Tampere University

Karen Basualto Cárcamo

DECENTRALIZATION AND EQUITY IN THE CHILEAN PRIMARY HEALTHCARE SYSTEM

Faculty of Social Sciences
MDP in Public and Global Health
Master's thesis research
2022

ABSTRACT

Since the Pinochet dictatorship in the 1970s, the decentralization of Chile's primary health care system began for various reasons. However, as the years progressed, health in Chile did not seem to advance at the same pace as the general development of the country.

This study analyzes how the decentralization process of primary health care in Chile led to inequities between the different municipalities of the country.

To achieve this analysis, a methodology called triangulation was used, where sources of different origins are analyzed to conclude the results of the study. The different sources were: descriptive data from the participating municipalities, official documents and interviews with family health center managers.

As results, decentralization was implemented in official documents, but in practice, they are not adapted to local realities. In addition, in Chile there is a deconcentration of power rather than a deeper decentralization. Finally, decentralization generates inequity, since each commune must take care of the budgetary gap not covered by the central level. And not all communes can take charge of this gap.

The main reason and source of PHC inequality in Chile is that each commune depends on its own income and communes must cover the budget gaps left by the central level.

Keywords: Decentralization, Decentralisation, Equity, Primary Healthcare, Latin America, Chile.

The originality of this thesis has been checked using the Turnitin Originality Check service.

ACKNOWLEDGEMENTS

Thank you very much for the full support of my husband, Ernesto, my sister, Cynthia, and my mother, Maria. Thank you very much for your unconditional love and patience in the process of doing this study.

Also many thanks to my supervisor Dr. Meri Koivusalo. Thank you for your motivation, guidance and kindness.

CONTENTS

1. ABBREVIATIONS

Km: Kilometers

GDP: Gross Domestic Product

OECD: Organization for Economic Cooperation and Development

DEIS: Departamento de Estadísticas e Información de Salud

IMF: International Monetary Fund

FONASA: Fondo Nacional de Salud

ISAPRE: Instituciones de Salud Previsional

PAHO: Pan American Health Organization

SNSS: Servicio Nacional de Sistemas de Salud

WHO: World Health Organization

LMICs: Low and Middle Income Countries

PHC: Primary Health Care

UHC: Universal Health Coverage

2. INTRODUCTION

Of particular interest and complexity are the concepts of decentralization and equity within health systems. Decentralization can be defined as the process of dispersion or transferral of planning and decision making from a central location or group to more local sub-unities (Merriam-Webster, n.d.). Importantly, decentralization within health systems is of great relevance, as it gives decision-making autonomy to local communities. It allows each locality to make its own decisions according to its own needs in education, economy, and specially health.

Furthermore, equity can be defined as the absence of gaps within a certain population, in terms of health, education and so forth. Equity within health systems is important, as it allows equal access and quality of health care for all members of a given population, regardless of socioeconomic status or pre-existing diseases.

When decentralization is present within a country, it may result in inequities as each region or locality takes care of its own needs with its own resources and/or resources from the central level. This is why it is important to know the consequences of decentralization on the equity of a system, in this case a health system.

There have been studies in decentralization or equity in health systems separately. Moreover, there have been studies where decentralization an equity are studied together; however they are not applied to chilean health system in particular. Therefore, this research seeks to understand how decentralization policies are affecting equity and allocation of resources to Primary Healthcare in Chile.

3. BACKGROUND INFORMATION

3.1 Decentralization

Firstly, it is essential to give a suitable definition of the concept of decentralization. *Decentralization* refers to the process of dispersion or transferral of planning and decision making from a central location or group to more local sub-unities (Merriam-Webster, n.d.). Specifically, regarding governance, decentralization can be described as the delegation of power from a central government department to local authorities (Boko, 2002). This thesis will be focused on decentralisation in health systems, more precisely in primary healthcare.

3.2 Primary healthcare

Since I will be working with decentralization in primary healthcare, it is important to define primary healthcare. The description that I will be using is established on the Alma Ata Declaration, 1978 (WHO, 1978): Primary health care is basic health care built on technically based, practical, and socially acceptable practices and technology. This necessary health care should be universally accessible to individuals and families in the society through their full involvement. It should also be delivered at a cost that the community and country can afford to preserve at every stage of their advancement. Primary healthcare constitutes an indispensable part of the country's health system, and it is the first level of connexion of the family, individuals and the community with the countrywide health system.

3.3 Equity

Several definitions of equity can be found in the literature. The term equality is found with a wide variety of conceptualisations as well. Nevertheless, I will be using the following descriptions to provide a common understanding of equity and equality. Equality and its counterpart, inequality, are described as dimensional concepts in which, only measurable quantities are considered. In contrast, equity and inequity are more political concepts where is expressed as a moral commitment to social justice (Kawachi, Subramanian, & Almeida-Filho, 2002). Thus, where inequality is used to indicate measurable discrepancy in the health of a population group or an individual, inequity is utilized to describe aspects of health gaps

that are unnecessary, avoidable, unjust and unfair derived from some form of injustice (Sumah, Baatiema, & Abimbola, 2016).

As an example of the difference between these two terms, the life expectancy difference between men and women within the same country tend to be higher among women as a consequence of innate biological causes; hence, it is an example of inequality since it cannot be described as avoidable or unfair. But on the other hand, as inequity example, life expectancy gaps among developed and developing countries can be due to avoidable factors such as a different availability of economic resources (Sumah et al., 2016).

Specifically, a widely utilised description of equity in health is "the absence of potential remediable systematic differences in one or more aspects of health across socially, economically, demographical or geographical defined groups or sub-groups", provided by Sumah et al. (2016). This definition implies that horizontal and vertical equities are being addressed. Horizontal equity can be described as when equal health services are offered in circumstances of equal need. Similarly, vertical equity refers to an increased provision of services and resources when greater health needs arise (Starfield, 2001).

3.4 Background information about Chile

Chile is situated in South America southwest area, with a continental and insular area of 756,770 km² and of the Antarctic territory of 1.250.000 km2. Chile has a division of 16 regions, 53 provinces and 346 communes. The country has an irregular and mountainous topography, and it has exposure to natural disasters, such as earthquakes and tsunamis (PAHO, 2020). It is characterised by being the longest and narrowest country on the planet. Its border countries are Argentina, Bolivia and Peru, and it has a coastline of 6,435 km (Central Intelligence Agency, 2020). Chile has 17.574.003 million inhabitants as of 2017 (National Statistics Institute, 2018). Santiago of Chile is the capital city, which is the largest city in the country. The primary national language is Spanish.

3.4.1 Demographics

In terms of demographics, up to 87% of the population resides in urban areas and, there is a relative diversity in ethnic groups where the white/mestizo population is the majority of the population with an 88.9% out of the total (Central Intelligence Agency, 2020). Between 1990 and 2015, the population increased by 36.6%. In 1990, the Chilean demographic structure was expansive in the groups over 25 years of age and stationary in the groups under that age. Currently, a regressive form has been seen in the demographic structure, which is related to the decrease in fertility, mortality and increase in ageing and life expectancy at birth. Current Life Expectancy in Chile is 82 years and females and 76 years for males (PAHO, 2020). Therefore, Chile is undergoing a demographic transition, in which we find an increase in the ageing population.

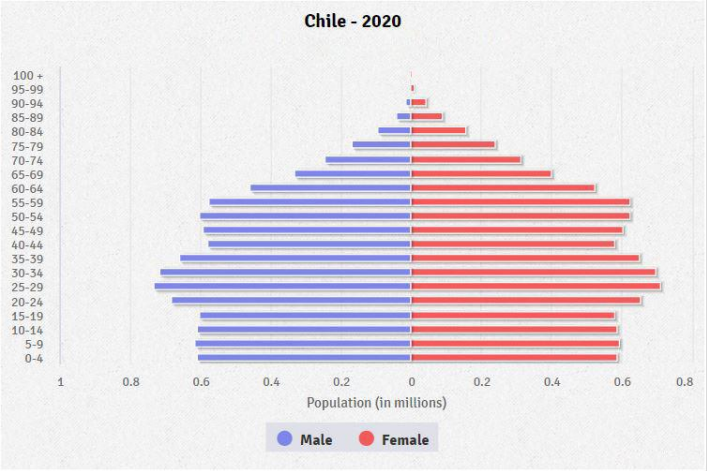


Fig.1. Demographic structure, Chile 2020. Source: (Central Intelligence Agency, 2020).

3.4.2 Economy

Regarding the economy of the country, between 1961 and 2014, gross domestic product (GDP) rose by an annual average of 4.3% (PAHO, 2017). Moreover, Chile is regarded by The World Bank (The World Bank Group, 2020) as a High-Income country with a GDP of US $298 billion in 2019 and it has been the first South American country to join Organization for Economic Co-operation and Development (OECD), in 2010 (OECD, 2020). The economy of Chile has its main focus on service sectors, and it is rich in natural resources, especially agricultural resources and copper. However, Chile is a highly unequal country. In terms of income, Chile is the third most unequal country among OECD members with a Gini index of 0,46. (OECD, 2020).

At a regional level, some differences in the GDP per capita are observed. Five regions are above the national average income: Antofagasta, Atacama and Tarapacá regions mainly due

to mining, plus Magallanes and Metropolitan regions. In contrast, the regions that show less development in matters of income are La Araucanía, El Maule and Los Lagos regions. (Mieres Brevis, 2020)

3.4.3 Basic Health Indicators

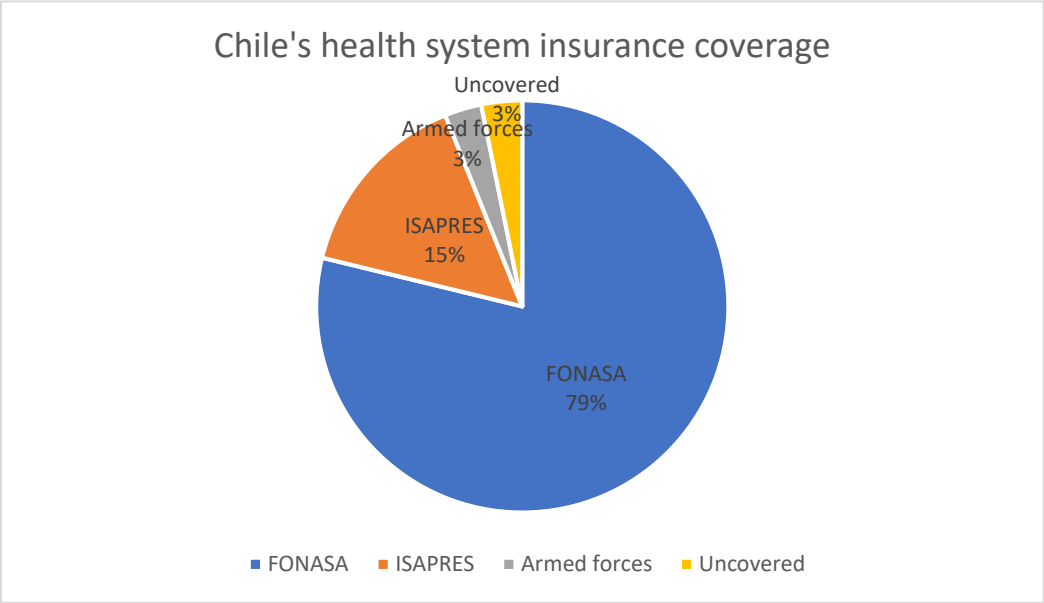
Some basic health indicators can assist in having a big picture of the health of the Chilean population. According to the Department of Health Statistics and Information - DEIS for its name in Spanish -, in 2017 the national birth rate is 11,9 (per 1000 inhabitants), the mortality rate is 5,79 (per 1000 inhabitants), the infant mortality rate is 7,1 (per 1000 life births), Life Expectancy in Chile is 82 years for females and 76 years for males. (DEIS, 2017).

3.4.4 Governance and Health system in Chile

In general terms, the Chilean administrative and political system is decentralized. Such a decentralization process was initiated in 1974 during the dictatorship of Augusto Pinochet and under the neoliberalist influences of the International Monetary Fund (IMF) and The World Bank. In this period, the political-administrative units of 'regions' and 'municipalities' were created and established; hence, 16 regions, 53 provinces and 346 communes arose. (Henríquez, 2020 ; PAHO, 2020).

In Chile, the 'commune'- or municipality - represents the most basic unit in the political-administrative division of the country. It represents the highest level of fragmentation of the system in which, demographic, social and health statistics can be reported. (Henríquez, 2020). Since 1974, the central level has delegated to municipal governments the administration of highly relevant areas, such as public education and public primary healthcare (Observatorio chileno de Salud Pública, 2013).

Regarding the health system, the Ministry of Health is in charge for the health system regulation and governance, and for the regulatory framework as well. In terms of its financing, it is mainly a mixed dual system, with both public and private insurance: The National Health Fund – FONASA- and the Social Security Health Institutions – ISAPRE – respectively. There are also other insurance schemes such as the Armed Forces one. FONASA covers around 79% of the population, ISAPRE covers around 15% of the population, while a further 3-4% are covered under an Armed Forces insurance system.



(PAHO, 2017).

Fig. 2. Chile's health system insurance coverage.
Source: Own elaboration based on PAHO, 2017.

Importantly, FONASA is a public non-for-profit organization; on the other hand, ISAPRE are profit-making private associations mediating the acquisition and sale of health plans, mostly for the "lower-risk-high-income groups", consequently "decapitalizing the public sector" (Almeida, Oliveira, & Giovanella, 2018). Thus, the fundamental subdivision of Chile's health care system implies that in low-income and high-risk populations being provided principally by the public sector, while high-income and low-risk populations are mostly attended by the private sector.

The health care system is currently fragmented in terms of financing and insurance due to the mixed characteristics of the system. For the same reason, the system is fragmented in

terms of service delivery that leads to an unequal availability of resources, depending on where the population is served (public or private sector). Therefore, the system's duality has led to increasing inequalities, in which 40 % of the total payments goes to the private scheme, from which 15 to 18 % of the members benefit. It is also remarkable to note that the private health sector spent 2,5 times more for each recipient than the public system (Tanjung & Basualto Cárcamo, 2021 ; PAHO, 2017).

Lastly, as a decentralization reform of the public health system the National System of Health Services (SNSS) was created. It regulates the health delivery tasks of the public sector. Moreover, it is composed of 29 decentralized services, distributed across the 16 regions of the country (OCHISAP, 2020). The National System of Health Services manages the functions of public sector providers. SNSS administer 62 public hospitals and supervises the primary healthcare system, which operates principally at the municipal level. (Bastias, Pantoja, Leisewitz, & Zarate, 2008).

Finally, the primary healthcare system in Chile is only public. The private sector does not count with a primary level of services. Lastly, when specifically talking about primary healthcare in Chile, its financing comes from three different sources: per capita funding, municipalities' own funds and resources for vertical programs.

3.4.5 Equity within Chilean primary healthcare

As previously discussed, the highest level of decentralization in the political-administrative system in Chile is the municipality. Consequently, primary healthcare is the highest expression of decentralization of the public health system as the municipalities are in charge of operating and overseeing them. In turn, the primary healthcare centres are the public system closest level to the community.

Furthermore, the population size, the demographic characteristics and the socio-economic level of each municipality tend to vary enormously. According to OECD, Chile is a highly unequal country (OECD, 2020) Therefore, the specific needs and availability of resources may differ when analysing the population of different municipalities.

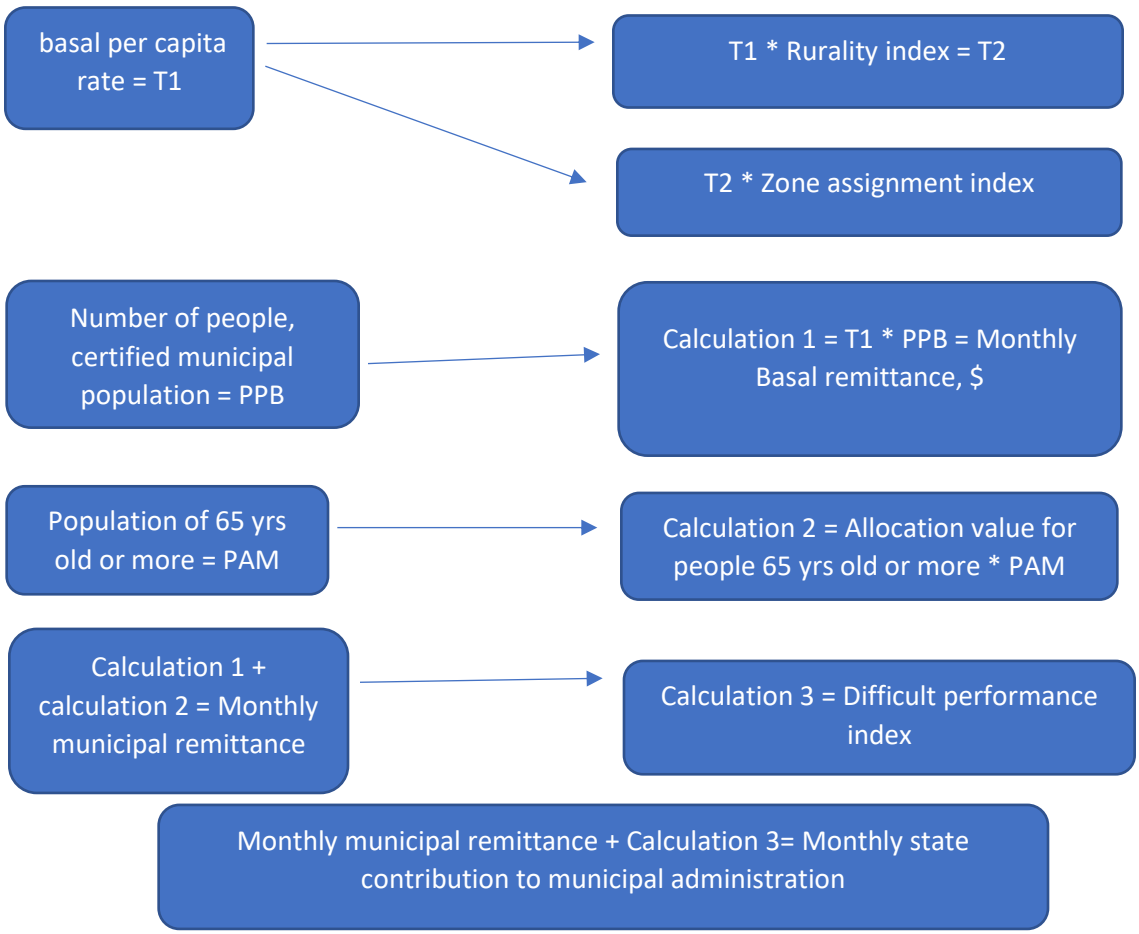
All in all, the described decentralization process of the health system affects health equity among the Chilean population. To address this situation, the primary healthcare centres are financed from the central level with a 'per capita' finance system. This system was introduced in 1994 and its main objective was to increase equity when allocating resources for the centres. This mechanism of allocation of resources is responsible for 69,6% of the total amount of funds for primary healthcare centres (Ministerio de Salud, 2013).

The per capita mechanism payment is based on a rate stipulated by the Ministry of Health, according to the beneficiary population registered in each health centre. This per capita payment system seeks to offer a set of services called the 'Family Health Plan'. This Plan determines the 'basal per capita', from which increments are added through the use of indexers (Ministerio de Salud, 2013). Indexers can be defined as ratios that adjust the basal per capita and can increase it to a greater or lesser extent depending on the characteristics of the population.

The basal per capita can be defined as the homogeneous contribution, per beneficiary enrolled in the municipal primary healthcare centres of each commune. Furthermore, the indexers which increment the basal contributions are (Ministerio de Salud, 2013):

1. The socioeconomic level of the population - including the level of poverty -, the population aged 65 or more, and the epidemiological characteristics of the population.
2. The set of benefits that are scheduled by the municipal centre that are delivered to the population.
3. Rurality and difficulty in providing healthcare services
4. The difficulty of the population in accessing healthcare
5. Amount of services actually provided by the municipal health centres, based on a semestral evaluation

Algorithm for calculating the municipal state contribution, per capita payment mechanism, year 2015. Source: Estudio Sobre la Revisión del Per Cápita Basal para la Atención Primaria de Salud, los Indexadores, Plan de Salud Familiar y Comunitario, Sept 2015, p. 24.



4. REVIEW OF THE LITERATURE

Firstly, the following terms were sought in the literature: Decentralization OR Decentralisation, Decentralization AND health systems, Decentralization AND Latin American health systems, and lastly, Equity. Databases that were utilized were: PubMed and Google Scholar.

4.1 Decentralization in the literature

Throughout the literature, is it possible to find different opinions regarding decentralization and how much it can truly impact an organization or government. Both advocates and detractors of decentralisation can sometimes agree that it can consistently expand the power of subnational governments (Falleti, 2005), even though it can happen in different degrees. According to Daun (2007), decentralisation could be a response to the issues presented by centralised systems. For this author, for researchers and decision-makers, decentralization in government matters can be seen as a solution to a wide range of difficulties such as government incapability to supply services and their general deterioration in the performance of burdened services, increase the participation in decision-making of local communities, and economic decline.

Nonetheless, Falleti (2005) argues that decentralization policies can undo the "skilful organisation of authority" and that decentralisation does not always shift power from central authorities to local governors and mayors since 'certain types of reforms decrease the power of subnational officials'. Falleti (2005) also claims that whenever decision-makers and researchers carry out a thorough examination of the effects of decentralisation across countries, it is likely to find that the scale of change after performing a decentralisation process, can vary 'from substantial to insignificant'. As a result, it is conceivable to conclude that the consequences of decentralisation are not yet clear, and the process itself is not a sort of 'one size fits all' solution due to the ambiguities surrounding the concept of decentralization (Collins & Green, 1994). It is of high importance to perform an in-depth study of the background and needs of the country before even planning and implementing this method in a particular country.

According to WHO (Mills et al., 1990), the objectives of decentralization are diverse. On a ideological level, decentralization is seen as a political ideal to follow since it provides the means for community participation, and ensuring the accountability level of government officials to the local population. On a practical level, decentralization is seen as a way of reducing institutional, physical and administrative hindrance on development in general.

Moreover, decentralization is also seen as a form of relocating responsibility for development from the center to the periphery.

Particularly, is it of great relevance to draw a distinctive line between *functional* and *geographical or areal* decentralization, which is important in decentralization as a general term, but also when discussing health systems. In functional decentralization, authority for performing particular functions is tranferred to a specialized local office. According to Mills (1990), in geographical decentralization, broad responsibilities are transferred to local institutions that have well identified geographical borders (Mills et al., 1990). Thus, if we want, for example, the ministry of health to have more local involvement, we should lean towards functional decentralization since there would be a local office specialized in the health area. This local office would comunicates directly with the ministry of health.

Four main types of decentralization exist in practice: *deconcentration, devolution, delegation and privatization*. Deconcentration can be defined as the delivery of some administrative jurisdiction to locally based offices of central government ministries. It is seen as the least form of decentralization as it involves the transfer of administrative rather than political responsibilities. In turn, devolution is the formation or strengthening of subnational levels of government with clear responsibilities which are independent from the national level. Hence, devolution involves a much more drastic reorganization of services than deconcentration. Furthermore, delegation can be defined as the relocation of managerial responsibilities for well-defined functions to parastatal organizations which are outside the central government structure and indirectly regulated by the central government. Lastly, Privatization is the relocation of government functions to voluntary, for-profit and /or non-for-profit organizations, with a variable degree of government regulation (Rondinelli, Cheema, & Nellis, 1983 ; Mills et al, 1990).

Importantly, decentralization in a certain country may have features from the different types of decentralization. Therefore, the four types of decentralization should not be seen as necessarily different or separate from each other.

All in all, even though the bibliographical results of decentralization are mixed, the idea should always be to aim at decreasing the negative results and increasing the positive ones

when it comes to implementing decentralization policies in a given context (Abimbola, Baatiema, & Bigdeli, 2019).

4.2 Decentralization in Health Systems

In decentralization of health systems, this process encompasses the allocation of some fiscal, organizational or technical responsibilities from the central to the local level. Moreover, in the literature is discussed how there is no agreement on the definition of decentralization nor in its impacts on health systems (Cobos Muñoz et al., 2017).

Advocates of decentralization in health systems claim that the transfer of obligations from the central level to the local level would improve the overall performance of the health system. Nonetheless, its detractors have raised alarms about the risk of increasing inequities due to the lost capacity in the central level of governance as an equaliser among the different decentralized unities (county, region, etc) (Bossert T. , 2000). Potential problems related to coordination among different levels are brought by its detractors as well (Cobos Muñoz et al, 2017 ; Collins & Green, 1994).

Global-level interest on this topic was raised for the first time in The Harare Declaration in 1987, where WHO suggested decentralizing health systems based on primary health care (PHC) as the pillar for accomplishing the goal of "Health for All" in 2000 (WHO 1987). Recently, the turn back to Alma Ata principles in 2008 also caused a new concern in local health systems as fundamental components to reach universal health coverage (UHC). (Cobos Muñoz et al, 2017 ; Bossert T. , 2000).

Lastly, it is also discussed in the literature how low and middle-income countries (LMICs) – especially Latin American countries - have implemented decentralization in their health systems as an only principal change or as part of more comprehensive reforms. However, its impacts are not yet clear (Riutort & Cabarcas, 2006).

4.3 Decentralization in Latin American health systems.

Reforms in the health sector have been usual among Latin American countries, particularly during the 1980s and 1990s due to several dictatorships and crises that had occurred in the region. The International Monetary Fund -IMF- and The World Bank took advantage of this

situation to push Latin American governments to introduce health reforms as a condition for borrowing money intended to recover from their crises (Homedes & Ugalde, 2005 ; Riutort & Cabarcas, 2006)

This introduction to health reforms from these organizations was based on ideological concerns and not in the current health system, its outcomes and performances, the epidemiological profile nor in the socio-political context of the country (Riutort & Cabarcas, 2006). Therefore, the IMF and the World Bank did not pursue the best interest of these countries according to their needs, but instead sought to shift Latin American countries governments to a more neo-liberalist tendency. For instance, the Colombian and the Chilean experiences show that neoliberal reforms do not improve equity, quality of care, nor efficiency (Homedes & Ugalde, 2005)

Some aspects that were established by the reforms in Latin American countries could include: constraints on the role of the public sector, introduction of new incentives for the private sector to take part in health and, decentralization, among others (Ugalde & Homedes, 2008).

At first, decentralization was installed to improve efficiency in the resources utilized by the health sector, but it would also seek to achieve equity in health, ameliorated responsiveness of local conditions, and better local accountability to community requirements (Riutort & Cabarcas, 2006). Nonetheless, not even supporters of decentralisation would surely claim that decentralization policies are likely to increase the equity of a health system (Collins & Green, 1994).

Furthermore, the effects and processes of decentralization have been somewhat different among the countries of the Latin American region, since each of them had diverse backgrounds at the moment of installing the decentralization policies in their health care systems. The decentralization process in Latin American countries can be classified according to the grade of transference of power to the local level. Thus, the countries in Latin American region can be categorized into three groups concerning their process: devolution, de-concentration and, autonomy of healthcare facilities (Riutort & Cabarcas, 2006).

In Latin American region, decentralisation has greatly transformed the health sector by including strong participation of the private sector (Infante, de la Mata, & Lopez-Acuña,

2000 ; Cobos Muñoz et al, 2017). De-concentration refers to the transference of the executions of measures from central to local level, without transferring autonomy of decisions, unlike countries that have undergone a devolution process (Rondinelli, Cheema, & Nellis, 1983). Finally, we can find Latin American countries with an autonomy of healthcare facilities, in which each facility can take their own decisions depending on their particular needs, regardless of the needs of the total population in a certain administrative unit -county, region, etc. (Riutort & Cabarcas, 2006).

4.4 Equity in the literature

This section is to point out what the literature discussses about the term equity. Firstly, equity in general, is a concept mainly rooted in ethical and moral constructions. Furthermore, the meaning of equity in health is defined as the absence of "differences which are ***unnecessary*** and ***avoidable,*** but in addition are considered ***unfair*** and ***unjust"*** (Whitehead, 1992)**.** Thus, the cause of inequity must be analyzed and judged to be unfair within the context of the whole society. However, since equity is an abstract concept based on values that are assigned differently in different societies, it reinforces the point that measuring equity can be complex.

Importantly, equity in health systems can be frequently measured by taking into consideration three principal dimensions: access to healthcare, financing of healthcare, and health status or outcomes (Sumah et al, 2016). These three dimensions of equity are deeply interconnected, hence, they need to be considered together and closely when examining equity in health systems.

Among the concepts of equity, the most measurable is that of health systems, but with the other definitions of equity, such as equity in general and equity in health, it may be more difficult to measure because of its more abstract quality.

It is also shown in the literature that the concept of equity must be present within a health system in order to have a better health status of the population. For instance, Whitehead has enphazised that disadvantaged groups have poorer survival chances, dying at a younger age than more favored groups, and disadvantaged groups not only suffer a heavier burden of disease than others, but also experience the onset of chronic illness and disability at younger ages (Whitehead, 1992).

Above all, national health policies that are designed for an entire society, without taking into account the most affected groups within it, cannot claim to be considering the well-being and health of all its people. Equity and the differing needs of each group in society must be taken into account before designing national health policies.

All in all, decentralization policies may be related to inequities because giving independence to administrative subunits together with little regulation from the central level results in unequal health care. This combination of events can lead to differences in the health status of the country's population as a result of these inequalities between administrative sub-units. Furthermore, decentralization Chilean policies may be affecting equity at a primary healthcare level. Thus, the idea is to understand the gap between official information and the actual impact at the level of primary health care.

Therefore, it is clear the need for research in this area, in which the gap between official information and real performance of the primary health system can be clarified and solved.

5. RESEARCH AIMS

This research seeks to understand the relationship between decentralization policies, equity and allocation of resources in Primary Health Care in Chile.

6. RESEARCH QUESTIONS

The research questions, therefore, are:

1. How decentralization policies are affecting equity in primary healthcare in Chile?
2. How the government mechanism for redistribution of resources in Chilean primary healthcare are affecting its equity?
3. Have the decentralisation policies increased or decreased equity within the Chilean primary healthcare system, in the last 10 years?

7. DESIGN AND METHODS

The mixed method of triangulation was used. Triangulation is a mixed method approach of research, in which it is possible to compare data from different sources and find out if their results and information correspond (UNAIDS, 2010). In my study, three sources were compared: **descriptive data, official documents and interview data from key informants.**

As **descriptive data**, it was utilized the following information, which is the most updated data for each analyzed municipality:

1. **Income Poverty rate**. The measurement of the income poverty rate identifies the group of households whose total monthly income does not exceed the value of the poverty line and who, therefore, do not have sufficient income to satisfy the consumption of a basic set of food and non-food goods. (Ministerio de Desarrollo Social y Familia, 2017). In Chile this rate is delivered by the Ministry of Social Development and Family.
2. **Birth rate** which is the ratio between births and individuals in a specified population and time (Merriam-Webster. (n.d.), 2022). For the purposes of this

study it was utilized live births over 1000 inhabs. In Chile, this rate is delivered by the National Institute of Statistics.

3. **Mortality rate** which is the ratio between deaths and individuals in a specified population and during a particular time period (Merriam-Webster. (n.d.), 2022). For the purposes of this study it was utilized number of deaths over 1000 inhabs. In Chile, this rate is delivered by the National Institute of Statistics.

4. **Deciles** which are mainly used to define socioeconomic sectors according to per capita family income. It allows us to differentiate the population by income level according to family members. Thus, decile 1 represents the population with the most vulnerable socioeconomic condition, and decile 10 represents the people with the highest income in the country. It is calculated by identifying all household income (gross value minus legal discounts) and dividing it by the number of members of the family group. (INACAP, 2020). In Chile, this data is delivered by the Ministry of Social Development and Family. Lastly, Deciles were added in this study to understand where among the 10 deciles the participant municipalities are located.

5. **Index of elderly population**. It can be defined as the ratio of the elderly population to the child population. This data will be used in order to indicate the population age of each municipality. The larger the number, the older the population. In Chile, this data is delivered by the National Institute of Statistics.

Clarification:

Taking into account all the data to be analyzed and for the purposes of this study to facilitate the analysis of each municipality, deciles were divided into three subgroups, according to the following scale:

- Low income subgroup having deciles 1, 2, 3 and 4
- Middle income subgroup having deciles 5, 6 and 7
- High income subgroup including deciles 8, 9 and 10.

Regarding **Official documents**, a literature review was conducted with the concepts of Primary healthcare budget, decentralization, equity and primary healthcare laws from the years 2010 to 2020. These documents have been issued by the Ministry of Health and the Ministry of Interior Affairs of Chile.

Since I did not know what were the specific laws that discuss the topics of *"decentralization", "Primary Healthcare", "Equity in Primary Healthcare" and " Primary Healthcare budget",* I had to look for these concepts at the search engine named National Congress Library. In this website is posssible to find the database of all the laws in force that regulate the Republic of Chile.

When performing this search, a total of 22 laws were reviewed. These laws were divided into 4 different groups: 8 decentralization laws, 2 Primary Healthcare laws, 1 Equity in Primary Healthcare law, and 11 Primary Healthcare budget laws.

Lastly, in relation to **interview data from key informants,** a semi-structured anonymous interview was conducted. In the search for participants, 30 potential participants were contacted via e-mail, of which 12 accepted to participate and took part in this stage of the research.

These 12 participants belong to 8 municipalities which were chosen purposively according to their income - low, middle and high income – , according to the scale of deciles of socioeconomic groups in Chile defined by The Ministry of Social Development and Family. This is done in order to compare different socioeconomic settings.

11 out of 12 interviews were performed through the Zoom platform and last 1 hour each one approximately. One interview was answered through email format. The 11 videocalls were performed in Spanish and transcribed in order to be able to analyze them. When having the 11 transcriptions plus the one which was written already, thematic analysis was utilized as a method to seek the answer for the previously presented study questions.

In order to solve the need for more specific information in relation to decentralization and equity in primary healthcare, thematic analysis was selected due to its main strength of "reflecting reality and to unpick or unravel the surface of reality" both happening at the same time (Braun & Clarke 2006). Nonetheless, this method is frequently criticized since it lacks

clear guidance for researchers when it comes to utilize thematic analysis (Fielden, 2011). In spite of this "lack of clear guidance", this approach is sufficiently comprehensive to extract semantic and tacit information from the data, therefore, it facilitates the process of responding to the study questions.

8. ETHICAL CONSIDERATIONS

Regarding descriptive data and official documents, no ethical considerations were needed since the information and documents are freely available on internet. Nonetheless, when performing the interviews, an informed consent that stipulated the privacy of personal information was handed to each participant. Interviews and personal information of each participant are anonymous. Importantly, it was informed of the anonymous characteristics of the interview to each participant, when the invitation via email was sent, and verbally at the beginning of each interview.

9. FINDINGS

Findings are presented in the following order: descriptive data, official documents and finally, interviews from key informants.

9.1 Descriptive data

The collected information will be described according to the income subgroup to which the municipalities participating in the study belong – high, middle and low income subgroups. Furthermore, they will be described geographically, from north to south of Chile within each income subgroup.

High income Municipalities

Iquique

It can be observed that this municipality has an Income Poverty rate of 4,38% (Ministerio de Desarrollo Social y Familia, 2017); Birth rate over 1000 inhabs of 15,7 and Mortality rate over 1000 inhabs of 5,3 (Instituto Nacional de Estadisticas, 2016). It also has an Index of Elderly Population of 43,68(Instituto Nacional de Estadisticas, 2017). Lastly, it belongs to decile 9 (Ministerio de Desarrollo Social y Familia, 2013).

Las Condes

It can be observed that this municipality has an Income Poverty rate of 0,19% (Ministerio de Desarrollo Social y Familia, 2017); Birth rate over 1000 inhabs of 13 and Mortality rate over 1000 inhabs of 6,1 (Instituto Nacional de Estadisticas, 2016). It also has an Index of Elderly Population of 102,2 (Instituto Nacional de Estadisticas, 2017). Lastly, it belongs to decile 10 (Ministerio de Desarrollo Social y Familia, 2013).

Providencia

It can be observed that this municipality has an Income Poverty rate of 0,43% (Ministerio de Desarrollo Social y Familia, 2017); Birth rate over 1000 inhabs of 14 and Mortality rate over 1000 inhabs of 7,4 (Instituto Nacional de Estadisticas, 2016). It also has an Index of Elderly Population of 125,47 (Instituto Nacional de Estadisticas, 2017). Lastly, it belongs to decile 10 (Ministerio de Desarrollo Social y Familia, 2013).

Middle income Municipalities

Arica

It can be observed that this municipality has an Income Poverty rate of 8,34% (Ministerio de Desarrollo Social y Familia, 2017); Birth rate over 1000 inhabs of 13,3 and Mortality rate over 1000 inhabs of 5,3 (Instituto Nacional de Estadisticas, 2016). It also has an Index of Elderly Population of 49,39 (Instituto Nacional de Estadisticas, 2017). Lastly, it belongs to decile 5 (Ministerio de Desarrollo Social y Familia, 2013).

Quillota

It can be observed that this municipality has an Income Poverty rate of 9,93% (Ministerio de Desarrollo Social y Familia, 2017); Birth rate over 1000 inhabs of 12 and Mortality rate over 1000 inhabs of 6,9 (Instituto Nacional de Estadisticas, 2016). It also has an Index of Elderly Population of 66,04 (Instituto Nacional de Estadisticas, 2017). Lastly, it belongs to decile 5 (Ministerio de Desarrollo Social y Familia, 2013).

Recoleta

It can be observed that this municipality has an Income Poverty rate of 6,89% (Ministerio de Desarrollo Social y Familia, 2017); Birth rate over 1000 inhabs of 13,3 and Mortality rate

over 1000 inhabs of 6,9 (Instituto Nacional de Estadisticas, 2016). It also has an Index of Elderly Population of 69,64 (Instituto Nacional de Estadisticas, 2017). Lastly, it belongs to decile 5 (Ministerio de Desarrollo Social y Familia, 2013).

Cisnes

It can be observed that this municipality has an Income Poverty rate of 6,81% (Ministerio de Desarrollo Social y Familia, 2017); Birth rate over 1000 inhabs of 11,1 and Mortality rate over 1000 inhabs of 4,5 (Instituto Nacional de Estadisticas, 2016). It also has an Index of Elderly Population of 38,09 (Instituto Nacional de Estadisticas, 2017). Lastly, it belongs to decile 5 (Ministerio de Desarrollo Social y Familia, 2013).

Low income Municipalities

El Bosque

It can be observed that this municipality has an Income Poverty rate of 9,58% (Ministerio de Desarrollo Social y Familia, 2017); Birth rate over 1000 inhabs of 11,2 and Mortality rate over 1000 inhabs of 5,3 (Instituto Nacional de Estadisticas, 2016). It also has an Index of Elderly Population of 60,18 (Instituto Nacional de Estadisticas, 2017). Lastly, it belongs to decile 4 (Ministerio de Desarrollo Social y Familia, 2013).

All the previous information is summarized in the fig. 3 found below.

	Income Poverty rate (2017)	Birth rate (2016) over 1000 inhabs	Mortality rate (2016) over 1000 inhabs	Index of Elderly Population (2017)	Deciles (2013)	Income subgroup
Municipality nº1 IQUIQUE	4,38 %	15,7	5,3	43,68	Decile 9	High income
Municipality nº2 LAS CONDES	0,19%	13	6,1	102,2	Decile 10	High income
Municipality nº3 PROVIDENCIA	0,43%	14	7,4	125,47	Decile 10	High income
Municipality nº4 ARICA	8,34%	13,3	5,3	49,39	Decile 5	Middle income
Municipality nº5 QUILLOTA	9,93%	12	6,9	66,04	Decile 5	Middle income
Municipality nº6 RECOLETA	6,89%	13,3	6,9	69,64	Decile 5	Middle income
Municipality nº7 CISNES	6,81%	11,1	4,5	38,09	Decile 5	Middle income
Municipality nº8 EL BOSQUE	9,58%	11, 2	5,3	60,18	Decile 4	Low income

Fig 3. Table with descriptive data of selected municipalities.

The data described in the table above was obtained from the following sources:

- Income Poverty rate: Data from the year 2017 from the Ministry of Social Development and Family.
- Birth rate over 1000 inhabs: Data from the year 2016 from the National Institute of Statistics.
- Mortality rate over 1000 inhabs: Data from the year 2016 and extracted from the National Institute of Statistics.
- Deciles. Data from the year 2013 from the Ministry of Social Development and Family.
- Index of Elderly Population. Data from the year 2017 and extracted from the National Institute of Statistics

The aforementioned descriptive data assisted in understanding the socioeconomic and health context of each municipality that participated in the study.

9.2 Official documents

Official documents regarding primary healthcare budget, decentralisation, equity and primary healthcare laws were sought at the online service of the National Congress Library. (Biblioteca del Congreso Nacional de Chile, 2021).

The concepts of " decentralization", "Primary Healthcare", " Equity in Primary healthcare", and " Primary healthcare budget" were looked at the National Congress Library website.

From the total number of documents reviewed, it was observed that the laws refer to these topics in the following manner:

Regarding "decentralization" concept, 8 laws were found at the National Congress Library:

Decentralization laws	Subject	Date/ responsible
Law nº 18.695, Constitutional organization of municipalities	It defines what municipalities are and how they should be constituted. It discusses the services that each municipality must deliver to its population such as education, public health, transportation and transit, cleaning, among others.	March 31, 1988. Ministry of Interior Affairs
Law nº 19.175, Constitutional organization on regional government and administration	This law created regional governments. It discusses how a Regional Government should be constituted, its functions and attributions.	November 11, 1992. Ministry of Interior Affairs
Law nº 20.035	It introduces a series of reforms to Law n° 19.175 regarding regional financing, generating changes for the efficiency and modernization of regional administration.	July 2, 2005. Ministry of Interior affairs
Law nº 20.390	It sought to improve the system of government and internal administration of the State, strengthening the actions of the regional councils, through the direct election of regional councilors, and raising the level of attributions and the nature of the Regional Government.	October 28, 2009. Ministry of Interior affairs
Law nº 20.678	This law establishes the direct election of regional councilors.	March 2014. Ministry of Interior affairs

Law nº 20.990	It provides a Constitutional Reform for the popular and democratic election of the executive body of the Regional Government, which will be exercised by the Regional Governor, who together with the Regional Council, will oversee the social, cultural and economic development of the region.	January 5, 2017. Ministry of Interior affairs
Law nº 21.073	It regulates the election by popular suffrage of the Regional Governor.	February 22, 2018. Ministry of Interior affairs
Law no. 21.074, strengthening the regionalization of the country	This law introduces a series of modifications to law n° 19.175 in order to strengthen regionalization in the country, granting greater autonomy in each region's management and increasing the functions and powers of regional governments	February 15, 2018. Ministry of Interior affairs

Chart 1. Own elaboration based on the information extracted from the website of the Chilean National Congress Library when looking for "decentralization" term.

Regarding "Primary Healthcare" concept, 2 laws were found:

Primary Healthcare Laws	Subject	Date/ Responsible
Law nº 19378	This law regulates in the matters that are established in it, the administration, financing regime and coordination of primary health care, whose management, by reason of the principles of decentralization and deconcentration , was transferred to the municipalities.	April 13, 1995. Ministry of Health.
Update of law n° 19.378	This law addresses the public and private health care system in general. More specifically, it mentions its financing and the regulatory entities of these services.	January 22, 2016. Ministry of Health

Chart 2. Own elaboration based on the information extracted from the website of the Chilean National Congress Library when looking for "Primary Healthcare" term.

1. Law nº 19378, which establishes a statute of primary municipal health care, from April 13, 1995. This law is the most important regarding Primary Healthcare in Chile. Importantly, this law regulates in the matters that are established in it, the administration, financing regime and coordination of primary health care, whose management, by reason of the principles of

decentralization and deconcentration , was transferred to the municipalities. It will also regulate the aforementioned aspects with respect to those primary health care facilities that are created by the municipalities, subsequently transferred by the Health Services, or that are incorporated to the municipal administration for any reason. It shall also regulate, as appropriate, the labor relationship, civil service career, duties and rights of the respective personnel performing primary health care actions. Modified by 6 amending laws issued subsequently.

Importantly, according to the **article 49** of this law, each municipal health administration entity will receive monthly, from the Ministry of Health, through the Health Services and through the corresponding municipalities, a state contribution, which will be determined according to the following criteria:

a) Potentially beneficiary population in the commune and epidemiological characteristics;

b) Socioeconomic level of the population and indexers of rurality and difficulty in accessing and providing health care;

c) The set of benefits that are scheduled annually in the establishments of the commune, and

d) Amount of benefits that are actually carried out by the municipal health establishments of the commune, based on a biannual evaluation.

The contribution referred to in the preceding paragraph shall be determined annually by means of a substantiated decree issued by the Ministry of Health, after consultation with the corresponding Regional Government, and also signed by the Ministers of the Interior and of Finance.

The **article 56** mentions that Municipal primary health care facilities shall comply with the technical standards, plans and programs issued by the Ministry of Health. However, always without the need for any authorization, they may extend, at municipal cost or by charging the user, health care to other services.

2. Update of previous law from January 22, 2016. This law addresses the public and private health care system in general. More specifically, it mentions its financing and the regulatory entities of these services.

Regarding "Equity in Primary Healthcare" concept, no laws we found; hence, the concept of "equity in healthcare" was looked for. The result was 1 law:

Equity in healthcare laws	Subject	Date/ Year
Resolution 1535 by the Ministry of Health	Creation of technical commission on equity, social determinants of health and health in all policies.	December 31, 2016.

Chart 3. Own elaboration based on the information extracted from the website of the Chilean National Congress Library when looking for "Equity in healthcare" term.

Regarding "Primary healthcare budget" concept, 11 laws from 2010 to 2020 were found at the National Congress Library, since 1 law is issued each year with the budget for the following year.

	APORTE ESTATAL A MUNICIPALIDADES - MINSAL 2010 - 2020 (STATE CONTRIBUTION TO MUNICIPALITIES REGARDING HEALTH)						
	TOTAL ANNUAL CONTRIBUTION CHILEAN PESOS	EUROS - 13/11/21	BASAL PER CÁPITA CONTRIBUTION - MONTHLY	EUROS - 13/11/21	LAWS	INFLATION ANUAL*	ANUAL INCREASING OF BUDGET
2010	$371.713.480.630	404.916.645,57	$2.402	2,83	DECREE 70	1,411%	
2011	$453.486.262.251	493.993.749,73	$2.853	3,37	DECREE 132	3,341%	21,99%
2012	$537.983.893.912	586.039.100,12	$3.304	3,9	DECREE 59	3,007%	18,63%
2013	$586.815.381.036	639.232.441,22	$3.649	4,31	DECREE 82	1,790%	9,08%
2014	$640.389.522.117	697.592.072,02	$3.976	4,69	DECREE 94	4,719%	9,13%
2015	$744.648.477.993	811.163.919,38	$4.516	5,33	DECREE 202	4,349%	16,29%
2016	$836.710.804.556	911.449.678,17	$5.020	5,92	DECREE 154	3,786%	12,37%
2017	$930.048.420.011	1.013.124.640,53	$5.513	6,51	DECREE 35	2,183%	11,16%
2018	$1.027.384.896.673	1.119.155.669,86	$6.106	7,21	DECREE 31	2,435%	10,47%
2019	$1.116.903.029.486	1.216.669.966,76	$6.471	7,64	RESOLUTION 84	2,558%	8,71%
2020	$ 1.294.074.816.816	1.409.667.556,44	$7.211	8,51	DECREE 55	3,000%	15,87%

Chart 4. Own elaboration based on the information extracted from the website of the Chilean National Congress Library when looking for "Primary Healthcare budget" term from 2010 to 2020.

**Source 2010-2019: World Bank. Source 2020: National Institute of Statistics (INE)*

Chart 4 shows that from 2010 to 2020, the national budget allocated to primary health has been steadily increasing. The increased amount in budget for primary healthcare surpasses the annual inflation (World Bank , 2019 ; INE, 2020). The budget is distributed according to per capita criteria to each municipality, which is mentioned in article 49 of the official

documents section. These resources are allocated by the Ministry of Finance to the health area.

9.3 Interview data from key informants.

Through thematic analysis, it was possible to obtain key themes from the dataset that met the 3 research questions. Specifically, six themes were mentioned related to the effects of decentralization policies on equity in primary health (question 1), three themes related to the effects of redistribution of financial resources on equity in primary health (question 2) arose, and three themes emerged related to whether decentralization policies have increased or decreased equity in primary health in Chile in the last 10 years (question 3).

Importantly, the themes obtained from the 12 interviews will be presented in relation to the 3 research questions of this study.

Question 1: How are decentralization policies affecting equity in primary healthcare in Chile?

The most recurring themes in relation to this research question are six, and they are as follows:

1. There is no real decentralization, but rather there is a deconcentration of power.

There is only a deconcentration of power where functions are delegated from the central level to the local level, but there is no autonomy in the decision-making power of each municipality, as far as health is concerned. This is noted by all the participants, but specially by those located in geographic isolation in the north and south areas of the country. The following participant discusses these points:

"PHC in Chile was deconcentrated, not decentralized. It was deconcentrated from the direct administration of what used to be the National Health Service. Such deconcentration has been maintained over time, without changes. We are organically a centralist country, and it is evident that the same effect exists in health. This type of structure allows very little planning capacity to the regions and communes". (Participant nº 9, middle income municipality, Recoleta municipality).

2. Resources are insufficient.

The basal per capita is insufficient because it is often only enough to pay staff salaries. Therefore, the possibility of developing new social and infrastructure improvement programs and hiring more personnel is very limited. One aspect that makes the use of resources even more difficult is the massive influx of undocumented immigrants who are treated in the health centers, but for whom there are no resources allocated. Therefore, the municipality must use the same amount of resources for a larger population than planned from the central level. The following participant discusses these points:

> *"The resources provided by the central level are insufficient. They should improve the per capita valuation and make a real one. This means that the resources are assured through the per capita and not through the municipal transfer."*
> *(Participant nº 4, high income municipality, Providencia municipality).*

3. Per capita resources are stable while program resources are unstable.

Per capita resources are stable, regardless of the government, while program resources are unstable and depend on the intentionality and political convenience of each government. In this sense, a large part of the resources expected by the municipalities are intermittent, which does not allow for long-term planning. The following participant discusses these points:

> *"There is equality within the health care system because we are paid according to per capita, all equally every single year. But when it comes to dental care programs or any program that complement the per capita, those resources are always changing. They are not constant." (Participant nº 12, low-income municipality, El Bosque municipality)*

4. Resources are not flexible enough to be redistributed according to local needs.

Program resources are not very flexible since they must only be used for the purposes stipulated by the central level and cannot be redistributed according to the local needs of each population.

On the other hand, the scarcity of resources generates inflexibility per se since the municipalities are forced to use the entire per capita to pay salaries only. Medicines, equipment maintenance, infrastructure and improvements must be paid for by the municipal contribution, which cannot always be afforded by all municipalities. The following participant discusses these points:

> *"The money from the programs that supplement the per capita must only be used for the purpose stipulated by the central level. They cannot be used for other purposes that the director of the health center deems convenient."*
> *(Participant nº 6, middle income municipality, Quillota municipality)*

5. The central level does not know and is disconnected from the needs of the municipalities.

The central level does not know the local needs of each commune. It delivers the resources and ignores them. It is a poorly conceived decentralization since it delivers the scarce contribution from the central level to the municipalities and then ignores the real and specific needs of each locality. Moreover, there is a misconception that granting independence to the municipalities implies disengaging from them. The following participant discusses these points:

> *"The central level gives us the resources and then ignores us. It doesn't ask our opinion about what we need as a locality. It doesn't care about what our neighbors need." – (Participant nº 5, middle income municipality, Arica municipality).*

6. Poorly managed decentralization generates inequity.

This occurs because each municipality must take care of the health budget gap not covered by the central level. Not all municipalities have the budget to cover this gap, since the income of each municipality varies according to its commercial licenses and traffic permits. This means that the municipalities that have less wealth have less resources to allocate to health centers, and therefore, a lower quality of life for the inhabitants of these municipalities. The following participant discusses these points:

"The resources provided by the central level are insufficient; they always have to be complemented with municipal funds… There is no equity within the PHC system, because in reality some have a lot and others have very little. Communes with higher income in the country have better municipal health than those living in communes with lower income." (Participant nº7, middle income municipality, Quillota municipality).

Question 2: How the government mechanism for redistribution of resources in Chilean primary healthcare is affecting its equity?

The most recurring themes in relation to this research question are three, and they are as follows:

1. Indexers have been questioned for a long time.

The indexers are questioned by the 12 participants, since they claim that they should be adjusted to their local populations, but they are only adjusted to the reality at the national level (national average). The only indicator that fits the local reality is the "age-related risk" index. In addition, all the indexers are questioned and are the subject of some objection or suggestion for change. The following participant discusses these points:

"The "age-associated risk" indexer is the only one that makes a differentiation adjusted for local demographics. All other indexers are calculated by averaging national, not local, demographics"

(Participant nº2, high income municipality, Las Condes municipality).

2. Indexers adjust too little the basal per capita for it to improve equity within PHC.

The indicators adjust the basal per capita, but they adjust it in a low proportion according to the interviewees. The adjustment they make to the basal per capita should be greater in order to see a real difference that adjusts to the needs of each locality. The following participant discusses these points:

"The indexers adjust too little the basal per capita for the populations that have these certain characteristics". (Participant n°10, middle income municipality, Recoleta municipality).

3. The poverty indicator is the most important indicator to promote equity.

According to the interviewees, the poverty indicator is the most important indexer for reducing the inequality gap within the Chilean PHC system. The following participant discusses these points:

"It is important to consider the poverty index as one of the most relevant when redistributing Resources in pursuit of the equity of the system". (Participant n° 8, middle income municipality, Recoleta municipality).

Question 3: Have the decentralization policies increased or decreased equity within the Chilean primary healthcare system, in the last 10 years?

The most recurring themes in relation to this research question are three, and they are as follows:

1. Resources have increased over the last 10 years; however, they are still insufficient.

The resources received have always been increasing because there are more and more needs and more and more Investment within a population that is growing continuously. New agreements regarding allocation of resources have been appearing every year and have been strengthened and added value to the overall PHC resources. However, despite the continuous increase in resources from year to year, these are still insufficient, as the municipal contribution is still very important in financing the health of its population. The following participant discusses these points:

"Currently there have been reforms that have reduced inequality, such as the GES, the delivery of medicines, the "Ricarte Soto" law for catastrophic diseases, etc. Nonetheless, resources are insufficient since the municipality must afford a budgetary gap, and

sometimes is not possible to be covered by poor municipalities" (Participant n°1, High income municipality, Iquique municipality)

2. The inequality gap has decreased in the last 10 years.

Participants from high- and middle-income municipalities claim that the inequality gap has decreased over the last 10 years. It is said that it mainly happens due the increasing of supply of health services within Primary Healthcare. The following participant discusses these points:

"The inequality gap within the PHC has been maintained and improved in some areas. More and better-quality services are being provided and supplies are of better quality as well". (Participant n° 3, high income municipality, Providencia municipality).

3. The inequality gap has been maintained for the last 10 years.

The participant from low-income municipality claims that the inequality gap has been maintained over the last 10 years. Despite this, there has been more access to health benefits compared to 10 years ago. The following participant discusses these points:

"The inequality gap has been maintained; it has not decreased at all in the last 10 Years within the PHC system... However, we now have psychological, phonoaudiological and dental care at our health center, which was not the case 10 years ago." (Participant n° 12, Low-income municipality, El Bosque Municipality).

9.4 Triangulation.

Among the 8 municipalities that participated in the study, the municipalities of Providencia and Las Condes are the ones with the oldest population and belong to the high income subgroup. With this, it can be inferred that due to the age- related risk indexer, the older municipalities receive a greater amount of resources compared to the other municipalities.

On the other hand, the commune of El Bosque, which belongs to the low income subgroup, has a high income poverty rate, so it receives more resources from the poverty index. With this it can be inferred that the poorest communes receive more resources due to the poverty index.

Furthermore, in terms of decentralization, the most important law is the nº 18695, constitutional organization of municipalities, issued on March 31, 1988, since this law defines what municipalities are and how they should be constituted. This law also discusses the services that each municipality must deliver to its inhabitants such as education, primary healthcare, transportation and transit among others. The other laws that speak of decentralization are mere updates of the law nº 18695.

The second most important law in matters of decentralization is the law nº 21074, issued on February 15, 2018 which discusses about the strengthening the regionalization of the country. It grants greater autonomy in each region's management and increasing the functions and powers of regional government.

In terms of Primary Healthcare and equity, the most important law is the law nº 19378. It regulates the administration, financing regime and coordination of primary healthcare whose

management was transferred to the municipalities because of the principles of decentralization and deconcentration. This law regulates equity within PHC through article 49, which refers to indexers that seek to promote equity within PHC.

PHC financing is mainly due to 3 sources: municipalities' own funds, financing of vertical programs and per capita funding. This study reveals the fact that resources are insufficient, despite the redistribution of per capita resources made by Article 49 of Law 19378.

In addition, the interviewees affirm that the indexers present in article 49 of law 19378 are not sufficient to adjust the per capita basal given by the central level; for example, one of the interviewees affirms that the indexers only adjust 12% of the budget, leaving the remaining 88% equal for all the communes, independent of their needs and population.

Lastly, decentralization laws discuss how well planned they are on paper, whereas interviews reflect that decentralization is not effective and that there is only a deconcentration of power. In theory there is a well-organized decentralization, but in practice decentralization in primary healthcare is not effective.

10. DISCUSSION

First of all, decentralization can be defined as the process of dispersion or transferral of planning and decision making from a central location or group to more local sub-unities (Merriam-Webster, n.d) , whereas equity in health is described as the absence of health gaps that are unnecessary, avoidable, unjust and unfair derived from some form of injustice (Whitehead, 1992). Based on these definitions, I worked on this study and it was possible to verify through the interviews that Chile is deconcentrated rather than decentralized. In practice, Chile is a deconcentrated country.

Moreover, Mills et al. (1990) and Rondinelli (1983) provide the exact definitions of deconcentration, devolution, delegation and privatization. This knowledge also supports the finding made in this study that Chile is a deconcentrated rather than a fully decentralized country.

A recent OECD report on decentralization in Chile (OECD, 2017) states that Chile is among the most centralized countries in the OECD, along with Ireland and Greece (p. 71). This report supports the point that Chile is mostly a deconcentrated country. Moreover, In 2014, subnational government expenditures in Chile represented 3.0% of GDP and 13.1% of public expenditures, which contrasts with the OECD average of 16.6% and 40.2% respectively. Subnational governments have limited access to their own revenues and depend mainly on transfers from the central government to finance specific sectors or activities. Policy design and implementation is still specified at the central level in national ministries and public agencies in a "top-down" procedure. Locally, public policy is performed by the deconcentrated territorial entities of the State, and is to some extent applied by the

municipalities, many times according to national uniform standards that do not take into account local needs and situations.

In comparison of research on other cases in Latin America, the Colombian case provides a good point of comparison since PHC is decentralized to municipalities, as is the case of Chile (Jaramillo, 2002). Here, there are problems related to equity due to the decentralization of the PHC system. The same can be seen in Chile, where equity is affected by the decentralization carried out in the country. The problems related to equity and decentralization in Colombia are in terms of access and quality of health care, where wealthier municipalities have better access and quality of care than municipalities with fewer resources same as Chile.

Moreover, problems related to Primary Health Care are comparable between Colombia and Chile with Colombia having a similar health care sytem scenario as Chile. Colombia is based on a segmented and fragmented insurance system, with strong weaknesses in the decision-making and planning capacity of the governmental bodies in charge of the orientation and national and territorial management of the health system and of the implementation of PHC. There are also great difficulties regarding the availability of health care services by territories, the scarce resoluteness of the low complexity level, the lack of culture and capacity of the health workforce to take an integral view of health actions, the absence of a clear strategy to promote community and social participation and the insufficiency of institutional, financial and human resources to guarantee the operation of a public and modern PHC strategy.

There is also the case of Argentina, in which we can find similarities with the case of Chile. There is an article (Lago, Elorza, Moscoso, & Ripari, 2013) that discusses decentralization, equity and PHC in the city of Buenos Aires, Argentina. The results indicate the existence of strong inequalities in access between municipalities. It is observed that municipalities with higher levels of wealth and higher levels of public expenditure per capita present better indicators of access to PHC services.

Regarding the impact of decentralization on equity, there is a study on the impact of decentralization in Finland, Switzerland and Portugal. In this study, the authors (Koivusalo, Wyss, & Santana, 2007) concluded that, “ although decentralization is expected to increase equity... there is little evidence that this is the case” . On the contrary, an increase in local or

regional autonomy is more likely to increase differences." If this can happen in rich countries with specialized human resources, it is not surprising that in Latin American region, including Chile, decentralization has increased inequality.

According to Abimbola et al (Abimbola, Baatiema, & Bigdeli, 2019), the way to achieve the decentralization of the health system is summarized through 3 methods: voting with feet, close to ground and watching the watchers. According to the interviewees of this study, in Chile it is necessary to generate a greater decentralization through the close to ground mechanism, because among the main problems that they express about the way of decentralizing health in Chile is that it is not very flexible, little adapted to local realities and little receptive to the feedback provided by the community. Regarding voting with feet in Chile, geographic mobility is very low, with a high concentration of the population in the central area of the country. Finally, the method of watching the watchers applies only partially because the supervision is produced unidirectionally from the central power to the local levels.

Furthermore, Bossert et al. (Bossert, Larrañaga, Giedion, Arbelaez, & Bowser, 2003) claim that “decentralization of financing in Colombia and Chile certainly did not increase inequality of resource allocations”. In contrast, in this study has been shown that decentralization has increased inequities within Chilean Primary Health Care.

Several studies have discussed decentralization and equity and their interaction within a health system. They are mainly focused in Africa and Asia (Nyamhanga, Fruemnce, Mwangu, & Hurtig, 2013 ; Abimbola, et al., 2015) . Nonetheless, despite their location, they share some similar results with this study: funds from central level are sent late, and budgets for vertical programs are restricted to those certain programs and cannot be redistributed according to local needs.

Importantly, despite all these efforts of indexing municipalities to improve the distribution of resources, in my practical experience does not seem to be sufficient. This point is supported by a study made in 2007 by the Chilean Association of Municipalities (Ministerio de Salud, 2013), in which is discussed how the cost of health services is constantly increasing, whereas the amount of available resources in each municipality is not necessarily following this same direction. Hence, on average, the municipalities have a budget deficit of 20 % that

needs to be covered by their municipal fundings. In turn, this shortfall leads to increasing inequalities within the primary healthcare system since not all the communes have available resources to cover those needs.

The results of this study were to be expected. It is observed that resources for PHC are insufficient, not sufficiently distributed according to the needs of the population, where the local level is not able to discuss its needs with the central level. Moreover, all laws and vertical programs are based on national averages and not local averages. For these reasons, it is necessary to listen efficiently to the level of the municipalities because they are the only ones who can dictate what are the real needs of their territory. In addition, Chile's deconcentrated model has a great impact on Chilean PHC, promoting the blindness of local needs from the central level.

In terms of strengths and weaknesses of the present study, the main strength is that data from different sources are used and the results are confirmed using these sources. This makes it a more reliable study. The main weakness is that the study was carried out by only one researcher, which can result in accidental bias when processing the interviews' data.

As ethical considerations, this study did not receive any funding from any source. Importantly, all the interviews were run with an informed consent from each participant, in which the anonymous characteristics of the interview were stipulated. Moreover, the interviews were run in 3 high income municipalities, 4 middle income municipalities and only 1 low income municipality. This unequal distribution of the sample may affect validity and reliability of this study.

Lastly, as a main result, the Chilean PHC system is decentralized only in terms of budget gaps, since each municipality must be in charge of covering them. The system is completely centralized in terms of how to generate health indicators, fulfillment of goals and use of resources.

11. CONCLUSION

First of all, the literature and the interviews done in this study support the motion that Chile is a deconcentrated rather than a decentralized country.

As a proposal to improve decentralization and equity in the Chilean PHC system, the per capita should be increased according to the real needs of each locality and the resources of vertical programs should be reduced. In this way, the municipality would know which are its fixed resources that would enter monthly, they could be administered with greater flexibility and improvements could be made in the care of the population. The increase in per capita should be sufficient in itself and the central level should not count on the municipalities' own resources, since the availability of their own resources generates inequity among municipalities.

In addition, in order to improve decentralization and equity in Chilean PHC, local management autonomy should be increased, where resources would be provided as previously stated and the central level would request health indicators to be improved after discussing with the communal health directorate. However, each commune should be free to think about how to achieve those indicators requested by the central level.

In conclusion, the equity of the Chilean PHC system would be improved through the delivery of sufficient resources and the increase of local autonomy to achieve health indicators.

12. REFERENCES

Abimbola, S., Baatiema, L., & Bigdeli, M. (2019). The impacts of decentralization on health system equity, efficiency and resilience: a realist synthesis of the evidence. *Health policy and planning, 34*(8), 605-617. Retrieved from https://doi.org/10.1093/heapol/czz055

Abimbola, S., Olanipekun, T., Igbokwe, U., Negin, J., Jan, S., Martiniuk, A., . . . Aina, M. (2015). How decentralisation influences the retention of primary health care workers in rural Nigeria. *Glob Health Action, 8*, 26616. Retrieved from https://doi.org/10.3402/gha.v8.26616

Almeida, Oliveira, S. C., & Giovanella, L. (2018). Network integration and care coordination: The case of Chile's health system. *Ciência & saude coletiva, 23*(7), 2213–2228.

Bastias, G., Pantoja, T., Leisewitz, T., & Zarate, V. (2008). Health care reform in Chile. *Canadian Medical Association Journal (CMAJ), 179*(12), 1289–1292. Retrieved from https://doi.org/10.1503/cmaj.071843

Biblioteca del congreso nacional de Chile - BCN. (2016). *Reportes comunales*. Retrieved from https://www.bcn.cl/siit/reportescomunales/index.html

Biblioteca del Congreso Nacional de Chile. (2021). *Ley Chile*. Retrieved from https://www.bcn.cl/leychile/

Boko, S. H. (2002). Decentralization: definitions, theories and debate. In S. Boko, *Decentralization and Reform in Africa* (pp. 1-10). Springer US. Retrieved November 18, 2020, from https://doi.org/10.1007/978-1-4615-1111-3

Bossert, T. (2000). Analyzing the decentralization of health systems in developing countries: decision space, innovation and performance. *Social Science & Medicine, 47*, 1513-27.

Bossert, T., Larrañaga, O., Giedion, U., Arbelaez, J., & Bowser, D. (2003). Decentralization and equity of resource allocation: evidence from Colombia and Chile. *Bull World Health Organ., 81*(2), 95-100.

Central Intelligence Agency. (2020, November 9). *The World Factbook: Chile*. Retrieved November 15, 2020, from https://www.cia.gov/library/publications/the-world-factbook/geos/ci.html

Cobos Muñoz, D., Merino Amador, P., Monzon Llamas, L., Martinez Hernandez, D., & Santos Sancho, J. M. (2017). Decentralization of health systems in low and middle income countries: a systematic review. *International Journal of Public Health, 62*(2), 219-229. Retrieved November 18, 2020, from https://doi.org/10.1007/s00038-016-0872-2

Collins, & Green, A. (1994). Decentralization and Primary Health Care: Some negative implication in developing countries . *International Journal of Health Services, 24*(3), 459–475. Retrieved from https://doi.org/10.2190/G1XJ-PX06-1LVD-2FXQ

Daun, H. (2007). How Does Educational Decentralization Work and What Has it Achieved? In H. Daun, *School Decentralization in the Context of Globalizing Governance: International Comparison of Grassroots Responses* (pp. 28-29). Springer Netherlands. Retrieved November 18, 2020, from https://doi.org/10.1007/978-1-4020-4700-8

DEIS. (2017). Indicadores básicos de salud: Chile 2*017*. Retrieved from https://repositoriodeis.minsal.cl/Deis/indicadores/IBS%202017.pdf

Falleti, T. (2005). A Sequential Theory of Decentralization: Latin American Cases in Comparative Perspective. *The American Political Science Review, 99*(3), 327–346. Retrieved November 18, 2020, from https://doi.org/10.1017/S0003055405051695

Henríquez, O. (2020). Descentralización y regionalización en Chile 1974-2020: De la desconcentración autoritaria al Estado unitario descentralizado con mayor empoderamiento regional. *Revista Territorios y Regionalismos, 3*, 61-81. Retrieved from https://doi.org/10.29393/RTR3-5OHDR10005

Homedes, N., & Ugalde, A. (2005). Why neoliberal health reforms have failed in Latin America. *Health policy , 71*(1), 83-96. Retrieved from https://doi.org/10.1016/j.healthpol.2004.01.011

INACAP. (2020). *Becas y financiamiento*. Retrieved from https://portales.inacap.cl/becas-y-financiamiento-old/que-son-los-deciles-y-como-se-calculan

INE. (2020). Boletin estadistico: Indice de precios al consumidor. Retrieved from https://www.ine.cl/docs/default-source/%C3%ADndice-de-precios-al-consumidor/boletines/2020/bolet%C3%ADn-indice-de-precios-al-consumidor-(ipc)-diciembre-2020.pdf?sfvrsn=c8f1549a_4

Infante, A., de la Mata, I., & Lopez-Acuña, D. (2000). Reforma de los sistemas de salud en América Latina y el Caribe: situación y tendencias. *Revista Panamericana de Salud Pública, 8*(1-2), 13-20.

Instituto Nacional de Estadísticas. (2018, June). *Síntesis de resultados Censo 2017.* Retrieved from https://www.censo2017.cl/descargas/home/sintesis-de-resultados-censo2017.pdf

Jaramillo, I. (2002). Evaluación de la descentralización de la salud y la reforma de la Seguridad Social en Colombia. *Gaceta Sanitaria, 16*(1), 48-53.

Kawachi, I., Subramanian, S., & Almeida-Filho, N. (2002, September). A glossary for health inequalities. (Glossary). *Journal of Epidemiology & Community Health, 56*(9).

Koivusalo, M., Wyss, K., & Santana, P. (2007). Effects of Decentralization and Recentralization on Equity Dimensions of Health Systems. In R. Saltman, V. Bankauskaite, & K. Vrangbæk, *Decentralization in Health Care. Strategies and Outcomes.* (pp. 189-206). New York: Mc Graw Hill, Open University Press.

Lago, F., Elorza, M., Moscoso, N., & Ripari, N. (2013). Equidad en el acceso a los servicios de Atención Primaria de Salud en sistemas de salud descentralizados: El caso de la provincia de Buenos Aires, Argentina. *Revista Gerencia y Politicas de Salud*, 40-54.

Merriam-Webster. (n.d.). *Decentralization*. Retrieved November 18, 2020, from Merriam-Webster.com dictionary: https://www.merriam-webster.com/dictionary/decentralization

Merriam-Webster. (n.d.). (2022, February 2). *Birth rate. In Merriam-Webster.com dictionary.* Retrieved from https://www.merriam-webster.com/dictionary/birth%20rate

Merriam-Webster. (n.d.). (2022, February 2). *Mortality rate. In Merriam-Webster.com dictionary.* Retrieved from https://www.merriam-webster.com/dictionary/mortality%20rate

Mieres Brevis, M. (2020, October). The dynamics of inequality in Chile: A regional look. *Revista de Análisis Económico, 35*(2), 91-133. Retrieved from https://scielo.conicyt.cl/pdf/rae/v35n2/0718-8870-rae-35-02-91.pdf

Mills, A., Vaughan, J., Smith, D., & Tabibzadeh, I. (1990, July 13). *Health system decentralization: concepts, issues and country experience.* Ginebra: WHO. Retrieved from https://apps.who.int/iris/bitstream/handle/10665/39053/9241561378.pdf

Ministerio de Desarrollo Social y Familia. (2017). *Observatorio Social*. Retrieved from Preguntas frecuentes: http://observatorio.ministeriodesarrollosocial.gob.cl/preguntas-frecuentes#:~:text=La%20medici%C3%B3n%20de%20pobreza%20por,bienes%20alimentarios%20y%20no%20alimentarios.

Ministerio de Salud. (2013). *Financiamiento de la atención primaria municipal: Evaluación de indexadores del per cápita basal.* Retrieved from http://www.bibliotecaminsal.cl/wp/wp-content/uploads/2018/01/001.Financiamiento-de-la-Atención-Primaria-de-Salud-Municipal-evaluación-de-indexadores-del-per-capita-basal.pdf

National Statistics Institute. (2018, January 1). *RESULTADOS CENSO 2017.* Retrieved November 15, 2020, from http://www.censo2017.cl/wp-content/uploads/2017/12/Presentacion_Resultados_Definitivos_Censo2017.pdf

Nyamhanga, T., Fruemnce, G., Mwangu, M., & Hurtig, A.-K. (2013). Achievements and challenges of resource allocation for health in a decentralized system in Tanzania: perspectives of national and district level officers. *East Afr J Public Health, 10*(2), 416-27.

Observatorio chileno de Salud Pública. (2013). *Nivel socioeconómico y de salud de las comunas de Chile*. Retrieved February 19, 2021, from http://ochisap.cl/index.php/nivel-socioeconomico-y-de-salud-de-las-comunas-de-chile

OCHISAP. (2020). *Desarrollo histórico del sistema de salud*. Retrieved from http://www.ochisap.cl/index.php/organizacion-y-estructura-del-sistema-de-salud/desarrollo-historico-del-sistema-de-salud

OECD. (2009). Retrieved from https://www.oecd-ilibrary.org/urban-rural-and-regional-development/oecd-territorial-reviews-chile-2009_9789264060791-en

OECD. (2017). Retrieved from https://www.oecd.org/chile/making-decentralisation-work-in-chile-9789264279049-en.htm

Organisation for Economic Co-operation and Development, OECD. (2020). *Chile and the OECD*. Retrieved November 15, 2020, from https://www.oecd.org/chile/chile-and-oecd.htm#:~:text=Chile%20signed%20the%20Convention%20founding,country%20to%20join%20the%20OECD.

PAHO. (2017). *Health in The Americas: Chile*. Retrieved from https://www.paho.org/salud-en-las-americas-2017/?p=2518

PAHO. (2017). *Health in the Americas+, 2017 Edition. Summary: Regional Outlook and Country Profiles.* Retrieved from https://iris.paho.org/handle/10665.2/34321

PAHO. (2020). *Chile*. Retrieved from https://www.paho.org/es/chile

Riutort, M., & Cabarcas, F. (2006, December). Decentralization and Equity: A review of the Latin America literature. *Revista Gerencia y Políticas de Salud, 5*(11), 8-21.

Rondinelli, D., Cheema, G., & Nellis, J. (1983). Decentralization in developing countries.: a review of recent experience. *Staff Working Paper, 581*. Retrieved from

https://documents1.worldbank.org/curated/en/868391468740679709/pdf/multi0page.pdf

Sumah, A. M., Baatiema, L., & Abimbola, S. (2016). The impacts of decentralisation on health-related equity: A systematic review of the evidence. *Health Policy, 120*(10), 1183–1192. Retrieved from https://doi.org/10.1016/j.healthpol.2016.09.003

Tanjung, I. K., & Basualto Cárcamo, K. (2021, May). Presentation "Chilean Health System: An overview". *Health Systems lecture*. Tampere: Tampere University.

The World Bank Group. (2020). *Country profile: Chile*. Retrieved November 15, 2020, from https://databank.worldbank.org/views/reports/reportwidget.aspx?Report_Name=CountryProfile&Id=b450fd57&tbar=y&dd=y&inf=n&zm=n&country=CHL

Ugalde, A., & Homedes, N. (2008). La descentralización de los servicios de salud: de la teoría a la práctica. *Salud Colectiva, 4*(1), 31-56.

UNAIDS. (2010). An introduction to triangulation. Retrieved from https://www.unaids.org/sites/default/files/sub_landing/files/10_4-Intro-to-triangulation-MEF.pdf

Whitehead, M. (1992). The concepts and principles of equity and health. *International Journal of Health Services, 22*(3), 429-445. Retrieved from https://doi.org/10.2190/986L-LHQ6-2VTE-YRRN

WHO. (1978, September 6-12). *Declaration of Alma-Ata.* Retrieved from International Conference on Primary Health Care, Alma-Ata, USSR.: https://cdn.who.int/media/docs/default-source/documents/almaata-declaration-en.pdf?sfvrsn=7b3c2167_2

World Bank . (2019). Retrieved from https://datos.bancomundial.org/indicator/FP.CPI.TOTL.ZG?end=2019&locations=CL&start=2010

13. ANNEXES

In English

INFORMED CONSENT FORM

Name of the study: Decentralization and equity in the Chilean Primary Healthcare system.

Consent for participation in a research study

I have been requested to participate in the research study identified above. I have received information about the study in writing and have had the opportunity to ask questions from the researcher(s) conducting the study.

I understand that participating in the study is voluntary. I am aware that I have the right to refuse to participate and the right to withdraw from the study permanently or for a temporary period at any time and without giving a reason. I understand that any personal data collected during the study will remain confidential.

By taking part of the interview, I agree to the interview transcription, consent to the publication of the study, and possibility to use anonymised translated quotations. Anonymity will be maintained during the course of the study and afterwards.

I hereby give my voluntary consent for participation in this study.

Place and date

_____
Signature

_____
Name in block letters

_____ _____
Phone number Email address

INTERVIEW

General questions

1. Tell me about yourself and your work experience.
2. How long have you been in this position?
3. Have you worked in PHC before this position, in this same commune or in other communes?

Questions regarding decentralization in PHC

As we know, Primary Health Care in Chile works under a decentralized system that, for the most part, is based on municipalities and their respective health centers (CESFAM, CECOSF, COSAM, etc.).

a. What do you think of this decentralized PHC operation? Does it work or does it not work effectively in terms of resource distribution and meeting the needs of the population?

b. What advantages and disadvantages do you see to this decentralized system?

2. How is the stability of the resources delivered to your population from the central level? Does the current government influence or not this stability? Why?

3. From your knowledge, how are the needs of your population taken into account from the central level (MINSAL) when planning the Family Health Plan, designing health policies or distributing resources? In other words, are the needs of your population considered or not in these instances? HOW?

a. If they are taken into account, what is the method used by the central level to determine (or listen and collect) local needs?

4. In this decentralized Primary Health Care system based on municipalities, resources are previously defined at the central level and then distributed to municipalities for administration. Taking this into account:

a. What is your opinion regarding the amount of resources sent from the central level (MINSAL) to your health center? Are they sufficient or insufficient? Why?

b. In the case of having a surplus of resources that are previously designated for a certain program or service, is it possible to reallocate these resources and use them for other requirements or needs that your population in charge has? Are you authorized to do this? How is this process carried out?

5. According to a report conducted by the OECD in 2017 , Chile's regions and municipalities still rely heavily on decisions made at the central level. This information also applies to Primary Health Care. Taking this into account:

a. Under your point of view, how do these policies influence your freedom of decision and freedom of resource distribution regarding your Health center?

<u>Questions regarding equity in PHC</u>

1. In your opinion, how do you see equity between municipalities within the Primary Health Care system, does it exist or not, could it be improved?

2. According to the existing law decrees for the distribution of PHC resources (last version: decree nº 29, 2021, MINSAL), such distribution of resources is made by basal per capita payments adjusted according to different indexers in order to increase equity within the PHC system. Taking this into account:

a. In relation to the poverty indexer:

What do you think is the role of this indexer in the distribution of resources? In other words, does it help or not to increase equity within the PHC system?

b. In relation to the indexer Risk associated with age: Same questions

c. In relation to the rurality indexer: Same questions

d. In relation to the indexer Difficult performance: Same questions

e. In relation to the indexer Zone allocation reference: Same questions

3. Among these 5 indexers mentioned above,

a. Which do you think is the most important indexer to increase equity within the PHC system?

b. Would you make any changes to these indexers to increase equity within primary care?

c. Do you have any other comments about the PHC resource distribution system?

4. According to a study conducted by the Association of Municipalities in 2007, an average of 20% of municipal health expenditure must be covered by funds from the municipalities themselves in order to comply with the Family Health Plan stipulated by the Ministry of Health. According to this:

a. To what extent are the resources provided by MINSAL sufficient to comply with the Family Health Plan in your CESFAM? In your case, is there or is there not a gap to be covered by municipal funds?

b. In case there is a gap in the resources delivered by the central level, is the municipality able to cover these expenses?

c. If applicable, what is the approximate percentage or proportion that the municipality must cover in order to comply with the central level guidelines? Do not know

d. If the municipality does not have sufficient resources to meet the needs of its population, what are the mechanisms used to deal with this situation? For example, are costs reduced in human resources, number and/or quality of health services delivered, number and/or quality of health inputs, or other?

Questions regarding the last 10 years

1. From your point of view, has the inequality gap within the PHC system increased or decreased in the last 10 years, has this situation improved or worsened, and why?

2. Do you recall any public policy related to changes or improvements in the equity of PHC resources?

3. Have the resources received by this CESFAM increased, decreased or maintained during the last 10 years? If they have increased, have they been sufficient?

Concluding questions

1. What challenges do you see in relation to equity in this decentralized PHC system?
2. In your opinion, what should be decentralized and what should not be decentralized in this PHC system?

Suggestions

1. Do you have any suggestions that could contribute to this study?
2. Do you know of any other person that I could interview for this study?