1. [cited November 11, 2021]. Available from <https://www.who.int/publications/i/item/WHO-HIS-HSI-2014.5-Rev.1>