Comparative Analysis of the Determinants of Healthcare Worker Satisfaction between Public and Private Hospitals in the Urban and Rural Areas in the Philippines: A Mixed Methods Study

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Abbreviations

DOH	Department of Health
HCW	Healthcare Worker
HRH	Human Resources for Health
KII	Key Informant Interview
NCR	National Capital Region
RHU	Rural Health Unit
WHO	World Health Organization

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Year after year, an increasing number of hospital healthcare workers (HCWs) are opting to work in other countries primarily because of different factors affecting their satisfaction level from working in hospitals in the Philippines. This migration of HCWs adds to the widening gap of the Philippines' health care system to provide good quality health service delivery because of the insufficient number of doctors and nurses working in the country.

This study looked into the different factors affecting the satisfaction level of HCWs in the Philippines. A mixed methods approach in data gathering and analysis was employed to attain the objectives of this study. Quantitatively, a total of 303 doctors and nurses from selected public and private hospitals in Manila City, Albay Province, and Sorsogon Province participated in an online survey. Twenty-one specific factors of job satisfaction were pre-identified and using factor analysis, they were grouped into three generalized dimensions of job satisfaction: extrinsic factors, intrinsic factors, and environmental and welfare factors. HCWs satisfaction on these dimensions and their relationship with the HCWs' individual characteristics (age, sex, job position, monthly income, employment status, total years of experience as a HCW, personality type, hospital type, and area type where hospital is located) were analyzed using independent sample t-test, one-way ANOVA test, and multiple regression analysis. Results of the analyses revealed the following:

Extrinsic factors. All individual characteristics, except employment status, showed significant relationship with this dimension of job satisfaction. No significant relationship was shown between hospital type and extrinsic factors, but there was high positive significance shown between area type and extrinsic factors. This means that HCWs from hospitals in rural areas are more satisfied with the extrinsic factors compared to those from urban areas.

Intrinsic factors. Only personality type and employment status showed significant results for this dimension. No significant relationship was shown for both hospital type and area type and intrinsic factors.

Environmental and welfare factors. Monthly income, job position, and personality type showed significant relationship with this dimension of job satisfaction. While area type shows no significance, hospital type showed high negative significant relationship with environmental and welfare factors. This means that HCWs from public hospitals are less satisfied with the environmental and welfare factors compared to those from private hospitals.

Qualitatively, a key informant interview was conducted to hospital heads/directors and human resource department heads. Saturation level of information was reached after 7 interviews. Thematic analysis was used to analyze the qualitative data gathered. All interview participants recognized the presence of job dissatisfaction among the HCWs in their hospitals. Salary was identified as the main reason for job dissatisfaction among HCWs, followed by poor working conditions, poor interpersonal relationships among co-workers, and lack of reward and benefits system in the hospitals. Extended work hours, manpower insufficiency, and lack of opportunity of capacity building opportunities were also mentioned as reasons for job dissatisfaction. If these factors can be addressed within the hospital, job satisfaction can be attained.

To possibly address the identified challenges among HCWs, recommendations include having an improved reward system and increasing the salary of the HCWs, fixing the hospital staffing patterns and increasing the availability of permanent positions to address manpower insufficiency, improving hospital working environment and conditions, improving the interpersonal and organizational relationships between co-workers in the hospital, and defining each worker's duties and responsibilities for a clearer and more efficient process flow in the hospital. To further hasten the addressing of gaps in the human resources for health sector in the country, the importance of a top-bottom approach is emphasized wherein actions should be initiated by the Department of Health and key stakeholders themselves.

Keywords: *healthcare workers, job satisfaction, public hospital, private hospital, urban area, rural area*

CHAPTER 1. INTRODUCTION

1.1 Background of the Study

Hospital healthcare workers are the backbone of the healthcare system. The health human resources are the main drivers of the health care system and are essential for the efficient management and operation of the public health system (Department of Health, 2017).

The Philippines is one of the largest producers of healthcare workers in the world, but data shows that there is low healthcare worker ratio to patients in the country. For physicians alone, the World Health Organization (WHO) recommends the ideal doctor-patient ratio at 1:10,000, but the Department of Health (DOH) reported that the Philippines' doctor-patient ratio is more than three times less at 1:33,000 (Cabato, 2016). The DOH added that country is short of 15,000 doctors to be able to adequately meet the health needs of Filipinos each year. In an HRH report of the DOH (2017) on the number and distribution of government healthcare workers in the Philippines by region, they indicated there that only two regions (NCR and Cordillera Administrative Region) with sufficient rural health unit (RHU) physicians; seven regions (Cordillera Administrative Region, Ilocos, Cagayan

Valley, MIMAROPA, Western Visayas, Northern Mindanao, and Caraga) with enough rural health midwives. None of the regions had adequate public health nurses with permanent appointment to cover the entire population. These translate to a shortage of 2,013 RHU physicians and 4,467 public health nurses appointed on a permanent basis (Department of Health, 2017).

A scarcity of highly skilled nurses and the massive retraining of physicians to become nurses in other countries have led to severe problems for the Filipino health system, including the closure of many hospitals (Lorenzo et al., 2007). A resolution to the senate in 2005 urging the committee on health and demography and other essential committees was submitted urging to do an investigation on the occurring mass migration of Filipino doctors and nurses which will highly lead to serious impacts for the public health sector of the country. It was cited there that twenty-one (21) municipalities and seven (7) government hospitals in Western Samar, as well as five (5) municipalities in Sulu have no doctors. Furthermore, by the end of 2005, approximately 120 hospitals in rural areas have closed because there is no one left to see patient. In 2007, the Philippine Hospital Association recently reported that 200 hospitals have closed within the past 2 years due to shortages of doctors and nurses, and 800 hospitals have partially closed for the same reason, ending services in one or two wards (Lorenzo et al., 2007).

In the Philippines, healthcare workers are generally overworked but underpaid. Koty (2021) reported that there is approximately one nurse for every 5,000 residents, but this can be as low as one for every 20,000 in rural areas. Furthermore, a national study published in 2018 found that as many as 75 percent of local government units lack health workers. Because of this scarcity, medical workers are usually overworked and face high levels of stress and are at risk of making more medical mistakes. With low pay and hazardous working conditions, the Private Hospitals Association of the Philippines estimates that about 40 percent of private hospital nurses quit in 2020 (Koty, 2021).

Many of the healthcare workers in the Philippines prefer to go out of the country to work there. The Philippines is one of the world's largest suppliers of nurses employed to work overseas and overall, more than 193,000 nurses who studied in the Philippines work abroad, representing 85 percent of all nurses trained in the country (Koty, 2021). Doctors who have retrained as nurses (known as "nurse medics") in order to seek overseas employment are a new and growing phenomenon (Lorenzo et al., 2007). The study further noted that this career shift was attributed to the very low compensation and salaries in the Philippines, poor working conditions, and the threat of malpractice lawsuits. Nurse medics were also drawn to attractive compensation and benefits packages, more job opportunities, career

growth, and more socio-political and economic security abroad (Lorenzo et al., 2007).

The DOH admitted that the healthcare workers in the Philippines are excellent and skilled but the attraction for them to stay here is sort of lacking (Cabato, 2016). One of the reasons why so many medical workers from the Philippines choose to work abroad is because despite their high levels of skills and training, work conditions in the country are poor (Koty, 2021).

1.2 Statement of the Problem

Year after year, an increasing number of hospital healthcare workers are opting to work in other countries primarily because of different factors affecting their satisfaction level from working in hospitals in the Philippines. A WHO report mentioned that 40% of health care professionals, including nurses and doctors, will leave their job as a result of job dissatisfaction. The Philippines is one of the world's top sources for healthcare workers, however, many hospitals and health care facilities in the country are consistently understaffed primarily because many of these HCWs prefer to work abroad or in alternative industries. This adds to the widening gap of the Philippines' health care system to provide good quality health

service delivery because of the insufficient number of doctors and nurses working in the country.

1.3 Significance of the Study

This study looked into the different factors affecting satisfaction level of healthcare workers in the Philippines, particularly doctors and nurses. Job satisfaction among healthcare workers is vital and deemed as an essential parameter that affects their productivity and quality of work.

There is generally little existing data on the health care worker satisfaction in the Philippines. According to previously conducted studies in other countries, retention and turnover intention of healthcare workers have a close correlation with job satisfaction. In relation to this, job satisfaction and the quality of care being provided are strongly associated with each other.

This is an important topic of research because having a sufficient number of healthcare workers helps build a more effective, efficient, and stable healthcare system. Adequate hospital staffing has been constantly cited in the literature as an important determinant of patient satisfaction and care quality.

Furthermore, as health workforce is one of the six core components of the health system, it is crucial for it to be part of a regular monitoring and evaluation of the country's health-related bodies.

1.4 Research Objectives

General Objective:

To do a comparative analysis of the determinants of healthcare worker satisfaction between public and private hospitals in the urban (Manila City) and rural areas (Albay Province and Sorsogon Province) in the Philippines

Specific Objectives:

1) To investigate the factors affecting job satisfaction among doctors and nurses in selected public and private hospitals in Manila City, Albay Province, and Sorsogon Province;
2) To determine the association between the identified factors of job satisfaction and the individual characteristics of healthcare workers;
3) To determine the association between the identified factors of job satisfaction and the type of hospital, i.e., public vs private;

4) To determine the association between the identified factors of job satisfaction and the type of area where the hospital is located, i.e., urban vs rural;
5) To determine the hospital management's perception of doctors' and nurses' job satisfaction; and
6) To provide policy recommendations based on the findings of the study.

1.5 Scope and (De)limitation of the Study

This study mainly focused looking into different factors affecting the job satisfaction of hospital workers, particularly doctors and nurses, in selected hospitals in the Philippines. There are six (6) general factors that were looked into: individual characteristics, structural factors, social & managerial factors, work-in-itself factors, benefit factors, and environmental & welfare factors.

The hospitals targeted for the study participants are those that are in the official list of Department of Health (DOH) – licensed hospitals as of 2020. DOH-licensed hospitals were selected for the reason that they are being regulated by DOH itself. With this, possible policy recommendations can be directed towards DOH

and they can be streamlined directly to the selected hospitals for a more efficient and effective direction of policy implementation. Specifically, for the comparison of hospitals from different area types, i.e., urban vs rural, all DOH – licensed public and private hospitals in Manila City, and Albay Province and Sorsogon Province will represent the urban and rural areas, respectively. Target population will be the nurses, doctors, and hospital directors/heads and/or human resources head currently working in the identified hospitals.

CHAPTER 2. REVIEW OF RELATED LITERATURE

One of the most important aspects of an organization is their employees, thus, it is also one of their most crucial goals to ensure that their employees are highly satisfied with their jobs. In a hospital setting, a healthcare worker's job satisfaction can vary depending on factors of time and location, such as between countries, geographical areas, hospitals, and wards in the same hospital (Ravari et al., 2012). Job satisfaction is a multidimensional concept, thus, to achieve the goal of maintaining it in an organization, the management should carefully look into the different factors that are highly and directly related to their workers' job satisfaction, because how satisfied the workers are in their jobs will be reflected in their quality of work and turnover intention (Ravish & Deveshwar, 2018).

Job satisfaction of healthcare workers in hospitals and its effect on productivity, quality of work, work retention, and patient satisfaction

Job satisfaction can be simply defined as one's sensitivity and perception to his/her work, or how much a person likes or dislikes his/her job. In last three decades, a lot of studies have been conducted to evaluate the job satisfaction among hospital healthcare workers.

A study by Atif et al. (2015) cited that job dissatisfaction among doctors in both developing and developed countries have been worsening. They mentioned that even in US, a well-developed country, only less than 50% doctors were satisfied with their job. In general, the topic of job satisfaction amongst doctors has been neglected since long. Farman et al. (2017) looked into nurses' job satisfaction, and they found in their study that nurses usually work for 8 to 12 hours in a day and due to poor hospital staffing, how they deal with patients are also affected. With this, it is common for nurses to be required to work beyond their scheduled hours resulting in exhaustion. It was suggested by Bautista et al. (2020) in their study on specific stressors related to nurses' job satisfaction, perceived quality of care, and turnover intention that the hospital management should look into stressors experienced by nurses since these can lead to increased turnover and poor quality of health care provided.

Job satisfaction is vital to attain superlative quality of work. Among healthcare workers, job satisfaction is crucial and considered as an essential parameter that affects their productivity and work quality (Halawani et al., 2021). There is a clear relationship between the employees' satisfaction and the organizational achievement. In a hospital, nurses and doctors play a key role in running the organization's economy because they have the foremost direct interaction with the

patients, thus, if the nurses and doctors provide quality of care to the patients, the economy of the organization has a higher chance at stability (Farman et al., 2017). In a study by Bagheri et al. (2017) in a teaching hospital of Karachi, nearly 70% of the doctors were not satisfied with their job, which, in turn, affected the quality of their work.

Job satisfaction increases the staff retention within organization. It has a direct link with absenteeism and turnover of the staff in organizations (Bagheri et al., 2012). Healthcare workers' interaction with colleagues and their patient relation is largely related to the level of their job satisfaction. Dissatisfaction may lead to inability to offer a caring and affectionate treatment to their patients, even neglecting their patients caused by lack of focus or interest in their job (Atif et al., 2015).

Job satisfaction among healthcare workers is directly proportional to quality of care. If quality of care is excellent, then patient satisfaction will also be high. Job satisfaction and quality care are the two main factors which directly affect the health care industry. If healthcare workers do not provide good quality service delivery to their patients, then the patient turnover also increases (Farman et al., 2017), affecting continuity of care provision and health care costs (Bovier & Perneger, 2004). Job satisfaction of the health care providers is considered one of the most

essential factors that affects the quality of the provided care and the efficacy of the health care service (Halawani et al., 2021).

Public vs private hospitals

Several international studies have looked into the type of hospital as a factor affecting the satisfaction level of healthcare workers. A study by Bovier & Perneger (2014) on the predictors of work satisfaction among physicians found that among all the factors that they have looked into, public vs private practice was one of the most important.

Hamid et al. (2013) conducted a study on the job satisfaction among nurses working in the private and public sectors in tertiary care hospitals in Pakistan and their study findings indicate that nurses in both the private and public sectors were dissatisfied with their jobs, but their grievances differed with respect to three important circumstances: years of service, working environment (which include interpersonal relationships and renumerations), and availability of in-service training. Nurses from the public sector who have been working for more than 5 years were found to be less satisfied with their work compared to nurses working in the private sector for the same length of service. Regarding working environment, nurses in both the public and private sectors experienced completely different

situations wherein nurses in the public sector work with limited resources and under harsh conditions and were dissatisfied with the compensation that they got for services they do. Most respondents working in the private sector had experience working in the public sector, giving them points of comparison of the two environments and were more satisfied with the working conditions in their current workplace. As for in-service training, nurses from the private hospitals received regular training which they can use as leverage to have further career opportunities, while many nurses working in the public hospitals are stagnant in the same post even after years of service because training opportunities are usually unavailable in the public sector. Based on the findings of their study, the authors recommended that further and more in-depth comparisons of the working environment for nurses in the private and public sector would provide better understanding for an effective development of context-specific retention strategies (Hamid et al., 2013).

As for the case in the Philippines, it generally takes over eight years for a medical student to finish medical studies and become a full-pledged, licensed physician. Without scholarship or aid, the expenses in medical schools can be high, which provokes new doctors to work in private hospitals which generally offer higher pay to be able to recuperate their medical school investment (Cabato, 2016).

According to a DOH report (2017), double shifting in private hospitals is a common practice among government doctors to augment income.

Hospitals in urban vs rural areas

Studies looking into the satisfaction level of healthcare workers in hospitals between rural and urban areas are generally lacking, both local and international. In the Philippines, reports from the Department of Health have several mentions about the concerns of health human resources (HRH) distribution in the country. The Philippines is known to be a huge human reservoir for health workers; however, they are maldistributed across the country as a greater number of health personnel are concentrated in urban areas such as Metro Manila and other cities, resulting in doctorless health facilities in certain regions (Department of Health, 2017).

Each city/municipality is supposed to have a designated City/Municipal Health Officer (CHO/MHO) who are also medical doctors. In some rural areas, especially in far-flung and marginalized municipalities, MHO posts are difficult to fill up because of the local government's inability to offer adequate incentives to entice health personnel to practice in their localities (Department of Health, 2017). Furthermore, DOH (2017) reported that HRH distribution is skewed towards

hospital-based services and in urban areas where economic and career opportunities are perceived to be better. Incentives and benefits to persuade healthcare workers to practice in disadvantaged rural areas are mostly insufficient. Additional factors that cause the lack of persuasion for health workers to be stationed in rural areas are the poorly maintained and poorly equipped healthcare facilities. Consequently, because of poor staffing, hospital congestion is a common day-to-day scenario in national and regional hospitals with patients bypassing primary health facilities even for simple illnesses because of insufficient and inefficient health system management flow at the local level (Department of Health, 2017).

CHAPTER 3. METHODOLOGY

3.1 Study Design and Setting

This study is a cross-sectional, mixed methods study. The target participants of this study were doctors and nurses from the selected licensed public and private hospitals in Manila City, Albay Province, and Sorsogon Province. Hospital heads/directors and human resource department heads were also targeted.

There was a total of 52 hospitals identified: 26 from Manila City (11 public and 15 private), 17 from Albay Province (5 public and 12 private), and 9 from Sorsogon Province (5 public and 4 private).

The complete list of hospitals is shown on Table 1.

Area	Public hospitals	Private hospitals
Manila City (Urban Area)	1) Dr. Jose Fabella Memorial Hospital 2) Gat Andres Bonifacio Memorial Medical Center 3) Jose R. Reyes Memorial Medical Center 4) Justice Jose Abad Santos General Hospital	1) Amisola Maternity Hospital 2) Chinese General Hospital & Medical Center 3) De Ocampo Memorial Medical Center 4) Hospital of the Infant Jesus Medical Center 5) Manila Doctors Hospital

	5) Ospital ng Maynila Medical Center 6) Ospital ng Sampaloc 7) Ospital ng Tondo 8) San Lazaro Hospital 9) Sta. Ana Hospital 10) Tondo Medical Center 11) UP – Philippine General Hospital	6) Mary Chiles General Hospital, Inc. 7) Mary Johnston Hospital, Inc. 8) Medical Center Manila, Inc. 9) Metropolitan Medical Center 10) Our Lady of Lourdes Hospital 11) Perpetual Succor Hospital and Maternity, Inc. 12) Seamen's Hospital 13) St. Jude General Hospital and Medical Center, Inc. 14) Trinity Woman & Child Center "The Birthplace" 15) University of Santo Tomas Hospital
Albay Province (Rural Area)	1) Bicol Regional Training and Teaching Hospital 2) Dr. Lorenzo T. Ziga Memorial District Hospital 3) Josefina Belmonte Duran Memorial District Hospital 4) Legazpi City Hospital 5) Rapu-Rapu District Hospital	1) Ago General Hospital 2) Albay Doctors' Hospital, Inc. 3) Cabredo General Hospital 4) Daraga Doctors' Hospital, Inc. 5) Dr. Amando D. Cope Memorial Hospital, Inc. 6) Estevez Memorial Hospital, Inc. 7) Jaime B. Berces Memorial Hospital 8) Ludovice General Hospital 9) Lumbis Rances General Hospital 10) Tanchuling General Hospital, Inc. 11) University of Santo Tomas (UST) – Legazpi, Inc. 12) Zone Medical and Intervention Hospital, Inc.
Sorsogon Province	1) Donsol District Hospital 2) Irosin District Hospital	1) Sts. Peter and Paul Hospital of Sorsogon, Inc

(Rural Area)	3) Salvador R. Encinas District Hospital 4) Vicente L. Peralta Memorial District Hospital 5) Dr. Fernando B. Duran, Sr. Memorial Hospital	2) Chacon General Hospital, Inc. 3) Sorsogon Medical Mission Group Hospital and Health Services Cooperative 4) Metro Health Specialists Hospital, Inc.

Table 1. Complete list of DOH-licensed public and private hospitals in Manila City, Albay Province, and Sorsogon Province

3.2 Sampling Technique and Sample Size

The sampling technique that was utilized for this study was purposive sampling wherein eligible respondents were entirely based on the inclusion and exclusion criteria provided.

INCLUSION CRITERIA (for the survey):

- Doctors and nurses working in selected DOH-licensed public and private hospitals from Manila City, Albay Province, and Sorsogon Province in the Philippines
- Working for at least 6 months in the hospital, regardless of employment status

EXCLUSION CRITERIA (for the survey):

- All other types of hospital healthcare workers

INCLUSION CRITERIA (for the KII):

- Hospital director/head of the selected DOH-licensed public and private hospitals from Manila City, Albay Province, and Sorsogon Province in the Philippines
- Human resources department head of the selected public and private hospitals from Manila City, Albay Province, and Sorsogon Province in the Philippines
- Working for at least 1 year in the hospital

For the survey, the minimum number of target participants that should be included in the study was computed as follows:

$$E = zSp, \text{ where } Sp = \sqrt{(\frac{pq}{n})}$$

$$n = (z^2)\ x\ (\frac{pq}{E^2})$$

At 95% confidence level, where p is assumed to be 0.50, the target sample size is 300. A total of 307 responses were gathered. Upon data cleaning, 3 responses were disregarded because of noncompliance to the inclusion criteria of the respondents. The total number of responses accounted for analysis is 303.

For the key informant interview (KII), participants were continuously recruited for interview until saturation level for the information gathered has been reached. After doing 7 interviews, the information gathered reached saturation level.

3.3 Data Collection Procedure

In engaging with the study participants, methods of data collection were conducted in the following manner:

- Survey questionnaire – via online administration
- Key Informant Interview (KII) – via Zoom interview

3.4 Study Variables

Using the survey, the study looked into the study participants' individual characteristics which are also the independent variables of the study. Ten (10) characteristics were included: Age, Sex, Job position, Monthly net income, Employment status, Years of working at current hospital, Total years of experience as a HCW, Personality type, Hospital Type, and Area type where hospital is located.

The survey participants were asked about their level of satisfaction on 21 different pre-identified factors of job satisfaction: Job security, Manpower

sufficiency, Advancement/training opportunities, Policy implementation, Leadership, Organizational relationships, Mental health awareness and practices, Workload, Work hours, Duties and responsibilities, Job compatibility, Job interest, Relation between workload and payment, Compensation and benefits, Recognition of work, Hospital facilities, Availability of resources, Environmental safety, Occupational safety, Work environment and physical conditions, and Pandemic response. The participants' satisfaction level on each of these factors are the dependent variables of the study.

3.5 Data Processing and Analysis

Data analysis was done using IBM SPSS Statistics 26.

To provide an overview of the respondents' individual characteristics, frequency and percentages were presented in tables and graphs.

The gathered data corresponding to the pre-identified factors of job satisfaction were subjected to factor analysis. Factor analysis is a technique that is used to reduce a large number of variables into fewer numbers of factors. This technique extracts maximum common variance from all variables and puts them

into a common score (Statistics Solutions, 2021). As an index of all variables, we can use this score for further analysis.

The result of the factor analysis is shown in the table below:

Variables	Component			
	Factor 1	**Factor 2**	**Factor 3**	**Communality**
Job security	0.465	0.227	0.148	0.292
Manpower sufficiency	0.720	0.395	0.168	0.702
Advancement/Training opportunities	0.325	0.270	0.518	0.447
Policy implementation	0.642	0.313	0.168	0.539
Leadership	0.639	0.106	0.299	0.508
Organizational relationships	0.093	0.149	0.719	0.548
Mental health awareness and practices	0.646	0.194	0.327	0.562
Workload	0.698	0.208	0.237	0.586
Work hours	0.575	0.208	0.318	0.476
Duties and responsibilities	0.408	0.104	0.631	0.575
Job compatibility	0.184	0.143	0.769	0.645
Job interest	0.308	0.150	0.671	0.568
Relation between workload and payment	0.798	0.152	0.159	0.684
Compensation and benefits	0.787	0.201	0.071	0.664
Recognition of work	0.686	0.291	0.268	0.627
Hospital facilities	0.289	0.734	0.128	0.639
Availability of resources	0.135	0.830	0.138	0.726
Environmental safety	0.267	0.775	0.251	0.735
Occupational safety	0.296	0.799	0.181	0.759
Work environment and physical conditions	0.341	0.734	-0.009	0.655
Pandemic response	0.139	0.637	0.304	0.517

Table 2. Factor analysis results showing the factor loading and communality values of each variables

Communality was first checked. Communality is the ratio explained by the factors extracted. It is recommended to remove questions with communality of 0.4 or less. Based on the results of the factor analysis, the job security variable has to be removed as it does not satisfy the recommended communality value.

Factor loadings was checked next. The factor loadings obtained from the factor analysis indicate how much a factor explains a variable. Loadings can range from -1 to 1. Each factor loading pattern was examined to determine the factor that has the most influence on each variable. Loadings close to -1 or 1 indicate that the factor strongly influences the variable. Loadings close to 0 indicate that the factor has a weak influence on the variable.

Three new dimensions of job satisfaction were extracted and based on the results of the factor analysis, Factor 1 shows 9 variables with the most influence among each other: Manpower sufficiency, Policy implementation, Leadership, Mental health awareness and practices, Workload, Work hours, Relation between workload and payment, Compensation and benefits, and Recognition of work. Factor 1 was labelled ‘Extrinsic Job Factors’ as these are a set of factors that are related to the external working conditions.

Factor 2 shows 6 variables with the most influence among each other: Hospital facilities, Availability of resources, Environmental safety, Occupational safety, Work environment and physical conditions, and Pandemic response. Factor 2 was labelled ‘Environmental and Welfare Factors’. This set of factors looked into the physical conditions of the job as well as the well-being of the workers.

Factor 3 shows 5 variables with the most influence among each other: Advancement/training opportunities, Organizational relationships, Duties and responsibilities, Job compatibility, and Job interest. Factor 3 was labelled ‘Intrinsic Job Factors’ as these are a set of factors that are related to the attitude of the individual towards her/his job.

The new identified set of factors or dimensions of job satisfaction from the analysis were analyzed using descriptive analysis, two independent sample t-test, ANOVA, and multiple regression analysis versus the individual characteristics identified.

For the qualitative data, thematic analysis was utilized.

KMO and Bartlett’s Test was also checked. KMO and Bartlett’s Test indicates how well the correlation coefficient between questions is explained by other questions. The acceptable KMO value in factor analysis is 0.70 ~ 0.80. A KMO value of 0.80 ~ 0.90 is considered good, and 0.90 and above is considered excellent.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**0.910**
Bartlett's Test of Sphericity	Approx. Chi-Square	3,857.130
	df	210
	Sig.	**<0.001**

Table 3. KMO and Bartlett's Test values for the Validity Test

3.6 Analytical Framework

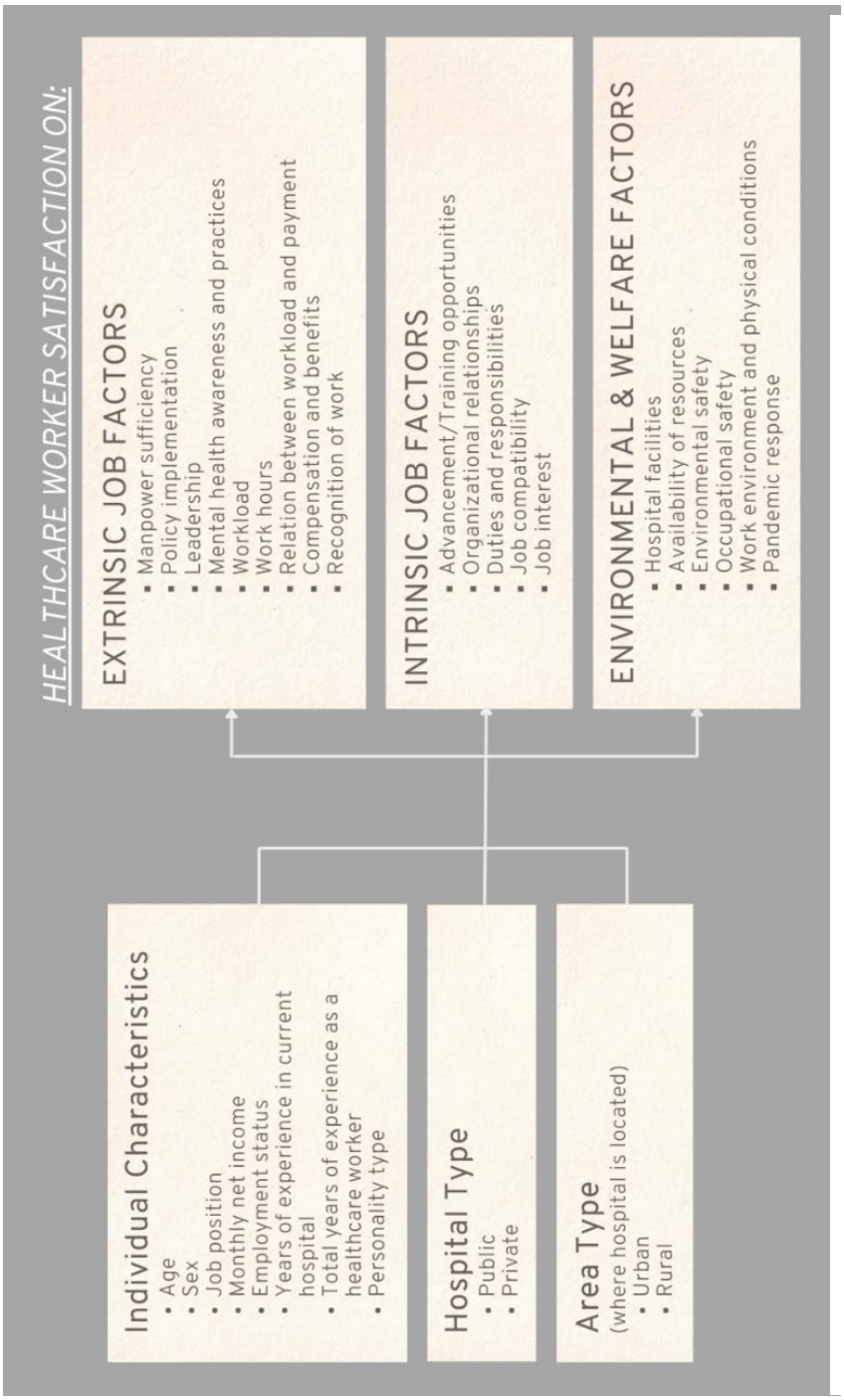

Figure 1. Analytical framework showing all the variables that were used in the analysis of the study

3.7 Hypotheses Development

Factors associated with each of the 3 dimensions of healthcare workers' satisfaction- extrinsic job dimension, intrinsic job dimension, environmental and welfare dimension- were explored and the hypotheses were developed.

H1: Sociodemographic factors are associated with each of the 3 dimensions of healthcare workers' satisfaction.

H2: Personality type is associated with each of the 3 dimensions of healthcare workers' satisfaction.

H3: Hospital type (public vs. private) is associated with each of the 3 dimensions of healthcare workers' satisfaction.

H4: Hospital location (urban vs. rural) is associated with each of the 3 dimensions of healthcare workers' satisfaction.

CHAPTER 4. RESULTS AND DISCUSSIONS

The summary and analysis of the data gathered are presented in this chapter. It explains the findings of the data acquired via survey questionnaire and key informant interview, which were generated using IBM SPSS Statistics 26 to analyze the data set. The data analysis includes descriptive analysis, two independent sample t-test, one-way ANOVA test, and multiple regression analysis. Discussions of the results are also included in this chapter.

I. QUANTITATIVE ANALYSIS

Descriptive Analysis of the Individual Characteristics

The socio-demographic characteristics and individual characteristics of the surveyed respondents were analyzed accordingly. The characteristics described are age, sex (assigned at birth), job position (doctor vs nurse), monthly net income, employment/tenure status (permanent vs non-permanent), years of experience in current hospital, and total years of experience as a healthcare worker. Personality type was also analyzed. The Big 5 Personal Traits test was employed wherein the personality type of the respondents were categorized and scored into 5 traits:

Extroversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience.

Age

Out of the 303 respondents, 26.4% (N=80) of them are in their 20s, 53.1% (N=161) are in 30s, 14.2% (N=43) are in their 40s, and 6.3% (N=19) are in their 50s. The mean age of the respondents is 34.54.

Sex

There are a lot more female respondents (N=238) than male respondents (N=65), representing 78.55% and 21.45% of the total respondents, respectively.

Job position

Ninety-five (95) out of the 303 respondents (31.35%) are doctors and 208 of the respondents (68.65%) are nurses.

Monthly net income

Majority of the respondents (27.1%, N=82) have monthly income that ranges between Php 10,001 - 20,000 and all of them are working as hospital nurses. There are 19.1% (N=58) and 20.5% (N=62) of the respondents who have monthly income

that ranges between Php 20,001 - 30,000 and Php 30,001 - 40,000, respectively. Those with monthly income that ranges between Php 40,001 - 50,000 represent 11.2% (N=34) of the respondents. According to the responses, this range is where the maximum salary of a nurse falls, where 16 of the 34 respondents declared having such income. There are 7.3% (N=22), 12.2% (N=37), and 1.3% (N=4) of the doctors who have monthly income that ranges between Php 50,001 - 60,000, Php 60,001 - 70,000, Php 70,001 - 80,000, respectively. This data shows that the maximum monthly income that a doctor can earn in the Philippines, regardless of type of hospital workplace, position, or length of service, falls in this range.

Employment status

Almost one-third of the respondents have permanent employment status (N=200) while 34% (N=103) of the respondents have non-permanent employment status.

Years of experience in current hospital

Out of the 303 respondents, 24.8% (N=75) have at most 1 year of experience working in their current workplace. Thirty-one percent (N=94) have been working in their current workplace for more than a year but at most 3 years. 18.5% (N=56) have been working in their current workplace for more than 3 years but at most 5 years. 10.6% (N=32) and 15.2% (N=46) have been working in their current

workplace for more than 5 years but at most 10 years, and for more than 10 years, respectively.

Total years of service as a healthcare worker

Most of the respondents (25.7%) have been working as a healthcare worker for more than 5 years but at most 10 years (N=78). This is followed by those with at most 10 years of total HCW experience at 25.1% (N=76), then at 20.8% (N=63) by those with more than a year but at most 3 years of total HCW experience. Those with total HCW experience of more than 3 years but at most 5 years is at 19.8% (N=60), and those with at most a year of total HCW experience is at 8.3% (N=25). There is 1 missing data in for this variable.

Hospital type

Almost 59.7% (N=181) of the respondents are working in public hospitals, while 40.3% (N=122) are currently working in private hospitals.

Area type where hospital is located

The number of respondents from both urban and rural areas are quite comparable, with 54.5% (N=165) coming from Manila City (urban) hospitals, and 45.5% (N=138) coming from Albay Province and Sorsogon Province (rural) hospitals.

Variable	Category	Frequency	Percentage
Age	20-29	80	26.4
	30-39	161	53.1
	40-49	43	14.2
	50-59	19	6.3
	Mean: **34.54**	Standard deviation: **7.530**	
Sex	Male	65	21.5
	Female	238	78.5
Hospital type	Public	181	40.3
	Private	122	59.7
Type of area where hospital is located	Urban	165	54.5
	Rural	138	45.5
Job position	Doctor	95	31.4
	Nurse	208	68.6
Monthly net income	Php 0 - 10,000	4	1.3
	Php 10,001 - 20,000	82	27.1
	Php 20,001 - 30,000	58	19.1
	Php 30,001 - 40,000	62	20.5
	Php 40,001 - 50,000	34	11.2
	Php 50,001 - 60,000	22	7.3
	Php 60,001 - 70,000	37	12.2
	Php 70,001 - 80,000	4	1.3
	Php 80,001 - 90,000	0	0.0
	Php 90,001 - 100,000	0	0.0
	Php 100,001 and above	0	0.0
Employment status	Permanent employment	200	66.0
	Non-permanent employment	103	34.0
Years of service in current hospital	0-12 months (1 year)	75	24.8
	13-36 months (3 years)	94	31.0
	37-60 months (5 years)	56	18.5
	61-120 months (10 years)	32	10.6
	121~ months (10+ years)	46	15.2

Total years of service as a healthcare worker	0-12 months (1 year)	25	8.3
	13-36 months (3 years)	63	20.8
	37-60 months (5 years)	60	19.8
	61-120 months (10 years)	78	25.7
	121~ months (10+ years)	76	25.1

Table 4. Socio-demographics and individual characteristics of the respondents

Personality type

The Big Five Personality Test was utilized to analyze the personality type of the respondents. It will help the researchers understand why the respondents act the way they do, why they answered the survey the way they did, and how their personality is structured. The scores for each personality were calculated using a standardized computation system shown below:

E = 20 + (1) ___ - (6) ___ + (11) ___ - (16) ___ + (21) ___ - (26) ___ + (31) ___ - (36) ___ + (41) ___ - (46) ___ = _____

A = 14 - (2) ___ + (7) ___ - (12) ___ + (17) ___ - (22) ___ + (27) ___ - (32) ___ + (37) ___ + (42) ___ + (47) ___ = _____

C = 14 + (3) ___ - (8) ___ + (13) ___ - (18) ___ + (23) ___ - (28) ___ + (33) ___ - (38) ___ + (43) ___ + (48) ___ = _____

N = 38 - (4) ___ + (9) ___ - (14) ___ + (19) ___ - (24) ___ - (29) ___ - (34) ___ - (39) ___ - (44) ___ - (49) ___ = _____

O = 8 + (5) ___ - (10) ___ + (15) ___ - (20) ___ + (25) ___ - (30) ___ + (35) ___ + (40) ___ + (45) ___ + (50) ___ = _____

Figure 2. Scoring system to calculate the scores for the big five personality test.

The calculated scores should be between zero and forty. Considered as low scores are 0-20, while high scores are 21-40.

- Extroversion: This is the personality trait of seeking fulfillment from sources outside the self or in community. High scorers tend to be very social while

low scorers prefer to work on their projects alone. Out of the 303 respondents, 2/3 of the respondents (N=202) have low extroversion scores, while 33.3% (N=101) have high extroversion scores. The mean of the extroversion scores of all respondents is 18.27.

- Agreeableness: This trait reflects how much individuals adjust their behavior to suit others. High scorers are typically polite and like people. Low scorers tend to 'tell it like it is'. Out of the 303 respondents, 6.3% (N=19) have low agreeableness scores, while 93.7% (N=284) have high agreeableness scores. The mean of the agreeableness scores of all respondents is 27.64.
- Conscientiousness: This is the personality trait of being honest and hardworking. High scorers tend to follow rules and prefer clean homes. Low scorers may be messy and cheat others. Out of the 303 respondents, 9.2% (N=28) have low conscientiousness scores, while 90.8% (N=275) have high conscientiousness scores. The mean of the conscientiousness scores of all respondents is 28.16.
- Neuroticism: This is the personality trait of being emotional. Out of the 303 respondents, 47.5% (N=144) have low neuroticism scores, while 52.5% (N=159) have high neuroticism scores. The mean of the neuroticism scores of all respondents is 21.32.

- Openness to experience: This is the personality trait of seeking new experience and intellectual pursuits. Out of the 303 respondents, 13.2% (N=40) have low openness scores, while 86.8% (N=263) have high openness scores. The mean of the openness to experience scores of all respondents is 25.59.

Personality Type	**Category**	**Frequency**	**Percentage**	**Mean of the overall calculated scores**	**Standard deviation of the overall calculated scores**
Extroversion	Low score (0-20) High score (21-40)	202 101	66.7 33.3	18.27	5.681
Agreeableness	Low score (0-20) High score (21-40)	19 284	6.3 93.7	27.64	5.044
Conscientiousness	Low score (0-20) High score (21-40)	28 275	9.2 90.8	28.16	5.670
Neuroticism	Low score (0-20) High score (21-40)	144 159	47.5 52.5	21.32	6.682
Openness to Experience	Low score (0-20) High score (21-40)	40 263	13.2 86.8	25.59	4.801

Table 5. Personality type score results of the respondents

The mean of the groups of each individual characteristics were compared using independent t-test and ANOVA test results.

Independent T-test Results

The satisfaction means of the three main factors (Extrinsic, Intrinsic, and Environmental and Welfare Factors) and of the two independent groups of the factors sex, job position, employment status, hospital type, area type, and the five personality types were analyzed using independent t-test.

EXTRINSIC FACTORS						
Factors		MEAN	SD	Sig (from Levene's Test)	Sig (2-tailed)	
Sex (assigned at birth)	**MALE**	-0.4025	1.0028	0.278	<0.001	***
	FEMALE	0.1099	0.9726			
Job position	**DOCTORS**	-0.1554	1.0858	0.089	0.067	
	NURSES	0.0710	0.9525			
Employment status	**PERMANENT**	0.0272	0.9598	0.289	0.509	
	NON-PERMANENT	-0.0530	1.0765			
Hospital type	**PUBLIC**	0.1492	0.9625	0.183	0.001	***
	PRIVATE	-0.2214	1.0172			
Area type	**URBAN**	-0.1553	1.0442	0.658	0.003	**
	RURAL	0.1857	0.9138			
Personality Type						
Extroversion	**LOW**	-0.0401	0.8996	<0.001	0.367	
	HIGH	0.0802	1.1762			
Agreeableness	**LOW**	-0.4886	0.8381	0.318	0.028	*
	HIGH	0.0326	1.0026			
Conscientiousness	**LOW**	-0.2500	1.2147	0.087	0.165	
	HIGH	0.0254	0.9745			
Neuroticism	**LOW**	-0.1414	0.8937	0.010	0.018	*
	HIGH	0.1280	1.0741			
	LOW	-0.0968	0.8110	0.007	0.438	

Openness to Experience	**HIGH**	0.0147	1.0262

** ≤ 0.05 level of significance, ** ≤ 0.01 level of significance, *** ≤ 0.001 level of significance*

Table 6. Independent t-test results of the extrinsic factors means in relation to sex, job position, employment status, hospital type, area type, and the five personality types

Based on the results the analysis, there is a significant difference at $p \leq 0.001$ on the satisfaction means of the extrinsic job factors between the two sex groups wherein females have a statistically significant positive and higher mean score on their satisfaction level (0.1099) than males (-0.4025). At the same level of significance, the two hospital types also show significant difference wherein public hospitals have a statistically significant positive and higher mean score on the satisfaction level of their HCWs (0.1491) compared to HCWs from private hospitals (-0.2214).

As for the area type where the hospital is located, at $p \leq 0.01$, the mean score of hospitals from rural areas shows to be significantly higher and with a positive value (0.1857) compared to the hospitals from urban areas (-0.1553).

When it comes to personality type, at $p \leq 0.05$, only Agreeableness and Neuroticism show mean significant differences. Both personality types show that HCWs with high personality type scores have a statistically significantly higher and

positive mean scores on their extrinsic factors' satisfaction than those with low personality type scores, with 0.0326 and -0.4886, and 0.1280 and -0.1414 for Agreeableness and Neuroticism personality types, respectively.

INTRINSIC FACTORS						
Factors		MEAN	SD	Sig (from Levene's Test)	Sig (2-tailed)	
Sex (assigned at birth)	**MALE**	0.1705	1.0864	0.154	0.121	
	FEMALE	-0.0465	0.9723			
Job position	**DOCTORS**	0.3307	0.9874	0.615	<0.001	***
	NURSES	-0.1510	0.9711			
Employment status	**PERMANENT**	-0.1643	0.9498	0.087	<0.001	***
	NON-PERMANENT	0.3190	1.0222			
Hospital type	**PUBLIC**	0.1030	1.0189	0.093	0.029	*
	PRIVATE	-0.1528	0.9549			
Area type	**URBAN**	0.0333	1.0803	0.036	0.519	
	RURAL	-0.0399	0.8967			
Personality Type						
Extroversion	**LOW**	0.2161	0.9272	0.021	0.012	*
	HIGH	0.2161	1.1049			
Agreeableness	**LOW**	0.1835	1.4006	0.002	0.556	
	HIGH	-0.0122	0.9695			
Conscientiousness	**LOW**	0.0749	1.2228	0.024	0.731	
	HIGH	-0.0076	0.9768			
Neuroticism	**LOW**	-0.1135	1.0408	0.283	0.060	
	HIGH	0.1028	0.9531			
Openness to Experience	**LOW**	-0.3261	1.0839	0.228	0.027	*
	HIGH	0.0496	0.9793			

** ≤ 0.05 level of significance, ** ≤ 0.01 level of significance, *** ≤ 0.001 level of significance*

Table 7. Independent t-test results of the intrinsic factors means in relation to sex, job position, employment status, hospital type, area type, and the five personality types

Based on the results the analysis, at $p \leq 0.001$, there is a significant difference on the satisfaction means of the intrinsic job factors between the two job positions wherein doctors have a significantly positive and higher mean score on their satisfaction level (0.3307) than nurses (-0.1510). At the same level of significance, the two employment status types also show significant difference wherein non-permanent workers have a statistically significant positive and higher mean score (0.3190) compared to permanent workers (-0.1643).

At $p \leq 0.05$, the two hospital types also show significant difference wherein public hospitals have a statistically significant positive and higher mean score on the satisfaction level of their HCWs (0.1030) compared to HCWs from private hospitals (-0.1528).

As for the personality type, at $p \leq 0.05$, only Extroversion and Openness to Experience show mean significant differences. Both personality types show that HCWs with high personality type scores have a statistically significantly higher and positive mean scores on their intrinsic factors' satisfaction than those with low personality type scores, with 0.2161 and 0.2161, and 0.0496 and -0.3261 for Extroversion and Openness to Experience personality types, respectively.

ENVIRONMENTAL AND WELFARE FACTORS						
Factors		MEAN	SD	Sig (from Levene's Test)	Sig (2-tailed)	
Sex (assigned at birth)	**MALE**	-0.2371	0.7854	0.007	0.012	*
	FEMALE	0.0647	1.0430			
Job position	**DOCTORS**	-0.3392	1.0510	0.550	<0.001	***
	NURSES	0.1549	0.9382			
Employment status	**PERMANENT**	0.1814	0.9725	0.730	<0.001	***
	NON-PERMANENT	-0.3522	0.9261			
Hospital type	**PUBLIC**	-0.3255	0.9705	0.177	<0.001	***
	PRIVATE	0.4830	0.8371			
Area type	**URBAN**	-0.1544	1.0333	0.297	0.003	**
	RURAL	0.1846	0.9289			
Personality Type						
Extroversion	**LOW**	-0.0720	1.0009	0.719	0.076	
	HIGH	0.1441	0.9872			
Agreeableness	**LOW**	-0.6661	0.9474	0.990	0.003	**
	HIGH	0.0445	0.9890			
Conscientiousness	**LOW**	-0.0445	1.1494	0.592	0.805	
	HIGH	0.0045	0.9857			
Neuroticism	**LOW**	-0.1175	0.9754	0.536	0.051	
	HIGH	0.1064	1.0130			
Openness to Experience	**LOW**	-0.6064	0.9357	0.587	<0.001	***
	HIGH	0.0922	0.9785			

** ≤ 0.05 level of significance, ** ≤ 0.01 level of significance, *** ≤ 0.001 level of significance*

Table 8. Independent t-test results of the environmental and welfare factors means in relation to sex, job position, employment status, hospital type, area type, and the five personality types

Based on the results the analysis, there is a significant difference on the satisfaction means of all groups. Particularly for job position and employment status, and hospital type, at $p \leq 0.001$, nurses (0.1549) and permanent workers (0.1814)

have significantly positive and higher mean scores on their satisfaction level compared to doctors (-0.3392) and non-permanent workers (-0.3522). At the same level of significance, the two hospital types also show significant difference wherein for environmental and welfare factors, HCWs from private hospitals have a statistically significant positive and higher mean score (0.4830) compared to HCWs from public hospitals (-0.3255).

As for the area type where the hospital is located, at $p \leq 0.01$, the mean score of hospitals from rural areas shows to be significantly higher and with a positive value (0.1846) compared to the hospitals from urban areas (-0.1544).

When it comes to personality type, only Agreeableness and Openness to Experience show mean significant differences. Both personality types show that HCWs with high personality type scores have a statistically significantly higher and positive mean scores on their environmental and welfare factors' satisfaction than those with low personality type scores. At $p \leq 0.001$, high scorers of Openness to Experience personality show a higher mean score of 0.0922 compared to the low scorers' mean score of -0.6064. As for the Agreeableness personality type, at $p \leq 0.01$, high scorers show a higher mean score of 0.0445 compared to the low scorers' mean score of -0.6661.

One-way ANOVA Test Results

The satisfaction means of the three main factors (Extrinsic, Intrinsic, and Environmental and Welfare Factors) and of the factors with more than two independent groups (monthly net income, length of experience in current hospital, total length of experience as a healthcare worker) were analyzed using one-way ANOVA test.

EXTRINSIC FACTORS				
	Mean	**SD**	**Sig**	
Monthly net income				
Php 0 - 10,000	0.7284	0.3905	0.003	**
Php 10,001 - 20,000	-0.0446	1.0086		
Php 20,001 - 30,000	-0.3949	1.0864		
Php 30,001 - 40,000	0.1621	0.8584		
Php 40,001 - 50,000	0.3451	0.8022		
Php 50,001 - 60,000	-0.1310	0.9357		
Php 60,001 - 70,000	0.0197	1.0850		
Php 70,001 - 80,000	1.0047	1.0724		
Length of experience in current hospital				
0-12 months (1 year)	0.0849	0.9802	0.077	
13-36 months (3 years)	-0.1466	1.2081		
37-60 months (5 years)	-0.1615	0.8426		
61-120 months (10 years)	0.3390	0.7894		
121~ months (10+ years)	0.1220	0.7942		
Total length of experience as a healthcare worker				
0-12 months (1 year)	0.0416	0.9431	0.165	
13-36 months (3 years)	0.1244	1.0975		
37-60 months (5 years)	0.0365	1.0080		
61-120 months (10 years)	-0.2446	1.0843		
121~ months (10+ years)	0.0982	0.8056		

** ≤ 0.05 level of significance, ** ≤ 0.01 level of significance, *** ≤ 0.001 level of significance*

Table 9. One-way ANOVA test results of the extrinsic factors means in relation to monthly income, length of experience in current hospital, and total length of experience as a healthcare worker

Based on the results of the analysis with extrinsic factors, at $p \leq 0.01$, there is a significant difference on the means of the different income groups, with HCWs having an income range of Php 70,001–80,000 with the highest mean score (1.0047) and HCWs having an income range of Php 20,001–30,000 with the lowest and negative mean score (-0.3949).

INTRINSIC FACTORS				
	Mean	**SD**	**Sig**	
Monthly net income				
Php 0 - 10,000	-0.0864	0.4116	0.005	**
Php 10,001 - 20,000	-0.2614	1.0386		
Php 20,001 - 30,000	0.0219	1.0484		
Php 30,001 - 40,000	-0.1889	1.0221		
Php 40,001 - 50,000	0.2192	0.7881		
Php 50,001 - 60,000	0.4698	0.9024		
Php 60,001 - 70,000	0.3205	0.8787		
Php 70,001 - 80,000	0.6439	0.9087		
Length of experience in current hospital				
0-12 months (1 year)	0.0824	1.0934	0.261	
13-36 months (3 years)	0.1399	1.1128		
37-60 months (5 years)	-0.1136	1.0163		
61-120 months (10 years)	-0.1388	0.6273		
121~ months (10+ years)	-0.1854	0.7313		

Total length of experience as a healthcare worker			
0-12 months (1 year)	-0.0640	1.0501	
13-36 months (3 years)	0.0577	1.0685	
37-60 months (5 years)	0.0508	1.1576	0.196
61-120 months (10 years)	0.1587	0.9891	
121~ months (10+ years)	-0.2179	0.7613	

** ≤ 0.05 level of significance, ** ≤ 0.01 level of significance, *** ≤ 0.001 level of significance*

Table 10. One-way ANOVA test results of the intrinsic factors means in relation to monthly income, length of experience in current hospital, and total length of experience as a healthcare worker

Based on the results of the analysis with intrinsic factors, at p≤0.01, there is also a significant difference on the means of the different income groups, with HCWs having an income range of Php 70,001–80,000 with the highest mean score (0.6439) and HCWs having an income range of Php 10,001–20,000 with the lowest and negative mean score (-0.2614).

ENVIRONMENTAL AND WELFARE FACTORS				
	Mean	**SD**	**Sig**	
Monthly net income				
Php 0 - 10,000	0.0076	0.3268		
Php 10,001 - 20,000	0.4375	0.9875		
Php 20,001 - 30,000	0.3195	0.7945		
Php 30,001 - 40,000	-0.1075	0.9833	<0.001	***
Php 40,001 - 50,000	-0.3760	0.7753		
Php 50,001 - 60,000	-0.0838	1.0394		
Php 60,001 - 70,000	-0.7444	0.9223		
Php 70,001 - 80,000	-1.4023	0.3285		

Length of experience in current hospital				
0-12 months (1 year)	-0.1883	1.0154		
13-36 months (3 years)	0.1092	1.1320		
37-60 months (5 years)	0.1931	1.0023	0.036	*
61-120 months (10 years)	0.1723	0.6996		
121~ months (10+ years)	-0.2712	0.7583		
Total length of experience as a healthcare worker				
0-12 months (1 year)	-0.2655	0.9614		
13-36 months (3 years)	-0.1452	1.0949		
37-60 months (5 years)	-0.0724	1.0319	0.142	
61-120 months (10 years)	0.2077	0.9574		
121~ months (10+ years)	0.0385	0.9250		

** ≤ 0.05 level of significance, ** ≤ 0.01 level of significance, *** ≤ 0.001 level of significance*

Table 11. One-way ANOVA test results of the environmental and welfare factors means in relation to monthly income, length of experience in current hospital, and total length of experience as a healthcare worker

Based on the results of the analysis with environmental and welfare factors, at $p \leq 0.001$, there is a significant difference on the means of the different income groups, with HCWs having an income range of Php 10,001–20,000 with the highest mean score (0.4375) and HCWs having an income range of Php 70,001–80,000 with the lowest and negative mean score (-1.4023), showing opposite results with the analysis with intrinsic factors.

At $p \leq 0.05$, there is also a significant difference on the means of the different lengths of experience in current hospital, with those with 37-60 months of

experience have the highest mean score (0.1931) while those with more than 121 months of experience have the lowest and negative mean score (-0.2712).

Regression Analysis Results

Multiple regression analysis was used to test the hypotheses of this study and infer the influence of the individual characteristics of the HCWs, hospital type, and area type where hospital is located to the different dimensions of job satisfaction.

In the analysis, the individual characteristics (age, sex, job position, monthly income, employment status, total length of experience as a HCW, and the five personality types), hospital type, and area type were the independent variables and the 3 dimensions of job satisfaction (extrinsic factors, intrinsic factors, and environmental and welfare factors) were the dependent variables.

EXTRINSIC FACTORS					
	B	S.E.	β	p-value	
Age	0.023	0.009	0.174	**0.013**	*
Sex	0.362	0.146	0.149	**0.014**	**
Job position	0.666	0.205	0.309	**0.001**	**
Monthly income	0.198	0.053	0.348	**<0.001**	***
Employment status	0.029	0.158	0.014	0.855	
Total length of experience as a healthcare worker	-0.182	0.057	-0.234	**0.002**	**
Personality type					
Extroversion	-0.006	0.011	-0.036	0.552	
Agreeableness	0.032	0.013	0.164	**0.012**	*
Conscientiousness	-0.027	0.012	-0.152	**0.025**	*
Neuroticism	0.012	0.010	0.082	0.200	
Openness to Experience	-0.010	0.012	-0.048	0.420	
Hospital type (Public vs Private)	0.283	0.145	0.139	0.052	
Area type (Urban vs Rural)	0.537	0.122	0.268	**<0.001**	***

** ≤ 0.05 level of significance, ** ≤ 0.01 level of significance, *** < 0.001 level of significance*

Table 12. Regression analysis results of the individual characteristics in relation to the extrinsic factors of job satisfaction

Based on the results of the analysis for extrinsic factors, all individual characteristics except employment status show significant relationship with this dimension of job satisfaction. Particularly, monthly income significantly affects the HCWs' job satisfaction on extrinsic factors at $p \leq 0.001$. Sex, job position, and total length of experience as a HCW significantly affect the HCWs' job satisfaction on

extrinsic factors at $p \leq 0.01$, while age and personality types, specifically Agreeableness and Conscientiousness, significantly affect the HCWs' job satisfaction on extrinsic factors at $p \leq 0.05$.

Separate studies done by Atif et al. (2015) in Pakistan and Lu et al. (2016) in China among the job satisfaction of healthcare workers both found that age, sex, income, and years of service were indeed significantly associated with job satisfaction, supporting the results of this study, particularly for the extrinsic factors. Halawani et al. (2021) also noted in their study in Saudi Arabia that job satisfaction was significantly affected for participants aged 31-40 years old. The same findings on the significance relationship of age and job satisfaction were noted by Carillo-Garcia et al. (2013) but they found in their study that participants aged 20-30 years old and those over 61 years old showed higher satisfaction levels than middle-aged participants. Singh et al.'s study, however, have a different result on the significance relationship of age on job satisfaction and the same non-significant result for age was also noted by Nikic et al. (2008) in their study conducted in Serbia.

A study among Swiss doctors by Bovier & Perneger (2004) also found that age and sex, although weakly associated, were still among the significant predictors of job satisfaction. They noted that women were found to be less satisfied

than men with work-related responsibilities, which may be caused by pressure to manage family matters, on top of their careers. The same results on sex a significant factor for job satisfaction was found by Singh et al. (2019) in their study in India wherein male workers felt more satisfied compared to females. These interpretations are quite in contrast with the result of this study wherein women are found to be significantly more satisfied with their jobs, particularly with the extrinsic factors, compared to men. This is supported by the studies done by Miao et al. (2017) in China among rural doctors and Carrillo-García et al. (2013) among health care professionals at a university hospital in Spain wherein women showed greater overall job satisfaction compared to men.

According to Halawani et al. (2021), doctors of higher position were found to have higher job satisfaction compared to other health care workers who hold a low position. They also noted that when it comes to years of service as a HCW, those working for more than 3 years were more satisfied with their job while those working from 1 to 3 years were less satisfied. They inferred that this may be because HCWs with more years of experience have already adjusted to their work environment because they also gained more work understanding. This finding supports the result of this study wherein years of experience play a significant role on HCWs' job satisfaction.

With the different findings of the studies cited, including this current study, it is important to take note that the differences in the results of these studies may be attributed to cultural variations.

Evidently, income is especially a crucial factor that affects the job satisfaction of HCWs in general. Based on the results of the analysis, it is highly significantly related to extrinsic factors in particular because two specific factors under this dimension are directly related to income which are Compensation and benefits and Relation of workload to payment.

Agreeableness, as a personality type, is defined as a trait that reflects how much individuals adjust their behavior to suit others. The significance of this factor may be attributed to the presence of specific factors under the extrinsic dimension of job satisfaction, particularly Leadership and Mental health awareness. Workers are typically affected by how their management handles them as subordinates. In the same way, workers with mental health concerns tend to be more satisfied with an employer that shows genuine and visible concern towards their employees.

Conscientiousness personality is defined as the personality trait of being responsible, organized, hard-working, goal-directed, and adhere to norms and rules. The significant result obtained for this factor may be linked to the specific factors under the extrinsic dimension of job satisfaction: Policy implementation, Manpower sufficiency, Workload, Work hours, and Recognition of work. Workers with conscientiousness personality type tend to be adhering with how policies are implemented in the workplace, thus, the way workplace policies are put into practice affect their job satisfaction level. Being organized and hard-working, it also matters to these workers how they allot their time and energy to their jobs, making workload and work hours significant aspects of their job satisfaction level. Moreover, as manpower sufficiency directly affects workload and work hours of the workers in a particular workplace, HCWs perception of satisfaction for this specific factor is also affected.

No significant relationship is shown between hospital type and extrinsic factors, but there is high significance ($p \leq 0.001$) shown between area type and extrinsic factors. There is a positive relationship with the area type and extrinsic factors. In the analysis results, this means that HCWs from hospitals in rural areas are more satisfied with the extrinsic factors compared to those from urban areas.

Some HCWs prefer to go to urban areas because economic and career opportunities are perceived to be better there. However, because of this, hospitals in urban areas become more cramped than in rural areas. Each hospital, depending on its capacity, can only accommodate a limited number of employees and have limited available positions. Because of this movement from rural to urban, hospitals in the former offer more opportunities for HCWs because there are more positions to be filled and promotions are more likely, compared to the latter. Furthermore, because there is a higher population in urban areas compared to rural areas, more patients are also being catered to in hospitals in the former on a daily basis. In the Philippines, it was already recorded that there is a low HCW-to-population ratio. Thus, regardless of the influx of HCWs to urban areas, manpower is still insufficient, which ultimately leads to more workloads and extended workhours, putting HCWs in hospitals in urban areas at a more difficult situation than those from rural areas.

INTRINSIC FACTORS					
	B	S.E.	β	p-value	
Age	-0.012	0.010	-0.093	0.192	
Sex	-0.052	0.150	-0.021	0.731	
Job position	-0.024	0.211	-0.011	0.911	
Monthly income	0.105	0.055	0.186	0.054	
Employment status	-0.596	0.162	-0.283	**<0.001**	***
Total length of experience as a healthcare worker	0.081	0.059	0.104	0.172	
Personality type					
Extroversion	-0.009	0.011	-0.050	0.422	
Agreeableness	0.010	0.013	0.051	0.441	
Conscientiousness	0.013	0.012	0.072	0.304	
Neuroticism	0.021	0.010	0.137	**0.038**	*
Openness to Experience	0.044	0.013	0.211	**<0.001**	***
Hospital type (Public vs Private)	-0.106	0.149	-0.052	0.478	
Area type (Urban vs Rural)	0.082	0.125	0.041	0.514	

** ≤ 0.05 level of significance, ** ≤ 0.01 level of significance, *** < 0.001 level of significance*

Table 13. Regression analysis results of the individual characteristics in relation to the extrinsic factors of job satisfaction

Based on the results of the analysis for intrinsic factors, only Openness to Experience personality type and employment status (both at $p \leq 0.001$), and Neuroticism personality type ($p \leq 0.05$) significantly affect the HCWs' job satisfaction on intrinsic factors.

There are 5 specific factors identified under intrinsic factors: Advancement/Training opportunities, Organizational relationships, Duties and responsibilities, Job compatibility, and Job interest. Employment status having a significant relationship with intrinsic factors may be attributed to job situations wherein non-permanent workers are usually in search of capacity building opportunities as these can serve as an advantage for them to apply and land permanent positions. The same explanation can be inferred to the high significant result for Openness to Experience personality type. By definition, this personality type is more prominent among workers seeking new experience and intellectual pursuits. A significant result obtained for Neuroticism may be attributed to the Job compatibility and Job interest factors as people with high neuroticism score have a personality trait of being emotional, and these two specific factors are most associated with feelings of self-accomplishment and achievement.

No significant relationship is shown for both hospital type and area type, and intrinsic factors.

ENVIRONMENTAL AND WELFARE FACTORS					
	B	S.E.	β	p-value	
Age	-0.014	0.009	-0.106	0.112	
Sex	0.148	0.139	0.061	0.291	
Job position	-0.407	0.195	-0.189	**0.038**	*
Monthly income	-0.198	0.051	-0.349	**<0.001**	***
Employment status	0.142	0.150	0.067	0.347	
Total length of experience as a healthcare worker	0.049	0.055	0.063	0.370	
Personality type					
Extroversion	0.014	0.010	0.083	0.152	
Agreeableness	-0.009	0.012	-0.045	0.469	
Conscientiousness	0.024	0.011	0.136	**0.037**	*
Neuroticism	0.019	0.009	0.125	**0.042**	*
Openness to Experience	0.009	0.012	0.041	0.473	
Hospital type (Public vs Private)	-0.581	0.139	-0.285	**<0.001**	***
Area type (Urban vs Rural)	-0.091	0.116	-0.045	0.437	

** ≤ 0.05 level of significance, ** ≤ 0.01 level of significance, *** < 0.001 level of significance*

Table 14. Regression analysis results of the individual characteristics in relation to the environmental and welfare factors of job satisfaction

Based on the results of the analysis for environmental and welfare factors, monthly income shows significant relationship with this dimension of job satisfaction at $p \leq 0.001$, while job position and Conscientiousness and Neuroticism personality types show significance at $p \leq 0.05$.

Work environment has proven to be a great source of stress for workers and the conscientiousness personality is conceptualized as a general protective factor from stress (Bartley & Roesch, 2011). It is also characterized by an individual's tendency to be well-organized, diligent, and thorough, which means that they can be easily affected by disorganized surroundings. In the same way, persons with elevated levels of neuroticism respond poorly to environmental stress (Widiger & Oltmanns, 2017) and have a tendency to complain when faced with stress.

Most of the procedures in the hospital that require equipment are directly done by nurses, so they also have a more direct perception as to the availability of hospital resources and conditions of hospitals facilities, making them more significantly affected by these factors than doctors.

At $p \leq 0.001$, hospital type also shows significant relationship with environmental and welfare factors, while area type shows no significance. There is a negative relationship with the hospital type and environmental and welfare factors. In the analysis results, this means that HCWs from public hospitals are less satisfied with the environmental and welfare factors compared to those from private hospitals.

In the Philippines, healthcare services in private hospitals are well-established and growing. Although doctors at public hospitals are just as good as those in private hospitals, private hospitals are far better equipped, and treatment is typically faster. Furthermore, public hospitals also face strain from treating the large number of Filipinos who rely on it because health services are cheaper compared to private hospitals. These interpretations are supported by a study of Hamid et al. (2013) wherein with regards to the working environment, in the public hospitals, HCWs worked with limited resources and were working under harsh conditions, as compared to those working in private hospitals.

Table 15. Summary of regression analysis results showing the independent variables and their relationship with the three main dimensions of job satisfaction

	EXTRINSIC FACTORS			INTRINSIC FACTORS			ENVIRONMENTAL AND WELFARE FACTORS		
	B	**p-value**		**B**	**p-value**		**B**	**p-value**	
Age	0.023	**0.013**	*	-0.012	0.192		-0.014	0.112	
Sex	0.362	**0.014**	**	-0.052	0.731		0.148	0.291	
Job position	0.666	**0.001**	**	-0.024	0.911		-0.407	**0.038**	*
Monthly income	0.198	**<0.001**	***	0.105	0.054		-0.198	**<0.001**	***
Employment status	0.029	0.855		-0.596	**<0.001**	***	0.142	0.347	
Total length of experience as a healthcare worker	-0.182	**0.002**	**	0.081	0.172		0.049	0.370	
Personality type									
Extroversion	-0.006	0.552		-0.009	0.422		0.014	0.152	
Agreeableness	0.032	**0.012**	*	0.010	0.441		-0.009	0.469	
Conscientiousness	-0.027	**0.025**	*	0.013	0.304		0.024	**0.037**	*
Neuroticism	0.012	0.200		0.021	**0.038**	*	0.019	**0.042**	*
Openness to Experience	-0.010	0.420		0.044	**<0.001**	***	0.009	0.473	
Hospital type (Public vs Private)	0.283	0.052		-0.106	0.478		-0.581	**<0.001**	***
Area type (Urban vs Rural)	0.537	**<0.001**	***	0.082	0.514		-0.091	0.437	

Table 15. Summary of regression analysis results showing the independent variables and their relationship with the three main dimensions of job satisfaction

Hypotheses Testing

According to the results of the analyses done, the following hypotheses are accepted which indicate the significant relationships between the factors tested.

H1: Sociodemographic factors are associated with each of the 3 dimensions of healthcare workers' satisfaction.

Specifically, extrinsic factors are associated with age, sex, job position, monthly income, and total length of experience as a healthcare worker. Intrinsic factors are associated with employment status only. Environmental and welfare factors are associated with monthly income and employment status.

H2: Personality type is associated with each of the 3 dimensions of healthcare workers' satisfaction.

Specifically, extrinsic factors are associated with agreeableness and conscientiousness. Intrinsic factors are associated with neuroticism and openness to experience. Environmental and welfare factors are associated with conscientiousness and neuroticism.

H3: Hospital type (public vs. private) is associated with only 1 dimension of healthcare workers' satisfaction which is the environmental and welfare factors.

H4: Hospital location (urban vs. rural) is associated with only 1 dimension of healthcare workers' satisfaction which is the extrinsic factors.

II. QUALITATIVE ANALYSIS

A total of seven (7) hospital management personnel were interviewed for the study. Six out of the 7 are hospital directors or medical department heads, and 1 is a human resources department head. Four (4) interview questions were asked to the participants. A thematic analysis was done to summarize the results of the interviews. The answers of the interviewees to the questions were very direct and straight to the point.

Question #1: **In general, what do you think are the reasons for job dissatisfaction among hospital healthcare workers in the Philippines?**

Most of the participants (5 out of 7) mentioned that low salary/pay is the main reason for the healthcare workers' job dissatisfaction. Four (4) of them mentioned that the working environment, including having incomplete equipment and resources, as well as being overworked, especially in public hospitals, also affect HCWs' job satisfaction negatively.

Three (3) out of the participants mentioned that interpersonal relationships among co-workers and the lack of reward and benefits system are also reasons of job dissatisfaction.

Two (2) participants recalled that the need to work overtime and having extended working hours are also problematic for the HCWs.

Lack of manpower which leads to an overflow in the number of customers being catered, bad feedback from customers, personal reasons and personality type, as well as the lack of hospital trainings were also cited by the participants as reasons for hospital HCW job dissatisfaction.

Question #2: **In general, what do you think are the reasons for job satisfaction among hospital healthcare workers in the Philippines?**

Job satisfaction among HCWs in the Philippines are experienced by having higher pay and salary, as well as getting promotions and having proper incentives and credentials, said 4 out of the 7 participants. Furthermore, interpersonal and organizational relationships is also a positive factor that affects HCW job satisfaction.

According to 2 participants, having a secured position in the hospital, i.e., having plantilla or regular positions is also a factor that contributes to HCW job satisfaction.

Personality types, such as having an eagerness and self-determination with the work an HCW does, the feeling of self-fulfillment as an

HCW, as well as having access to hospital services are positive factors for HCW job satisfaction.

Question #3: **In your hospital, do you think the doctors and nurses experience dissatisfaction with their job? If yes, what are the factors that affect their job dissatisfaction? If not, what are the factors that affect their job satisfaction?**

Four (4) out of the 7 participants mentioned that in their hospitals, their doctors and nurses experience both job satisfaction and dissatisfaction, and 2 out of the 7 gave straightforward reasons for job dissatisfaction of their hospital HCWs.

Reasons that were mentioned for hospital HCW job dissatisfaction include lack of staffing (4 out of 7), working environment, i.e., lack of resources and equipment, and low salary (3 out of 7 for both), and extended work hours, bad interpersonal relationships, and being overworked (2 out of 7 for all).

Specific factors that affect HCW job satisfaction that were mentioned include having benefits and promotion (2 out of 7), and the proximity of the hospital to the HCW's house and having good interpersonal relationships (1 out of 7 for both).

One of the participants mentioned, "*Resignation rate among doctors is low, but for nurses, [it] is increasing, but not probably because of job*

dissatisfaction but because better opportunities are given to them abroad." This is still highly related to the nurses experiencing job dissatisfaction in their hospital workplace in the Philippines as having good work opportunities can be translated into different factors, which may include those factors that are being investigated in this study.

Question #4: **What actions do you think can be done to improve hospital healthcare workers' job satisfaction in the Philippines?**

Action recommendations from the interviewed hospital management personnel can be summarized into 6 categories. Five (5) out the 7 mentioned that having an improved reward system and increasing the salary of the HCWs can greatly improve their job satisfaction.

Three (3) out of 7 emphasized fixing the hospital staffing patterns and improving hospital working environment and conditions. Increasing the availability of permanent positions was also suggested by 2 out of the 7 participants.

Other recommendations include improving the interpersonal and organizational relationships between co-workers in the hospital and defining each worker's duties and responsibilities for a clearer and more efficient process flow in the hospital. It was also emphasized by one of the respondents that addressing the

gaps in the HCWs situation should be done in a top-bottom approach, which should be initiated by the Department of Health itself.

CHAPTER 5. CONCLUSION AND RECOMMENDATIONS

The purpose of this study is to analyze the factors affecting the job satisfaction of healthcare workers (HCWs) in the Philippines. To achieve the purpose of the study, a multiple regression analysis was performed on the data collected from 303 survey participants and a thematic analysis was done on the information gathered from 7 interviewees.

5.1 Main Findings

Quantitative phase

Twenty-one specific factors of job satisfaction among healthcare workers were pre-identified and were grouped into three (3) generalized dimensions of job satisfaction. HCWs satisfaction on these dimensions were tested and compared with HCWs' individual characteristics.

Extrinsic factors. Results showed that HCWs are most affected by the factors under this compared as compared to the other two (2) dimensions. All individual characteristics, except employment status, showed significant

relationship with this dimension of job satisfaction. No significant relationship was shown between hospital type and extrinsic factors, but there was high significance shown between area type and extrinsic factors. There was a positive relationship with the area type and extrinsic factors which means that HCWs from hospitals in rural areas are more satisfied with the extrinsic factors compared to those from urban areas.

Intrinsic factors. It was found that for intrinsic factors, only personality type and employment status showed significant results. No significant relationship was shown for both hospital type and area type, and intrinsic factors.

Environmental and welfare factors. Monthly income, job position, and personality type show significant relationship with this dimension of job satisfaction While area type shows no significance, hospital type showed high significant relationship with environmental and welfare factors. There is a negative relationship between the two which means that HCWs from public hospitals are less satisfied with the environmental and welfare factors compared to those from private hospitals.

Qualitative phase

All interview participants recognized the presence of job dissatisfaction among the HCWs in their hospitals. Salary was identified as the main reason for job dissatisfaction among HCWs, followed by poor working conditions, poor interpersonal relationships among co-workers, and lack of reward and benefits system in the hospitals. Extended work hours, manpower insufficiency, and lack of opportunity of capacity building opportunities were also mentioned as reasons for job dissatisfaction. If these factors can be addressed within the hospital, job satisfaction can be attained, according to the participants.

Actions that were mentioned to counter the identified challenges in the workplace include having an improved reward system and increasing the salary of the HCWs, fixing the hospital staffing patterns and increasing the availability of permanent positions to address manpower insufficiency, improving hospital working environment and conditions, improving the interpersonal and organizational relationships between co-workers in the hospital, and defining each worker's duties and responsibilities for a clearer and more efficient process flow in the hospital. It is also important to highlight one of the recommendations mentioned that addressing the gaps in the HCWs situation should be done in a top-bottom approach, which should be initiated by the Department of Health itself.

5.2 Policy Implications

Through the study, the researcher was able to find out the statistical determinants that affect the job satisfaction of healthcare workers in the public and private hospitals in the urban and rural areas in the Philippines. Thus, to hopefully address identified gaps in the health resource sector, the following policies are recommended:

A. Compensation and salary have always been a vital factor for an employee. These factors significantly affect HCWs regardless of hospital type and area type where the hospital is located. Being overworked is one problem but being underpaid in addition to being overworked is a much bigger concern that needs to be addressed. Policies focusing on increasing the HCWs' net income, improving their benefits, job security, and career development for hospitals are highly recommended. Increasing the overall national budget allotment for the health sector, particularly on the item of personnel services (which include salary and benefits) is the first step.

B. Healthcare workers fulfillment on the work they do are affected by how they are treated in the workplace and how much their efforts and hard works are recognized. Policy focusing on improving the HCW

incentives system in the hospital is recommended. Performance-based incentives can be developed. Not only will this boost the job satisfaction of the HCWs, but it will also encourage them to perform their job better.

C. Interpersonal relationships among supervisor and employees are deemed as an important factor affecting the job satisfaction of healthcare workers. Different supervisors have different ways of handling their subordinates, but ethical and effective leadership skills can be developed. An organizational policy on having regular leadership trainings can be implemented. The human resources department play a crucial role in organizational relationships. Arranging scheduled organizational activities can further develop the relationship between supervisors and employees.

D. Mental health awareness and how to deal with the mental health concerns of the employees are getting more emphasized recently. As frontliners in the health sector, healthcare workers are not exempted from experiencing stressors that might directly affect their psychological health. Particularly in the rural areas where societal practices and norms are usually recognized later then compared to urban areas, the implementation of a hospital mental health policy will promote the health of HCWs which will increase their productivity and

better work performance. Recommended mental health policies may include but are not limited to raising awareness on mental health issues, recognizing and providing support for individuals who might be experiencing such concerns in the workplace, and facilitating access of individuals with mental health concerns to treatment and support.

E. Healthcare workers prefer to go to urban areas because economic and career opportunities are perceived to be better there. However, each hospital has limited number of available positions, but because of the influx of healthcare workers to urban areas, the available posts for the number of healthcare workers are becoming lesser, thus, less opportunities for securing permanent positions and job promotions. Although there is generally a higher influx of patients to urban healthcare facilities, manpower insufficiency is still present. With the limited number of staff available, piling of workload and extended work hours are also inevitable. In government institutions, unless approved by the management, extended work hours are usually unpaid, especially for contractual employees. Insufficiency in the number of hospital staff also leads to mixed up duties and responsibilities as the staffs may be forced to do the tasks that are not theirs just to accomplish them. Hospital managements have been lobbying for an increase in

regular/plantilla positions to attract more HCWs to apply for these hospitals, but the approval process for these requests from the national government usually take much longer than expected. The delay in this process affects the health workforce of the hospitals in general. Policy to ensure that there are available regular HCW positions in the hospitals, depending on HCW to bed capacity ratio in a particular hospital, and fast-track this condition is recommended.

F. Advancement and training opportunities were also proven to be an important aspect of work for HCWs. Career growth is one of the crucial deciding factors for an employee's job retention. Providing training and advancement opportunities to employees also speak a lot about how effective the organization's management is of its workers. If the management shows its commitment to its employees' work improvement and development, the employees will also be committed to performing better and more effectively in return. More importantly, not only do proper and high-quality capacity building activities improve the performance and competence of the HCWs, but they also have a direct impact on the hospital's productivity and performance, and ultimately, to the quality of health services provided to the patients. With this, an employee training and development policy is

recommended to be applied in the hospitals. This kind of policy can also be tailored to hospital HCWs' specific needs.

G. Environmental and welfare factors show high significance on the job satisfaction of HCWs, particularly between hospital types. Hospitals in the Philippines are classified into 3 levels — Level 1 (minimum healthcare services), Level 2 (with extra facilities like ICU and specialist doctors), and Level 3 (with training programs for doctors, rehabilitation, and dialysis units, etc.). Especially for public hospitals, the funding for such facilities come from the government. Policy for increasing the funding allotment for hospitals, particularly on Maintenance and Operating Expenses will also improve the environmental and working conditions of the hospitals. Improving the overall hospital's environmental and occupational conditions will also improve specific factors such as environmental and occupational safety, as well as availability of hospital facilities and resources.

H. The area type where the hospital is located (i.e., urban versus rural) was proven to significantly affect the extrinsic factors of job satisfaction. These factors can be controlled by external interventions. With this, it is highly recommended for the national government and the Department

of Health to give focus on the specific factors identified and the differences of the roles they play in hospitals in the urban and rural areas.

5.3 Limitations of the Study

Despite the completion and success of the study, areas of improvement can still be identified. The sample size of this study is only 303, of which 95 are doctors and 208 are nurses. This sample is quite small compared to the total number of healthcare workers in the Philippines. This affects the results and overall interpretation of the analysis of the study. As this study only included three (3) out of the 17 regions of the country, the data cannot be generalized to a national level. Furthermore, only doctors and nurses were included in the study.

Due to the non-probability purposive sampling method used in the study, the chances of selection bias could not be overruled. The survey questionnaire, which was administered online, was prone to survey and response biases. Moreover, because the bulk of the questionnaire was in Likert scale format, extreme response bias and neutral responding bias were also likely. The concept of job satisfaction is also perceived and understood differently by different people, thus, limitations in subjectively answering the questionnaire could not be denied.

Because of time restriction, lack of funds and manpower, and despite asking assistance from the hospital management themselves and some stakeholders to convince the HCWs to participate in the study, it was still challenging to collect many samples as data are sensitive and the HCWs themselves are busy with their daily hospital duties to fully accommodate participating in the study.

Future researchers who want to study more on this field may increase the number of samples and include other variables relevant to the study area and the variables in the empirical model in this study. More regions of the country can also be included for a more generalizable result. Furthermore, as healthcare workers are composed of a variety of professions, other healthcare practitioners can also be included in future studies.

If data and resources are available, probability sampling techniques can be employed, and face-to-face data collection is recommended for a faster and more accurate data collection process.

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Appendix I

SURVEY QUESTIONNAIRE

Comparative Analysis of the Determinants of Healthcare Worker Satisfaction between Public and Private Hospitals in the Urban and Rural Areas in the Philippines: A Mixed Methods Study

Dear Healthcare Worker,

Good day! My name is Janine Marie B. Balbedina, a master's student at Yonsei University in South Korea taking up Master of Public Policy. I am doing a study on the factors affecting the job satisfaction of healthcare workers (HCWs) in the Philippines.

This questionnaire has been designed to solicit information for academic purposes only. Kindly note that any information provided would be treated with utmost confidentiality.

1. Research purpose:

   The general objective of this study is to do a comparative analysis of the determinants of healthcare worker satisfaction between public and private hospitals in the urban and rural areas in the Philippines.

2. What you will be expected to do as a participant in this research:

   The target participants of this survey are doctors and nurses from the selected public and private hospitals in Manila City, Albay province, and Sorsogon Province.

   If you agree to take part in this study, you will be invited to complete a questionnaire in google form format. It will only take around 5-8 minutes to finish the survey.

   In the questionnaire, we would like you to respond to questions regarding your satisfaction level on given factors under different categories (i.e., Structural Factors, Social and Managerial Factors, Work-in-itself Factors, Benefit Factors, and Environmental Factors).

   You may participate in this research voluntarily and you may withdraw from the survey at any time if you wish to. There will be no negative consequences even if you decide not to participate in this research. If you withdraw in the middle of the survey, your responses will not be saved in the database.

   Any information we have about you from the questionnaire will be kept confidential. All electronic data will be stored on a password protected computer and will only be used during the research.

3. Benefits and risks:

   Everyone who will complete the survey can join a raffle, wherein 30 winners will win Php500.00. Also, you can help us better understand the different factors

affecting the satisfaction level of healthcare workers in the Philippines, particularly doctors and nurses, so that appropriate and innovative measures can be taken in a timely manner.

There is no known risk if you take part in this study. Respondent identifiers (i.e., your name) will NOT be included in the questionnaire or database.

4. Contact information for any questions or concerns:

   If you have any questions about this research or your rights as a research participant, please contact <Seohyun Lee>, principal researcher, at <+82-33-760-2357> or <Janine Marie Balbedina>, researcher, at <0927-238-6813> (Viber/Whatsapp) or jarieblbdna@yonsei.ac.kr. You may also contact Yonsei University Mirae Campus IRB at ☎ +82-33-760-5247.

Thank you very much for your participation!

Answering this questionnaire implies consent to participate. Proceed?

○ Yes.

If you want to join the raffle for a chance to win Php500.00, please input your GCash number: _____

Individual Characteristics

1. Age: _____
2. Sex (assigned at birth)
   ○ Male ○ Female
3. What type of hospital are you currently working at?
   ○ Public ○ Private
4. Which hospital are you currently working at?

○ Ago General Hospital (Albay Province)
○ Albay Doctors' Hospital, Inc. (Albay Province)
○ Amisola Maternity Hospital (Manila City)
○ Bicol Regional Training And Teaching Hospital (Albay Province)
○ Cabredo General Hospital (Albay Province)
○ Chacon General Hospital, Inc. (Sorsogon Province)
○ Chinese General Hospital & Medical Center (Manila City)
○ Daraga Doctors' Hospital, Inc. (Albay Province)
○ De Ocampo Memorial Medical Center (Manila City)
○ Donsol District Hospital (Sorsogon Province)
○ Dr. Amando D. Cope Memorial Hospital, Inc. (Albay Province)
○ Dr. Fernando B. Duran, Sr. Memorial Hospital / Sorsogon Provincial Hospital (Sorsogon Province)
○ Dr. Jose Fabella Memorial Hospital (Manila City)
○ Dr. Lorenzo T. Ziga Memorial District Hospital (Albay Province)
○ Manila Doctors Hospital (Manila City)
○ Mary Chiles General Hospital, Inc. (Manila City)
○ Mary Johnston Hospital, Inc. (Manila City)
○ Medical Center Manila, Inc. (Manila City)
○ Metro Health Specialists Hospital, Inc. (Sorsogon Province)
○ Metropolitan Medical Center (Manila City)
○ Ospital ng Maynila Medical Center (Manila City)
○ Ospital ng Sampaloc (Manila City)
○ Ospital ng Tondo (Manila City)
○ Our Lady of Lourdes Hospital (Manila City)
○ Perpetual Succor Hospital & Maternity, Inc. (Manila City)
○ Rapu-Rapu District Hospital (Albay Province)
○ Salvador R. Encinas District Hospital / Gubat District Hospital (Sorsogon Province)
○ San Lazaro Hospital (Manila City)

- ○ Estevez Memorial Hospital, Inc. (Albay Province)
- ○ Gat Andres Bonifacio Memorial Medical Center (Manila City)
- ○ GSAC General Hospital, Inc. / Sts. Peter and Paul Hospital of Sorsogon, Inc. (Sorsogon Province)
- ○ Hospital of the Infant Jesus Medical Center (Manila City)
- ○ Irosin District Hospital (Sorsogon Province)
- ○ Jaime B. Berces Memorial Hospital (Albay Province)
- ○ Jose R. Reyes Memorial Medical Center (Manila City)
- ○ Josefina Belmonte Duran Memorial District Hospital (Albay Province)
- ○ Justice Jose Abad Santos General Hospital (Manila City)
- ○ Legazpi City Hospital (Albay Province)
- ○ Ludovice General Hospital (Albay Province)
- ○ Lumbis Rances General Hospital (Albay Province)
- ○ Seamen's Hospital (Manila City)
- ○ Sorsogon Medical Mission Group Hospital and Health Services Cooperative (Sorsogon Province)
- ○ St. Jude General Hospital & Medical Center, Inc. (Manila City)
- ○ Sta. Ana Hospital (Manila City)
- ○ Tanchuling General Hospital, Inc. (Albay Province)
- ○ Tondo Medical Center (Manila City)
- ○ Trinity Woman & Child Center "The Birthplace" (Manila City)
- ○ University of Santo Tomas Hospital (Manila City)
- ○ University of Santo Tomas (Ust) - Legazpi, Inc. (Albay Province)
- ○ UP - Philippine General Hospital (Manila City)
- ○ Vicente L. Peralta Memorial District Hospital / Castilla District Hospital (Sorsogon Province)
- ○ Zone Medical and Intervention Hospital, Inc. (Albay Province)

5. How long have you been working at your current workplace? (Please be specific with the number of years and/or months.) _____
6. Job position: _____
7. Monthly net income
   - ○ Php 0 - 10,000
   - ○ Php 10,001 - 20,000
   - ○ Php 20,001 - 30,000
   - ○ Php 30,001 - 40,000
   - ○ Php 60,001 - 70,000
   - ○ Php 70,001 - 80,000
   - ○ Php 80,001 - 90,000
   - ○ Php 90,001 - 100,000

○ Php 40,001 - 50,000
○ Php 50,001 - 60,000
○ Php 100,001 and above

8. Employment status

○ Probationary employment
○ Regular / permanent employment
○ Fixed term / contractual employment
○ Casual employment
○ Project employment
○ Seasonal employment

9. Total years and/or months of experience in the field (regardless of workplace): _____

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10. Personality Trait Scores

This is a 50-item personality test using a pre-constructed questionnaire based on the Big Five Personality Traits theory. It will help you understand why you act the way that you do and how your personality is structured.

Please read each statement carefully and decide how much you agree on it, wherein:

1 = Disagree

2 = Slightly Disagree

3 = Neutral

4 = Slightly Agree

5 = Agree

	1	2	3	4	5
1. I am the life of the party.	○	○	○	○	○
2. I feel little concern for others.	○	○	○	○	○
3. I am always prepared.	○	○	○	○	○
4. I get stressed out easily.	○	○	○	○	○
5. I have a rich vocabulary.	○	○	○	○	○
6. I don't talk a lot.	○	○	○	○	○
7. I am interested in people.	○	○	○	○	○
8. I leave my belongings around.	○	○	○	○	○
9. I am relaxed most of the time.	○	○	○	○	○
10. I have difficulty understanding abstract ideas.	○	○	○	○	○
11. I feel comfortable around people.	○	○	○	○	○
12. I insult people.	○	○	○	○	○
13. I pay attention to details.	○	○	○	○	○
14. I worry about things.	○	○	○	○	○
15. I have a vivid imagination.	○	○	○	○	○
16. I keep myself in the background.	○	○	○	○	○
17. I sympathize with others' feelings.	○	○	○	○	○
18. I make a mess of things.	○	○	○	○	○
19. I seldom feel blue.	○	○	○	○	○
20. I am not interested in abstract ideas.	○	○	○	○	○
21. I start conversations.	○	○	○	○	○
22. I am not interested in other people's problems.	○	○	○	○	○
23. I get chores done right away.	○	○	○	○	○
24. I am easily disturbed.	○	○	○	○	○
25. I have excellent ideas.	○	○	○	○	○
26. I have little to say.	○	○	○	○	○
27. I have a soft heart.	○	○	○	○	○
28. I often forget to put things back in their proper place.	○	○	○	○	○
29. I get upset easily.	○	○	○	○	○
30. I do not have a good imagination.	○	○	○	○	○
31. I talk to a lot of different people at parties.	○	○	○	○	○
32. I am not really interested in others.	○	○	○	○	○
33. I like being orderly and organized.	○	○	○	○	○
34. I change my mood a lot.	○	○	○	○	○
35. I am quick to understand things.	○	○	○	○	○
36. I don't like to draw attention to myself.	○	○	○	○	○

37. I take time out for others.	○	○	○	○	○
38. I avoid my duties.	○	○	○	○	○
39. I have frequent mood swings.	○	○	○	○	○
40. I use difficult words.	○	○	○	○	○
41. I don't mind being the center of attention.	○	○	○	○	○
42. I feel others' emotions.	○	○	○	○	○
43. I follow a schedule.	○	○	○	○	○
44. I get irritated easily.	○	○	○	○	○
45. I spend time reflecting on things.	○	○	○	○	○
46. I am quiet around strangers.	○	○	○	○	○
47. I make people feel at ease.	○	○	○	○	○
48. I am precise in my work.	○	○	○	○	○
49. I often feel blue.	○	○	○	○	○
50. I am full of ideas.	○	○	○	○	○

Different Factors Affecting Job Satisfaction

The next 5 sections will ask about your satisfaction level on given factors under different categories. Each section has 3-6 statements.

Please read each statement carefully and decide how satisfied you feel about the aspect of your job described by the statement.

Keeping the statement in mind:

- If you feel that your job gives you more than you expected, select 5 (Very Satisfied);
- If you feel that your job gives you what you expected, select 4 (Satisfied);
- If you cannot make up your mind whether or not the job gives you what you expected, select 3 (Neither Satisfied nor Dissatisfied);

- If you feel that your job gives you less than you expected, select 2 (Dissatisfied);
- If you feel that your job gives you much less than you expected, select 1 (Very Dissatisfied).

I. Structural Factors

	1	2	3	4	5
My job security.	○	○	○	○	○
How the manpower sufficiency compares to workload.	○	○	○	○	○
The opportunities for trainings and capacity building activities.	○	○	○	○	○
The way company policies are put into practice.	○	○	○	○	○

II. Social and Managerial Factors

	1	2	3	4	5
The way my supervisor handles his/her employees.	○	○	○	○	○
The spirit of cooperation among my co-workers.	○	○	○	○	○
How mental health concerns of employees are being dealt with.	○	○	○	○	○

III. Work-in-itself Factors

	1	2	3	4	5
How my workload compares to my duties and responsibilities.	○	○	○	○	○
How my workload compares to my work hours.	○	○	○	○	○
The clarity of my duties and responsibilities with my position.	○	○	○	○	○
The chance to do work that is well suited to my abilities.	○	○	○	○	○

The feeling of accomplishment I get from the job.	○	○	○	○	○

IV. Benefit Factors

	1	2	3	4	5
The amount of pay for the work I do.	○	○	○	○	○
The benefits I receive apart from my monthly compensation.	○	○	○	○	○
The way I am recognized when I do a good job.	○	○	○	○	○

V. Environmental Factors

	1	2	3	4	5
The availability of hospital facilities.	○	○	○	○	○
The availability of hospital resources.	○	○	○	○	○
The environmental safety in my workplace.	○	○	○	○	○
The occupational safety in my workplace.	○	○	○	○	○
The overall working conditions (heating, lighting, ventilation, etc.) on this job.	○	○	○	○	○
Protocols implemented for the pandemic.	○	○	○	○	○

Thank you for participating in this survey! You may review your responses by clicking "Back," or finish with the survey by clicking "Submit." Once you click the Submit button, the responses cannot be edited. If you want to make corrections in your responses after you clicked the "Submit" button, please email me at jarieblbdna@gmail.com.

Appendix II

INTERVIEW GUIDE

Opening

Good day! My name is Janine Marie Balbedina. I am a master's student taking up Master of Public Policy at Yonsei University in South Korea. First of all, thank you for agreeing to be interviewed for my study.

I am conducting a research study entitled, "**Comparative analysis of the determinants of healthcare worker satisfaction between public and private hospitals in the urban and rural areas in the Philippines: A Mixed Methods Study**". Particularly, the study's target participants are doctors, nurses, and hospital management heads of DOH-accredited hospitals in Manila City, Albay Province, and Sorsogon Province. One of the specific objectives of my study is to determine the hospital management's perception of doctors' and nurses' job satisfaction to collect information that can supplement the survey results from the healthcare workers. In doing so, we can further analyze different perspectives from various stakeholders and come up with relevant policy recommendations, if needed, based on the findings of the study.

Your participation in this interview is voluntary and you may refuse to answer any questions asked. I already sent the questions beforehand, but as mentioned, there are only four (4) questions that will be asked. Follow-up questions related to the main questions might be asked if deemed needed by the interviewer. The interview proper will only take 10-15 minutes. The information you will share will remain confidential and will be used solely for purposes of the study and publishing of reports. Your name or the name of the hospital will not appear in any publications resulting from the study unless agreed to.

There will be no immediate compensation, but your time and effort in participating in this interview will be greatly appreciated. Also, you can help us better understand the different factors affecting the satisfaction level of healthcare workers in the Philippines, particularly doctors and nurses, so that appropriate and innovative measures can be taken in a timely manner. There is no known risk if you take part in this study.

So, with those said, before we proceed, I would like to ask for your permission if we can record this conversation. The recording will solely be for the study's documentation purposes and basis for analysis later on.

Questions

1. In general, what do you think are the reasons for job dissatisfaction among hospital HCWs in the Philippines?
2. In general, what do you think are the reasons for job satisfaction among hospital HCWs in the Philippines?
3. In your hospital, do you think the doctors and nurses experience dissatisfaction with their job?
    a. If yes, what are the factors that affect their job dissatisfaction?
    b. If not, what are the factors that affect their job satisfaction?
4. What actions do you think can be done to improve hospital healthcare workers' job satisfaction in the Philippines?

Closing

That would be the end of the interview. I appreciate the time you took for this interview. If you have any questions, feel free to ask me. Thank you very much!

Abstract in Korean

필리핀 도시와 농촌 지역의 공공병원과 민간병원 간 의료종사자 만족도 결정요인 비교 분석: 혼합 방법 연구

연세대학교 정경대학원
여성농촌지역개발 석사학위과정
Janine Marie Berja Balbedina

해마다 점점 더 많은 병원 의료 종사자(HCW)가 필리핀 병원에서 일하는 만족도에 영향을 미치는 다양한 요인 때문에 다른 국가에서 일하기를 선택하고 있습니다. 이러한 HCW 의 이주로 인해 필리핀에서 근무하는 의사와 간호사의 수가 부족하여 양질의 의료 서비스를 제공하기 위한 필리핀 의료 시스템의 격차가 커지고 있습니다.

본 연구는 필리핀 의료종사자의 만족도에 영향을 미치는 다양한 요인을 살펴보았다. 이 연구의 목적을 달성하기 위해 데이터 수집 및 분석에 혼합 방법 접근 방식을 사용했습니다. 정량적으로는 Manila City, Albay Province, Sorsogon Province 의 선정된 공립 및 사립 병원의 총 303 명의 의사와 간호사가 온라인 설문 조사에 참여했습니다. 직무만족의 21 가지 특정요인을 사전에 파악하고 요인분석을 통해 직무만족의 일반화된 세 가지 차원인 외적요인, 내재적요인, 환경 및 복지요인으로 분류하였다. 이러한 차원에 대한 의료종사자의 만족도 및 개인별 특성(연령, 성별, 직위, 월수입, 고용상태, 총 경력년수, 성격유형, 병원유형, 병원이 위치한 지역유형)과의 관계 독립 표본 t-검정, 일원 분산 분석 검정 및 다중 회귀 분석을 사용하여 분석했습니다. 분석 결과 다음과 같은 사실이 밝혀졌습니다.

외적 요인. 고용상태를 제외한 모든 개인의 특성은 직무만족 차원과 유의한 관계를 보였다. 병원 유형과 외적 요인 간에는 유의한 상관관계가 없었으나 지역 유형과 외적 요인 간에는 높은 양의 유의성을

보였다. 이는 농촌지역 병원의 의료종사자가 도시지역의 의료종사자에 비해 외재적 요인에 대한 만족도가 더 높다는 것을 의미한다.

내적 요인. 성격 유형과 고용 상태만이 이 차원에서 유의미한 결과를 보였습니다. 병원 유형과 지역 유형 및 내적 요인 모두에 대해 유의한 관계가 나타나지 않았습니다.

환경 및 복지 요인. 월수입, 직위, 성격유형은 직무만족도와 유의한 관계가 있는 것으로 나타났다. 지역유형은 유의성이 없는 반면, 병원유형은 환경 및 복지요인과 부적 유의한 상관관계가 높게 나타났다. 이는 공립병원 의료진이 민간병원 의료진에 비해 환경 및 복지요인에 대한 만족도가 낮다는 것을 의미한다.

질적으로는 병원장/원장 및 인사과장을 대상으로 주요 정보원 인터뷰를 실시하였다. 정보의 포화 수준은 7 번의 인터뷰 후에 도달했습니다. 주제별 분석은 수집된 정성적 데이터를 분석하는 데 사용되었습니다. 모든 인터뷰 참가자는 병원의 HCW 사이에 직업 불만족이 있음을 인식했습니다. 의료종사자들의 직무불만족의 주요 원인은 급여, 열악한 근로조건, 동료간 인간관계 미비, 병원 내 보상 및 복리후생 미흡 등으로 나타났다. 근로시간 연장, 인력 부족, 역량 강화 기회 부족 등도 직무불만족 이유로 꼽혔다. 병원 내에서 이러한 요소를 해결할 수 있다면 직업 만족도를 얻을 수 있습니다.

HCW 사이에서 확인된 문제를 해결하기 위해 권장 사항에는 보상 시스템 개선 및 HCW 급여 인상, 병원 인력 패턴 수정 및 인력 부족을 해결하기 위한 정규직 가용성 증가, 병원 작업 환경 및 조건 개선, 병원 내 동료 간의 대인 관계 및 조직적 관계를 정의하고 병원 내 보다 명확하고 효율적인 프로세스 흐름을 위해 각 직원의 의무와 책임을 정의합니다. 국가의 보건 부문 인적 자원 격차를 더욱 신속하게 해결하기 위해 보건부와 주요 이해 관계자가 조치를 시작해야 하는 하향식 접근 방식의 중요성이 강조됩니다.

키워드: *의료인, 직무만족, 공공병원, 민간병원, 도시지역, 농촌지역*