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## ORIGINAL PAPER

**Psychiatrists in Malaysia: The Ratio and Distribution***Ng Chong Guan<sup>1</sup>, Toh Chin Lee<sup>2</sup>, Benedict Francis<sup>1</sup>, Tan Shean Yen<sup>3</sup>*<sup>1</sup>Department of Psychological Medicine, Faculty of Medicine,  
University of Malaya, Malaysia<sup>2</sup>Ministry of Health, Malaysia<sup>3</sup>Faculty of Medicine, University of Malaya, Malaysia**Abstract**

**Introduction:** We are aware of the shortage of psychiatrists in Malaysia. However, there is no formal report on the distribution and ratio of psychiatrists in each state in Malaysia. We aim to do a detailed count of the number of psychiatrists in the country. **Methods:** We obtained the figures for the psychiatrists practicing in the government, private and university settings by accessing the Ministry of Health database, information from the Malaysian Psychiatric Association, Malaysian Mental Health Association, National Specialist Register and websites of the respective Universities. The total number and ratio of psychiatrists per 100,000 population are calculated. **Results:** There was a total of 410 registered psychiatrists in Malaysia in the private universities, private clinics, public universities and government hospitals. The state with the highest number of psychiatrists is Wilayah Persekutuan Kuala Lumpur with a total of 94 psychiatrists which has a ratio of 5.24 per 100, 000 population followed by Wilayah Persekutuan Putrajaya with 3.38 per 100,000 population. The states with the least ratio of psychiatrists are Sabah with 0.54 and Kedah with 0.55 per 100, 000 population. **Conclusion:** There is a discrepancy in the geographical distribution of psychiatrists in Malaysia. People living in larger, urban states have better access to mental health care whereas the smaller states face a serious lack of psychiatrists. More effort should be taken to improve mental healthcare in Malaysia as recommended by WHO with one psychiatrist for every 10, 000 population.

**Keywords:** Psychiatrist, Malaysia, Count, Ratio, Distribution**Introduction**

Malaysia is a developing nation, and located in South East Asia, is the epicenter of the cultural melting pot which defines the region. Consisting of people from a

multiethnic and diverse cultural background, Malaysia is indeed a colourful and vibrant nation. Mental health issues have been in the spotlight recently as the National Health and Morbidity Survey 2015 reported that 30 % of Malaysians suffered from some form of

mental illness. This is a worrying figure as mental health awareness is still in its infancy in Malaysia [1]. Thus mental health resources need to be mobilized as it is clearly lacking in Malaysia, as compared to developed nations.

The history of psychiatric services in Malaysia can be traced back to the setting up of the first asylum for the mentally insane in Penang in the 1890s. In the first decades of the 20<sup>th</sup> century, two hospitals were built for the mentally ill – Hospital Taiping and also Hospital Tanjung Rambutan. The latter was an institution which housed mentally ill patients and was built in 1911, with 280 beds [2]. In East Malaysia, similar institutions were constructed in Sabah and Sarawak. Some years later, the country's next mental institution was set up in Johor, which is at the southern tip of the country. This institution was named Tampoi Hospital and is now known as Hospital Permai, and it was completed in 1935.

Up to that point in time, mental health treatment was focused on institutional care, and there was high prevalence of stigma towards the patients. This ultimately led to poor quality of care for the patients and very low remission and recovery rates. Mental health treatment in Malaysia during the early days was seen as managing chronic, irreversible illness and efforts were mainly focused on custodial care, rather than rehabilitative and curative approaches [3]. Thus when the first psychiatry ward in a general hospital was started in the Penang General Hospital in 1958 it was a paradigm shift for Malaysian psychiatry as for the first time people with mental illness were housed under the same roof as other patients [4]. The first local psychiatrist in Malaysia was Dr M. Subramaniam in 1961, followed by Tan Eng Seong in 1963 who was sent to Tampoi Mental Hospital. In 1962, Dr Eric

Dax was commissioned by the World Health Organization (WHO) to review the mental health policy and treatment of mental illness in Malaysia. He was instrumental in revolutionizing mental health care in Malaysia. Under his leadership, the Mental Disorders Ordinance 1952 was revised and the quality of mental health delivery in the country was given an upgrade [2]. The Malaysian Psychiatric Association (MPA), which was founded in November 1976 by Dr MP Deva and Dato Sri' Dr M. Mahadevan, took on the role of nurturing the field of psychiatry, still at its nascent stage at the time [5].

The first psychiatry department at a Malaysian university was set up in 1966 at University Malaya (UM), followed by the Masters in Psychological Medicine programme in 1973. The graduating first batch of UM produced three fledgling psychiatrists who would pave the way for many more future psychiatrists in the country [3]. The setting up of a Conjoint Board in the year 2000 further boosted the development of psychiatry in the country. The board oversaw the general development of the post-graduate Masters programme and played a vital role in coordinating the academic curriculum as well as to collate input from various academicians psychiatrists in the country. The number of psychiatrists has continued to grow since the Conjoint Board was set up. In 2010, there were a reported 224 psychiatrists in the country [6], however this number has only increased marginally. This number is a far cry from achieving the WHO's psychiatrist to population ratio of 1:10000, which requires at least 3000 psychiatrists [7]. In order to fulfil the WHO ratio, the Ministry of Health encouraged the development of the parallel pathway to specialization by encouraging more candidates to train for the Member of the Royal College of Psychiatry

(MRCPsych) qualification between 2012-2014. Expanding recognition to the parallel pathway is expected to encourage more doctors to pursue psychiatry, as there is a great need for psychiatrists in the country.

To date, there is no formal report on the number and ratio of psychiatrists in Malaysia. There is imbalance in the distribution of psychiatrists between states in Malaysia. In the current study, we aim to determine the number of psychiatrists who are practicing not only in the government hospitals but also in the private settings and Universities in Malaysia. We will also calculate the ratio and distributions of psychiatrists in each state.

## Methods

This is a cross-sectional manual count of the number of psychiatrists in Malaysia. As the number of psychiatrists is growing from time to time, we ended the count on 31<sup>st</sup> June 2018. The psychiatrists included in the count are those graduated from the local masters training program and those overseas graduates who are recognized by the Malaysian Medical Council. For the local graduates, those who completed their gazettement will only be included in the count.

We obtained the number of psychiatrists in the government setting from the Ministry of Health database. For both the public and private universities, the number of psychiatrists is taken from the universities database, websites and personal contacts with the respective head of department.

The number of psychiatrists in private practice is gathered from the psychiatry related pharmaceutical industry database and personal contacts with the senior psychiatrists in each state in Malaysia. The number of counts is counter-checked with the Malaysian Psychiatric Association (MPA) Database and Malaysian Mental Health Association (MMHA) Website. We also check the list of psychiatrists registered in the National Specialist Register (NSR), Malaysia.

The number of psychiatrists in each state was calculated and summed. The population of the country and each state was obtained from the Department of Statistics, Malaysia ([www.dosm.gov.my](http://www.dosm.gov.my)). The ratio of psychiatrists per 100,000 population for each state is calculated using the formula below:

$$\text{Ratio} = \frac{\text{number of psychiatrists}}{\text{population}} \times 100,000$$

## Results

**Table 1. Ratio and Distribution of Psychiatrists in Malaysia in 2018**

States	Private University <sup>a</sup>	Public University <sup>b</sup>	Private Practice	Government Hospital <sup>c</sup>	Total Psychiatrists in each state <sup>d</sup>	Population <sup>e</sup>	Psychiatrist per 100,000 population
Perlis	0	0	0	3	3	253100	1.18
Kedah	0	0	3	9	12	2166200	0.55
Pulau Pinang	5	0	8	9	22	1767900	1.24
Perak	3	0	5	32	40	2507200	1.59
Selangor	4	28	17	29	78	6448400	1.20
W. P. Kuala Lumpur	23	28	23	20	94	1792600	5.24
W. P Putrajaya	0	0	0	3	3	88700	3.38
Negeri Sembilan	3	0	2	10	15	1130600	1.32
Melaka	2	0	2	5	9	924900	0.97
Johor	5	0	8	28	41	3737200	1.09
Pahang	0	0	1	11	12	1664000	0.72
Terengganu	0	3	0	8	11	1226000	0.9
Kelantan	0	7	0	10	17	1854500	0.92
Sabah	0	4	4	13	21	3915100	0.54
Sarawak	0	2	7	22	31	2789400	1.11
W.P. Labuan	0	0	0	1	1	98400	1.01
<b>TOTAL</b>	<b>45</b>	<b>72</b>	<b>80</b>	<b>213</b>	<b>410</b>	<b>32364200</b>	<b>1.27</b>

<sup>a</sup> University of Malaya, Universiti Kebangsaan Malaysia, Universiti Sains Malaysia, Universiti Malaysia Sarawak, Universiti Putra Malaysia, International Islamic University, Universiti Teknologi MARA, Universiti Malaysia Sabah, Universiti Sains Islam Malaysia, Universiti Sultan Zainal Abidin, Universiti Pertahanan Nasional Malaysia

<sup>b</sup> International Medical University, Penang Medical College, Monash University School of Medicine and Health Sciences, Melaka Manipal Medical College, Universiti Kuala Lumpur - Royal College of Medicine Perak, Cyberjaya University College of Medical Science Faculty of Medicine, UCSI University, Management & Science University, AIMST University, MAHSA University, Newcastle University Medicine Malaysia, Perdana University Graduate School of Medicine, Perdana University Royal College of Surgeon, SEGi University, Taylor's University, Universiti Tunku Abdul Rahman, WIDAD University College, QUEST International University, Asia Metropolitan University School of Medical and Health Sciences, Lincoln University, Universiti Islam Antarabangsa Sultan Abdul Halim Mua'dzam Shah

<sup>c</sup> There were twenty master graduates who passed their professional examination on May 2018 but not included in the count as they have not completed their gazettelement.

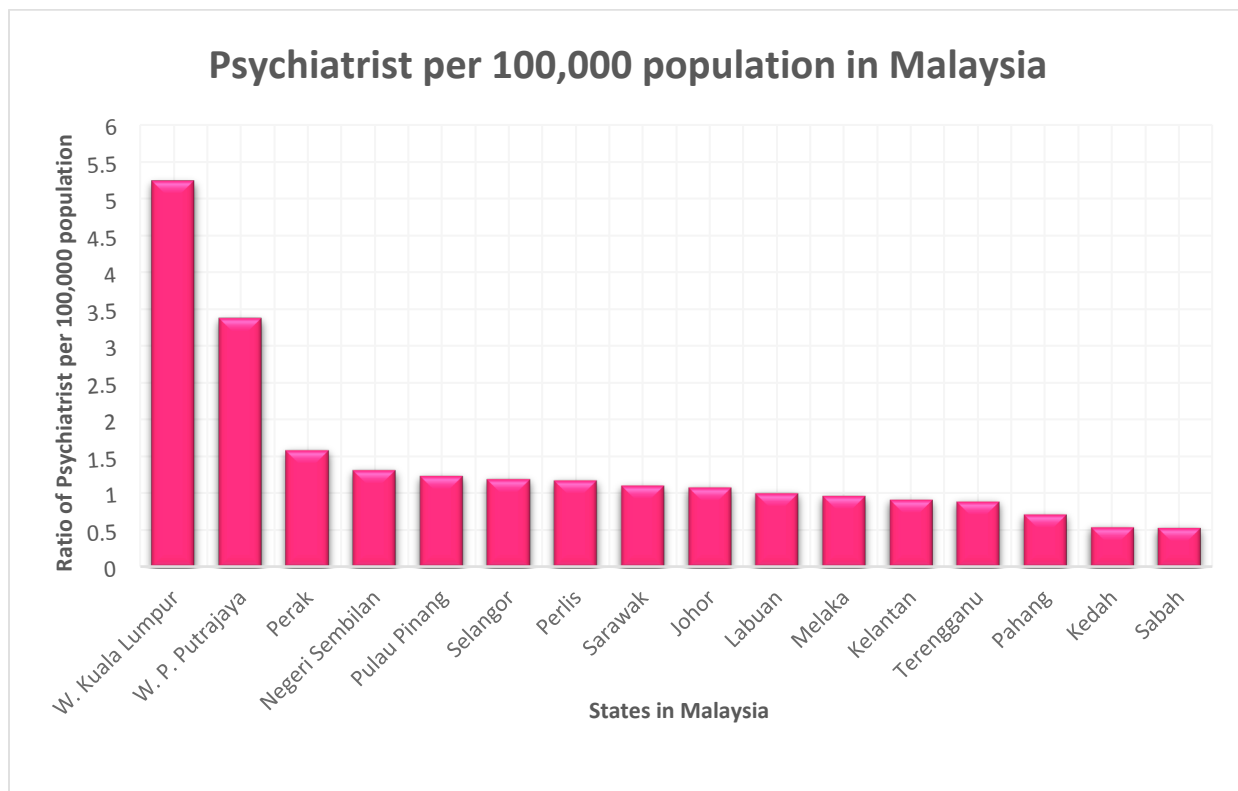
<sup>d</sup> Ministry of Health Data

<sup>e</sup> Based on Department of Statistics, Malaysia ([www.dosm.gov.my](http://www.dosm.gov.my))

Table 1 shows the number of psychiatrists in different states in Malaysia. The total psychiatrists in Malaysia was 410, which is only 0.02% as for the Malaysian population. The three states with the highest number of psychiatrists are Wilayah Persekutuan Kuala Lumpur (66) followed by Selangor (50) and Perak (40). Wilayah Persekutuan Labuan has only one psychiatrist. For the ratio of

psychiatrists per 100,000 population in Malaysia in 2018 is only 1.27. Wilayah Persekutuan Kuala Lumpur has the highest ratio (5.24 per 100, 000) followed by Wilayah Persekutuan Putrajaya (3.38 per 1000,000). Sabah and Kedah have the lowest ratio which are 0.54 and 0.55 per 100,000 population respectively.

**Figure 1. The Ratio and Distribution of Psychiatrists in Malaysia**



This figure shows the ratio of psychiatrists per 100, 000 population in Malaysia. Wilayah Persekutuan Kuala Lumpur has the highest ratio of psychiatrist followed by

Wilayah Persekutuan Putrajaya. Sabah is shown to have the lowest ratio of psychiatrist compared to all states in Malaysia.

## Discussion

As of year 2018, there is a total of 410 registered psychiatrists in Malaysia with 213 doctors in the government sector, 80 doctors in the private sector, 72 doctors in the public universities and 45 in the private universities. The state with the highest number of psychiatrists is the capital city of Kuala Lumpur with a total of 94 doctors. However, most of the psychiatrists have opted to work in private setting (23 doctors) and universities (51 doctors). This is followed by the state of Selangor, Johor Bahru and Perak with a total of 78, 41 and 40 psychiatrists respectively. Subsequently, Sarawak takes the lead by having 31 psychiatrists in its state. 22 psychiatrists are working in the government sector while the remaining 9 doctors operate their own private clinics. Penang has 13 psychiatrists working in the private sector and 9 in the public hospitals, making up to a total of 22 psychiatrists on the island. Sabah and Negeri Sembilan have 21 and 15 psychiatrists respectively. With 12 doctors in each state are Kedah and Pahang whereby more of the doctor work with the government than privately. Kelantan, Terengganu and Melaka have a total of 17, 11 and 9 psychiatrists respectively. However, for the state of Kelantan and Terengganu, there are no psychiatrists working privately. The states with the least psychiatrists are Labuan, Putrajaya and Perlis. Labuan only has one psychiatrist working in the government sector while Putrajaya and Perlis have a total of three each who are also from the public sector. Overall, we can see that the geographical distribution of Malaysian psychiatrists is strongly correlated to the population size of the different states and they are unevenly distributed throughout the nation.

The ratio of psychiatrist per 100,000

population in Malaysia is only 1.27 which still does not achieve WHO recommendation. As for ratio of psychiatrist according to each state in Malaysia, Wilayah Persekutuan Kuala Lumpur has the highest ratio of psychiatrist which is 5.24 followed by Putrajaya which is 3.38 and Perak 1.59. Meanwhile, Negeri Sembilan, Pulau Pinang and Selangor have ratio of 1.32, 1.24 and 1.2 respectively. Moreover, Perlis, Sarawak, Johor followed by Labuan, 1.18, 1.11, 1.09, and 1.01 subsequently. Furthermore, Melaka, Kelantan and Terengganu have ratio of 0.97, 0.92, and 0.90 respectively. Whereas, the states with the least ratio of psychiatrists are Pahang, Kedah, Sabah which are 0.72, 0.55 and 0.54 respectively.

More and more people around the world are facing mental health issues nowadays. According to the Global Health Estimates report by WHO, nearly 50% of the total number of people having depression live in the Western-Pacific and South-East Asia Region due to the relatively large population size of these two regions [8]. South-East Asia is made up of 11 countries and most of these countries are classified under the low-income group according to the World Bank criteria. The poor financial state and severe lack of human resources in these affected countries contribute to a high treatment gap of 90%, exposing them to various mental health issues and challenges. Out of these 11 countries, 9 of them have lesser than one psychiatrist per 100,000 people. [9] The WHO's Global Health Observatory data repository has shown that Indonesia, Philippines and Thailand have only 0.29, 0.46 and 0.87 mental health doctors per 100,000 population respectively. Singapore has 3.48 psychiatrists per 100,000 population which is a higher figure in comparison to the other countries in its region. China has 1.53 psychiatrists per 100,000 population for the year 2011

whereas India has about 0.30 mental health doctors per 100,000 people [10]. In the US, there are around 28,000 psychiatrists and 12.4 doctors per 100,000 population. However, there is a rapid decrease in numbers as many are close to retirement age - at least 3 out of 5 practising psychiatrists are older than 55 years old [11].

It is estimated that 1 in every 10 persons may require mental health support at a point in time. There is still a shortage of psychiatrists as the global median remains only around one psychiatrist per 100,000 population. In comparison to low-income countries, richer countries have approximately 120 times more mental health doctors [12]. In Malaysia, the prevalence of mental health issues has been steadily increasing from 10.7% in 1996, to 11.2% in 2006, to 29.2% in 2015. World Health Organization (WHO)'s Global Health Observatory data repository showed that there were only 0.76 psychiatrists per 100,000 population for Malaysia in 2015 [10]. WHO has recommended a ratio of psychiatrists to the Malaysia population of 1:10,000. However, the current ratio is only 1:200,000 [13]. In the current study, we showed that there were only 1.27 psychiatrists per 100,000 population in Malaysia. This severe shortage of psychiatrists in the country may pose several problems for those who are facing mental health problems, including delay in seeking treatment, seeking alternative treatments which are not evidence-based, long waiting time for psychiatric consultation, low-quality outpatient mental health care, poor compliance to follow-up and treatment, increase in drug abuse and addiction cases, surge in suicide rates, unemployment and homelessness. In addition, general practitioners have to shoulder the burden of treating these patients and are unlikely to provide the requisite standard of care e.g.

psychotherapy. Current practising psychiatrists may also face high burnout rates due to the increasing demand. The psychiatric workforce is unevenly distributed in most countries with larger, affluent cities being most concentrated with psychiatrists. Hence, the rural poor may face difficulty accessing basic mental health care due to the lack of resources.

The growing world population means that the number of people with mental health problems is on the rise especially in lower-income countries. In 2015, it was estimated globally that more than 300 million people have depression [8]. Clearly, there is an increasing need for more psychiatrists in order to meet the new demand. To address this shortage issue, it is important for the government, medical council and media to help increase awareness among healthcare professionals, workers and public regarding the urgent need in this field. Besides that, in order to encourage more doctors to specialise in psychiatry, medical undergraduates should be provided with a high-quality psychiatry rotation as part of their medical course. By having more clinical experience with real-life patients, hands-on mental health training and dedicated tutors to mentor them, students will be more engaged in this field and this will simultaneously increase their interest to become future psychiatrists. Furthermore, psychiatrists should partner closely with other mental health professionals such as psychologists and counsellors to provide other forms of therapy for their patients and also help ensure increased access and a better standard of care for them. In addition, more training positions, specialty programmes or certifying examination for psychiatry should be introduced or provided for doctors who are interested in pursuing psychiatry. Efforts should also be made to ensure that the Malaysian population has



greater access to self-care resources, mental health promotion, mental health literacy and prevention of mental illness. Greater use should be made of information and communication technology (ICT) especially mental health websites, mobile applications, helplines, telemedicine and artificial intelligence to mitigate the effects of having small numbers of psychiatrists and other mental health practitioners.

There are some limitations in this study. Firstly, there is difficulty in obtaining an exact count of the total number of psychiatrists who are working in the government and private setting in Malaysia as there is no formal or official database. Most of the data were obtained through manual online search, calls and emails to various medical institutions and hospitals, word of mouth and various colleague contacts. Secondly, there are some new masters graduates in psychiatry who are yet to be included officially in the Ministry of Health's list. Thirdly, some psychiatrists might have stopped working or retired but their names were still on the official list. Hence, the contents of the data may be subjected to some under- or overestimation. However, we have tried to minimize error by thoroughly checking through the data we have obtained from various sources and ensuring there is no overlapping between psychiatrists.

Overall, there is a discrepancy between the geographical distributions of psychiatrists in Malaysia. People living in larger, urban states have better access to mental health care whereas the smaller states face a lack of psychiatrists. There should be a more uniform distribution between all geographical locations within the country. At the same time, more effort and steps should be taken to address the issue of shortage of psychiatrists in Malaysia in view

of the increasing demands of mental health services. Collaborative effort between all parties involved is required to help achieve a ratio of psychiatrists to the Malaysia population of 1:10,000 as recommended by WHO.

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