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Unmet healthcare needs among adults in Rural area, Paraguay: A cross-sectional study

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The Plan Nacional de Desarrollo Paraguay 2030 states “coverage must be secured in public sectors for [the] development of the country,” and efforts are currently being made to increase health coverage. However, there has been a limited number of studies on the accessibility and use of medical care by local residents in Paraguay. This study aimed to identify factors that affect the experience of unmet health care needs in adults residing in rural area, Paraguay, Community Health Survey of Limpio city. Results revealed that participants residing in rural areas had higher unmet healthcare needs than those in urban areas. It was also found that those in the higher income quartile had fewer unmet healthcare needs than those in the lower income quartile. Those with chronic diseases and no healthcare insurance were more likely to experience unmet healthcare needs than those without chronic diseases and those with health insurance, respectively. We concluded that regional features can create gaps in the use of healthcare services. Therefore public health centers should be located in areas accessible. And according to the results, the quality of healthcare services is an important factor in the selection. Thus, the function of public health centers should be improved, and healthcare human resources and infrastructure of facilities should be systematically reinforced.

[Key Words: Primary Healthcare, Healthcare Needs, Health Delivery System, Paraguay, Global Health]

Ⅰ. Introduction

Accessibility and the ability to use healthcare services are key factors that determine the outcome of an illness (Goddard & Smith, 2001). In the World Health Report 2000, the World Health Organization (WHO) stated that access to healthcare granted based on demand rather than ability to afford improves well-being (World Health Organization, 2000). Healthcare insurance guarantees the right to healthcare and aims to promote health by providing access to healthcare when it is needed (Ghebreyesus, 2017). In addition, Dr. Tedros Adhanom Ghebreyesus, the Director-General of the WHO, emphasized that universal healthcare is a top priority. He strongly advocated the importance of establishing a primary healthcare system (Organization for Economic Cooperation and Development, 2020). In response, the European Union stated that the level of coverage for essential healthcare services (SDG 3.8.1) needs to be assessed to examine equity and access, and that unmet needs should be measured (Donabedian, 1973). Unmet needs refer to the cases when improper provision of healthcare was provided when needed (Shin, Lim, & Han, 2014), and all situations of unmet needs are referred to as an experience of unmet healthcare needs (International Monetary Fund, Western Hemisphere Department, 2019).

Paraguay is a country in Latin America with a population of 7.144 million, and it is a leading developing country with a gross domestic product per capita of $5,667 in 2019 (International Monetary Fund, 2018). Since 2018, Mario Abdo Benitez, the president of Paraguay, has been investing in public health through social reforms (Pan American Health Organization, 2008); however, the overall primary healthcare system is still inefficient in many aspects (Secretaría técnica de planificación, 2014). Therefore, the Plan Nacional de Desarrollo Paraguay 2030 stated that coverage must be secured in public sectors for the development of the country, and efforts are currently

being made to increase health coverage (Pan American Health Organization, 2017a). The Paraguay government has provided free public healthcare services since 2008; however, the quality of these healthcare services is inadequate due to the lack of public finance, which has caused difficulties in supplying necessary healthcare devices (Pan American Health Organization, 2019). Outdated facilities, lack of professional human resource, and fragmentation of the healthcare system are aspects of poor-quality of healthcare services. The Paraguay government is currently focusing on the establishment of MICRORED (small regional healthcare delivery system) to improve the quality of healthcare services (González Galeano, 2018). Studies have evaluated the national health policy of Paraguay (Giménez, Flores, Rodríguez, Ocampos, & Peralta, 2018), determined the healthcare expenditure on disasters (Giménez Caballero, Ocampos, Rodríguez, Araujo, & Peralta, 2019; Giménez Caballero et al., 2019), and analyzed the effect of decentralization of the national healthcare system (City population. LIMPIO district in Paraguay, 2020). However, there have been a limited number of studies on the accessibility and use of healthcare by local residents in selected regions of Paraguay.

Therefore, the purpose of this study was to identify factors that affect the experience of unmet healthcare needs in adults aged ≥17 years, residing in Limpio, Paraguay, using data from the city's 2018 Community Health Survey.

Ⅱ. Methods

1. Research Data

This study analyzed the data of the 2018 Community Health Survey in Paraguay. It was the first comprehensive survey conducted as part of the

Health For All (HEFA) project in Paraguay, and the questionnaire used in this survey was jointly developed by the Korea International Cooperation Agency (KOICA), WHO/Pan American Health Organization (PAHO), and Yonsei Global Health Center. The questionnaire was based on the World Health Survey questionnaire and was reviewed by the steering committee of the WHO/PAHO before completion. To select the population, a two-step sampling process was conducted to calculate an unbiased estimator according to the region. In the first step, probability proportionate sampling, which gives greater weight to regions with larger populations, was performed to select the population. In the second step, people from administrative districts selected through the official household guidance of the Ministry of Health of Paraguay were randomly selected.

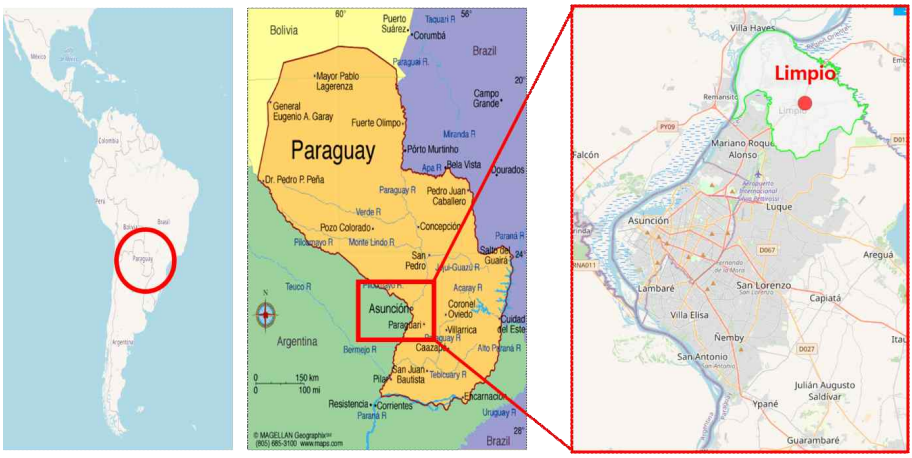
The questionnaire consisted of items assessing demographic characteristics, health behavior, income and expenditure, healthcare coverage, risk factors for health, various diseases, response indicators for the healthcare system, and social capital of the respondents. The questionnaire was available in English and Spanish, and the Spanish questionnaire was used in the survey. A total of 60 surveyors underwent a 2-week-long training provided by statistical experts from WHO/PAHO. Then a preliminary survey was conducted for approximately 1 month (from September 17, 2018 to October 7, 2018) to assess and modify problems. One-on-one interviews were conducted manually by visiting households in the area where the trained surveyor was assigned. The average survey time was approximately 1 hour.

2. Research Subjects

The target region of this study was the city of Limpio, which is the central state of Paraguay and is located approximately 23 km from Asuncion, the capital city of Paraguay (Figure 1). The total population of this city is

145,740, including 72,779 men (49.94%) and 72,961 women (50.06%) (Hong & Jeon, 2019). The region is divided into 12 compania, which are classified as urban-rural complex areas with 73% urban regions and 27% rural regions. This study was conducted on 2,200 adults aged ≥17 years, who resided in Limpio, Paraguay, and a total of 2,196 respondents were included in the analysis, excluding data with missing values in the survey response required for this study.

〈Figure 1〉 Research Area



3. Dependent Variables

The first dependent variable was an experience of unmet healthcare needs. The participants were asked "The last year you (or your child) needed healthcare, did you get healthcare?" A "no" to this question was defined as an experience of unmet healthcare needs (Huh et al., 2009). The second dependent variable was the reason for this experience. The participants with an experience of unmet healthcare needs were asked "Which reasons explain why you (or your child) did not get healthcare?" The questionnaire was

designed such that the same responses could be recorded. Answers of “no transport” and “could not afford the cost of the visit, transport” were classified as experiences of unmet healthcare needs due to transportation issues and financial reasons, respectively. Closed-ended answers such as “The healthcare provider’s drugs or equipment were inadequate,” “The healthcare provider’s skills were inadequate,” and “You were previously badly treated” were classified as experience of unmet healthcare needs due to poor quality.

4. Independent Variables

Sex, age, marital status, educational level, income quartile, subjective health status, chronic diseases, regional features, and healthcare coverage (insurance), which are demographic and socioeconomic characteristics related to unmet healthcare needs, were included. Age was categorized as young (17-39 years), middle-aged (40-59 years), or older adult (≥60 years) and marital status was categorized as either married or unmarried. Educational level was categorized as elementary, middle, or secondary school or above, and income quartiles were categorized as first (low), second, third, or fourth (high) quartiles. Subjective health status was assessed as good, moderate, or poor, and chronic diseases were included as a variable indicating healthcare demands. Chronic disease variables are those who have been diagnosed with Diabetes, Hypertension, Asthma, or Depression by a doctor or are undergoing treatment.Lastly, regions were divided into urban and rural areas to evaluate the effects of insurance and regional features.

5. Data analysis

In this study, SPSS 25.0 statistical software (IBM Corp., Armonk, NY USA) was used to assess the experience of unmet healthcare needs and factors that

affected the experience.

First, frequency of the general characteristics of the respondents was calculated, and the rate of experience of unmet healthcare needs in consideration with every independent variable was assessed. Second, related factors affecting the experience of unmet healthcare needs in adults aged ≥ 17 years residing in Limpio, Paraguay, were analyzed through logistic regression. Third, related factors affecting the reasons for experience of unmet healthcare needs were analyzed through logistic regression.

Ⅲ. Results

1. General Characteristics

69.8% of the 2,196 respondents were women. The mean age was 44.16 years, and most respondents (45.6%) were in the young age category (17-39 years), followed by middle-aged (40-59 years) and older adult (≥60 years). 63.8% was married and 36.2% of respondents was unmarried. Elementary school graduates were 46.9%, educational levels of middle school was 22.1% and high school graduate or above was 31.0%. 1_{st} income quartile(low) was 29.7%, 2_{nd} quartile (21.9%), 3_{rd} quartile (23.3%), and 4_{th} quartile(high) was 25.0%. 63.7% of respondents was good in the subjective health status, and 76.8% had chronic diseases. Respondents were living in urban areas (54.0%) and rural areas (46.0%) and 72.4% of respondents did not have a health insurance (Table 1).

Men (20.3%) were found to have more unmet healthcare needs than women (10.8%). The young age group (17-39 years) had more unmet healthcare needs (19.2%), compared with the other age groups. Unmarried respondents was more experienced unmet healthcare needs (18.1%) than married of

respondents (11.2%). It was also found that 15.6% of respondents with secondary school, 13.0% with elementary school, and 12.6% with middle school educational level experienced unmet healthcare needs. In case of income quartile, respondents in the 1st quartile (low) had the highest unmet healthcare needs (23.6%), followed by the fourth (high), second, and third quartiles, with 11.1%, 9.3%, and 8.0%. 16.7% of respondents who had good subjective health status were experienced unmet healthcare needs. 15.8% of those with chronic diseases were experienced unmet healthcare needs, and 6.9% of those without chronic diseases were experienced unmet healthcare needs. Considering regional features, 21.2% of respondents residing in rural areas had experiences unmet healthcare needs. In terms of health insurance, 14.8% of respondents without health insurance had unmet healthcare needs and 10.7% of respondents with health insurance experienced unmet healthcare needs.

〈Table 1〉 General characteristics

Variables		N=2,196 (%)	Unmet Healthcare Needs (%)	x^2
Sex	Men	664(30.2)	20.3	35.314***
	Women	1,532(69.8)	10.8	
Age (years)	17 – 39	1,002(45.6)	19.2	48.635***
	40 – 59	752(34.2)	8.0	
	Above 60	442(20.1)	11.1	
Average		44.16±16.3		
Marital status	Unmarried	795(36.2)	18.1	20.457***
	Married	1,401(63.8)	11.2	
Educational status	Elementary school	1,031(46.9)	13.0	2.997
	Middle	485(22.1)	12.6	
	High school graduate or above	680(31.0)	15.6	
Income quartile	1_{st} quartile(low)	653(29.7)	23.6	78.825***

	2_{nd} quartile	482(21.9)	9.3	
	3_{rd} quartile	512(23.3)	8.0	
	4_{th} quartile(high)	549(25.0)	11.1	
Subjective health status	Good	1,477(67.3)	16.7	33.222***
	Normal	617(28.1)	7.8	
	Bad	102(4.6)	6.9	
Chronic diseases	No	510(23.2)	6.9	26.306***
	Yes	1,686(76.8)	15.8	
Area	Urban	1,185(54.0)	7.3	88.162***
	Rural	1,011(46.0)	21.2	
Health coverage (Insurance)	No	1,591(72.4)	14.8	4.365*
	Yes	605(27.6)	10.7	

*p<.05 **p<.01 ***p<.001

2. Related Factors Affecting the Experience of Unmet HealthCare Needs (Table 2)

The definition of the experience of unmet healthcare needs varies among studies. In general, unmet healthcare needs can be defined as conditions where the need (desire) for healthcare is not met. Individual healthcare needs cannot be overlooked as healthcare services are for the people (Huh et al., 2009). It is premised that access to healthcare services should be granted when individuals acknowledge the need for healthcare services. Among the various methods used to measure the experience of unmet healthcare needs, questionnaires are commonly used for subjective evaluation (Allin & Masseria, 2009; Chen & Hou, 2002).

When related factors affecting the experience of unmet healthcare needs were analyzed, male were 1.9 times higher than females and were statistically significant (p<.001, OR=1.961). Unmarried respondents experienced unmet healthcare needs 1.7 times higher than married respondents and were statistically significant (p<.001, OR=1.707). When education level affecting the

experience of unmet healthcare needs were analyzed, respondents with a high school and above level of education were 1.5 times higher than those with elementary school level of education (p<.01, OR=1.547). Respondents with moderate subjective health status experienced unmet healthcare needs 2.4 times higher than those with good subjective health status (p<.05, OR=2.401). Those with chronic diseases were significantly 1.7 times higher unmet healthcare needs than those without chronic disease (p<.01, OR=1.703). Respondents who did not have health insurance experienced unmet healthcare needs 1.4 times higher than those who have health insurance and were statistically significant (p<.05, OR=1.448). In case of analyzing regional features, residents of rural areas experienced unmet healthcare needs 3.2 times higher than those of urban areas and were statistically significant (p<.001, OR=3.236).

In case of economic reasons, sex, age group, income quartile, subjective health status, chronic diseases, and health insurance were not statistically significant. However, in terms of regional features, respondents residing in rural areas experienced 26 times higher unmet healthcare needs as transportation issues than those living in urban areas and were statistically significant (p<.001, OR=26.284). Married respondents experienced unmet healthcare needs due to transportation issues 0.5 times fewer than unmarried respondents (p<.05, OR=0.465). Respondents with an educational level of secondary school and above experienced unmet healthcare needs due to transportation issues 0.5 times fewer than those with an educational level of elementary school (p<.05, OR=0.468).

In terms of economic reasons, sex, age, marital status, educational level, subjective health status, regional features, and health insurance were not statistically significant. The 2nd income quartile experienced unmet healthcare needs due to economic reasons 0.4 times fewer than those in 1st quartile and were statistically significant (p<.05, OR=0.414). The 3rd income

quartile experienced unmet healthcare needs due to economic reasons 0.1 times fewer than those in 1st quartile and were statistically significant (p<.001, OR=0.109). The 4th income quartile experienced unmet healthcare needs due to economic reasons 0.2 times fewer than those in 1st quartile and were statistically significant (p<.001, OR=0.192). Respondents with chronic diseases experienced unmet healthcare needs 2.7 times higher than those without chronic diseases and were statistically significant (p<.05, OR=2.706).

In case of poor quality of healthcare services reasons, sex, age group, marital status, educational level, subjective health status, chronic diseases, and health insurance were not statistically significant. Respondents in the 3rd income quartile experienced unmet healthcare needs 3.9 times higher than those in the 1st quartile (p<.01, OR=3.922). Respondents in the 4th income quartile experienced unmet healthcare needs 6.1 times higher than those in the 1st quartile (p<.001, OR=6.066). Respondents who residing in rural areas experienced unmet healthcare needs 0.4 times fewer than those who in urban areas (p<.05, OR=0.398).

〈Table 2〉 Influencing factors of unmet healthcare needs

Variables		Experience of unmet healthcare needs (N=2,196)		Reasons for unmet healthcare needs					
				Transport		Cost		Quality of service	
		β	ORs	β	ORs	β	ORs	β	ORs
Sex	Women	(Ref)		(Ref)		(Ref)		(Ref)	
	Men	0.673	1.961***	−0.395	0.673	0.149	1.161	−0.441	0.643
Age (years)	17 – 39	(Ref)		(Ref)		(Ref)		(Ref)	
	40 – 59	−0.678	0.508**	−0.613	0.542	−0.489	0.613	−0.677	0.508
	Above 60	−0.428	0.652	−0.761	0.467	−0.065	0.937	−0.177	0.838
Marital status	Married	(Ref)		(Ref)		(Ref)		(Ref)	
	Unmarried	0.535	1.707***	−0.767	0.465*	−0.232	0.793	−0.103	0.902
Educational status	Elementary school	(Ref)		(Ref)		(Ref)		(Ref)	
	Middle	0.017	1.018	−0.489	0.613	0.401	1.493	0.105	1.111

	High school graduate or above	0.437	1.547**	-0.760	0.468*	-0.219	0.803	-0.018	0.982
Income quartile	1_{st} quartile(low)	(Ref)		(Ref)		(Ref)		(Ref)	
	2_{nd} quartile	-0.591	0.554**	0.789	2.201	-0.882	0.414*	0.683	1.980
	3_{rd} quartile	-0.448	0.639	0.338	1.402	-2.216	0.109***	1.366	3.922**
	4_{th} quartile(high)	-0.271	0.763	-0.712	0.491	-1.649	0.192***	1.803	6.066***
Subjective health status	Good	(Ref)		(Ref)		(Ref)		(Ref)	
	Normal	0.876	2.401*	0.146	1.158	0.549	1.731	-0.024	0.977
	Bad	0.277	1.319	0.170	1.185	0.670	1.953	1.196	3.308
Chronic disease	No	(Ref)		(Ref)		(Ref)		(Ref)	
	Yes	0.533	1.703**	0.629	1.877	0.996	2.706*	0.604	1.829
Area	Urban	(Ref)		(Ref)		(Ref)		(Ref)	
	Rural	1.174	3.236***	3.269	26.284***	0.298	1.347	-0.921	0.398**
Health coverage (Insurance)	Yes	(Ref)		(Ref)		(Ref)		(Ref)	
	No	0.370	1.448*	0.592	1.807	0.169	1.184	0.341	1.407

*p<.05 **p<.01 ***p<.001

Ⅳ. Discussion

In this study, data from the 2018 Community Health Survey in Paraguay were used to assess the experience of unmet healthcare needs in residents of Limpio, Paraguay, and to analyze the factors that affected this experience.

In case of regional, rural had higher unmet healthcare needs than those in urban areas. This finding is consistent with those of previous studies (Van Doorslaer, Koolman, & Jones, 2002). The characteristics of residential areas were found to affect the acquisition of services and equity in healthcare use, and geographical factors lead to gaps in healthcare use. Quality of transportation and healthcare service, which was closely related to geographical factors, was the primary reason for unmet healthcare needs. The region analyzed in this study, Limpio, Paraguay, is 23km away from the

capital city, Asuncion. Like Gyeonggi-do in Korea, Limpio is an urban-rural complex area where urban and rural areas coexist. In Limpio, paved roads are connected to a large main road, which leads to Asuncion, and buses traverse only the large main road. However, there are many unpaved roads in rural areas that are vulnerable to rain, and it is difficult to access many regions by vehicles. Therefore, many residents visit Unidad de Salud Familiar and local national hospitals on foot (Kim, J. E., Kim, M. K., & Nam, E. W., 2020). Public health centers, which serve an important role in primary healthcare, are not functioning adequately due to the shortage of healthcare human resources and facilities. Therefore, residents requiring healthcare services visit hospitals of better quality rather than nearby public health centers, decreasing the accessibility and quality of healthcare services throughout the community, and increasing user discomfort. Therefore, more public health centers should be located in areas accessible through the roads and transportation systems of rural areas, in order to increase access and to accommodate the number of rural residents. This would aid in preventing the experience of unmet healthcare needs due to transportation problems. Moreover, it is believed that many residents in Limpio would visit nearby public health centers if the functionality of the centers were improved and healthcare human resources and infrastructure were reinforced.

The study also found that those in the higher income quartile had fewer unmet healthcare needs than those in the lower income quartile. Previous studies have shown that unmet healthcare needs due to economic reasons have a great influence on the ability to use healthcare services (Zavras et al., 2016). Individuals with low income were more likely to experience unmet healthcare needs than those with a higher income. Furthermore, the possibility of experiencing unmet healthcare needs due to poor quality of healthcare service was significantly higher among individuals with low income. These findings suggest that quality of healthcare service is an

important factor that affects the use of healthcare services as the income quartile increases. Among those residing in Limpio, the effects of economic factors on the use of healthcare were lower and the range of options for healthcare services was greater among those with a higher income. Therefore, it is likely that those with a higher income would move to a hospital in Asuncion for better quality healthcare services. Moreover, it is believed that those with a higher income have higher expectations regarding the quality of healthcare services, which may explain why they experienced unmet healthcare needs.

Respondents with chronic diseases were more likely to experience unmet healthcare needs than respondents without chronic diseases, and respondents with no healthcare insurance were more likely to experience unmet healthcare needs than respondents with healthcare insurance. It may be that respondents with chronic diseases experienced unmet healthcare needs because they had more requirements for healthcare services. It was also observed that those who needed healthcare services and did not have health insurance were more likely to experience unmet healthcare needs. According to the WHO, cardiovascular diseases are the number one cause of death in Paraguay. Although Paraguay is a developing country, similar to developed countries, problems caused by chronic diseases are detrimental (Pan American Health Organization, 2017b). The presence or absence of chronic diseases is one of the most commonly used indicators of the need for healthcare (Kim et al., 2018), and it is also an important indicator for measuring and comparing healthcare needs (Cunningham & Hadley, 2007). Few previous studies have analyzed the relationship between chronic diseases and health inequality in Latin American countries. However, some studies have examined the patterns in which chronic diseases affect the need for healthcare services (Fleischer, Diez Roux, Alazraqui, & Spinelli, 2008). Considering the findings of our study, those with chronic diseases should be

included in the vulnerable group in public health centers, and preventive interventions (smoking, alcohol, obesity, etc.) for the management of chronic diseases should be developed when the MICRORED project is implemented. Moreover, it is important to suggest measures to ensure effective access to essential medicine and diagnostic services required for the management of chronic diseases, and it is necessary to establish a systematic monitoring system through programs for the management of chronic diseases.

This study had several limitations. First, the survey was only performed on the residents of Limpio. Therefore, the results cannot be generalized to the entire Paraguay area. Second, a survey, which is the most common method used to assess the experience of unmet healthcare needs, was used; however, the disposition of the surveyor might have affected the results. Third, this was a cross-sectional study that was conducted at a certain point of time, and the accurate assessment of the causal relationship between variables was limited. However, as the Ministry of Health of Paraguay, KOICA, and WHO/PAHO are cooperating to promote primary healthcare delivery systems for Limpio, it is expected that an evaluation of the effects of the project and a time-series analysis will be carried out in the future.

V. Conclusion

In conclusion, regional features are an important factor affecting unmet healthcare needs that can create gaps in the use of healthcare services. More public health centers should be located in areas accessible through the roads and transportation systems of rural areas, in order to increase access and to accommodate the number of rural residents. Moreover, the quality of healthcare services plays an important role in selecting a healthcare institution. Thus, the function of public health centers should be improved

and healthcare human resources and infrastructure of facilities should be systematically enhanced. Lastly, healthcare resources should be utilized considering the vulnerable characteristics of the residents. As those with chronic diseases or without healthcare insurance experienced higher unmet healthcare needs, the presence or absence of chronic disease should be primarily considered while developing preventive interventions and visiting care programs, and the expansion of health insurance is necessary. Additionally, a systematic monitoring system needs to be established through programs for the management of chronic diseases.

The observations of this study aim to provide data and improve the MICRORED system for the Paraguay 2030 National Development Plan.

DECLARATIONS

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Ethics approval

This study was conducted after receiving approval from the Institutional Review Board (IRB) of the Paraguayan Health Ministry (number: 136/05062018) and the Bioethics Review Board of the University of Illinois at Chicago (UIC) (number: 2,017-0600).

References

Allin, S., & Masseria, C. (2009). Unmet need as an indicator of health care access. Eurohealth, 15(3), 7.

Chen, J., & Hou, F. (2002). Unmet needs for health care. Health Reports, 13(2), 23–34.

City population. LIMPIO district in Paraguay. (2020). https://www.citypopulation.de/en/paraguay/admin/central/1108__limpio/

Cunningham, P. J., & Hadley, J. (2007). Differences between symptom- specific and general survey questions of unmet need in measuring insurance and racial/ethnic disparities in access to care. Medical Care, 45(9), 842–850. https://doi.org/10.1097/MLR.0b013e318053678f

Donabedian, A. (1973). Aspects of medical care administration: Specifying requirements for healthcare. Cambridge, MA: Harvard University Press.

Fleischer, N. L., Diez Roux, A. V., Alazraqui, M., & Spinelli, H. (2008). Social patterning of chronic disease risk factors in a Latin American City. Journal of Urban Health: Bulletin of the New York Academy of Medicine, 85(6), 923–937. https://doi.org/10.1007/s11524-008-9319-2

Ghebreyesus, T. A. (2017). All roads lead to universal health coverage. Lancet. Global Health, 5(9), e839–e840. https://doi.org/10.1016/S2214-109X(17)30295-4

Giménez Caballero, E., Ocampos, G., Rodríguez, J. C., Araujo, J. M., & Peralta, N. (2019). Impoverishing health expenditure: A challenge for universal health coverage in Paraguay. Anales de la Facultad de Ciencias Médicas, 52(1), 33–42. https://doi.org/10.18004/anales/2019.052(01)33-042

Giménez Caballero, E., Rodríguez Zuccolillo, J. C., Peralta Garay, N., Barrios, R., Martínez Acosta, P., Araujo Quevedo, J., & Jojot de Gneiting, E. (2019). Factors that limit the decentralization of the National health

system of Paraguay. Anales de la Facultad de Ciencias Médicas, 52(2), 39–48. https://doi.org/10.18004/anales/2019.052(02)39-048

Giménez, E., Flores, L., Rodríguez, J. C., Ocampos, G., & Peralta, N. (2018). Catastrophic health expenses in households of Paraguay. Memorias del Instituto de Investigaciones en Ciencias de la Salud, 16(2), 38–48. https://doi.org/10.18004/mem.iics/1812-9528/2018.016(02)38-048

Goddard, M., & Smith, P. (2001). Equity of access to health care services: Theory and evidence from the UK. Social Science and Medicine, 53(9), 1149–1162. https://doi.org/10.1016/s0277-9536(00)00415-9

González Galeano, M. C. C. (2018). National health policy of Paraguay. Revista Virtual de la Sociedad Paraguaya de Medicina Interna, 5(2), 110–111. https://doi.org/10.18004/rvspmi/2312-3893/2018.05(02)110-111

Hong, J. Y., & Jeon, Y. H. (2019). The factors affecting unmet medical needs of the elderly aged more than 65 years. Indian Journal of Public Health Research and Development, 10(11), 4563–4569. https://doi.org/10.5958/0976-5506.2019.04326.2

Huh, S. I. et al. (2009). (a) study for unmet health care need policy impllications. Korea Institute for Health and Social Affairs.

International Monetary Fund, Western Hemisphere Department. (2019). IMF Country Report No. 19/111, Paraguay 2019. Consultation-press release; staff report; and statement by the executive Director for Paraguay. https://www.imf.org/en/Publications/CR/Issues/2019/04/30/Paraguay-2019-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-46837, article IV.

Kim, A. B. (2018, August 31). Paraguay's economic, political transformation deserves recognition. https://www.heritage.org/international-economies/commentary/paraguays-economic-political-transformation-deserves-recognition.

Kim, J. E., Kim, M. K., & Nam, E. W. (2020). A study on the management and

utilization of sub-health center in rural area, Paraguay [1]-Focused on Limpio, Paraguay. Journal of the Korea Institute of Healthcare Architecture, 7-17. https://doi.org/10.15682/jkiha.2020.26.2.7

Kim, Y. S., Lee, J., Moon, Y., Kim, K. J., Lee, K., Choi, J., & Han, S. H. (2018). Unmet healthcare needs of elderly people in Korea. BMC Geriatrics, 18(1), 98. https://doi.org/10.1186/s12877-018-0786-3

Organization for Economic Cooperation and Development. (2020). Unmet needs for health care: Comparing approaches and results from international surveys. https://www.oecd.org/health/health-systems/Unmet-Needs-for-Health-Care-Brief-2020.pdf.

Pan American Health Organization. (2008). Health systems profile Paraguay: Monitoring and analyzing health systems change/reform. Washington, DC: Pan American Health Organization.

Pan American Health Organization. (2017a). Health in the Americas. https://www.paho.org/salud-en-las-americas-2017/?p=4292.

Pan American Health Organization. (2017b). Health in the Americas. Country report. https://www.paho.org/salud-en-las-americas-2017/?page_id=147. Paraguay.

Pan American Health Organization. (2019). OPS Paraguay. https://www.paho.org/par/index.php?option=com_content&view=article&id=2117:proceso-de-seleccion-consultoria-nacional-para-el-proyecto-conjunto-hefa-paho-koika&Itemid=0.

Secretaría técnica de planificación. (2014). Plan. Nacional de Desarrollo Paraguay, 2030.

Shin, H. R., Lim, Y. G., & Han, K. M. (2014). The influence of medical expenditure on unmet needs for healthcare: Focused on the moderating effect of private health insurance (pp. 25-48). (in Korean). Korean Association of Regional Studies, 22(3).

Van Doorslaer, E., Koolman, X., & Jones, A. M. (2002). Explaining income-

related inequalities in doctor utilisation in Europe: A decomposition approach. ECuity. Project, II.

World Health Organization. (2000). The world health report. Health Systems: Improving Performance. https://www.who.int/whr/2000/en/, 2000.

Zavras, D., Zavras, A. I., Kyriopoulos, I. I., & Kyriopoulos, J. (2016). Economic crisis, austerity and unmet healthcare needs: The case of Greece. BMC Health Services Research, 16, 309. https://doi.org/10.1186/s12913-016-1557-5

□□□□■□□ 국문초록

파라과이 림삐오시 주민들의 미충족 의료이용 경험에 미치는 영향 요인 분석

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본 연구는 파라과이 최초의 종합적 지역사회 설문조사인 2018년 파라과이 지역사회 건강조사(2018 Community Health Survey) 자료를 분석하여 지역주민들의 미충족 의료이용 경험에 영향을 주는 요인들을 규명하였다는 데 의의가 있다. 파라과이의 도·농 복합지역에 거주하는 17세 이상 성인 2,196명을 대상으로 미충족 의료이용 경험률을 산출하여 확인하고, 미충족 의료이용 경험과 그 이유에 영향을 미치는 요인을 로지스틱 회귀분석(Logistic Regression Analysis)으로 분석하였다. 연구 결과에 따르면, 농촌 지역에 거주한다고 응답한 사람들이 도시 지역에 거주하는 사람에 비해 미충족 의료이용 경험을 할 가능성이 높은 것으로 나타났다. 또한 소득이 높은 사람이 소득이 낮은 사람들에 비해 미충족 의료이용 경험을 할 가능성이 높았으며, 만성질환이 있고, 건강보험이 없는 사람들이 그렇지 않은 사람들에 비해 미충족 의료이용 경험을 할 가능성이 높았다. 결론적으로, 첫째, 지리적 요인이 의료이용에 대한 격차를 발생시키기 때문에 농촌 지역의 도로와 교통을 고려해 보건의료정책을 시행할 필요성이 있다. 둘째, 의료서비스의 질이 의료기관을 선택함에 있어서 중요한 결정요소로 작용하기 때문에 일차보건의료를 강화시키기 위해서는 보건소의 기능을 개선하고, 충분한 의료인력과 의료시설 인프라를 체계적으로 강화하여 점진적으로 의료서비스의 질을 강화해야 할 것이다. 마지막으로, 파라과이 림삐오시 주민들을 위한 만성질환 관리 중재 프로그램을 개발할 때 대상자의 만성질환과 의료보험의 유무가 우선적으로 고려되어야 할 것이다.

[주제어: 일차보건의료, 미충족 의료이용 경험, 의료전달체계, 파라과이, 국제보건]

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