Health System Responsiveness of Rural Health Units in the Cagayan Valley Region: A Cross-sectional Study

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ABSTRACT

Objective. This study assessed the level of health system responsiveness of Rural Health Units (RHUs) in Cagayan Valley Region along seven domains of responsiveness namely dignity, autonomy, confidentiality, choice of provider, prompt attention, communication, and quality of basic amenities, and five core components of the health system namely health governance, health human resource, health information system, access to medicines and technology, and service delivery.

Methods. A cross-sectional research design was adopted using survey as the primary means of data collection using a researcher-developed questionnaire. The study was conducted in RHUs of 15 identified municipalities in the region. The municipalities were chosen based on their low performance in the LGU health score cards for 2019. A total of 618 clients and 235 health workers were included in the study. Frequency, percentage, and mean were used to analyze the profile and level of health system responsiveness. T-test and one-way ANOVA were used to test significant differences.

Results. The results showed that the RHUs included in the study have very good level of health system responsiveness, with overall percentage scores ranging from 73.55 to 88.08, in all domains assessed. However, choice of providers within the facilities (62.71%) and access to medicine and technology (77.45%) were the least responsive among all the identified domains. Significant differences in the clients' assessment of the responsiveness of the RHUs were seen when grouped according to their sex, age, educational attainment, income level, overall level of health, frequency of visits, and distance of home to facility. The RHUs' location, whether in an urban or rural area, number of staff, and number of barangays catered also were found to determine the level of health system responsiveness. Moreover, not all RHUs were able to comply with basic requirements of the Department of Health specifically along the services offered.

Conclusion. It can be concluded therefore that the RHUs, despite the limitations in certain aspects are still able to meet the expectations of the clients and health workers in the delivery of health services. However, in order to maximize responsiveness of these facilities, DOH requirements for these facilities should be met.

Keywords: health system responsiveness, primary health care, rural health unit, Cagayan Valley

INTRODUCTION

A country's health system consists of all entities that interact with one another with the goal of maintaining and improving the health of the people.[1-4] As health is considered a basic human right, health systems and health care delivery must therefore continually adapt and improve to meet this goal. This desire to continually improve the health system is intrinsic in all nations especially among low- and middle-income countries.[5] Due to the complexity of the nature of this system, many factors can directly or indirectly affect its outcomes and performance.[3] To create a universal standard for health systems in the world, WHO identified three intrinsic goals for a well-functioning health system which include health, fairness and equity in health financing, and responsiveness.[2,6] These goals were adopted as indicators of health system performance and are used to set strategic actions to improve and strengthen health. Health as an intrinsic goal pertains to the efforts done to improve and maintain health and health outcomes.[2,6] which should be accompanied by the assurance of fair distribution of health services and freedom from financial burden due to costs of healthcare services[2,6,7]. The latter pertains to fair and equitable health financing. Health system responsiveness encompasses how the health system meets the legitimate expectations of the people to non-medical aspects related to health services.[2,8-10] Non-medical aspects of the health care system pertain to the behaviors associated with and the conditions of the environment where healthcare is delivered.[8,10,12] These factors greatly affect the quality of care provided by the health system. Health system responsiveness differs from client satisfaction. Although both responsiveness and satisfaction greatly depend on reports from clients for data, responsiveness differs from satisfaction in terms of range, scope, and rationale.[2,10,13] Health system responsiveness is composed of eight domains which include dignity, autonomy, confidentiality, communication, prompt attention, quality of basic amenities, choice of provider, and access to social support.[10,13-17]

Dignity involves upholding the right of the client to proper and respectful treatment which ensures that clients receiving health care services are treated and respected as persons and not merely cases.[14-16] Autonomy pertains to the clients' ability for self-determination which ensures that clients are fully capable of making sound health-related decisions and that this capacity of the client is not impede.[14,15] Confidentiality is related to ensuring the privacy of the client such that relevant information must be shared responsibly.[14-16] This also means ensuring clients are not physically exposed during delivery of care.[15] Prompt attention is determined by the ease of access and timely provision of health needs of the client which may involve the following aspects: a) reasonable waiting time for health care services in facilities, b) reasonable amount of time consumed for the actual provision of health services, and c) reasonable travel time to health facilities to access health services. Quality of basic amenities encompasses the physical attributes of health facilities where health care services are delivered.[14-16] Communication involves interpersonal communication skills exhibited by health care providers and may also include interagency communication such as referrals and linkages to ensure continuity of care.[16] Ensuring that clients have access to their social support is also an important aspect of the health system especially for those in in-patient care.[14-16] Allowing clients to have social support networks helps ease negative experiences and strengthen coping responses to illness.[16] Lastly, offering clients a choice of care providers who will be responsible for their care can ensure continuity of care provided.[14,16] The choice may involve allowing clients to choose the same care provider or giving the option of choosing a different one when care received is not satisfactory.[16]

Health system responsiveness is considered the easiest to manipulate among the three goals because changes in responsiveness will not significantly cause adjustments to activities relating to the other goals.[2] This further implies that improvements in health system responsiveness is easier to implement, requires less investments, and the effects are more easily felt than improvements in the two other intrinsic goals.[2] This makes responsiveness an important issue for health professionals and policy makers.[18] However, most reforms in health systems focus on health, and fairness and equity in health financing. Responsiveness of the health system was found to affect overall system performance, health outcomes, and quality of health of the population.[8,10,17,18] A highly responsive health system improves public trust[19] which favors better compliance to and demands for health care services[14,11]. A highly responsive health system therefore can address the health needs of the population.[11] Moreover, poor responsiveness is linked to poor health outcomes and the exacerbation of financial barriers to health services.[11,20] Responsiveness is also vital in creating a people-centered approach to health which is at the core of Universal Health Care (UHC).[18]

The Philippine health system is currently working towards the full implementation of UHC with the recent enactment of the UHC Act (RA 11223) in 2019. One of the three thrusts of UHC is the improvement of access and quality of health care facilities in the country. As initial points of contact between the health care consumers and the health care system, Primary Care Facilities' (PCF) performance in addressing health needs greatly affects peoples' perceptions of the performance of both local and national health systems and health care delivery.[21,22] PCFs, like Rural Health Units (RHUs), Health Centers (HCs), and Medical Outpatient Clinics, are also at the forefront in providing Primary Health Care (PHC) services which is considered a cornerstone of UHC.[23] Moreover, WHO confirms that PHC is the most convenient and affordable path to achieving universal health coverage and has a significant impact on health outcomes.[19,21,24] Although there is evidence of the existence of PHC implementation in most areas in the

country, its implementation is still in varying degrees with low implementation among geographically isolated and disadvantaged areas (GIDA).[21,24] It is therefore important to strengthen and improve the delivery of PHC services in the country to help achieve the goals of UHC.

Recent improvements in the Philippine health system have focused greatly on health financing and health service delivery.[3,25] This is manifested by enactment of laws and implementation of health reforms affecting health outcomes and delivery of health services and ensuring better access to health facilities and wider coverage of health insurance.[3,25] Moreover, there is a dearth of literature about the responsiveness of the Philippine health system especially among the local health systems. Research about the responsiveness of the Philippine health system focused on the health system in general in comparison with health systems of neighboring countries which found favorable results.[11,14,15,26] There is limited information about the responsiveness of PCFs particularly RHUs in the country. It is for this reason that this study assessed the level of health system responsiveness of RHUs in Cagayan Valley Region. This study described the profile of the clients and health workers of the RHUs, and measured the health system responsiveness from the point of view of both the clients and the health workers. Moreover, the study also described the profile of the RHUs based on the guidelines of DOH for PCFs. Health system responsiveness was measured using seven different domains of responsiveness namely dignity, autonomy, confidentiality, choice of provider, prompt attention, quality of basic amenities, and communication. The health system responsiveness of RHUs was also measured based on five building blocks of the health system namely, health governance, health human resource, health information system, access to medicines and technology, and service delivery. Significant differences in the level of health system responsiveness were then determined based on the profiles of the clients, health workers, and the RHUs. Lastly, significant difference of the assessment of health system responsiveness between clients and health workers was also done to triangulate the results.

METHODS

Study Sites

A cross-sectional research design was adopted using survey as the primary means of data collection. This study was conducted in RHUs in 15 municipalities of the region. For the purpose of this study, RHU is defined as publicly-owned institution that deliver primary health care services either preventive, promotive, curative or rehabilitative services and are recognized by the DOH. The RHUs that were included in the study were chosen based on the following criteria: a) RHUs which are not yet licensed by the DOH and b) RHUs belonging to municipalities with the most number of red marks (performance in current year is lower than national average) in the LGU Health Scorecard rating for year 2019. As of the approval of this paper in 2019, none of the RHUs in the region were licensed. Moreover, the municipalities with low LGU health score card rating were chosen to assist these LGUs to improve health system performance and the licensing of their RHUs.

A total of 15 municipalities were identified based on the above criteria. These municipalities include Basco and Manatao in Batanes, Amulung and Santo Nino in Cagayan, Aurora, Roxas, Santo Tomas, Cabagan, and Burgos in Isabela, Bambang, Kasibu, and Kayapa in Nueva Vizcaya, and Diffun, Maddela, and Aglipay in Quirino. After the identification of the municipalities included in the study, a letter of endorsement from the DOH-Cagayan Valley Center for Development was obtained to facilitate the data collection in the different municipalities and RHUs. Communications addressed to the governors and Provincial Health Officers, and mayors and Municipal Health Officers were also distributed before the data collection. The researchers then communicated via email or text to schedule the data collection for each RHU.

Study Participants

A total of 853 participants, 618 clients, and 235 health workers, were included in the study after eliminating incomplete data. Total enumeration of the health workers assigned in the RHUs were included excluding those who were absent or in the field during the time of data collection. Clients who are 18 years old and above who have directly received any health services within the past year of data collection were included. Data collection was done from July 2022 to February 2023. The clients were conveniently selected based on their availability during the time of data collection because the researchers were not able to obtain a total number of clients for each of the RHUs included in the study.

Study Instruments

A researcher-made questionnaire was used consisting of two main parts, the first assessed the profile of the participants and the second consist of 53 Likert Scale questions/statements assessing the level of responsiveness of the facilities which were based on the Key Informant Survey (KIS) questionnaire on responsiveness developed by WHO and a questionnaire measuring the World Health Organization concept of health system responsiveness with respect to perinatal services.[27] Two versions of the questionnaire were developed: one for the clients and another for health workers. Both versions were submitted for evaluation by content and research experts and a CVI of 1 was computed for both. Pilot testing of the questionnaires was also done and a Cronbach's alpha coefficient of 0.94 for client questionnaire and 0.88 for health worker questionnaire were computed which indicate excellent and good reliability of the questionnaires. Lastly, a checklist was used to obtain additional information about the PHC facilities included in the study. This checklist was

Table 1. Interpretation of Responsiveness Scores for each Domain

Domain/ Dimension	Description	No. of items	Minimum- maximum scores	Unacceptable (%)	Acceptable	
					Good (%)	Very Good (%)
Dignity	Proper and respectful treatment	5	0-15	0.00-33.3	33.4-66.7	66.8-100.0
Autonomy	Clients' ability for self-determination and decision making are upheld	4	0-12	0.00-33.3	33.4-66.7	66.8-100.0
Confidentiality	Ensuring the privacy of the client	3	0-9	0.00-33.3	33.4-66.7	66.8-100.0
Choice of Provider	Offering to choose the care provider responsible for clients' care	3	0-9	0.00-33.3	33.4-66.7	66.8-100.0
Prompt Attention	Ease of access and timely provision of health needs of the client	3	0-9	0.00-33.3	33.4-66.7	66.8-100.0
Quality of Basic Amenities	Quality of the physical attributes of health facilities where health care services are delivered	9	0-27	0.00-33.3	33.4-66.7	66.8-100.0
Communication	Interpersonal communication skills exhibited by health care providers	6	0-18	0.00-33.3	33.4-66.7	66.8-100.0
Health Governance	Information and coordination of the health programs, initiatives, and agenda of the LGU	3	0-9	0.00-33.3	33.4-66.7	66.8-100.0
Health Human Resource	Availability, adequacy, approachability, and organizational structure of health human resources	6	0-18	0.00-33.3	33.4-66.7	66.8-100.0
Health Information System	Management, maintenance, and sharing of health information and records in the RHU	4	0-12	0.00-33.3	33.4-66.7	66.8-100.0
Access to Medicines and Technology	Availability and quality of medicines and equipment in the RHUs	4	0-12	0.00-33.3	33.4-66.7	66.8-100.0
Service Delivery	Efficiency, understandability, and clarity of procedures and protocols within the facility and feedback mechanisms for the services	3	0-9	0.00-33.3	33.4-66.7	66.8-100.0
Total Health System Responsiveness		53	0-159	0.00-33.3	33.4-66.7	66.8-100.0

based on the DOH requirements for licensing primary care facilities.

Likert scale scores of the questions in the second part of the questionnaire was matched with standard responsiveness categories of "acceptable" (good/ often and very good/ always) and "unacceptable" (very poor/ never and poor/ sometimes). Total scores for each domain or dimension measured were converted to percentage scores and interpreted as acceptable or unacceptable using the range of scores indicated in Table 1.

Descriptive statistics such as frequency and percentage were used to analyze data pertaining to demographic profile of the participants and the RHUs. ANOVA and independent T-test were used to determine statistical differences in the responsiveness between and among the groups identified.

Study Procedures

After permissions and endorsements for the conduct of data collection were obtained, the researchers scheduled data collection with the RHUs specifically on days when they have the most clients. The instruments were personally administered by the researchers to the participants, both clients and health workers. The data for the profile of the RHUs were obtained from the Municipal Health Officers or the nurse-in-charge. The researchers distributed the questionnaires among clients in the waiting areas of the RHUs to ensure that no services were disrupted. The researchers also distributed

questionnaires among the health workers during their free time to ensure that no work is also disrupted. The researchers returned about 1-3 times to the different municipalities to gather data from the clients.

Ethical Considerations

The researchers personally obtained informed consent from the participants. Names and any identifying information were not collected to ensure anonymity and confidentiality of participants. The study was approved by the Institutional Review Board of Region II Trauma and Medical Center with protocol number: 2021:018 before the implementation of data gathering procedures.

RESULTS

Profiles of the Participants

This section presents the profile of the participants of the study which include the clients and health workers of the RHUs included in the study. Moreover, a profile of the RHUs is also presented.

As seen in Table 2, majority of the clients of RHUs are females (74.43%), belonging to lower income category (88.19%), have finished basic education (61.65), and with an average age of 38 years. Majority of the clients were able to visit the facilities about 1-3 times during the past year.

Table 2. Profile of the Clients of the RHUs (n=618)

	Categories	n	%
Age, in years	Below 20	62	10.03
	20 to 30	161	26.05
	31 to 40	145	23.46
	41 to 50	145	23.46
	51 to 60	64	10.36
	61 and above	41	6.63
	Average age	38 years	
Sex	Male	158	25.57
	Female	460	74.43
Monthly family income (PhP)	<11,690	439	71.04
	11,690 to 23,381	106	17.15
	23,381 to 46,761	63	10.19
	46,761 to 81,832	6	0.97
	81,832 to 140,284	4	0.65
Highest educational attainment	Elementary level	66	10.68
	Elementary graduate	93	15.05
	High school graduate	288	46.60
	College graduate	168	27.18
	Master's degree holder	3	0.49
Overall health	Very good	277	44.82
	Good	318	51.46
	Bad	23	3.72
Frequency of visits	Once	318	51.46
	2 to 3 times	241	39.00
	4 to 5 times	24	3.88
	>5 times	35	5.66
Distance of house from RHU, in km	<1	284	45.95
	2 to 3	185	29.94
	4 to 5	61	9.87
	>5	88	14.24

Table 3. Profile of the Health Workers of the RHUs (n=235)

	Categories	n	%
Age, in years	20 to 30	63	26.81
	31 to 40	116	49.36
	41 to 50	32	13.62
	51 to 60	20	8.51
	61 and above	4	1.70
	Average age	36 years	
Sex	Male	36	15.32
	Female	199	84.68
Educational attainment	College Graduate	215	91.49
	Master's degree holder	11	4.68
	Doctorate degree holder	4	1.70
Years of service	0 to 5	129	54.89
	6 to 10	58	24.68
	11 to 15	20	8.51
	16 to 20	9	3.83
	> 20	19	8.09
	Average years in service	7 years	
Designation	Physician	14	5.96
	Nurse	127	54.04
	Midwife	64	27.23
	Pharmacist	2	0.85
	Medical Technologist	12	5.11
	Barangay Health Worker	16	6.81

Table 4. Profile of the RHUs (n=15)

	Categories	n	%
Type of municipality catered	Urban	2	13.33
	Rural	13	86.67
Number of staff	20 and below	3	20.00
	21 to 40	7	46.67
	41 and above	5	33.33
	Average number of staff	36	
Number of barangays catered	20 and below	3	20.00
	21 to 40	10	66.67
	41 and above	2	13.33
	Average number of barangays	29	
Information, Education, and Communication Materials present	Patient's rights	14	93.33
	List and schedule of services	13	86.67
	Organizational chart	15	100.00
	Vision and mission statement	15	100.00

Moreover, clients who seek the services of the RHUs are those with good to very good overall health (96.28%), and those living within 3 kilometers from the facility (75.89%).

It can be seen in Table 3 that majority of health workers of RHUs are female (84.68%) and college graduates (91.49%). Moreover, a greater percentage of health workers are nurses (54.04%), aged 31 to 40 years (49.36%), and have worked in the facility for an average of 7 years.

Table 4 shows that majority of RHUs are found in rural municipalities (86.67%), have an average of 36 staff which include both health workers and support staff and cater to an average of 29 barangays. The table also shows that all RHUs have IEC materials posted. However, few of these facilities are unable to post all IEC materials that are required by DOH to be posted.

Table 5 shows that not all RHUs are able to provide all the required services according to Department of Health - Health Facilities and Services Regulatory Bureau (DOH-HFSRB). It can also be seen in the table that some services are not offered in the facilities or are out-sourced to a different facility. However, there are some services like nutrition services, developmental and behavioral assessment services, and minor surgical services that are not provided by all RHUs.

Table 6 shows that there is absence of some health workers specifically dentists and pharmacists in the RHUs included in the study.

Health System Responsiveness of the RHUs

This section presents the level of health system responsiveness of the different RHUs included in the study in terms of the different domains of health system responsiveness and the building blocks of a health system.

Table 5. PHC Services Offered by the RHUs (n=15)

Categories	Services Offered		Services Offered In-facility		Services Outsourced	
	n	%	n	%	n	%
Health Education	15	100.00	15	100.00	0	0.00
National Immunization Program	15	100.00	15	100.00	0	0.00
Epidemiologic Surveillance	15	100.00	15	100.00	0	0.00
Emergency Preparedness and Response	14	93.33	13	86.67	1	6.67
Maternal and Newborn Care	15	100.00	15	100.00	1	6.67
Family Planning Services	15	100.00	15	100.00	0	0.00
Nutrition Services	14	93.33	14	93.33	0	0.00
Dental Services	13	86.67	10	66.67	3	20.00
Rehabilitation Services	12	80.00	8	53.33	4	26.67
Developmental and Behavioral Assessment	12	80.00	11	73.33	1	6.67
Substance Abuse Services	12	80.00	6	40.00	5	33.33
Laboratory and Diagnostic Services	12	80.00	9	60.00	3	20.00
Minor Surgical Services	13	86.67	11	73.33	1	6.67

Table 6. Average Number of Health Workers Present in the RHUs

Categories	Mean
Physicians	1.35
Dentists	0.15
Nurses	14.67
Midwives	12.96
Medical Technologists	1.56
Pharmacists	0.35
Barangay Health Workers	136.53

Table 7. Health System Responsiveness in Terms of the Different Domains among the Different RHUs Included in the Study (n=15)

Categories	Clients		Health Workers		Overall	
	Mean	Interpretation	Mean	Interpretation	Mean	Interpretation
Dignity	82.23	Very Good	93.92	Very Good	88.08	Very Good
Autonomy	77.70	Very Good	88.60	Very Good	83.15	Very Good
Confidentiality	81.90	Very Good	93.23	Very Good	87.56	Very Good
Choice of Provider	62.71	Good	84.39	Very Good	73.55	Very Good
Prompt Attention	76.65	Very Good	81.32	Very Good	78.98	Very Good
Quality of Basic Amenities	79.02	Very Good	77.45	Very Good	78.24	Very Good
Communication	79.85	Very Good	86.23	Very Good	83.04	Very Good
Total HSR (Domains)	77.15	Very Good	86.45	Very Good	81.80	Very Good

Table 8. Health System Responsiveness in Terms of the Different Building Blocks of a Health System among the Different RHUs Included in the Study (n=15)

Categories	Clients		Health Workers		Overall	
	Mean	Interpretation	Mean	Interpretation	Mean	Interpretation
Health Governance	79.61	Very Good	84.88	Very Good	82.25	Very Good
Health Human Resource	76.99	Very Good	83.07	Very Good	80.03	Very Good
Health Information System	76.31	Very Good	78.60	Very Good	77.46	Very Good
Access to Medicines and Technology	72.98	Very Good	74.77	Very Good	73.87	Very Good
Service Delivery	76.73	Very Good	82.33	Very Good	79.53	Very Good
Total HSR (Building blocks)	76.52	Very Good	80.73	Very Good	78.63	Very Good

Table 7 shows that the level of health system responsiveness along the different domains of health system responsiveness of the different RHUs included in the study is acceptable. The table also shows that the RHUs are most responsive along the domain of dignity according to the clients (mean=82.33) and health workers (mean=93.92). The table also shows that the RHUs are most responsive along the domain of dignity according to the clients and health workers (overall mean=88.08). Moreover, both clients and health workers (overall mean=73.55) find the RHUs to be least responsive in terms of the choice of provider. The findings indicate that both the clients and health workers are treated properly and respected whenever they receive the services of the RHU. However, the clients and health workers also observe that although the clients are offered with the choice on who they want to provide health care services, this aspect or domain is the least responsive among the other domains assessed.

Table 8 shows that the level of health system responsiveness of the different RHUs included in the study in terms of the building blocks of health systems is acceptable. The table also shows that the RHUs are most responsive along the health governance according to both clients (mean=79.61) and health workers (mean=84.88). This indicates that both clients' and health workers' expectations of being well informed about the health programs and initiatives, and agenda of the LGU as it applies to RHU services are effectively met. Moreover, the clients find the RHUs least responsive in terms of the health information system (mean=76.31) which suggests that clients' expectations regarding the management, maintenance, and sharing of health information within the RHU is least responsive compared to the other areas assessed. Meanwhile, health workers find the facilities least responsive in terms of access to medicine and technology (mean=74.77) which also suggests that health workers' expectations concerning the availability and quality of medicines and equipment in the RHUs is least responsive compared to the other areas assessed.

Differences in the Level of Health System Responsiveness

This section presents the results of the inferential statistical tests utilized to determine the presence of significant differences in the level of health system responsiveness of the different RHUs according to the profile variables of the clients, health workers, and the RHUs. In order to triangulate the results, the significant difference of the level of health system responsiveness was also tested between the clients and the health workers.

Table 9 shows the level of health system responsiveness of the different RHUs significantly differ when grouped according to clients' profile variables. The RHUs are more responsive along choice of provider to male clients. The table also shows that the level of responsiveness along dignity, prompt attention, health information system, access to medicines and technology, and service delivery significantly differ with the age of the clients. The RHUs are less responsive along dignity, health information system, access to medicines and technology, health service delivery, and overall health system responsiveness to clients aged 20 years and below (mean=11.37) than the clients aged 21 to 50 years. The RHUs were also found to be more responsive along prompt attention to clients aged 41 to 50 years (mean=4.94) than the clients aged 20 years and below (mean=4.13), 31 to 40 years, and 61 and above (mean=4.32).

The level of responsiveness along dignity, health governance, health human resources, and health information system are also significantly different according to the clients' educational attainment. The RHUs were found to be less responsive along dignity to clients who are elementary graduates (mean=11.07) than those who graduated secondary (mean=12.68) and tertiary (mean=12.49) education. However, the facilities were found to be less responsive along health

information system to clients who are college graduates (mean= 8.55) than clients who are elementary (mean= 9.31) and high school graduates (mean=9.52).

Moreover, the level of responsiveness of RHUs when grouped according to the clients' income status is significantly the same in all domains apart from health information system. The RHUs were less responsive along health information system to clients who earn less than PhP 11,690 than those who earn about PhP 23,381 to PhP 46,761 monthly.

It can be seen that the level of responsiveness is significantly different along dignity, choice of provider, quality of basic amenities, health information system, access to medicine and technology, and service delivery according to the overall level of health of the clients. The RHUs are more responsive to clients with lower or poorer overall level of health than those who are in good health. The level of responsiveness along prompt attention, quality of basic amenities, health human resource, health information system, and access to medicine and technology are also significantly different when grouped according to the clients' frequency of visits. The RHUs were less responsive along health human resource to clients who visited the facilities more than 5 times than the clients who visited the facilities fewer than 5 times. Moreover, the facilities were less responsive to clients who visited the facilities about 3-4 times than the clients who visited the facility less than 3 times. The RHUs were also less responsive to clients who only visited the facilities about 1-2 times than those clients who visited the facilities more than twice. Moreover, the level of health system responsiveness is significantly the same in all domains when grouped according the distance of the clients' home to the RHU except for quality of basic amenities. The RHUs were more responsive along quality of basic amenities to clients who live more than 4 km away from the facilities.

Table 10 shows that level of health system responsiveness according to health workers is significantly the same regardless of the health workers' gender, highest educational attainment, years of service, and designation. However, the level of responsiveness along health human resources and service delivery significantly differs with the health workers' age.

Table 11 shows that there is a significant difference in the level of health system responsiveness between RHUs located in urban and rural municipalities. The RHUs found in urban municipalities are more responsive along dignity, autonomy, confidentiality, choice of provider, prompt attention, health governance, health human resource, access to medicine and technology, service delivery and overall responsiveness than those facilities located in rural communities. However, the level of responsiveness along quality of basic amenities, communication, and health information system is the same regardless of the type of municipality the facilities are located. The table also shows that there is a significant difference in the level of health system responsiveness of RHUs along dignity, autonomy, confidentiality, choice of provider,

prompt attention, quality of basic amenities, communication, health information system, access to medicine and technology, service delivery and overall responsiveness when grouped according to the number of staff in the facilities. Furthermore, it was found that the RHUs with staff of 40 and above were less responsive than the facilities with less than 40 staff members. The table also shows that there is a significant difference in the level of health system responsiveness of the RHUs specifically along confidentiality, choice of provider, prompt attention, health governance, health human resource, access to medicine and technology, and service delivery when grouped according to the number of barangays that the facility caters to. The RHUs which cater to more than 40 barangays were less responsive along health governance than those facilities that cater to lesser number of barangays.

DISCUSSION

This study assessed the level of health system responsiveness of selected RHUs in Cagayan Valley Region. The results show that the RHUs included in the study cater to about 29 barangays and have an average of 36 staff members. Majority of the RHUs were also able to comply in the posting of IEC materials, which should be visible to the clients within the facility. These IEC materials are required by the DOH-HFSRB AO. No. 2020-0047-A for the licensing of RHUs.[28]

The results also show that not all RHUs are able to provide all the population-based, individual-based, and other clinical services that are required of them. Nutrition services, developmental and behavioral assessment services, and minor surgical services are not provided by some RHUs either within the facility or through outsourced services. PCFs, which the RHUs are classified under, are mandated to provide population-based services such as health promotion and protection, epidemiologic surveillance, and emergency preparedness and response services as well as individual-based services such as maternal and newborn care, family planning services, nutrition services, and dental services.[28] Moreover, PCFs are also required either through referral or in-facility provision to provide community-based services such as rehabilitation services, developmental and behavioral assessment/ evaluation, and substance abuse services. Other clinical services that are required of PCFs are laboratory and diagnostic, and minor surgical services.[28] Furthermore, the RHUs met the DOH requirements for human resources.[27] However, in order for these facilities to implement required individual-based services such as dental services, the facilities must have community dentists.

The results also showed that the level of health system responsiveness of the different RHUs is acceptable. This means that the RHUs are able to meet the expectations of both the clients and the health workers in terms of the delivery of services offered.[8] Both the clients and the health workers observe that clients are respected and treated properly, their right to self-determination and decision making is respected,

their privacy is preserved, and the PHC services are provided to the clients in a timely manner. Moreover, there is good and effective communication between the health workers with the clients, and the facilities and equipment within the RHUs are of good condition. This is also consistent with previous studies which showed that the Philippine health system is highly responsive.[11,14,15,26] The RHUs were also found to be most responsive along dignity which is consistent with other studies.[9,18,29-31] This indicates that the clients' right to proper and respectful treatment is a priority among health workers and that in the delivery of health services clients are treated as persons and not cases.[14-16]

Choice of provider is the least responsive domain among clients which is consistent with the findings of other studies.[9,12,29,30] This may be due to the limited choice of primary care providers within the RHUs as there are only about one medical doctor assigned in most RHUs. The DOH mandates one primary care physician per 20,000 population[28] and although all municipalities included in the study meet the criteria, this limits the choice of provider among clients. The provisions of UHC include the certification of Primary Care Workers (PCW). PCWs are health care workers, either health professionals, community health workers or volunteers, who are certified by the DOH to provide PHC services to the community.[28] Moreover, the UHC provisions also include the establishment of a Health Care Provider Network (HCPN) with a strong referral system in order to allow clients to better access PHC via the local health system.[28] These provisions of the UHC may be helpful in improving the responsiveness of RHUs along the domain of choice of provider. Moreover, improving the competencies of the health workforce is also an important factor that will ensure quality of health services delivered especially where there is limitation in the quantity of human resources.[32] Policy reforms directed towards providing clients freedom to choose primary providers coupled with appropriate economic incentives were found to significantly improve patient satisfaction and overall health system performance.[33] Moreover, measures to allow clients to make more informed decisions in their choice of primary care providers are essential in improving responsiveness along choice of providers.[33]

Access to medicine and technology was found to be least responsive for health workers. This is consistent with previous studies also conducted within Asia.[9,29] Obstacles in the access of medicines and technologies is not a new issue especially among developing countries.[34] Factors such as budgetary issues and increasing cost of these medicines and health technologies also compound this concern.[35] The certification of primary care workers and establishment of a primary care provider network in PCFs will allow for the coverage of population-based and individual-based services by the Philippine Health Insurance Corporation/ Philhealth as per RA 11223 or the Universal Health Care Act. This will aid in greatly reducing budgetary concerns regarding the

access to medicines and health technologies within the PCFs in the country.

Differences in the responsiveness were also seen according to the profile variables of the clients. Dignity, prompt attention, health information system, access to medicines and technology, and service delivery significantly differ with the age of the clients. The RHUs were found to be less responsive to clients aged 20 years and below specifically along dignity, prompt attention, health information system, access to medicines and technology, health service delivery, and overall health system responsiveness. Age has been identified as a factor determining health system responsiveness wherein clients belonging to the younger age group were found to have a lower assessment of health system responsiveness than the older clients as seen in other studies.[9, 29-31] This may be because younger clients tend to have a more critical expectation of how health workers interact and provide services.[31] There may be a need for RHUs to implement ways to become more appealing among younger clients to attract more clients of this age group.

The level of responsiveness along dignity, health governance, health human resources, and health information system are also significantly different according to the clients' educational attainment. It was found that the RHUs are less responsive along dignity to clients with lower educational attainments such as those who are elementary graduates. This implies that these clients do not feel that their dignity as person are respected when receiving care in the RHUs. Education also plays a role in the assessment of responsiveness wherein clients with lower educational attainment have lower assessment of responsiveness than those who finished higher educational levels.[9,29-31] However, the RHUs were also found to be less responsive to clients who are college graduates along health information system than the clients who are elementary and high school graduates. This is in contrast with the findings of other studies which may be due to a higher expectation of college graduates in the implementation of health information systems as a result of their knowledge in this area compared to those clients who finished lower level of education.[9,29,30] This further underlies the importance of not only hardware/ infrastructure improvements but also software improvements in improving health system responsiveness.[30]

Moreover, the RHUs were found to have the same level of responsiveness for clients belonging to different income status apart from health information system. The RHUs were found to be more responsive along health information system to clients belonging to the lower income status. Socioeconomic status was also found to be a determinant of responsiveness. This finding is consistent with the results of this study stating that clients belonging to the lower income class have a higher assessment of responsiveness than those belonging to higher income categories.[9,29] This may be because clients coming from higher income classes have a higher expectation in terms of the services provided by health facilities compared to the clients belonging to lower income levels.[9]

The results also show that the level of responsiveness is significantly different along dignity, choice of provider, quality of basic amenities, health information system, access to medicine and technology, and service delivery according to the overall level of health of the clients. RHUs were found to be more responsive to clients with very good level of health compared to those clients with lower overall levels of health which was consistent with previous studies.[29] Clients with poorer health and more disease conditions or complaints may be more irritable and sensitive to how they are treated within the facilities which may explain a lower assessment on responsiveness.

This is the first study on health system responsiveness that was conducted in Cagayan Valley Region but only 15 municipalities were included in the study as the focus was on the municipalities with low performance on the LGU health scorecard. Moreover, the researchers utilized non-probability sampling technique specifically on the selection of client participants. As such, the data presented cannot be generalized to provide the general picture of health system responsiveness of RHUs within the region. The study was also limited only to RHUs and other types of primary care facilities were not included. This also limits the generalizability of the findings to all PCFs within the region. To improve the knowledge base on the responsiveness of the local health system of the region, further research should consider these limitations.

CONCLUSION

The results of the study show that the RHUs included in the study have an acceptable level of health system responsiveness as assessed by both clients and health workers. There is also a consensus between the clients and health workers that the quality of basic amenities, health information system, and access to medicines and technologies within the facilities are responsive to their needs. However, clients assessed that the choice of providers within the facilities is the least responsive while health workers assessed that the access to medicine and technology to be the least responsive. Demographic variables of clients were also found to affect responsiveness. Sex, age, educational attainment, income level, overall health status, frequency of visits, and distance of home to the facilities significantly affect how the clients assess the responsiveness of the facilities. These differences show a disparity on how clients feel they are treated within the facilities and may become barriers to the access of PHC services. Moreover, the results of the study show that not all RHUs included in the study are able to comply with the requirements of the Department of Health specifically along the health human resources and services that the RHUs are expected to offer. It can be concluded therefore that the RHUs, despite the limitations in certain aspects of health service delivery, are still able to meet the expectations of the clients and health workers in the delivery of services within the facilities.

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