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STUDYING THE JUSTICE IN DISTRIBUTING PHARMACISTHUMAN FORCE IN KERMANSHAH PROVINCE BASED ON THE DOZEN COEFFICIENT INDEX DURING THEYEARS 2006 TO 2011

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Abstract

Introduction: the aim of present research is to study the justification of pharmacist human force distribution in Kermanshah province based on dozen coefficient index during years 2006 to 2011.

Method: present research is applicative and descriptive analytical. Considering that the data related to the years 2006 - 2011 is in a specific time during the past, there for this is a longitude and historical research. Research society in this study includes all the pharmacist human force in entire Kermanshah province based on each township. Samples are in form of ensues from Iran statistic center and Ministry of Health and Medical Education's information technology and statistics management center and has been registered in information forms. Excel software was used to do the calculations.

Results: The dozen coefficients calculated for pharmacists during years 2006 to 2011 are respectively equal to 438586, 463134, 461382, 448142, 445739 and 443203.

Discussion and Conclusion: the maximum distribution of inequality was during years 2006 till 2007. the dozen coefficient changes procedure during the studied period first had a decreasing procedure and then had a decreasing procedure with a milder gradient. Therefore we suggest planning's by the policymakers and university managers to decrease this amount.

Key words:

Justice, pharmacist human force distribution, dozen coefficients.

Introduction

Health is one of the most basic individual rights in human communities; which should be reachable for all members of the society similarly and without any discrimination. Achieving this goal requires us to have professional human force such as doctors, nurses and other health and medical staff along with other resources which are considered to be the basic capitals of health and medical organizations (1). presenting health and medical services not only requires a great number of human forces but it also requires other factors such as their working enthusiasm and more important the manner these resources are distributed in various areas of a country. Meanwhile we always consider existing resources of the health department such as money, credits and also bed and equipment's ad the building as a complementary factor for the human force and their proper and enough number and distribution leads to increase in presenting health and medical services to citizens (2). (3) Unequal distribution in manufacturing institutions of the health department (such as doctors, nurses, hospital beds and …) could affect the justice and quality in reaching the medical services for everyone and increases the basis of injustice and inequality in receiving the medical care services. One of the important pre-conditions to present medical care is to create a relationship between people that require services and the represents of these services. If there is an optimized level of services, there must be the possibility that we can receive the services in time and location of need. Essentially, the condition to achieve such services is the quantitative sufficiency, proper geographic distribution and lack of cultural, economic and educational obstacles for healthcare services. The quantitative sufficiency proportionally refers to medical, service and technological facilities staff such as doctors, nurses, pharmacists and capital equipment equipment's such as hospital beds (4). Justice is the axis of presenting service despite all its various concepts. The concentration should be on the justified distribution of services between various social groups (5 & 6). The evidence shows that in most countries of the world, the groups that can't use these services have a lower chance to survive and die at younger ages. a deep gap is observe between urban and rural population and various areas of the country, poor groups not only have more disease by the also suffer from the begging of the epidemic diseases and disability happens for them in a younger age, and not only this fact is true about poor countries but also is true about poor groups of the developed countries (7). During the past years Universal Health Organization emphasizes on the necessity of measuring the justice in distribution of health systems due to the act that this distribution is usually unequal in developing countries since they don't have enough data, skill and expert in health and treatment planning. (8, 9) injustice in health is one of the most

important challenges of the new millennium and inefficiency of health systems is one of the most important reasons for that (10) .it also a social right in Iran for people to be able to reach medical services. This issue has been clearly stated in the law and as a result it is considered to be a legal duty for the government. But limited equipment and resources might prevent the immediate and entire success of presenting this absolute right. We could mention to hospitals or medical service presenting systems as the important bases of preventing in second level of every country's medical and health services system. Usually hospitals are named as the most important of centers presenting medicals services and diagnosing and enabling centers. therefore a strategic planning to improve the structural condition of these centers is considered to be a principal acts of country's health system to create and maintain the lost or endangered health in such individuals of the society which leads to improvement of these centers to satisfy the need for justified achievement to the hospital medical services for everyone and it should be put at the top of country's health and medical resource devotion program from functional and structural standard demonstration point of view (11). Despite various definitions of the justice, it is the axis of presenting services. The concentration should be on the justified distribution of the services among various social groups. (12, 13) although it might seem difficult to answered the issues related to the justice in health, but it deeply effect the policy making, resource devotion, and generally the legal principals of government and the society (14 & 15). Paying attention to the vulnerable social groups while evaluating social needs and creating compensating mechanism to solve the health problem of individuals that have an improper health condition is very important (14 & 16). in a report by the Universal Health Organization it is mentioned that Bangladesh with 11 nurses for each 100000 individuals and United states with 970 nurses for each 100000 of the population have respectively the lowest and highest nurse for population rate. This domain and high variety at indexes related to the number are ratio of human forces in various parts of a country or various countries of the world shows the noticeable structural differences in office of governor general related to the level of using human forces and the quality and quantity of presenting services (17) .One of the ways to evaluate and study medical and health systems is to consider the condition of distributing human forces. Determine hospital needs in relation to human force is a common problem in all hospitals (18). The numerical amount of dozen indexes is between 0 to 1, 0 shows the complete equality and 1 shows complete inequality (19). This scale has a more desired statistical character and there for enables us to evaluate the significance of the effect of political changes on the unequal distribution of profits or expenses (20). usually, if this index is between .35-.2, the distribution is balanced,

between .5-.35, the distribution is rather unequal and in case it is between .5-.7, its totally unequal (21, 22). based on the studies no similar study in relation to pharmacist human force hasn't been executed in our country, therefore similar studies has been executed in regard to other various groups that a brief history of them is presented as fallow. Results of Zandian & et al in 2012 shows that dozen index coefficient amount for specialist during years 2001-2009 was respectively equal to 52, 53, 55, 56, 54, 56, 58, 58, and 58. the process of inequality level among specialists has less fluctuation and in fact the process of distributing these doctors haven't changed much during these years; although this procedure had a decreasing path and a little decrease in level of inequality in regard to the distribution of work force is observed (23). Findings of Chang & et al. (2009) showed that changes of the dozen coefficients are proportionally low for pediatricians (24). Resulted presented by Kioko & et al.(2009) showed that most of inequality in distribution of pediatricians in Japanese rural area happened during years 1996-2004 (25). Results presented by Zanganeh & et al. showed that the dozen coefficient during years 2001 0 2006 for nurses was respectively as fallow 0274, 0226, 0094, 0002, 0007 and 0402 (26). Therefore considering the mentioned basis, the aim of present research is to study the process of justice trough distributing pharmacist human forces in Kermanshah province based on dozen coefficients during years 2006 to 2011.

Research method

Present research is practical and its method is descriptive- analytical. Considering that the data related to years 2006 – 2011 are related to a specific time in past, therefore this research is longitude and historical. Research society in this research includes all working pharmacists all over the Kermanshah province divided based on township. Samples were gathered in form of census from Iran's statistics center and Ministry of Health, Treatment and Medical Education's information technology and statistics management center and were registered in Data forms. The data were analyzed based on this method: data was gathered by a form called research fiche and the Excel software was used to do the calculations.

In analyzing the distribution of pharmacist human force we used the dozen coefficient standard technique and the researcher completed the province's townships population in a decreasing manner by means of data of the forms. it means that to obtain the dozen coefficient we should first calculate the associative percentage of the population and associative percentage of human force of obstetrician working in province's hospitals and then its coefficient is calculated by means of its dozen formula.

Table-1: redundancy distribution of pharmacist human force and population during years 2006-2011.

| population	Number of pharmacists	year
1879385	25	2006
1885248	19	2007
1891612	27	2008
1941849	27	2009
1905793	28	2010
1945227	37	2011

Results

Table-2: Dozen coefficients calculated for pharmacist human force during years 2006 – 2011.

Variant	dozen coefficient	standard deviation	low limit	high limit
1: GINI_pharm85	0.438586	0.240456	-0.080888	0.958059
2: GINI_pharm86	0.463134	0.261033	-0.100793	1.027061
3: GINI_pharm87	0.461382	0.260282	-0.100924	1.023687
4: GINI_pharm88	0.448142	0.248982	-0.089752	0.986036
5: GINI_pharm89	0.445739	0.245347	-0.084300	0.975778
6: GINI_pharm90	0.443203	0.241177	-0.077828	0.964235

Based on the above table it is shown that the calculated dozen coefficients for pharmacists during years 2006 to 2011 varied and had an almost decreasing path. The calculated dozen coefficients for years 2006-2011 was respectively equal to 438586, 463134, 461382, 448142, 445739 and 443203.

Diagram-1: Calculated dozen coefficients for pharmacist human force during years 2006 – 2011.
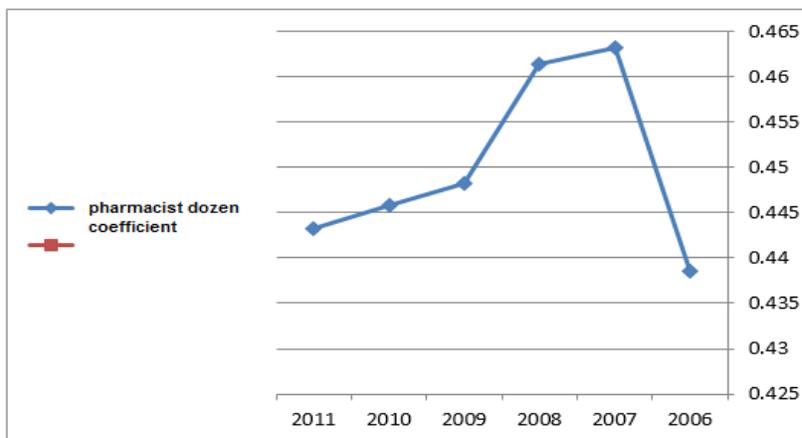
Based on the above diagram, the maximum dozen coefficient of pharmacist human force is related to years 2007 equal to .463134 and the lowest level of that is related to the year 2011 equal to .443203. The maximum unequal distribution was among years 2006 to 2007. The above table shows that the procedure of changes in dozen coefficients during the studied period first had an increasing path and then had a decreasing path with a lower gradient.

Discussion and conclusion

The dozen coefficient usually has a rather balanced distribution in case it's between .2-.35, rather unequal distribution if between .5-.35 and in case its between .7 - .5, the distribution is totally unequal (21, 22). Results show that the dozen coefficients calculated for the pharmacist human force during 2006 to 2011 was variant and had a rather variant procedure. The calculated dozen coefficients for years 2006 to 2011 was respective equal to 438586, 463134, 461382, 448142, 445739 and 443203. Results presented by Zandian & et al. (2012) shows that the amount of dozen coefficients for specialists during years 2001 – 2009 was respectively equal to .58, .57, .58, .56, .54, .56, .55, .55, .53, and .52. The procedure of inequality level among specialists had less fluctuation and in fact the condition of distribution of these doctors didn't change very much during past 8 years; although this procedure was generally decreasing and a little decrease was observed in inequality level of distribution in this work force (23) and is similar to present research's results. results presented by Zangane & et al. showed that the dozen coefficient for nurses during years 2001 – 2006 was equal to the fallowing amount respectively, 0274, 0226, 0094, 0002, 0007 and 0402 (24) which are similar to the results of the present research. Results of Chang & et al. (2009) showed that dozen coefficient changes is proportionally low for pediatricians (25) and is similar to the results presented by this research. results presented by Kioko & et al. (2009) showed that the maximum inequality n distributing pediatricians happened during years 1996-2004 in Japan rural area (18). Results of this research showed that the maximum in equality in distributing pharmacist human force was related to the years 2006 to 2007.

Therefore considering the mentioned findings we could say that there is a rather unequal distribution for pharmacist's human force in all over the province and the procedure of dozen coefficient changes which was studied for this period had an increasing path at first and then was fallowed but a decreasing gradient path. This procedure had the lowest amount in 2008 and the highest in 2011. Therefore it is advised to universities' managers and policy makers to plan and decrease this amount.

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