Health Services Utilization and Customer Satisfaction in the Inter-Local Health Zones in Lanao del Norte, Region X

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Abstract

Despite the health reforms instituted by the Philippine government to improve the delivery of health care services, the stigma of poor health conditions continues to prevail in the country. This study aims to determine the levels of awareness, utilization of and satisfaction on the health care services available in the District Hospitals (DHs), Rural Health Units (RHUs), and Barangay Health Stations (BHSs) of the various Inter Local Health Zones (ILHZs) in Lanao del Norte. In order to meet these goals, descriptive statistics was employed. Through unaided and aided recall, the study found that respondents are more aware of immunization, laboratory, out-patient, and prenatal services; more proportion of respondents seek illness-related care in district hospitals and preventive care from Barangay Health Stations; respondents were satisfied with the quality of health care in District Hospitals, Rural Health Units, and Barangay Health Stations. The respondents also identified

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that spiritual care is the most important service attribute while neatness of employees is the least important service attribute. Accordingly, some recommendations are forwarded: to provide trainings on interpersonal communication, service excellence, project proposal writing, information and education campaigns on preventive care services. These recommendations are geared towards future research directions while at the same time addressing the allocation and distribution of medicines to the local health care facilities in Inter Local Health Zones with particular attention to Barangay Health Stations.

Keywords: Health care services, utilization, awareness, satisfaction, Lanao del Norte

Rationale

Health conditions in the Philippines remain among the poorest in East Asia despite the presence of some modern medical facilities in major cities in the country (The Healthcare System in the Philippines, 2001). Thus, the country's Department of Health adopted the Formula One Program whose objectives are: better health outcomes, more responsive health system, and equitable healthcare financing (Department of Health, 2011). This program utilizes the structures resulting from the implementation of E.O. 205 – the Inter-local Health Zones.

An Inter Local Health Zone (ILHZ) refers to a district or a catchment area composed of a number of neighboring municipalities whose main function is to improve networking and to strengthen cooperation among themselves with regard to health matters (Department of Health, 2011). The intended functions of the ILHZ are to formulate, implement and evaluate: 1) local health plans, 2) health information system, 3) two-way referral system, 3) health resources management and development system, 4) health care financing, 5) hospital regulation and management, 6) community mobilization, and 7) benefit monitoring and evaluation (Department of Health, 2011).

Despite these reforms, it has been observed that some policies are poorly implemented as well as financial, and institutional challenges and issues haunting the country's health services delivery system. These

realities raise several questions particularly in Lanao del Norte, Philippines: (a) How far the local health units have gone in terms of health and services utilization advocacy to their constituents in their respective areas? (b) Are the identified health services for each unit accessible for utilization? (c) How satisfactorily have the local health units served their clientele? The rationale for embarking into this study is grounded on the imperative need for improvements in the delivery of health services, most especially to the marginalized sectors of the province.

Review of Related Literature

a. *Anderson and Newman's behavioral model of health services use*

The goal of a local health care delivery system is accessibility such that when there is a need for specific medical attention, local constituents are able to avail. According to Andersen (1995), access does not simply pertain to actual use of health services and accordingly he postulated several concepts of access, namely: potential access, realized access, equitable access, In a later improvement of the early behavioral model of health services use, Andersen (1995) integrated these factors as illustrated in Figure 1.

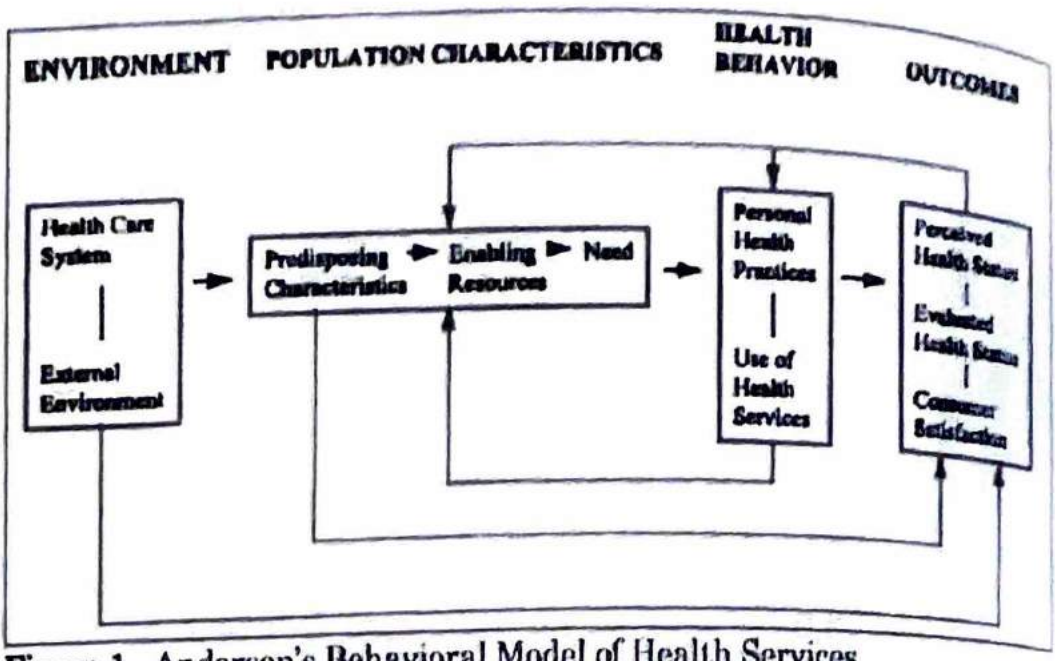

Figure 1. Anderson's Behavioral Model of Health Services Use. (Andersen R. M., 1995)

The theoretical framework of the study uses Andersen's behavioral model of health services use. In this model, utilization of health services is posited to be determined by three factors: predisposing characteristics of the individual; enabling resources or the ability to secure health care services; and need or the illness and the severity of it which eventually establishes whether there is a need for specific health care services (Insaf, Jurkowski, & Alomar, 2010). On the other hand, consumer satisfaction (or lack thereof) is illustrated as outcomes when there is use of health care services. Moreover, it is emphasized in this model that consumer satisfaction is not necessarily part of a cause-and-effect relationship with health care services use but rather is a means of evaluating access to medical care (Andersen R. M., 1995; Aday & Andersen, 1974)

b. Predisposing characteristics and health care services utilization

There are attributes that individuals possess before an incidence of any illness that determines an individual's inclination to avail of medical or health care services (Andersen & Newman, 1973). Aday and

Anderson (1974) and Anderson (1995) call these attributes as predisposing characteristics such as age, gender, marital status, education, and ethnicity among others.

The literature is replete with empirical evidence supporting the significant correlation between age and utilization of health care services (Surood & Lai, 2010; Dhingra, Zack, Strine, Pearson, & Balluz, 2010; Blackwell, Martinez, Gentleman, Sanmartin, & Berthelot, 2009). In a study of African – Americans and Hispanics in the U.S., older individuals were more inclined to admit that they have availed of diagnosis for their medical conditions compared to younger individuals (Ani, Bazargan, Bazargan-Hejazi, Andersen, Hindman, & Baker, 2008). In the Philippines, the use of medical services appears to diminish as an individual advances in age. Ching (1992) pointed human capital theory underlying this relationship and further explained that Filipino families are inclined to spend more for members who have greater economic contribution to the household.

Gender has also been found to significantly influence utilization of health care services. In a study of individuals from Ethiopia (Fitsum, Challi, & Belaineh, 2011), young adults from Australia (Parslow, Jorm, Christensen, & Jacomb, 2002), community – dwelling individuals from the U.S. (Dhingra, Zack, Strine, Pearson, & Balluz, 2010), and low – income U.S. residents (Broyles, McAuley, & Baird-Holmes, 1999), it was found that females were more inclined to see and visit a doctor than their male counterparts.

Meanwhile, there is also empirical evidence that marital status is a significant predictor of utilization of health care services (Fitsum, Challi, & Belaineh, 2011; Dhingra, Zack, Strine, Pearson, & Balluz, 2010). However, there are contradicting results in this relationship, which may be due to the interaction effects of gender. For instance, married women were more likely to avail of health care services among Hispanics (Insaf, Jurkowski, & Alomar, 2010), Australians (Parslow, Jorm, Christensen, & Jacomb, 2002), and Chinese immigrants in Canada (Chen, Kazanjian, & Wong, 2008). However, in the same study of Chen, Kazanjian, and Wong (2008) single men were found to have higher tendencies to visit a doctor.

There is also evidence that education is a significant factor of utilization of health care services. In Canada and the U.S., individuals with lower educational attainment have been found to have fewer

contacts with physicians than those with higher educational attainment (Blackwell, Martinez, Gentleman, Sanmartin, & Berthelot, 2009).

Several studies also provide support to the correlation between ethnicity and utilization of health care services. In the U.S., for example, black non – Hispanics, Hispanics, Asians, or other racial ethnic groups (Dhingra, Zack, Strine, Pearson, & Balluz, 2010)were significantly less likely to avail of health care services compared to white non – Hispanics and blacks visit doctors more frequently than other ethnic groups (Broyles, McAuley, & Baird-Holmes, 1999).

c. *Enabling resources and health care services utilization*

The second group cluster of factors affecting utilization of health care services are labeled as enabling resources. These resources facilitate the use of health care services (Andersen, McCutcheon, Aday, Chiu, & Bell, 1983). Several factors have been identified as enabling resources - income, employment, and health insurance coverage.

The significant relationship between income and health care use has been supported by a number of studies. However, the direction of these reported significant relationships are not consistent. For example, lower income groups in the U.S. have lower likelihood of physician visits (Blackwell, Martinez, Gentleman, Sanmartin, & Berthelot, 2009); but another study in the U.S. by Dhingra, et al., (2010) found that individuals whose annual $50,000 were more inclined to avail of psychiatric services than those whose annual household income is $75,000 or higher. In Australia, young adults who reported that they have experienced financial problems the prior year have higher tendencies to visit generalist physicians (Parslow, Jorm, Christensen, & Jacomb, 2002).

Meanwhile, a number of studies have identified nature of employment, that is, whether full-time or part-time, as a factor of health care use (Hammond, Matthews, & Corbie-Smith, 2010; Parslow, Jorm, Christensen, & Jacomb, 2002). In the Philippines, employment means that the household has a source of income, which has been earlier identified as a significant predictor of health care services utilization.

Several studies support the relationship between health insurance coverage and health care services use. Latin Americans who are uninsured in the U.S., for instance, are more prone to delay in seeking health care than those who are insured (Insaf, Jurkowski, & Alomar, 2010). In another study using secondary data from the

Philippines' social health insurance, findings indicate health care system variables, category and type of hospital, need aspect, and the nature of medical case were predominant determinants of health care utilization measured in terms of reimbursement and the duration of stay (Lequias, Kimsspee, & Sakulbamrungsil, 2002).

Meanwhile, it has been argued that "health information is an important factor determining the demand for medical care" (Chen, Lin, & Lin, 2013, p. 247). On a similar note, Starrett, Wright, Mindel and Tran (1989) stressed that awareness of social services is an essential enabling factor for service use following the behavioral model of service utilization of Andersen and Newman (1973). Mindel and Wright (1982) share the same view that perceived number of services available is directly related with health care service use. In studies among elderly individuals, awareness of existing services consistently turns out as a significant factor of service use (Moon, Lubben, & Villa, 1998). In a focus group discussion by Birmeta, Dibaba, and Woldeyohannes (2013), lack of awareness was among the reasons pointed out by participants for not availing of ante-natal care. This was quantitatively validated by the works of Worku, Yalew, and Afework (2013), Olayinka, Achi, Amos, & Chiedu (2014) and (Alvaro & Oducado, 2015).

A closer scrutiny of all these aforementioned studies suggests some similarities in the findings considering that the locales of these studies are developing countries. It is noted, though, that utilization has been measured in several different ways by scholars such as incidence of visit (dichotomous variable), amount of reimbursement for health services availed, length of stay in a health care facility, and delay in seeking health care. It is also observed that there are similarities in methodology among the studies cited. For instance, scholars usually apply Poisson regression and logistic regression. These observations guided the researchers in the design of this study.

d. Satisfaction of health care services

"Consumer satisfaction plays an increasingly important role in quality of care reforms and health-care delivery" (Bleich, Özaltin, & Murray, 2009, p. 271). Moreover, it is regarded as among the several intended outcomes of health care and has been argued to share a direct relationship with health care services use (Assefa, Mosse, & Hailemichael, 2011). Zapka, Palmer, Hargraves, Nerenz, Frazier, &

Warner (1995) and Stewart, Stewart, & Roter (1989) posited that satisfied patients are more prone to complete treatment procedures and are more inclined to be compliant and cooperative. Moreover, the extent of clients' satisfaction can be a gauge in determining the quality of health care and personnel. It indicates the capability of the health care provider to meet the clients' needs. Contended clients are more inclined to utilize the health care services and adhere to the therapeutic health regimens suggested by the health care providers (Mohamed, 2011).

In 2006, Social Weather Stations reported that satisfaction levels on government hospitals increased +37 from +30 in 2005. Excellent service and affordability are the main reasons for being satisfied whereas poor service is the main reason for being dissatisfied with the services given by government hospitals (Department of Health, 2015). It is important to note, though, that "patients are often generally satisfied with the healthcare they receive although they may not be uniformly satisfied with all aspects of care" (Villaruz-Sulit, Dans, & Javelosa, 2000).

Objectives of the Study

The primary aim of this study is to determine the nature and level of awareness and utilization and the level of satisfaction of residents towards health services provided by the Inter-Local Health Zones in Lanao del Norte.

Specifically, the study seeks to meet the following objectives:

a. To determine the level of the respondents' awareness towards health services available within their inter-local health zone;
b. To determine the respondents' nature and level of utilization of the health services available within their inter-local health zone;
c. To determine the respondents' level of satisfaction towards the health services available in district hospitals, Rural Health Units, and Barangay Health Stations;

Methodology

This study employs the descriptive research design and the unit of analysis is the health service beneficiary. Respondents identified for the BHS leg of the study are residents of eight deliberately chosen municipalities in Lanao del Norte. There was no sampling frame referred to in choosing actual respondents. However, based on the population information from the website of the Department of Interior and Local Government – Region 10, a sample size of 382 was estimated using Slovin's formula and considering a 95% confidence interval and 5% margin of error. As for the number of respondents for the RHU and district hospitals leg of the study, a sample size of 96 was determined using Slovin's formula while considering a 95% confidence level and a 10% margin of error. This target sample size was proportionately divided per RHU and district hospitals. Convenience sampling was carried out in selecting majority of the actual respondents primarily utilizing the "man-on-the-street" intercept technique while a few have been chosen from referrals. In the case of the BHS leg of the study in Tubod, Lanao del Norte, almost 80% of the respondents were chosen from the individuals who availed of health services during a province-sponsored free clinic activity during the scheduled data gathering. It must also be noted that the researchers chanced upon a data enumerator who had access to Sapad, Lanao del Norte and considering the value of additional information, was consequently included in the BHS leg of the study.

The profile of the respondents shows that more than half of the RHU and BHS respondents, both each at approximately 55%, are in the age bracket 21- 40 years old. The number is lower in the DHs where approximately 42% belong to the same age cluster of 21 – 40 years old. Furthermore, regardless of the sample sites, 4 out of every 10 of the respondents are 41 years old or older. The respondents of the 20 and below age category comprise the least as only 4.2% was noted at the RHU, 4.7% at the BHS, and 14% at the DH. Respondents in the 3 sample sites are mostly women, as 8 to 9 of every 10 of them are females. It is also observed that approximately 54% to 76% of the respondents are legally married, with those from the MHU registering the highest. There are more single respondents at the DH compared to the BHS, and the less of all at the MHU, that is 17%, 13%, and 10%, respectively. A bit higher than one-fourth, that is approximately 26% of the DH respondents, are common law partners. Also, this marital relationship is expressed by

respondents at the BHS and MHS, 12% and 10%, respectively. Widowers are noted as clients at the BHS registering at 9% and each at 3% for the DH and MHU. A few of the respondents from the BHS (1.6%) and MHU (1.0%) are separated. Single parents, approximately 2% of them, are all coming from the BHS.

In terms of highest educational attainment, majority of the DH and MHU respondents are elementary graduates compared to those coming from the BHS. That is, approximately 42% for the DH and 43% at the MHU, whereas only 28% from the BHS. However, respondents who are high school graduates registered highest from the BHS as revealed by 46%, followed by the DH respondents with 40%, and approximately 30% only from the MHU. Moreover, college graduates at the BHS sample site are noted highest, recorded at approximately at 19%, followed by 14% at the MHU, and about 8% of the DH respondents.

In all 3 sample sites, unemployment is reported by at least 5 to 7 of every 10 respondents. On the other hand, self-employment is the source of living by approximately 29% of the BHS respondents, about 25% in the case of DH clients and approximately 16% from the MHU group. Having a full-time job, either local or abroad, is revealed by about 21% of MHU respondents and approximately 13% and 6% from the BHS and DH, respectively. A very few from each of the sample sites are working on part-time as reflected in their respective responses ranging from about 3% to 1%. Meanwhile, the absence of ethnic affiliation is predominant at the BHS cluster recorded approximately at 97%; from the DH group at 91%; and from the RHU at about 98%.

In all 3 sample areas, the national government was declared as the source of the health insurance coverage with replies ranging from slightly higher than 85% from the DH respondents to approximately 75% each from either the RHU or BHS clients. Another source is the LPs, as stated by approximately 27% of the DH subjects, followed by 21% from the MHU, and a bit higher than 18% of the BHS respondents. For the DH and RHU sample areas, all respondents are recipients of government - financed health insurance services. Likewise, a large number of the BHS clients, that is 98.2% are availing the health insurance coverage of either the national or provincial government. The very few of the BHU subjects, approximately 2%, have health insurance coverage provided by private enterprises or cooperatives.

In terms of estimated average gross monthly household income, proportions in Table 6 show that more than three-fourths of the DH respondents, that is, 77.5%, have average gross monthly household income (AGMHH) of Php5,000.00 or less. At the RHU sample sites, respondents earning Php5,000.00 or less are recorded at 69.5%, whereas a total of 66.5% of the BHS respondents have the same level of AGMHH. The observed median AGMHH at the respective sample areas reveals that there are fewer respondents at the DH and those at the RHU having AGMHH between Php 5,001 to more than Php 20,000.00. Specifically, the data on Table 6 shows approximately 34% for BHS, 30% for RHU, and about 22% for DH.

Meanwhile, actual data gathering was conducted from February to May 2015 with the assistance of trained field researchers using the survey method. Prior to their engagement, the field researchers were oriented and trained on the objectives of the study and the survey instrument including the translation of the items. Entry protocols were also conducted with the Office of the Provincial Governor and the respective Municipal Mayors before the data collection. Additionally, informed consent of each respondent was secured prior to actual gathering of data through personal interviews.

Measures for each variable were adapted from various research works to address the objectives of the study. *Predisposing variables* such as gender, age, civil status, education, and ethnicity were based on studies such as those of Thode, Bergmann, Kamtsiuris, and Kurth (2005) and Afilalo, et al (2004). *Enabling factors* in the study, namely, income, nature of employment, health insurance coverage were culled and adapted from the works of Blackwell, Martinez, Gentleman, Sanmartin, and Berthelot, 2009 (2009), Brown, et al. (2004), Andersen, Yu, Wyn, Davidson, Brown, and Teleki (2002) and Parslow, Jorm, Christensen, and Jacomb (2002). Measurement of *awareness*, on the other hand, is adapted from the technique of Roberto (2006). The technique asks for unaided and aided recall of services available in a specific local health facility. The *need factor* was measured in terms of self-reported health reasons for the respondent's last visit in a local health facility as proxy for self-reported or perceived health status (Blackwell, Martinez, Gentleman, Sanmartin, & Berthelot, 2009; Thode, Bergmann, Kamtsiuris, & Kurth, 2005; Afilalo, et al., 2004; Andersen, Yu, Wyn, Davidson, Brown, & Teleki, 2002). Anchored on Andersen's (1995) behavioral model, utilization of health services is measured in terms of purpose and volume. Specifically, the

reasons of the respondents in their most recent visit to the local health facility were classified as illness-related care and preventive care (Andersen & Newman, 1973). Particularly for this study, reproductive and maternal care is classified separately. Volume, on the other hand, is measured specifically in terms of the number of times the respondent have visited a particular local health facility since 2012 until the schedule of data collection which is May 2015.

In this study, satisfaction was measured using the SERVQUAL questionnaire used in the work of Babakus and Mangold (1992). SERVQUAL is a measurement model capturing the perceptions of respondents on the quality of service of a specific establishment in terms of five dimensions, namely: tangibles, relinbility, responsiveness, assurance, and empathy. In this study, these dimensions are measured in five-point Likert scales where 1 stands for "strongly disagree", 2 stands for "disagree", 3 stands for undecided, 4 stands for "agree", and 5 stands for "strongly disagree". Moreover, in this study, higher levels of agreement are construed as higher satisfaction levels. The relinbility index of each SERVQUAL dimension during the pretest was greater than the acceptable level of 0.70.

Frequencies, percentages and proportions as well as measures of central tendency were utilized in analyzing the data.

Limitations of the Study

This study is focused on the nature and level of awareness and utilization and the level of satisfaction of residents towards health services provided by the three units of inter-local health zones in Lanao del Norte namely, the barangay health stations (BHS), the rural health units (RHUs), and the district hospitals. The study did not delve into the efficiency of the referral system within an ILHZ.

The respondents of the study are limited to patients and clients of these three categories of health care service providers within four ILHZs in the province. These are: (1) MgaBaTangMaiK, (2) LaMBaT, (3) SaNLaKaSS, and (4) MP3.

The study recognizes several limitations.

a. The selection of actual respondents during the actual data collection. Considering the scope of the study, "man-on-the-street" intercept

technique was employed in the identification of respondents to interview for RHU and district hospital and convenience sampling was used at the barangay health stations. These approaches may affect the representativeness of the population in the sample.

b. The inherent nature of perceptions data used, particularly in measuring client satisfaction. Perception surveys are known for issues on reliability due to social desirability bias and recall bias, among others. Perceptions are also shaped by many factors that may not be captured in the survey such as the respondents' personal situation and background and belief system (Herbert, 2013).

c. The bootstrapped approach to path analysis was used to examine the relationships among the variables where such approach "does not rely on statistical assumptions about the population to assess statistical significance but instead makes its assessment based solely on the sample data" (Hair, Black, Babin, & Anderson, 2010, p. 2), the results of the study may only be relevant to and generalizable in the context of Lanao del Norte.

Discussion of Results

Awareness on health services available in the LDN ILHZs

Investigating the top of mind services available in district hospitals through unaided recall, it appears that respondents are more familiar with laboratory services as x – ray and urinalysis had the most number of 1st mention and 2nd mention, respectively. X – ray is usually needed in screening for tuberculosis and for employment purposes while urinalysis is needed for kidney - related illnesses treatment. This could be the reason why internal medicine, particularly that pertaining to kidney – related illnesses has a relatively high incidence of 1st mention. It was also observed that more respondents are aware of immunization in district hospitals as it has the highest incidence of 1st and 2nd mention, combined. This may be due to more frequent visits to the hospital for this purpose and therefore is easily remembered. Respondents were also aware of birthing services in district hospitals, as it was either mentioned first or third through unaided recall.

Still employing the unaided recall technique, respondents are most aware of immunization among all services in the RHUs as it has the most incidence of either 2nd mention or 3rd mention (16.8%). Immunizations are usually scheduled and are regularly administered thus entailing more visits to the RHUs and increasing memory retention. Among all services available in RHUs, however, OPD has the highest incidence of 1st mention (12.6%).

For services available in BHUs, respondents are most aware of immunization as a total of 50.8% of the respondents either mention it first, second, or third through unaided recall. It was also observed that almost 25% of the respondents are more aware of prenatal care since it is either mentioned first or second through unaided recall.

Investigating awareness of health care services through aided recall, it was found that pharmaceutical services or that pertaining to medicine for various illnesses garnered the highest incidence of aided recall. It is followed by transportation services or that pertaining to the use of ambulance to transport patient from one health care facility to the referred facility or from the location of patient to a health care facility. It can also be deduced that respondents are more aware of laboratory services available in district hospitals compared to other services. This could imply that these services are only available in primary care facilities such as district hospitals.

Still utilizing the aided recall technique, it is worthy to note that respondents were most aware of immunization as one of the services available in RHUs while internal medicine, particularly that pertaining to hypertension comes second in terms of aided recall. This latter case could be attributed to rampant cases of hypertension among residents of Lanao del Norte. Coming in third on the list belong to reproductive and maternal care services, specifically family planning and birthing. This relative high incidence of aided recall for these two services can be attributed to the predominance of married women in the sample.

For the health services available in the BHSs respondents were aware of but were determined through aided recall, respondents are most aware of immunization among all services available in BHSs. This is followed by family planning. As earlier explained, this result could be due to the predominance of women in the sample who personally attends to either the immunization of their children or to family planning measures thus, increasing memory retention of these particular services.

It is important to note that in the BHS survey, one respondent claimed to be aware that the BHS renders dilation and curettage through aided recall (ranked 17th). During the validation of results, it was clarified that BHSs are not allowed to perform dilation and curettage. Consequently, the specific health care service was excluded from the list.

Utilization of health services available in the LDN ILHZs

Health-seeking behaviors of Filipinos remain a pressing issue (Romualdez, et al., 2011) in the Philippines. Utilization of health services, thus, becomes a crucial concern in public health policy. However, the goal is not necessarily to increase utilization of health care services in general but to specifically increase preventive care use in order to achieve MDGs on eradication of extreme poverty and hunger, reduction of child mortality, improvement in maternal health, and reduction of incidence of HIV/AIDS, malaria, and other diseases.

In Lanao del Norte, survey results show that higher proportion of respondents seek illness-related care in district hospitals while more proportion of respondents seek preventive care from Barangay Health Stations (see Table 1). Similar to South Africa, district hospitals in the Philippines carry out three critical roles in an operational and well-functioning health system, to wit: (1) provide support in terms of clinical care and "public health expertise" to health workers stationed in clinics and community health facilities; (2) provide first level hospital care for the district; and (3) serve as the referral hospital from other health care facilities for higher levels of care, when needed (McCoy, 1998). These functions of district hospitals may likely be the reason why more illness – related care are utilized in district hospitals than in other health care facilities especially that it is not as costly as that of private health institutions.

Table 1. Health care services utilization in terms of purpose and volume

	District Hospitals		Rural Health Units		Barangay Health Stations	
	f	%	f	%	f	%
Purpose						
Illness-related care	59	63.4	34	35.8	87	20.4
Preventive care	15	16.1	47	49.5	284	66.5
Reproductive and maternal care	3	3.2	14	14.7	47	11.0
Meeting					2	0.5
Documentary requirements					6	1.4
Patient company	16	17.2			1	0.2
Total	93	100.0	95	100.0	427	100.0
Volume						
2015	150	84.3	382	29.6	972	28.0
2012 – 2014	28	15.7	907	70.4	2,503	72.0
Total	178	100.0	1,289	100.0	3,475	100.00

It is also observed that preventive care has the highest utilization in RHUs. A possible explanation for this is that RHUs are located in the commercial part of the municipality where population is denser. Given the proximity of RHUs to a substantial number of municipality residents, utilization of preventive care is likely to be high. Moreover, RHUs provide more comprehensive preventive care compared to BHSs.

In terms of volume, BHSs have the highest utilization within a 3.5 – year period from 2012 to middle of 2015. This utilization volume may be attributed to the inherent frequency of the performance of services available in BHSs such as family planning and prenatal, which must be availed at most once every month and every month, respectively. District hospitals have the lowest utilization volume from 2012 to middle of 2015 since the services availed in district hospitals are more illness

related and may not require repetitive visits to the said health care facility.

A closer look at the different health units show that urinalysis is the most frequent service utilized in district hospitals. This test is employed for hypertensive patients and those with recurrent urinary tract infections for the sole purpose of early detection of chronic kidney disease or chronic renal failure (Snyder & and Pendergraph, 2005). According to Antonio Paraiso, DOH program manager for the Philippine Network for Organ Sharing, there are almost 130 persons per million-population getting sick of kidney failure each year as of 2013 (Crisostomo, 2014). This can possibly explain the high utilization of urinalysis in the sample sites.

X – ray is the second highly utilized service in district hospitals in Lanao del Norte. It must be noted that the Philippine Health Statists reported that among the top ten (10) causes of mortality in the Philippines, three (3) of which are related to respiratory problems, namely: pneumonia (Top 4), tuberculosis (Top 6), and chronic lower respiratory disease (Top 7) (Mella, 2013). These types of diseases require the utilization of pulmonary function tests such as x - ray. Pulmonary function tests (PFTs) are routinely used in patients with chronic respiratory disorders and are performed to evaluate respiratory function as well as ascertain the degree of dysfunction (Smeltzer, Bare, Hinkle, & Cheever, 2014). This could be an explanation to the respondents' utilization of X- ray radiologic services.

Poor utilization of health care services from year 2012 – 2014 was also observed. There are a variety of factors that have been identified as the leading causes of poor utilization of primary health care services and these include, poor socio-economic status, lack of physical accessibility, cultural beliefs and perceptions, low literacy level of the mothers and large family size (Shaikh & Hatcher, 2005). Another possible explanation would be the recency bias where individuals tend to remember more recent events and impressions than much earlier ones.

In the RHUs, immunization, out-patient services, internal medicine (hypertension - related), family planning, and prenatal are the five highly utilized health care services in RHUs. Three of these services – immunization, family planning, and maternal care – have been identified by Lavado, Sanglay-Dunleavy, Jimenez, and Matsudaz (2010) as the most utilized services in RHUs.

The least utilized among the health care services offered in the Rural health units are dental, ambulance, medico –legal, and birthing. A possible explanation for this utilization behavior is that individuals may not be aware of the availability of these services in the RHUs. Starrett, Wright, Mindel and Tran (1989) have emphasized that awareness of social services is an essential enabling factor for service use.

It is worthy to note that for both surveys in district hospitals and RHUs combined, newborn screening was one of the least utilized health care services. In fact, it was brought up only in the RHU survey and not in the district hospital survey. This low utilization is substantiated by the findings of the study on awareness where only one instance of recall was noted for newborn screening from the RHU survey and none in the district hospitals.

On the other hand, immunization is consistently the most availed service in BHSs. As earlier pointed out, immunization is inherently a regular health activity for children whose utilization is further magnified due to the number of children a household may have. Thus, it appears to be the most accessed service.

The next highly utilized service in the BHSs is health education. This implies that Barangay Health Workers (BHW) are able to encourage more individuals to attend their health advocacy undertakings. Aside from house-to-house health – related information campaigns, BHSs also conduct health education sessions in their respective stations such as those well – attended by senior citizens. Moreover, BHWs usually live in the barangays that they are serving thus their social ties with the residents in the barangays positively reinforce residents to join in health education activities.

Satisfaction on the health services in the LDN ILHZs

According to Andersen (1995), client satisfaction is one of the expected outcomes of health care services use. In this study, satisfaction is measured in the aspects of tangibles, reliability, responsiveness, assurance, and empathy. Levels of satisfaction are interpreted corresponding to the degree of agreement or disagreement to the criterion statements.

1. District Hospitals

Results in Table 2 show that among the five aspects of health care services delivery, responsiveness garnered the highest mean score of 3.9928 while empathy garnered the lowest mean score with a value of 3.8145. Health care personnel may find it challenging to show empathy to clients considering that many of these individuals are one time walk in patients or service consumers. Another possible explanation for low mean score for empathy is the work – related stress that is inherent in the jobs of health care professionals. Severe distress may result which consequently hamper health care workers to provide high quality health care (Ruotsalainen, Verbeek, Mariné, & Serra, 2015). Moreover, the relatively low rating of empathy may imply that there is a need to "improve health care provider - patient empathy skills, since empathy is universally deemed as vital in achieving higher patient satisfaction and improvement in health outcomes" (Lundy, 2015).

The tangibles of health care services quality include up to date equipment, availability of medicines, pleasing physical facilities, and neat personnel. Among these criteria, availability of medicine got the highest mean score of 4.04 while physical facilities got the lowest mean score of 3.67. This perception on the quality of physical facilities in government health care facilities seem to be shared by those of Bangladesh where facilities of privately-owned hospitals, which include buildings, cleanliness, light, and ventilation, are perceived favorably compared to government-owned ones (Hossain, Ferdousi, Biswas, Mahfuz, & Biswas, 2012). Availability of medicine and updated medical equipment are among the aims of ILHZs through its health resources management function.

Table 2. Level of satisfaction on healthcare services rendered in district hospitals

Criteria	Item Mean	Std. Dev	Inter-pretation*	Mean	Std. Dev.	Inter-pretation*
Tangibles						
1. The hospital has up-to-date equipment.	3.73	0.899	A	3.8226	0.56456	A
2. The hospital has the available supply of medicine needed for my sickness.	4.04	0.606	A			
3. The hospital's physical facilities are visually appealing.	3.67	0.925	A			
4. The hospital's employees appear neat.	3.85	0.820	A			
Reliability						
5. The hospital provides its services at the time it promises to do so.	3.99	0.699	A	3.9570	0.54626	A
6. When patients have problems, the hospital's employees are sympathetic and reassuring.	3.92	0.850	A			
a. When patients have problems, the hospital's doctors are sympathetic and reassuring.	3.97	0.814	A			
7. The hospital is accurate in its	3.95	0.728	A			

Criteria	Item Mean	Std. Dev	Inter-pretation*	Mean	Std. Dev.	Inter-pretation*
billing.						
Responsiveness						
8. The hospital's employees tell patients exactly when services will be performed.	4.01	0.667	A	3.9928	0.56888	A
9. Patients receive prompt service from the hospital's employees.	3.89	0.866	A			
10. The hospital's employees are always willing to help patients.	4.08	0.647	A			
Assurance						
11. Patients feel safe in their interactions with the hospital's employees.	3.85	0.884	A	3.8996	0.58107	A
12. The hospital's employees are knowledgeable.	4.04	0.569	A			
13. The hospital's employees are polite.	3.81	0.970	A			
Empathy						
14. The hospital's employees give patients personal attention.	3.85	0.751	A	3.8145	0.59196	A
15. The hospital has their patients' best interests at heart.	3.97	0.827	A			
16. The hospital's employees share comforting words that make a patient feel better.	3.81	0.875	A			
17. The hospital's	3.63	1.019	A			

Criteria	Item Mean	Std. Dev	Inter pretation*	Mean	Std. Dev	Inter pretation*
employees provide spiritual care to the patients.						

* 1.00 – 1.79 (SD); 1.80 – 2.59 (D); 2.60 – 3.39 (U); 3.40 – 4.19 (A); 4.20 – 5.00 (SA)
Overall Satisfaction Mean = 3.8973 (A); Std. Dev. = 0.46093

2. Rural Health Units

In a survey on client satisfaction on services rendered by RHUs, reliability got the highest score with the mean value of 4.2000 and empathy scored lowest with the mean value of 3. 9553 (see Table 3). Chimbindi, Bärnighausen, and Newell (2014) had a similar observation in Africa where respondents had low levels of satisfaction with health staff attitudes. It must be noted that interpersonal relationship between staff and consumers is an important factor contributing to satisfaction in health care context (Gerkensmeyer & Austin, 2005).

The assurance criterion of client satisfaction on health care services is included items pertaining to feelings of safety when being taken care of by health care providers, politeness and being knowledgeable of health care personnel. A study conducted by Aldana, Piechulek, and al-Sabir (2001), found out that the most powerful predictor for client satisfaction with government services was provider behavior where politeness is one of the parameters being captured.

Responsiveness was assessed in terms of how RHUs' employees inform clients exactly when services will be performed, how they provide clients with prompt service, and how willing RHUs' employees are to assist clients. Among these criteria, providing immediate service to clients got the lowest mean score of 3.92. One of the factors for clients' dissatisfaction of health care services delivery was the long waiting time before the service is actually performed (Rasheed, Arya, Acharya, & Khandekar, 2012).

Table 3. Level of satisfaction on healthcare services rendered in RHUs

Criteria	Item Mean	Std. Dev	Interpretation*	Mean	Std. Dev.	Interpretation*
Tangibles						
1. The RHU has up-to-date equipment.	3.99	0.805	A	4.0395	0.487	A
2. The RHU has the available supply of medicine needed for my sickness.	3.82	0.812	A			
3. The RHU 's physical facilities are visually appealing.	4.02	0.772	A			
4. The RHU's employees appear neat.	4.33	0.471	SA			
Reliability						
5. The RHU provides its services at the time it promises to do so.	4.21	0.582	SA	4.2000	0.518	SA
6. When patients have problems, the RHU's employees are sympathetic and reassuring.	4.19	0.589	A			
Responsiveness						
7. The RHU's employees tell patients exactly when services will be performed.	4.16	0.607	A	4.1228	0.528	A
8. Patients receive prompt service from the RHU's employees.	3.92	0.883	A			
9. The RHU's employees are always willing to help patients.	4.29	0.503	SA			

Assurance						
10. Patients feel safe in their interactions with the RHU's employees.	4.01	0.737	A	4.1368	0.525	A
11. The RHU's employees are knowledgeable.	4.17	0.577	A			
12. The RHU's employees are polite.	4.23	0.627	SA			
Empathy						
13. The RHU's employees give patients personal attention.	4.20	0.557	SA	3.9553	0.587	A
14. The RHU has their patients' best interests at heart.	4.11	0.691	A			
15. The RHU's employees share comforting words that make a patient feel better.	4.00	0.758	A			
16. The RHU's employees provide spiritual care to the patients.	3.52	1.050	A			

* 1.00 – 1.79 (SD); 1.80 – 2.59 (D); 2.60 – 3.39 (U); 3.40 – 4.19 (A); 4.20 – 5.00 (SA)
Overall Satisfaction Mean = 4.0909 (A); Std. Dev. = 0.43606

Meanwhile, tangibles are being measured in terms of up -to - date medical equipment, availability of medicine, and visually appealing physical facilities. Among these factors, availability of medicine got the lowest mean of 3.82. This finding suggests that there is not enough medicine supply for the clients in the RHU's. According to Rasheed, Arya, Acharya, and Khandekar (2012), one of the factors of clients dissatisfaction is the unavailability of medicines.

3. Barangay Health Stations

Meanwhile, client satisfaction on the five areas of quality health care in BHSs was also investigated. The mean scores of each quality health care aspect shown in Table 4 indicate that clients were either satisfied or very satisfied.

Table 4. Level of satisfaction on healthcare services rendered in BHSs

Criteria	Item Mean	Std. Dev	Interpretation*	Mean	Std. Dev.	Interpretation*
Tangibles						
1. The BHS has up-do-date equipment.	3.94	0.905	A	4.0583	0.64847	A
2. The BHS has the available supply of medicine needed for my sickness.	3.81	1.031	A			
3. The BHS's physical facilities are visually appealing.	4.13	0.779	A			
4. The BHS's employees appear neat.	4.36	0.607	SA			
Reliability						
5. The BHS provides its services at the time it promises to do so.	4.26	0.756	SA	4.2536	0.69818	SA
6. When patients have problems, the BHS's employees are sympathetic and reassuring.	4.24	0.796	SA			
Responsiveness						
7. The BHS's employees tell patients exactly when services will be performed.	4.25	0.732	SA	4.2381	0.67609	SA
8. Patients receive prompt service from the BHS's employees.	4.16	0.902	A			
9. The BHS's employees	4.30	0.706	SA			

are always willing to help patients.						
Assurance						
10. Patients feel safe in their interactions with the BHS's employees.	4.17	0.875	A	4.2516	0.66741	SA
11. The BHS's employees are knowledgeable.	4.24	0.748	SA			
12. The BHS's employees are polite.	4.35	0.723	SA			
Empathy						
13. The BHS's employees give patients personal attention.	4.30	0.728	SA	4.2130	0.67163	SA
14. The BHS has their patients' best interests at heart.	4.29	0.708	SA			
15. The BHS's employees share comforting words that make a patient feel better.	4.25	0.748	SA			
16. The BHS's employees provide spiritual care to the patients.	4.01	0.983	A			

* 1.00 – 1.79 (SD); 1.80 – 2.59 (D); 2.60 – 3.39 (U); 3.40 – 4.19 (A); 4.20 – 5.00 (SA)

Note: With seven (7) missing values attributed to respondents who have not availed of health care services for the past 12 months; Overall Satisfaction Mean = 4.2049 (SA); Std. Dev. = 0.59629

However, among these five areas of quality health care, reliability obtained the highest score of 4.2411; while tangibles got the lowest score of 4.0701. It must be noted that reliability was gauged in terms of BHSs' provision of services at the time it promises to do so and how BHS's employees are sympathetic and reassuring when clients have problems. Morris, Jahangir, and Sethi (2015) pointed out that one of the key determinants of clients' satisfaction is the health care providers' attitudes. Moreover, Peprah and Atarah (2014) also emphasized that the willingness of nurses to answer patients' questions, and the feeling of being secure at the hospital are factors that directly affect patient satisfaction.

Respondents were satisfied with the tangibles dimension of the health care services in the BHSs but it garnered the lowest satisfaction score equivalent (4.0583). Similar perceptions were found in this aspect in India (Rasheed, Arya, Acharya, & Khandekar, 2012), and Egypt (Gadallah, Zaki, Rady, Anwer, & Sallam, 2003) on their respective health care delivery facilities. Lacuesta, Sanz, and Ilagan (2012) reported that Northern Mindanao (Region X) has issues on scarce availability of drugs and medical supplies as well as lack of access to health facilities, among others.

On the other hand, client satisfaction on responsiveness of BHSs garnered a mean score of 4.2381. This was assessed in terms of how the BHSs employees inform clients exactly when services will be performed, how they provide immediate service, and how willing BHS employees are in assisting clients. In a study conducted by the National Commission on Indigenous Peoples (2013), it highlighted that the health care delivery system depends heavily on its available human resources—the health managers, health educators, and health. In the same study, it was found out that the clients were satisfied with the health care providers' responsiveness, which was postulated to greatly affect health outcomes.

In terms of assurance, constituents of Lanao del Norte registered a score equivalent to a "very satisfied" rating. This dimension of quality health care was assessed in terms of how BHS clients' felt safe in their interactions with the BHS employees, how BHS employees are knowledgeable of their work as well as how polite they are towards their clients. Aldana, Piechulek, and al-Sabir (2001) stressed that the most powerful predictor for client satisfaction with the government services was provider behavior, particularly respect and politeness.

Client satisfaction on the empathy aspect of quality health care was analyzed in terms of how BHS employees give patients personal attention, how they del with their patients' best interests, how they share comforting words that may make a patient feel better, and how they provide spiritual care to the patients. Patients are more likely to be satisfied when they are treated with utmost care and given individualized attention (Peprah & Atarah, 2014). In Lanao del Norte, BHSs obtained a satisfaction rating equivalent to "very satisfied". It might have been easier for BHWs to exhibit empathy since they usually share strong ties (e.g., neighbors, relatives).

Conclusion

With influences of Anderson's (1995) behavioral model of health care use, this study investigated the level of awareness towards health services available within the ILHZs, the nature and level of utilization of these health care services, the level of satisfaction towards the health care services provided by the local health facilities in an ILHZ, the respondent's perceived importance of specific health care service attributes, and the determinants of the utilization of health care services on the various providers in the ILHZs of Lanao del Norte, Region X, Philippines.

It was found that among all the health care services available in district hospitals, respondents were most aware of laboratory services, specifically x – ray and urinalysis, and birthing services; in RHUs, respondents were most aware of immunization and out – patient services; and in BHSs, respondents were most aware of maternal and child care services, specifically immunization and prenatal services.

The study also found that among all the health care services available in district hospitals, laboratory services, specifically x - ray and urinalysis were the most utilized health care services; in RHUS, immunization, internal medicine, specifically on hypertension – related ailments, out – patient services, family planning, and prenatal are the most utilized health care services; and in BHSs, immunization and health education are the most utilized health care services. It was also found that higher proportion of respondents seeks illness – related care in district hospitals while higher proportion of respondents seek preventive care from BHSs.

In terms of levels of satisfaction, of all three health care services facilities in Lanao del Norte, BHSs obtained an overall satisfaction rating equivalent to "very satisfied" while both district hospitals and RHUs garnered overall satisfaction ratings equivalent to "satisfied". Moreover, it was found that in district hospitals, the responsiveness dimension of quality health care obtained the highest satisfaction rating while empathy garnered the lowest satisfaction rating. In RHUs, results of the study show that the reliability dimension of quality health care got the highest satisfaction rating while empathy obtained the lowest satisfaction rating. In BHSs, the study found that the reliability dimension of quality health care garnered the highest satisfaction rating while tangibles obtained the lowest satisfaction rating.

Recommendations

This study has made a significant step in understanding the access to health care services in the ILHZ context in the province of Lanao del Norte. This initiative is helpful in determining more purposive approaches to improve health care services delivery in the province. Based on the findings, the following recommendations are proposed:

In the light of the findings of the study on awareness and utilization of health care services as well as on the review of related literature, it is recommended that information and educational campaigns (IECs) must be intensified and focused on preventive care services to increase the awareness of such type of services. This is also based on an oft spoken adage that "prevention is better than cure". Of particular emphasis is given to IECs on newborn screening. It is recommended that these campaigns be strengthened especially in the rural areas as provided in the "Newborn Screening Act of 2004". In the same manner, educational campaigns are suggested to also focus on diabetes and its preventive measures since this illness may lead to complications such chronic renal failure, heart disease, blindness and even death. IECs may involve regular forums and printed media (e.g., posters, flyers, and brochures).

Given that empathy obtained the lowest satisfaction ratings in district hospitals and RHUs and that attitudes of health employees, such as politeness, are considered as among the five important service attributes, it is suggested that a training program be designed and developed that will improve the interpersonal and client service competence of health care employees, especially those from the district hospitals and RHUs. Principles of customer service excellence are deemed a useful framework in this training initiative. Specifically, the academe may be tapped to develop modules to address the intangible or attitudinal aspects of health care. These modules may include but not limited to the following: (1) principles of customer service (e.g. active listening, empathy); (2) interpersonal relationship skills; and (3) negotiating skills to handle difficult clients. These training modules can then be rolled out in a pilot run in one local health care facility. Impact of this training may also be measured to determine effectiveness and subsequent module improvements. A related training concept is interpersonal communication (IPC) skills training for the health care employees. As pointed out by de Negri, Brown, Hernadez, Rosenbaum, & Roter (1997), "patients who

understand the nature of their illness and its treatment, and who believe the provider is concerned about their well-being" are the ones who show greater satisfaction with the care received and are more likely to comply with treatment regimens.

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