

Abstract

Macao is a Special Administrative Region of the **People's Republic** of China with a population of 454,300^[15]. With the return of Macao to **the mother country** since 20 December 1999, Macao benefits from the principle of “**one country, two systems**”. Macao had been a colony of Portugal for more than four hundred years.

Doctors are the most important inputs of the health system. **They are essential providers** of health services, too. In Macao, there are altogether two **hospitals as well as** approximately 397 private clinics and 201 Chinese medical institutes.^[11] **The former includes** a government hospital which is called Centro Hospitalar Conde de São Januário **and a private hospital** which is called Kiang Wu Hospital. They are responsible for providing **primary health care and hospital care**. The latter includes doctors who have established their **clinics by themselves**. They can provide primary health care and Chinese medical therapy to **Macao residents**.

There has not been any western or Chinese medical training course available in Macao until in 2000. Some universities started to provide Chinese medical training course since 2000. Because of this, senior secondary graduates who want to specialize in medicine must further their studies in other foreign countries such as Portugal, Australia, United States of America, United Kingdom, China, Taiwan, etc. Having finished their studies, Macao medical graduates have to apply for the academic approval in the Higher Education Bureau. Generally speaking, there are three choices for medical graduates to choose for their careers. Firstly, they can join the general intern training course which is held by the Department of Health every 2-3 years. They first have to pass the enrollment examination before they can join the training course. The duration of the course is about 1.5-2 years. Secondly, they can apply for job vacancies available in some private clinics. Lastly, they can establish their own private clinics. In Macao, doctors can apply for their medical licenses easily provided that they are medical graduates with at least a bachelor degree and have a site for the establishment of a clinic.

During the reign of the Portuguese government, most of the doctors were employed from Portugal and some cities in China such as Shanghai. After the return of Macao to China in 1999, localization occurred. Macao doctors gradually replaced foreign doctors. With the rapid development of Macao economy in these recent years, the population is increasing, too. This leads to the increase in the demand for health services. However, a more critical phenomenon

has occurred, that is, there are more and more doctors in Macao. This is mainly due to the lack of anticipation and careful planning on the human resources of doctors in Macao. The Macao government had once planned to construct the third hospital in Taipa. Therefore, it led to a “rush” of studying medicine. However, this plan was cancelled because the research report “Macao in the new millennium” made by a professional research team in 2000 had shown that the utility rate of the two hospitals was only 70%^[32]. The team suggested that it was not necessary for the government to build the third hospital. Moreover, the Macao government cannot control the number of candidates enrolled for medical training course in other foreign countries, so more and more senior secondary graduates specialize in medicine because of the high salaries of doctors in Macao. The excess number of doctors is also caused by the “loose” and easy procedures of applying for a medical license in Macao.

This study aims to analyze the development and evaluate the human resources of doctors in Macao. Doctor is the sole scope of analysis in this research. The objectives of this research are as follows:

1. By analyzing the development of the human resource of doctors in Macao before and after the return of Macao to China as well as the outcome of medical services provided by doctors in Macao, the supply of doctors and demand for medical services at present can be investigated.
2. Through the comparison between the number of doctors in Macao and other countries as well as the medical services in Macao, the evaluation on the demand and supply of doctors in Macao can be made.
3. By analyzing the factors affecting the number of doctors in Macao and the annual increase rate in total services, the number of doctors in the next ten years can be predicted.
4. The existing problems on the human resource of doctors in Macao can be highlighted and concluded. Suggestions and recommendations on the human resources of doctors in Macao and its sustainable development would also be given.

The methodologies employed in this research are: (1) literature review: the yearbooks of the Department of Health as well as Census and Statistics Department in Macao, Hong Kong, China and Taiwan are reviewed. The salary point system of health manpower in Macao and the entrance system of doctors in different countries are also studied. (2) Comparative study: the number of doctors, number of doctors per 1,000 population, population and Gross Domestic

Product (GDP) per capita in Macao are compared with those in different countries. They are classified into four groups: neighbouring regions, countries belonging to the Organization for Economics Cooperation and Development (OECD), developing countries and developed countries. (3) Health manpower planning: by making use of the linear regression equations and equation of straight line (two point form), the number of doctors, population, total services and GDP per capita in the next ten years are predicted.

Through the analysis on the human resources of doctors in Macao, the following results are obtained:

- (1) There are too many doctors in Macao at present. This can be supported by the following evidences: (a) By the comparative study of the number of doctors per 1,000 population and GDP per capita of different countries in the world with Macao, it is found that Macao was the 19th out of 165 in the GDP per capita and 56th out of 200 in the number of doctors per 1,000 population. The percentiles of the number of doctors per 1,000 population and GDP per capita lie on P₇₀-P₇₅ and P₈₅-P₉₀ respectively. Macao has a higher number of doctors per 1,000 population than the mean. Although Macao has an equivalent standard of GDP per capita with Canada, Macao has 2.25 doctors per 1,000 population while the number of doctors per 1,000 population in Canada is 2.09. As a result, it is obvious that there are too many doctors in Macao. (b) The annual increase rate of the number of doctors is greater than that of health outputs. In other words, doctors are increasing at a greater rate than health outputs. (c) The procedures for applying a medical license in Macao are too loose, simple and easy. It leads to the phenomenon of “lack of professional doctors but too many doctors in Macao”.
- (2) The existing problems on the human resources of doctors in Macao are also revealed: (a) Lack of anticipation on the demand and supply of the number of doctors in Macao. (b) Lack of standardized system on licensure registration and re-registration. (c) Lack of a standardized medical training program. (d) Lack of a standardized system on the assessment of doctors in Macao.

In a nutshell, it can be concluded that because of the lack of detailed planning and anticipation on the number of doctors needed in Macao, there are too many doctors in Macao at present. It is also obvious that anyone who has completed an approved medical training program can apply for a medical license and can obtain it with great ease. It so happens that there is a

phenomenon of “lack of professional doctors but too many doctors” existing in Macao at present. Moreover, the medical standard or level of freshmen or doctors cannot be ensured to protect the healthy rights of the public in Macao. The quality of doctors and medical services provided cannot be ensured without the establishment of a standardized system on the assessment of doctors. Last but not the least, because of the problems existing in the human resource management of doctors, the most miserable “victims” are the medical graduates. This is a very embarrassing problem to them. They may have to face psychological stress and social discrimination on their medical profession when they are forced to shift their profession to find other jobs in order to support their living.

Owing to the problems existing in the human resource management of doctors in Macao, strategies and measures must be taken to solve the embarrassing problem. They are: (a) The number of doctors needed in Macao must be investigated. Statistics should be made to investigate the unemployment rate of medical graduates and the number of medical students studying medical courses in other foreign countries so that a more clear-cut idea on the seriousness of this problem can be revealed. (b) A standardized system on both the medical training program and issue of medical licenses to medical graduates should be established. (c) An authorized organization should be established for the assessment of doctors regularly. (d) More financial resources should be allocated to train post-medical graduates so as to increase their competitiveness.

Key words human resources of doctors; Macao SAR; development; evaluation