

RESEARCH ARTICLE

Peruvian Health System: Proposal for a New Model

Alejandro Raul Falconi Lazaro^{1*}, Carmen Graciela Arbulu Perez Vargas², Marcos Calle Quispe³, Luis Pablo Diaz Barahona⁴, Hector Hugo Falconi Lazaro⁵, Luis Edgardo Robledo Madrid⁶, Jose Luis Quintos Vega⁷

¹Centro Medico San Miguel, Peru

² Universidad Cesar Vallejo, Peru

³ Ministerio de Salud, Peru

⁴ Hospital Luis Heysen Inchaustegui, Peru

⁵ Institucion Educativa Bandera del Peru, Peru

⁶ Hospital Jorge Reategui Delgado, Peru

⁷ Direccion Regional de Educacion, Peru

*Corresponding author: Alejandro Falconi Lazaro: falejandro182@hotmail.com



Citation: Lazaro A.R.F., Vargas C.G.A.P., Quispe M.C., Barahona L.P.D., Lazaro H.H.F., Madrid L.E.R. Vega J.L.Q. (2020) Peruvian Health System: Proposal for a New Model. Open Science Journal 5(3)

Received: 12th February 2020

Accepted: 22th June 2020

Published: 9th July 2020

Copyright: © 2020 This is an open access article under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Funding: The author(s) received no specific funding for this work

Competing Interests: The author has declared that no competing interests exist.

Abstract:

The main objective of the study was to propose a New Health System Model for Perú, based on the praxeology of the current model actors. The specific objectives were: (i) Analyze the Peruvian health system model from the subjectivities of its actors; (ii) Contrast the models of Latin American health systems with the Peruvian model; (iii) Design the health system model for Peru from the perspective of the actors; (iv) Validate the proposed health system model for Peru. The following paradigms were taken as a basis: the pragmatic paradigm, complementarity, systemic, humanist and complexity. A mixed derivative sequential exploratory study was conducted, under the scope of the transdisciplinary and projective research design. A multiple triangulation was applied. The study was carried out in two successive phases: in the first one, the grounded theory method was chosen and a semi-structured in-depth interview was held with 40 key participants; for the second phase, the exploratory research method was selected and a questionnaire was applied to 1308 participants nationwide. A low degree of user satisfaction was obtained: 10.7%, and it was determined that 89.3% agree that a reform to the current model be done. Regarding to the comparison with other models, it was found that 89.3% believe that reforms applied in other countries could

be implemented in our country. About the design of the model, it was found that 87.9% of the participants prefer a combination between a public and a private one; 91.6% think that the implementation of health determinants should be emphasized; and from the models presented, 37.2% prefer the Bismarck Model. Accordingly, a praxeological model for the Peruvian health system is proposed. It relegates the dilemma of preferences between public and private management, searching for efficiency; it considers a comprehensive approach to health determinants, and should progressively move towards a Bismarck model.

Keywords: Health system model, Health system actors, Praxeological model, Bismarck system, Transdisciplinary

Introduction

Health systems were, for centuries, institutions that operated at a very small scale, largely of charitable or, in some cases, of private origin, but almost all ineffective. Just over 100 years ago, health systems underwent a radical change, growing exponentially on account of the new knowledge acquired and applied, and of the needs and demands of the population. This explosive growth brought about an enormous benefit to improve health. However, it always had, and still does, a weak point, that is how to reach the general population equally, especially the poorest sector. These inequities are not the result of technical limitations, but rather of systemic failures. Therefore, it is essential to assess its current functioning, perform a comprehensive analysis and propose new models to achieve its full potential (1).

At present, many of the countries in the world are questioning their health systems, identifying their difficulties mostly in the areas of regulation, financing and provision (2).

At present, the Peruvian health system model is facing many difficulties: endless lines to access health services, appointments and diagnostic support tests scheduled for two or three months after being requested, emergency rooms in public hospitals overwhelmed in their attention span, lack of medications and supplies. These are just a few examples of the multiple deficiencies the system faces. These facts make other actors, such as private health service providers, be preferred by the citizen. Consequently, inequality and lack of access to health services of the poorest social groups prevail; that is, a privileged group accesses quality health services; while the rest, the poorest, access the health system, if any (3).

Taking into account the recommendations suggested by the World Bank, the Objectives of Sustainable Development, the National Agreement with a vision to 2050, institutional inequalities with other countries and global health trends, the Peruvian government is making efforts to improve the quality of public management, searching for a new and effective way to meet the health needs of

the population. We are facing an insurmountable opportunity to propose and make the expected and necessary changes in our health system model (3).

At this point, it is convenient to define what a model is and what a health system is. The model is an approach, through a scheme, to a thematic area. It is the mean between the abstract and the concrete sides. It is therefore the guideline followed to fulfill actions (4).

According to the WHO (World Health Organization), a health system is a social structure that is constituted by the group of people and actions aimed at maintaining and improving population health (5).

To have a clear conceptualization of health systems, it is also necessary to know their main components and functions.

Londoño and Frenk propose two fundamental components: populations and institutions. The main functions of health systems would be: (i) The production or generation of resources. This refers to the institutions that produce human resources to supply the health systems; (ii) The financing function. In a simple way, it means the mobilization of money from different sources to various funds to provide the production of health services; (iii) The provision function. It means the act itself of performing the health service provided to the user and must generate a change in his/her health; (iv) The modulation function. It refers to the establishment of clear rules for the proper functioning of the health system, it is imperative to balance the interests of all participating actors; (v) The articulation function. It covers key actions that will facilitate the financial income for the production and use of health services (6).

After analyzing the components and functions of health systems, the main health systems in the world were reviewed very briefly. According to the authors consulted, the classification referred to by Granados (7), was chosen, which is similar to the one proposed by the physicians for a national health program four basic models have been established:

The Beveridge model takes its name from the creator of the innovative National Health Service of Great Britain, William Beveridge. In this model, health services are provided and financed by the government through tax collection. Most of the health facilities belong to the state. Doctors can work for the government or for a private party, but all their fees will be paid by the government. In this model the only payer is the government. England, New Zealand, Spain and Cuba are representatives of this model. Although the latter represents an extreme and unique variant, where the government takes total control (8).

The Bismarck model takes its name from the Prussian chancellor Otto Von Bismarck, creator of the state of comfort in Germany in the 19th century. It applies the social insurance systems model. Funding is shared by the state, employers and employees. A fundamental characteristic is that, in this model, insurers, called "sickness funds", are established on a non-profit basis and must also cover the entire population. In this model, most health services are private. The government exercises strict regulation in cost control thanks to its status as a single payer. This model can be found in Germany, France, Switzerland, Belgium, Japan, among other countries.

The segmented model, mistakenly called a model because, in fact, three independent systems are included: 1. A public system, for poor people 2. A social security system, for formal employees 3. A private system, for economic and social elites. In this model, each one performs the health functions, but each one does it for a specific group. Such a situation leads to many deficiencies, generates duplication of functions and misuse of resources. It leads to relevant disparities as

to the quality of care received by the population segments. This model is present in the generality of Latin American nations.

The Regulated Market Model begins to develop in the 90s with health change initiatives based on the use of market incentives. It aims to solve the inequities of segmented systems by using market mechanisms that make the system more efficient. Differential packages are managed according to the possibilities of contributions to different plans in different segments of the population. In this model, the majority of health services offer belongs to the private sector and it is present in Chile, Colombia and the Dominican Republic.

No country is framed exactly to the models described, since they have their own characteristics that make them unique, however, the predominant model fits those described by the authors.

The Peruvian health system model lacks adequate functional interaction, is unable to carry out a common strategic plan and wastes, by not sharing, countless human, financial and infrastructure resources. It would fit in the segmented model, proposed by Granados (7).

One of the substantial antecedents for our study, is Londoño and Frenk's research, "Structured Pluralism: Towards an Innovative Model for Health Systems Reform in Latin America". They present a way to restructure the health systems models in Latin America. They make a brief but clear presentation of current health system models, identify their main weaknesses and propose a creative solution to them, based on a systemic approach through structured pluralism. The following conclusions stand out: 1. Need for a complete reform of the health system models in Latin America. 2. Latin America health systems have shown their inability to promote equity, quality and efficiency. 3. Institutional strengthening is essential for a true division of functions in the health system. 4. Fundamental changes in the organization and operation of institutions should be done prior to decentralization (2).

Likewise, Maceira's study, "A systematized analysis of models and key experiences in Latin America and Europe", should also be pointed out. He makes an analysis of the reforms undertaken in health systems in some countries in Europe and Latin America, finding disparate results in the different realities; he makes an explanation of why the differences found in both continents, and highlights the terms of allocative efficiency and social cohesion, with the firm conviction that intervening in the latter will significantly improve opportunities for most of the population. Finally, he states that in Latin America, health systems have a deep fragmentation in provision and financing of health care, in addition to enormous organizational defects among their sub systems. He also refers that the axis of all reforms was decentralization, although with disparate results on both continents; that the regulatory role of the Ministry of Health is a key factor for the success of the reforms, but this does not happen in Latin America mainly due to the weakness of its institutions; and that payment to health providers is not consistent with an appropriate incentive system (9).

In Peru, one of the most important antecedents is Sánchez-Moreno's publication entitled "The national health system in Peru". He holds that Peru has moved from a medium level in terms of health development, until the late sixties, to the last positions in South America, in the first decade of the 21st century. This is mainly due to the lack of understanding about health systems and what social security means; to a constant confrontation of opposite health systems models; to external and internal neoliberal economic influence, to the nonexistent leadership in health and, above all, to the instability caused by the lack of state health policies. Therefore, he argues that the current performance of the Peruvian

health system is dangerously inefficient, its financing is totally outdated and there is little valuation of human resources. He proposes that a national dialogue be held to learn about and evaluate international experiences on issues of health systems reform. In addition, he suggests that a state policy be established, and emphasizes the importance of financing in the health system. He proposes to progressively include all employees without distinction, with the purpose of increasing their contributions, through equitable sales and services. Thus, there would be a gradual increase of the number of insured persons, which would contribute to the sustainability of the system financing and to the intervention of private activity as a complementary and not an alternative one (3).

Another important study in Peru is Mendoza et al. (10) "The process of health sector reform in Peru" whose objective was to characterize the Health Sector Reform process, identifying the main achievements in its implementation and the pending challenges from the perspective of the participating actors. The main results were that the proposal is based on the growth of the number of insured people, with an emphasis on the public sphere, following the structured pluralism model, with a manifest independence of the functions of the health system. The most important achievements are: the establishment of state insurance under the public perspective of poverty, the improvement of investment in personnel and infrastructure, the consolidation of an entity dedicated to the defense of patient rights, and the task carried out by the Ministry of Health in the health system. The fundamental challenges: improving the percentage of policyholders not related to poverty, overcoming the deficit of specialized professionals, and decreasing out-of-pocket expenses.

As for the philosophical support, this study is based on the pragmatic paradigm for it supports projective research and complementary research methods. The complementarity paradigm also presents an important sustenance by incorporating and recognizing different ways of producing knowledge to explain reality (11). The systemic paradigm has been assumed because it is essential when dealing with dynamic organizations or systems whose components are not equal (12). Finally, the humanist paradigm has been selected for it highlights the importance and honesty of people to strengthen their work, freedom and autonomy.

Likewise, praxeology constitutes the know-how of organizations; in other words, it is people's know-how reflected in the daily activities within the organization. Therefore, it was decided to base the results of the present research on the praxeology of the actors.

The justification for this research is the need to develop a new model that takes into account the opinion of the various actors that participate in the Peruvian health system; hence, a new model that can face the current deficiencies of the state to achieve its goals is formally proposed.

The research is necessary not only for public health policy makers and the Ministry of Health staff, but also for the parliamentarians of the Legislative Power; because their contributions can provide other perspectives of solution to the various problems that affect the Peruvian health system. Also, it is important for the actors of the health system for their perspectives will be part of this research and their contribution can benefit and empower them (13).

The research question was: What type of health system model would be most appropriate for Peru? The general aim was to propose a new model of health system based on the praxeology of the actors involved in the Peruvian health system, in the period April-December 2019.

The praxeological model of the Peruvian health system, which relegates the dilemma of preferences between public and private management, seeking efficiency; considers a comprehensive approach to health determinants and aims to move progressively towards a Bismarck type model.

Method

Type and research design

This study was conducted contemplating the scope of transdisciplinary and projective research. The complementary methodology was used and multiple triangulation was applied.

The transdisciplinary team was constituted as follows: three professionals from different branches, including the main investigator, and a person without professional training but interested in the subject of research. Projective research was used to develop the proposal of a health system model that leads to improve practice. The main steps of this type of research were respected and included: diagnosis of the needs of the moment, explanatory processes and future trends.

Among the types of complementary designs, the exploratory design was chosen. Hernández, Fernández and Baptista propose the sequential exploratory design (DEXPLOS) and suggest two modalities: derivative and comparative. The derivative modality was used because it is appropriate when trying to test elements of an emerging theory that results from the qualitative phase and to generalize it to different samples. In addition, it allows to draw up a standardized instrument, necessary at present because they are inadequate or cannot be disposed of. All this fits this study fully. Based on the above, a derivative sequential exploratory design was developed (14).

Regarding the first phase of this research, the qualitative phase, the grounded theory method was selected to focus on the generation of theories that explain, confirm and / or develop the social phenomena, object of study. This theory was used to obtain the views and contributions of the various actors in the Peruvian health system.

Regarding the second phase of the research, the quantitative phase, the exploratory method was chosen. This type of studies “investigate not widely studied problems, investigate from an innovative perspective, help identify promising concepts and prepare the ground for new studies” (14).

Finally, multiple triangulation was applied in the study. It is the integration of two or more types of triangulation in an investigation. The triangulation of the investigator was used, having employed multiple observers, opposed to a singular one. The important thing about the triangulation of the researcher is that different disciplinary biases are compared or neutralized through this type of study. At the same time, triangulation between methods was used, using qualitative and quantitative methods.

Study scenario

The place where the information was obtained in the first phase of the study, the qualitative phase, was previously agreed with the interviewees: their homes, private offices, work or study places, cafeterias and other places that met the

necessary requirements for the effective application of the information collection instrument. In the second phase, the quantitative phase, the information was obtained from the chosen conglomerates.

Participants

The participants of this study were the actors of the Peruvian health system model. In other words, the patients, care and administrative personnel of the Ministry of Health (MINSA), Social Health Insurance (ESSALUD), The Army and police, in addition to the private health entities. Also, personnel working at universities or similar institutions, pharmaceutical firms, health managers, professionals from other public sectors, authorities and politicians were taken into consideration.

In the qualitative phase, a non-probabilistic sample was used. A convenience sample was applied according to the interest of the research team, interviewing 40 participants. In the quantitative phase, to obtain a probabilistic sample, it was necessary to meet two fundamental requirements: 1, establishing the sample size; and 2, random choice of sample subjects (14).

For the sample size, the formula with infinite or unknown population was used:

Where:

n = Sample

Z = Level of confidence

p = probability in favor

q = probability against

E = Sample error

$$n = \frac{Z^2 \times p \times q}{E^2}$$

The confidence level was set at 97%, the probability for and against 50% and the error of the sample at 3%.

Replacing the formula:

$$n = \frac{(2.17 \times 2.17) \times 0.5 \times 0.5}{0.03 \times 0.03} = 1308.02$$

The quote of participants share was then fixed in 1308.

In the selection of the sample size, the recommendations suggested by Hernández et al. (14), who refer that in national studies the samples are usually greater than one thousand participants, were also taken into consideration.

For random selection of the subjects, cluster sampling was performed in 4 stages. They were constituted by health establishments and higher education centers.

To ensure that the sample were representative, simple random sampling (SRS) was used in each of the first three stages of the conglomerates; and in the last one, systematic sampling. Thus, in the first stage, the regions where the questionnaire would be applied were chosen as follows: Amazonas, Cajamarca, Ica, Lima, Lambayeque and Piura. In the second, stage, the provinces selected were: Bagua, Jaén, Pisco, Lima, Chiclayo and Piura, respectively. In the third stage, the conglomerates that would be our unit of analysis were selected, as follows: “Gustavo Lannata Luján” Hospital, “Víctor Andrés Belaunde” Higher

Pedagogical Institute, “Bandera del Perú” Educational Institution, “Universidad Privada del Norte”, Hospital “Luis Heysen Incháustegui” and Hospital “Jorge Reátegui Delgado”, respectively. In the fourth stage the sample unit, the participants to whom the data collection instrument would be applied was selected.

The inclusion criterion for the sample in both phases of the study was: people over 18 years of age who belong to the Model of Peru's health system and voluntarily agree to participate. All persons who did not meet these requirements were excluded.

Techniques and instruments for data collection

The technique used in the first phase of the research was the semi-structured in-depth interview and the instrument consisted in the preparation and application of a video, covering the first three specific objectives of the present study. For the second phase, the technique chosen was the survey and the information collection instrument was the questionnaire, which covered the fourth specific objective. Only closed questions were used, specifically, 4 dichotomous; 78, scale and 1, semi-closed.

As emphasized by Niño (15), “The content must be consistent with the culture and training of the reporting subjects” (p.89). In this sense, prior to the application of the questionnaire, a pilot survey was applied to find out if what was intended to investigate was understood and answered by the participants.

Reliability and validity are conditions that every data collection instrument must meet. Consequently, Cronbach's alpha reliability coefficient was applied to 50 questionnaires, with a result of 0.87, considered good. The validity of the instrument was obtained through expert judgment. In addition, a validation of response or approach to population was developed after the in-depth interview was applied in the first phase of research.

Process

In the first phase, informed consent was obtained at the beginning, then a semi-structured in-depth interview was applied, using a video explaining the purpose and objectives of the research. The interview was conducted making sure that the participants' comments and suggestions would not be influenced so that the subtopics would emerge spontaneously. They were modified as the research progressed. 40 individual interviews were conducted nationwide. Two types were used, according to the successive phases of the study: 34 in-depth semi-structure interviews and 06 focused interviews. The interviews allowed to identify the main contents and when contrasted one by one and among them, as the study progressed, they produced a superior thematic precision. The total number of interviews depended on the moment when data saturation was reached.

In the second phase, based on the information collected and analyzed, a questionnaire was prepared and applied to the participants in order to validate the information obtained. The draws for the selection of the clusters where the questionnaire would be applied were made and applied, after coordinating with the collaborators of the chosen regions. At the end of the study, the data was tabulated and analyzed.

Information analysis meth

In the qualitative phase, the grounded theory was used, which has its own logic of analysis. After conducting the first interviews, a transcription was made. The substantive, theoretical and in vivo coding of each transcribed paragraph was then done; next, they were related to each other and the initial emerging categories were produced. Subsequently, these categories were contrasted with the new interviews carried out, resulting in new categories, which served as a guide to sampling and the respective analysis. This process continued successively until data saturation was reached. Finally, the definitive emerging categories were obtained and the quantitative data collection instrument for the second phase of the research was built.

In the quantitative phase, a questionnaire was prepared and applied; the data were consolidated in statistical tables and graphs for a better interpretation. Descriptive and inferential statistics were developed with the support of the SPSS statistical package, version 25.0 for Windows, which was used to build the database.

Ethical aspects

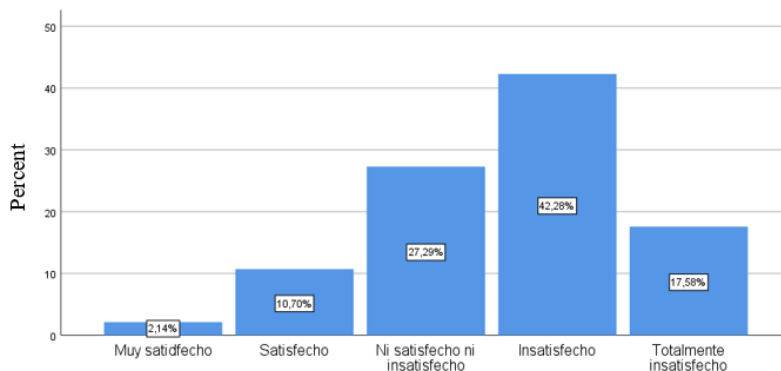
Blaxter et al. (16) indicate four major ethical aspects: confidentiality, anonymity, legality and professionalism were taken into consideration when obtaining the interviewees' permission through the signing of the informed consent; they were informed that the ethical aspects described above would be respected and that the information obtained would be used exclusively for the purpose of this study.

Results

Next, the main results are expressed according to the objectives set. Detailed results are presented in annexes.

Specific objective 1: Analyze the Peruvian health system model from the subjectivities of its actors in the period April-December 2019.

Degree of patient satisfaction in the current health system model.

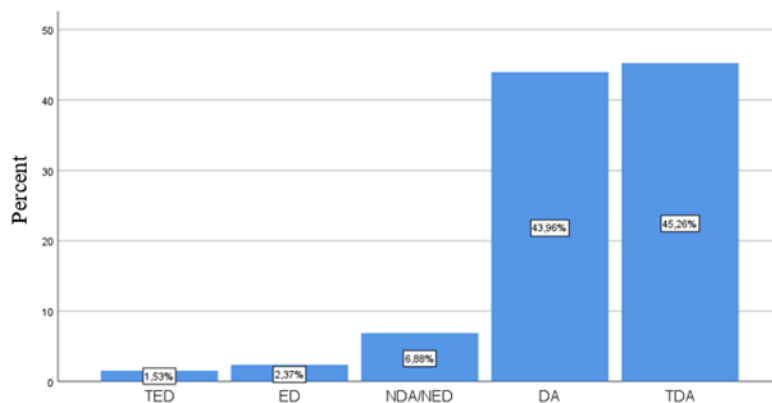


Source: Survey applied to the actors of the Peruvian health system, October 2019

Figure 1: Patient satisfaction degree in the current health system model.

Figure. 1 shows that, out of 1308 respondents, 42.3% feel “Dissatisfied” with the attention received as a patient; 27.3%, “Neither satisfied nor dissatisfied”; 17.6%, “Totally dissatisfied”; 10.7%, “Satisfied”; and only 2.1%, feel “Very satisfied”. Indeed, an extremely low percentage is observed in relation to patient satisfaction, due to the multiple deficiencies present in the current model of the health system.

Need to reform the current model of the health system.



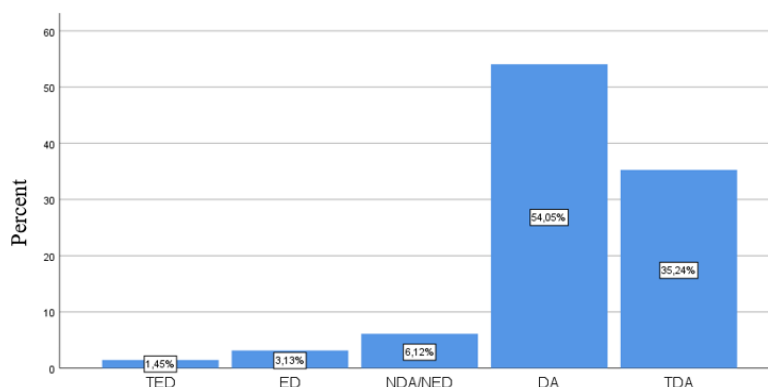
Source: Survey applied to the actors of the Peruvian health system, October 2019

Figure 2: Need to reform the current health system model.

Figure 2 shows that, out of the 1308 respondents, 45.3% “Strongly agree” that a reform of the current Peruvian health system model be carried out, 44% “Agree”, 6.9% “Neither agree or disagree”, 2.4% “Disagree”; and only 1.5% “Strongly disagree”. It is evident that the actors of the health system in Peru firmly express the need for a reform.

Specific objective 2: Contrast, with the actors' participation, Latin American health systems models with the Peruvian Health System Model in the period April-December 2019.

Implementation in Peru of reforms carried out in other countries.



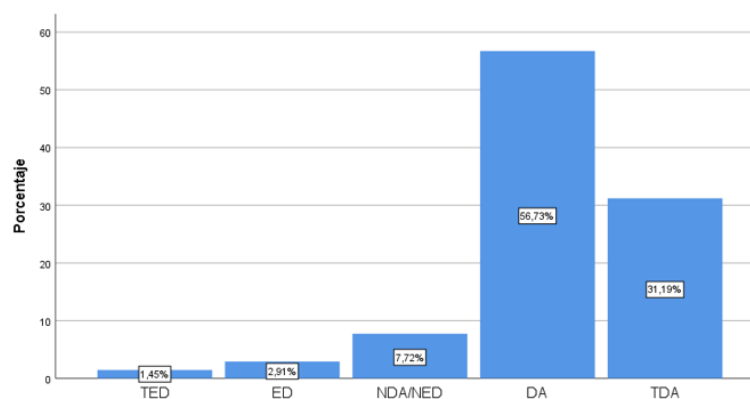
Source: Survey applied to the actors of the Peruvian health system, October 2019

Figure 3: Implementation in Peru of reforms carried out in other countries.

Figure 3 shows that, out of 1308 respondents, 54.1% "Agree" that the reforms made in other countries could be implemented in our country, 35.2% "Totally agree", 6.1% "Neither agree or disagree", 3.1% "Disagree" and only 1.5% "Totally disagree". The actors believe that international experiences could be helpful by considering their positive aspects and learning from their mistakes.

Specific objective 3: Design the health system model for Peru from the perspective of the actors in the period April-December 2019.

The reform must contemplate a combination between public and private



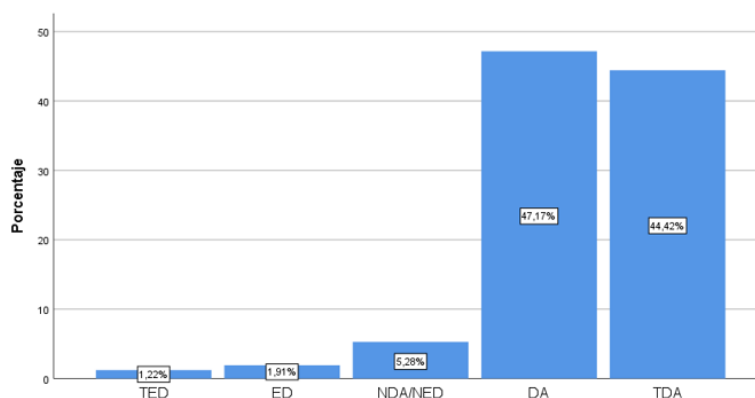
Source: Survey applied to the actors of the Peruvian health system, October 2019

Figure 4: The reform must contemplate a combination between public and private management

Figure 4 shows that, out of 1308 respondents, 56.7% "Agree" that the reform must comprise a combination between public and private management; 31.2% "Totally agree", 7.7% "Neither agree nor disagree", 2.9% "Disagree" and only 1.5% "Strongly disagree". The desire of the actors of the Peruvian health system

is that there be an optimal combination between the services offered by public and private health organizations.

Integral implementation of Health Determinants

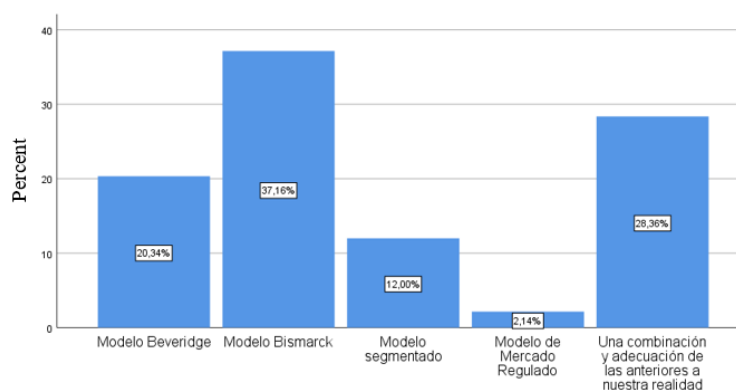


Source: Survey applied to the actors of the Peruvian health system, October 2019

Figure 5: Integral implementation of Health Determinants

Figure 5 shows that, out of 1308 respondents, 47.2% "Agree" that, in the reform, the implementation of the health determinants should be worked out; 44.4% "Totally agree", 5.3% "Neither agree nor disagree", 1.9% "Disagree" and only 1.2% "Strongly disagree". It should be stressed that a full intervention in the determinants of health would be beneficial for the general population. Therefore, investment and health strategies would not only be aimed at improving the health system, but would also cover other, more important aspects, such as the environment, healthy lifestyles and genetics.

Most suitable model to be implemented in Peru



Source: Survey applied to the actors of the Peruvian health system, October 2019

Figure 6: The most suitable model to be implemented in Peru

Figure 6 shows that, out of 1308 respondents, 37.2% consider that the "Bismarck Model" is the most suitable to be implemented in Peru, 28.4% consider that "A combination and adaptation of the previous models to our reality should be done"; 20.3%, to the "Beveridge Model"; 12%, to the "Segmented Model"; and

2.1%, to the “ Regulated Market Model ”. That is to say, the actors of the Peruvian health system consider that the ideal model to be implemented in Peru should be a universal and unique model, financed by the state, the firms and users. However, it should be clear that the change towards this model must be progressive, on account of the characteristics and reality of our country. In addition, other aspects demanded by the common actors must be considered in the new model, such as an optimal combination between public and private management and the integral implementation of health determinants.

A health system model based on the praxeology of its actors is proposed. A proper and unique model, which relegates the dilemma of preferences between public and private management and focuses on the search for efficiency is proposed. A Bismarck-type design adapted to our reality and complemented with the approach to health determinants. It includes the contribution of other authors, considering them substantial, but above all it coincides with the feelings of the actors of the Peruvian health system expressed in the results of this study.

Next, the proposed changes to be implemented in the new health system model for Peru are explained in summary.

1. Essentially, a modernization of the model must be carried out by establishing a change in the current vertical integration, based on social strata, to a horizontal one, based on the functions of the health system.
2. The new model must consider in its purpose, a comprehensive and effective intervention in the determinants of health, in accordance with the new concepts of health systems.
3. Search for efficiency in public and private spheres, excluding the self-exclusive dilemma between them.
4. Construction of a State Policy on consensual and long-term health, which must be respected by the current governors.
5. Financing is crucial for the sustainability of the proposal. Innovative financing mechanisms should be considered.
6. Regulations in accordance with the new health system model.
7. Prioritization of investment in the first level of health care.
8. Intersectoral approach.
9. Supervision and evaluation of the processes and results of the implementation should be considered from its planning.

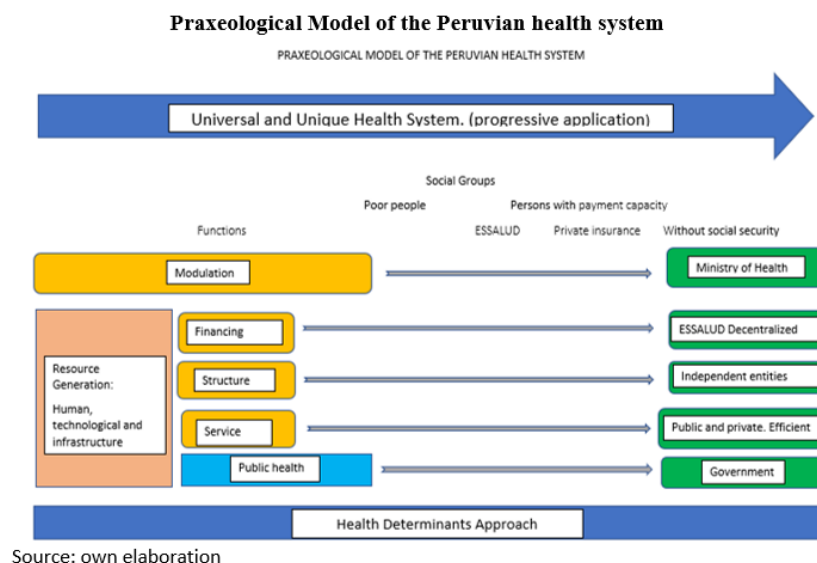


Figure 7: Praxeological model of the Peruvian health system

Figure 7. The proposed model is based on the know-how of the Peruvian health system actors. Efficiency is sought, leaving aside the dilemma of preferences between public and private management. The model has a comprehensive approach where all its dependencies and members must consider and apply the determinants of health. It is proposed to change the current vertical integration, based on social strata, for a horizontal one, based on the functions of the health system. It is intended to progressively move towards a Bismarck type system.

Specific objective 4. Validate the proposed health system model for Peru, period April-December 2019

This research was carried out in two successive phases. In the qualitative one, an exploration was made for the integral knowledge of the research topic through in-depth interviews. In the quantitative phase, based on the knowledge obtained and to be able to perform the extrapolation of the data, a questionnaire was applied to a larger sample, at a national level, validating the New Model of the Proposed Health System.

Discussion

The problem of health care is contemplated in the third objective of Sustainable Development, health and well-being. In addition, it is the thirteenth policy of the National Agreement to 2021, universal access to health services, and included in the fifth strategic axis of the Vision of Peru to 2050, efficient, transparent and decentralized state, approved in the National Agreement of April 29, 2019. And it is not only recognized by experts, but at the same time it is in the population's feeling, for it constitutes the fourth most important problem identified by Peruvians, according to the results of the survey prepared by Pulso Peru, Datum (17), only surpassed by lack of money, fear of being assaulted and job instability. Therefore, its importance as a public health problem, in force worldwide and nationally, is irrefutable.

In this context, addressing the problem derived from the inefficiency of the Peruvian health system model becomes transcendental for the interests of national development. It is considered that the problems evidenced must be treated in an integral way considering the opinion of all the actors that are part of the problem. Therefore, the general objective of this research was to propose a health system model based on the knowledge and opinion of the actors that participate in the health system of Peru.

The research is relevant on the absence of studies that consider the opinion of all the actors that participate in the Peruvian health system model. Additionally, it is one of the few, if not the only one in its level, which uses the Derivative Sequential Exploratory Design, transdisciplinarity and a national scope.

As to the validity of the study, in addition to work with a representative sample of the population, which meant an effort like no other, since this is a nationwide research, it has internal and external validity. The internal validity is demonstrated by the Cronbach's alpha coefficient of 0.87 obtained in the analysis of internal consistency of the instrument. In addition, a pilot survey was applied, which helped to be sure that the instructions were understood by all the participants, to detect wrongly elaborated questions that could cause confusion in the interviewee, or other aspects that could have a negative effect on the study, therefore, a higher probability of obtaining credible results for the present investigation was established.

External validity was obtained through the application of content validity, both apparent and response validity. The first, obtained through expert judgment; and the second, by applying an in-depth interview to investigate how the problem should be posed, since there was no clear notion of what should be measured, so that a validity of approximation to population, also called response validity, was also carried out.

In relation to the reviewed background regarding the analysis of the Peruvian health system model, with respect to the degree of user satisfaction, figure 1 shows that only 10.7% of them feel satisfied with the care received. Other negative results are also evident: figure 8 shows that there is a professional deficit according to 82.4% of the respondents; figure 9 shows an infrastructure deficit with 86.9% and in figure 10, corruption is identified as a major obstacle to the improvement of the health system model in Peru, with 90%.

These first results are consistent with those obtained by Sánchez-Moreno (3) who states that the current performance of the health system in Peru is dangerously inefficient. The use of the term "dangerously" used by Sánchez-Moreno is fully accepted, when trying to warn about the risks of not acting on the solution of this important issue and it is better understood today, when various countries of the region face numerous mass protests demanding reforms to current public policies, which have resulted in loss of human lives and significant damage to public and private property. In Peru this level of claim is not yet evident, however, the risk is latent. It is still possible to avoid these unfortunate events.

This study is also similar to Sánchez-Moreno's (3) in the point that there is a low valuation of human resources; affirmation that is in direct relation with the following results obtained: Table 1, the remuneration received by health personnel is not consistent with their training and skills, 70%; Table 2, the remuneration received by health personnel is not appropriate to their geographical scope, 70.6%; Table 3, the remuneration received by health personnel is very low, 72.6%.

Table 1: Remuneration not in accordance with training and skills.

	Frequency	Percent	Percentage Valid	Cumulative Percentage
Valid Strongly Disagree	48	3,7	3,7	3,7
Disagree	117	8,9	8,9	12,6
Neutral	228	17,4	17,4	30,0
Agree	544	41,6	41,6	71,6
Strongly Agree	371	28,4	28,4	100,0
Total	1308	100,0	100,0	

Source: Survey applied to the actors of the Peruvian health system, October 2019

It is evident that 70% of the people surveyed (Agree + Strongly Agree), state that the remuneration received by health personnel is not according to the training received. In Peru there is no real human resources policy that values these aspects.

Table 2: Non-adequate remuneration according to geographical scope.

	Frequency	Percent	Percentage Valid	Cumulative Percentage
Valid Strongly Disagree	46	3,5	3,5	3,5
Disagree	113	8,6	8,6	12,2
Neutral	225	17,2	17,2	29,4
Agree	582	44,5	44,5	73,9
Strongly Agree	342	26,1	26,1	100,0
Total	1308	100,0	100,0	

Source: Survey applied to the actors of the Peruvian health system, October 2019

It is observed that 70.6% (Agree + Strongly Agree) reports that the remuneration is inadequate according to the geographical scope. In the current Peruvian health system model, in many cases those working at central levels get greater benefits than those working in hard-to-reach areas.

Table 3: Very low compensation.

	Frequency	Percent	Percentage Valid	Cumulative Percentage
Valid Strongly Disagree	45	3,4	3,4	3,4
Disagree	104	8,0	8,0	11,4
Neutral	209	16,0	16,0	27,4
Agree	567	43,3	43,3	70,7
Strongly Agree	383	29,3	29,3	100,0
Total	1308	100,0	100,0	

Source: Survey applied to the actors of the Peruvian health system, October 2019

It is observed that 70.6% (Agree + Strongly Agree) reports that the remuneration is inadequate according to the geographical scope. In the current Peruvian health system model, even in many cases those working at central levels get greater benefits than those working in hard-to-reach areas.

Another important similarity with Sánchez-Moreno (3) is the little understanding about health systems. Indeed, it was felt in the process of the in-depth interviews, that the level of ignorance of the topic “models of health systems” is alarmingly high, not only among common citizens, but among health professionals and technical personnel dedicated to assistance care, whose knowledge on the subject is practically null, while the knowledge of the subject by health professionals dedicated to the administrative and managerial part is moderate to low. Very few people in the country master the issue and are mostly at the central level of health administration (MINSA), where they were interviewed. They appeared to be aware of the need for a change and know some possible routes to follow, but they were not very excited to strive to implement these reforms, perhaps because that would affect their life styles if they point at MINSA only as a modulating entity, with less power, because that is what most current trends in Latin America and the world proclaim.

Likewise, this study finds similarity with Maceira’s (9) "A systematized analysis of models and key experiences in Latin America and Europe", who states that in Latin America, health systems have a deep fragmentation in the provision and financing in the health care of their users, in addition to huge organizational defects among its subsystems. The results of this research that support the first part of this statement are those shown in: Table 4, it is a model that makes a difference in its attention to rich and poor, 69.4%; Table 5, there is an excessive out-of-pocket expense of the patient, 75%. The results that support the second part of Maceira's statement (9) are: Table 6, human resources in health are inadequately distributed, 80.5%; Table 7, there is inequality in the distribution of resources, 83.8%; and Table 8, it is a very centralized administration model, 65.2%.

Table 4: Model that makes a difference in its attention to rich and poor

		Frequency	Percent	Percentage Valid	Cumulative Percentage
Valid	Strongly disagree	79	6,0	6,0	6,0
	Disagree	128	9,8	9,8	15,8
	Neutral	193	14,8	14,8	30,6
	Agree	582	44,5	44,5	75,1
	Strongly Agree	326	24,9	24,9	100,0
	Total	1308	100,0	100,0	

Source: Survey applied to the actors of the Peruvian health system, October 2019

It is observed that 69.4% (Agree + Strongly Agree) reports that there is a marked difference in health care to rich and poor people. As long as the segmented model exists in Peru, this situation will not improve.

Table 5: Excessive pocket expense.

		Frequency	Percent	Percentage Valid	Cumulative Percentage
Valid	Strongly Disagree	44	3,4	3,4	3,4
	Disagree	97	7,4	7,4	10,8
	Neutral	185	14,1	14,1	24,9
	Agree	576	44,0	44,0	69,0
	Strongly Agree	406	31,0	31,0	100,0
	Total	1308	100,0	100,0	

Source: Survey applied to the actors of the Peruvian health system, October 2019

It is observed that 75% (Agree + Strongly Agree) of the respondents report that the out-of-pocket expenditure that is made is excessive. In fact, the cost of medical care, medications, laboratory tests and others, which the patient covers directly from his pocket, is high. He goes to private services because he does not find quality care in public services.

Table 6: Human resources inadequately distributed.

		Frequency	Percent	Percentage Valid	Cumulative Percentage
Valid	Strongly Disagree	38	2,9	2,9	2,9
	Disagree	60	4,6	4,6	7,5
	Neutral	158	12,1	12,1	19,6
	Agree	622	47,6	47,6	67,1
	Strongly Agree	430	32,9	32,9	100,0
	Total	1308	100,0	100,0	

Source: Survey applied to the actors of the Peruvian health system, October 2019

It is observed that 80.5% (Agree + Strongly Agree), indicates that human resources in health are poorly distributed. In some provinces there is an oversupply of health specialists and in others there is an obvious lack of them.

Table 7: Inequity in the distribution of resources.

		Frequency	Percent	Percentage Valid	Cumulative Percentage
Valid	Strongly Disagree	15	1,1	1,1	1,1
	Disagree	52	4,0	4,0	5,1
	Neutral	145	11,1	11,1	16,2
	Agree	670	51,2	51,2	67,4
	Strongly agree	426	32,6	32,6	100,0
	Total	1308	100,0	100,0	

Source: Survey applied to the actors of the Peruvian health system, October 2019

It is evident that 83.8% (Agree + Strongly Agree) indicates that there is a marked inequality in the distribution of resources. Decision makers' centralist vocation causes this inequality.

Table 8: Very centralized administration model

		Frequency	Percent	Percentage Valid	Cumulative Percentage
Valid	Strongly Disagree	73	5,6	5,6	5,6
	Disagree	170	13,0	13,0	18,6
	Neutral	212	16,2	16,2	34,8
	Agree	636	48,6	48,6	83,4
	Strongly Agree	217	16,6	16,6	100,0
	Total	1308	100,0	100,0	

Source: Survey applied to the actors of the Peruvian health system, October 2019

It is observed that 65.2% (Agree + Strongly Agree) indicates that the current health system model has a very centralized administration. International experience shows that decentralization in health has been one of the pillars in countries where progress has been made in improving the efficiency of the system.

On the other hand, the current study also coincides with Londoño and Frenk (2), who conclude that there is a need for a thorough reform of the health system models in Latin America, which have proved their inability to promote equity, quality and efficiency. The similarities are supported, respectively, by the following results: Figure 2, You agree with a reform to the current model of Peruvian health system, 89.3%; Table 7, there is inequality in the distribution of resources, 83.8%; Table 4, it is a model that makes a difference in assistance to rich and poor, 69.4%; Table 9, there is a proper quality of care, 37.4%.

Table 9: Attention quality

		Frequency	Percent	Percentage Valid	Cumulative Percentage
Valid	Strongly Disagree	218	16,7	16,7	16,7
	Disagree	402	30,7	30,7	47,4
	Neutral	199	15,2	15,2	62,6
	Agree	316	24,2	24,2	86,8
	Strongly Agree	173	13,2	13,2	100,0
	Total	1308	100,0	100,0	

Source: Survey applied to the actors of the Peruvian health system, October 2019

It is observed that only 37.4% (Agree + Strongly Agree) indicates that there is a proper level of care quality.

With regard to the contrast of Latin American health systems models with the Peruvian model, this study is similar to the statement made by Sánchez-Moreno (3), who recommends that a national dialogue be organized in order to learn and evaluate the international experiences on issues of health systems reform. In this regard, Figure 3 shows that 89.3% of respondents report that they agree that reforms made in other countries could be implemented in our country.

Likewise, another aspect in which there is similarity with Sánchez-Moreno (3) is with respect to the suggestion that, by consensus, a state health policy be

established. The results: Table 10, the creation of new health status policies would improve the management of the new health system model, where 87.8% of the study participants agree with this proposal. In addition, there is similarity with the recommendation to modernize the financing of the health system and the proposal to progressively include all employees without distinction, with the purpose of increasing their contributions through equitable sales and services. The results that support the coincidence are: table 11, as a means of financing, it is necessary to apply taxes to the private companies, 76.8%; table 12, it is necessary to allow the use of auxiliary methods of financing at the provincial level for the improvement of the local health system, 81.4%; table 13, allocate a special amount of the national budget destined solely to the improvement of the health system, 89.7%; and table 14, financing could be shared by the state, private companies and even a minimum percentage of the user with 73.5%.

Table 10: Creation of new health status policies.

		Frequency	Percent	Percentage Valid	Cumulative Percentage
Valid	Strongly Disagree	17	1,3	1,3	1,3
	Disagree	31	2,4	2,4	3,7
	Neutral	111	8,5	8,5	12,2
	Agree	615	47,0	47,0	59,2
	Strongly Agree	534	40,8	40,8	100,0
	Total	1308	100,0	100,0	

Source: Survey applied to the actors of the Peruvian health system, October 2019

It is observed that 87.8% (Agree + Strongly Agree) indicates that there is a need to create new state policies that contribute continuously to the improvement of the system.

Table 11: As a means of financing, it is necessary to apply taxes to the private company.

		Frequency	Percent	Percentage Valid	Cumulative Percentage
Valid	Strongly Disagree	26	2,0	2,0	2,0
	Disagree	54	4,1	4,1	6,1
	Neutral	224	17,1	17,1	23,2
	Agree	609	46,6	46,6	69,8
	Strongly Agree	395	30,2	30,2	100,0
	Total	1308	100,0	100,0	

Source: Survey applied to the actors of the Peruvian health *system, October 2019

It is evident that 76.8% (Agree + Strongly Agree) refers that taxes must be applied to the private companies to finance the system.

Table 12: Use of auxiliary methods of financing at the provincial level for the improvement of the local health system.

		Frequency	Percent	Percentage Valid	Cumulative Percentage
Valid	Strongly Disagree	18	1,4	1,4	1,4
	Disagree	40	3,1	3,1	4,4
	Neutral	185	14,1	14,1	18,6
	Agree	687	52,5	52,5	71,1
	Strongly Agree	378	28,9	28,9	100,0
	Total	1308	100,0	100,0	

Source: Survey applied to the actors of the Peruvian health system, October 2019

It is evident that 81.4% (Agree + Strongly Agree) indicates that auxiliary methods should be used to finance the system. This means that local governments may create new means of financing that allow them to contribute to the improvement of the system.

Table 13: Special amount of the national budget destined only to the improvement of the health system.

		Frequency	Percent	Percentage Valid	Cumulative Percentage
Valid	Strongly Disagree	11	,8	,8	,8
	Disagree	24	1,8	1,8	2,7
	Neutral	99	7,6	7,6	10,2
	Agree	619	47,3	47,3	57,6
	Strongly Agree	555	42,4	42,4	100,0
	Total	1308	100,0	100,0	

Source: Survey applied to the actors of the Peruvian health system, October 2019

It is observed that 89.7% (Agree + Strongly Agree) indicates that a special amount of the budget should be allocated to the health system.

Table 14: The financing could be shared by the state, private firms and even a minimum percentage of the user.

		Frequency	Percent	Percentage Valid	Cumulative Percentage
Valid	Strongly Disagree	52	4,0	4,0	4,0
	Disagree	93	7,1	7,1	11,1
	Neutral	202	15,4	15,4	26,5
	Agree	617	47,2	47,2	73,7
	Strongly Agree	344	26,3	26,3	100,0
	Total	1308	100,0	100,0	

Source: Survey applied to the actors of the Peruvian health system, October 2019

It is observed that 73.5% (Agree + Strongly Agree) indicates that the financing of the health system could be shared by the state, private firms and the user. As in the Bismarck type model.

In the same way, there is similarity with the proposals expressed by Maceira (9), who affirms that decentralization is the axis of all the reforms. The result that sustains this similarity is: table 15, a real administrative and budgetary decentralization with 87.1%. However, he recognizes that in Latin American countries, decentralization did not have the expected success, mainly due to the lack of coordination mechanisms between municipalities and provinces. Situation that must be considered to take advantage of these experiences and take the necessary foresight to avoid making the same mistakes again.

Table 15: Administrative and budgetary decentralization.

Valid		Frequency	Percent	Percentage	Cumulative
				Valid	Percentage
	Strongly Disagree	18	1,4	1,4	1,4
	Disagree	28	2,1	2,1	3,5
	Neutral	122	9,3	9,3	12,8
	Agree	623	47,6	47,6	60,5
	Strongly Agree	517	39,5	39,5	100,0
	Total	1308	100,0	100,0	

Source: Survey applied to the actors of the Peruvian health system, October 2019

It is observed that 87.1% (Agree + Strongly Agree) indicates that an administrative and budgetary decentralization of the health system must be carried out. The literature reviewed indicates that the countries that have advanced towards improving the system have used it.

Also, there is similarity, only with some of the results, with Mendoza (10), in relation to his statements that the main challenges to be solved would be to improve the percentage of insured people not related to poverty, overcome the deficit of specialized professionals, and the decrease in out-of-pocket expenses. The coincidences are based on the following results of this study: figure 6, the majority choice of the Bismarck model, a universal health system model with financing shared by the state, private firms and users, obtaining 37.16%; figure 8, there is a deficit of health professionals, 81.7%; and table 5, there is an excessive out-of-pocket expense of the patient, 75%. However, there are no similarities with other results, such as: the proposal is based on the growth of the insured people, with emphasis on the public sphere, following the model of structured pluralism, with a manifest independence of the functions of the health system. In this regard, the mentioned authors make an erroneous interpretation of what to follow the model of structured pluralism means. The essence is a change from the segmented, vertical to a horizontal segmented model; in other words, to organize the health system by functions, and not by social groups as is currently the case in Peru.

Likewise, there is no coincidence with the statement: the main achievements identified are the establishment of state insurance under the public perspective of poverty, the improvement of investment in personnel and infrastructure, the consolidation of an entity dedicated to defense of the patient's rights, and the task performed by the Ministry of Health in the health system. These discrepancies are supported by the following results: table 4, it is a model that makes differences in its attention between rich and poor, 69.4%; figure 9, there is an infrastructure deficit, 86.9%; figure 8, there is a deficit of health professionals, 82.4%; figure 11, the treatment of health personnel is inappropriate, 75.3%; table

16, there is a poor regulation of private insurance by the state, 77.9%; table 17, the reform should consider the management of aspects of health promotion, prevention, recovery and rehabilitation, 93.1%. Therefore, with these high percentages of yearnings and dissatisfactions it is not possible to affirm that there have been achievements.

Table 16: Poor regulation of private insurance by the state.

		Frequency	Percent	Percentage Valid	Cumulative Percentage
Valid	Strongly Disagree	27	2,1	2,1	2,1
	Disagree	54	4,1	4,1	6,2
	Neutral	208	15,9	15,9	22,1
	Agree	645	49,3	49,3	71,4
	Strongly Agree	374	28,6	28,6	100,0
	Total	1308	100,0	100,0	

Source: Survey applied to the actors of the Peruvian health system, October 2019

It is evident that 77.9% (Agree + Strongly Agree) indicates that there is a bad regulation of private insurance by the state.

Table 17: The reform must consider the management of aspects of promotion, prevention, health recovery and rehabilitation in health.

		Frequency	Percent	Percentage Valid	Cumulative Percentage
Valid	Strongly Disagree	21	1,6	1,6	1,6
	Disagree	14	1,1	1,1	2,7
	Neutral	55	4,2	4,2	6,9
	Agree	712	54,4	54,4	61,3
	Strongly Agree	506	38,7	38,7	100,0
	Total	1308	100,0	100,0	

Source: Survey applied to the actors of the Peruvian health system, October 2019

It is observed that 93.1% (Agree + Strongly Agree) states that the reform should consider the management of aspects of health promotion, prevention, health recovery and rehabilitation.

It is possible that the authors of the study in question consider as progress that the constitution of some entities for this purpose has been embodied, however, they do not take into account their effectiveness in practice, nor that while the current model persists, with structural and regulatory situations, no substantive improvements will be possible. In addition, they express half truths by stating that investment in infrastructure and personnel has increased; it has actually increased in quantity, but not significantly in percentage, which is really important. Today, Perú has an approximate investment of 5.5%, being below the Latin American average.

Probably these divergences are due to the difference in the methodology, While Mendoza (10), based the results on the interviews to 21 key participants, mostly people who have been working in the Ministry of Health, dependencies or related entities, this study was based on 40 interviews conducted with different key actors in the Peruvian health system and validated with the completion of 1308 questionnaires nationwide. The difference in the validity of the results is

very noticeable; on the other hand, some of their interviewees and authors were working in the governing body, which could cause a bias, undoubtedly unintentional, of interpretation when their incumbency is immersed in the progress of the health sector in the country.

On the other hand, Londoño and Frenk (2) report that institutional strengthening is essential for a true division of functions in the health system, while Maceira (9) reports that the Ministry of Health is a key factor in its regulatory role for the success of the reforms, but this does not happen in Latin America, mainly due to the weakness of its institutions. Both authors agree to give substantial importance to the issue of strengthening institutions. In this investigation, no results were obtained regarding this issue because it was not part of the study; and although two of the interviewees, in the first phase of investigation, expressed this concern, it was decided not to include it because it is an issue that concerns all sectors, all levels of government and includes both public and private institutions; and because, if considered, other issues of a more general nature should also be included, such as the broadening of the tax base, the fight against poverty, the reduction of anemia in children, etc., issues that have to do directly or indirectly with our subject of study, but which, like the strengthening of institutions, have already been commented on for a long time.

It should be stressed that the multiple coincidences found with the aforementioned authors, with the exception of Mendoza (10), are possibly due to the fact that the problems are common to our Latin American regional reality, and that despite the fact that the studies mentioned were carried out in different moments, with a difference of several years, the challenges are still the same and there is still much to do about it. But, what really attracts attention is that there are few divergences, so it is necessary to make clear, to avoid suspicion, that this research was not developed based on other studies results, quite the contrary, the methodology used demanded to ignore the results of other similar studies, which was fulfilled. This is why, in the first phase of the research, where the subject was investigated in depth, the technique of the methodology of the grounded theory was used and interviews were applied to the participants, and it was based on their ideas that the questions that would be applied through a questionnaire in the second phase of the research were prepared, thus obtaining the final results presented. Consequently, they have not been influenced by any external research and, therefore, this is an original and objective research.

Conclusions

- From the analysis of the Peruvian Health System Model from the subjectivities of the actors in the period April-December 2019, it is concluded: That the current health system model is perceived negatively obtaining a rating of 10.70% when referring to the degree of user satisfaction, and that needs to be urgently reformed, 89.3%.
- By contrasting, with the actors, health systems models in Latin America with the Peruvian Model in the period April-December 2019, it is concluded: That the reforms made in other countries could be implemented in our country with 89.3%, rescuing the positive aspects and learning from their mistakes.
- According to the perspective of the actors, the design of the health system model that should be implemented in Peru, is one in which

there is an optimal combination between public and private management, with 87.9%; that emphasizes the implementation of the determinants of health (human biology, environment, lifestyle and health system) with 91.6%; and that of the models presented, they prefer the Bismarck model (universal health system, where the only payer is the state, but financing is shared by the state, private firms and users), which could be accessed progressively, with the backing of 37.16% of the participants in the study.

- The sequential exploratory design derived from the study validated the proposed model, when testing emerging elements resulting from the qualitative phase and generalizing them to different samples in the quantitative phase.

References:

1. World Health Organization (WHO). World Health Report 2000. Chapter 1. Why are health systems important? [online]. Available in: https://www.who.int/whr/2000/en/whr00_ch1_es.pdf?ua=1
2. Londoño J. and Frenk J. Structured pluralism: Towards an innovative model for health systems reform in Latin America [online]. Washington, USA; 1997. Available in: <https://core.ac.uk/download/pdf/47280592.pdf>
3. Sánchez-Moreno F. The national health system in Peru. Peruvian Journal of Experimental Medicine and Public Health [Periodic publication online] 2014, [Cited: 2019 August 5]; (31) [747-753 pp.]. Available in: <http://doi.org/10.17843/rpmpes.2014.314.129>
4. Carvajal A. Theories and Models: Forms of representation of reality. Communication, Technological Institute of Costa Rica. Cartago, Costa Rica. Network of Scientific Journals of Latin America and the Caribbean, Spain and Portugal, 2002; (12): 1-14.
5. Seguí M., Toledo E. and Jiménez J. Systems of health. Models. Spain: Elsevier; 2013. Available in: <http://paginas.facmed.unam.mx/deptos/sp/wp-content/uploads/2013/12/biblio-basica-3.3.1.pdf>
6. Roemer M. "Health Systems of the World", Volume 1: The Countries. New York, EEUU : Oxford University Press; 1991.
7. Granados R. Health Systems in Latin America: Universal Coverage. PAHO / WHO health systems and services. Peru; 2009. Available in: <https://www.youtube.com/watch?v=znqacGEHX5M>
8. Infante A. Paradigms of Health Systems Organization [online]. Madrid: National School of Health; 2012. Topic 2.2 Available in: http://espacio.uned.es/fez/eserv/bibliuned:500566/n2.2_Paradigmas_de_organizacion_de_los_sistemas_de_salud.pdf
9. Maceira D. Technical Document on Financing and Health Sector Reform: A systematized analysis of models and key experiences in Latin America and Europe. Institut de recherche pour le développement. 2007. Available in: <https://www.danielmaceira.com.ar/wp-content/uploads/2014/07/Maceira-Eurosocial-ExperCompRefFin-mayo07-Versi%C3%B3n-Final.pdf>
10. Mendoza PJ, Rivera G, Gutiérrez C, Sanabria C. The process of health sector reform in Peru. Rev. Panama. Public Health [Online periodic publication] 2018. [cited 2019 August 12]; [42]; [74 pp.]. Available in: <https://doi.org/10.26633/RPSP.2018.74>
11. Hashimoto E. and Saavedra S. Paradigmatic Complementarity: A New Approach to Research. Iberoamerican Congress of Science, Technology, Innovation and Education, Buenos Aires, Argentina; 2014.
12. Martínez M The systemic paradigm, complexity and transdisciplinarity as epistemic bases of qualitative research [online]. 11th ed. URBAN REDHECS; 2011. [Quoted: 2019 July 18]. Available in: <http://prof.usb.ve/miguelm/El%20paradigma%20sistemico%20%20complej%20y%20transdisc.html>
13. Caballero A. Innovative integral methodology for plans and thesis. The methodology of how to formulate them. México DF: Cengage Learnes; 2014.
14. Hernández R., Fernández C. and Baptista M. Investigation methodology. 6th ed. México: McGraw-Hill; 2014.
15. Niño V. Investigation methodology. Design and Execution. Bogotá: Editions of the U; 2011
16. Blaxter L., Hughes C. and Tilgth M. How an investigation is done. Translation Gabriela Ventureira. Barcelona, Spain: Gedisa; 2000.
17. Datum. Pulso Perú: What are the 14 main problems of Peruvians? Gestión.PE [periodic publication online] 2017. December 11. [Quoted: 2019 August 15]; 1 (14). Available in: <https://gestion.pe>

<https://gestion.pe/peru/politica/pulso-peru-son-14-principales-problemas-peruanos-222453-noticia/?foto=4>