

# A Review of Depression Research in Malaysia

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## SUMMARY

Depression is a debilitating illness and has become a leading cause of morbidity globally. We aim to summarise the evidence available in regard to the prevalence, type of assessment tools used and treatment options for depression in Malaysia. Two hundred and forty seven articles related to depression were found in a search through a database dedicated to indexing all original data relevant to medicine published in Malaysia between the years 2000-2013. Fifty seven articles were selected and reviewed on the basis of clinical relevance and future research implications. Findings were summarised, categorised and presented according to prevalence of depression, depression in women, depression in clinical condition, assessment tools, and treatment of depression. The prevalence of depression in Malaysia was estimated to be between 8 and 12%. The figures were higher among women of low socio-economic background or those with comorbid medical condition. The common assessment tools used in Malaysia include Beck Depression Inventory (BDI), Depression, Anxiety and Stress Scale (DASS), Patient Health Questionnaire 9 (PHQ-9) and Hospital Anxiety and Depression Scale (HADS). They were translated into the Malay language and their psychometric properties were established. Both pharmacological treatment and psychotherapy were commonly used in Malaysia, and were highly recommended in local clinical practice guidelines. There are discrepancies in the reported rates of depression in Malaysia and this needs to be addressed. There were lack of studies looking into the depression among subgroups in Malaysia especially in the male population. There were several instruments available for assessment of depression in Malaysia but their suitability for the local setting need further research. Both pharmacotherapy and psychotherapy were recommended in the local treatment guideline in Malaysia. With the emergence of generic medication, we need to compare their clinical efficacy and tolerability with original products.

**KEY WORDS:** *Depression, prevalence, instrument, treatment, Malaysia*

## SECTION 1: REVIEW OF LITERATURE

### EPIDEMIOLOGY

Depression is one of the most common mental disorders worldwide<sup>1</sup>. It is characterised as deterioration from previous function with the presence of psychological complaints such as depressed mood, loss of interest or pleasure, feelings of worthlessness or guilt and recurrent thoughts of death or suicide, together with somatic symptoms which include significant weight change, sleep disturbance, physical agitation or retardation, fatigue and inability to concentrate<sup>2</sup>. Depression

has become a leading cause of morbidity over the past decades. It is projected that depression, will be among the major causes of worldwide disability by the year 2020 and the highest disorder in high income countries<sup>3</sup>.

In Malaysia, national surveys were conducted in community households by trained medical professionals every decade; and these surveys found that mental health problems had increased from 10.7% in 1996 to 11.2% in 2006<sup>4,5</sup>. In the National Health Morbidity Survey IV (NHMS IV) 2011 report, the prevalence of lifetime depression was 2.4% and current depression was only 1.8%<sup>6</sup>. The figures were surprisingly low and could be related to under-reporting by the informants and the poor validity of assessment tools. This survey also found that depression was high in urban areas, and among females, Indians, widowed, singles, divorced and those with lower education<sup>6</sup>.

In view of its high prevalence and morbidity, depression has become a popular topic of research in Malaysia. Various studies have been conducted to look into the prevalence, risk factors, treatment options and outcome of depression in different populations in Malaysia.

According to the review article by Firdaus and Tian, the prevalence of depression in Malaysia varied from 3.9 to 46%. The authors advised caution about the interpretation of the result as some studies used depressive symptoms, while others used current depression or lifetime depression<sup>7</sup>. In addition, the studies used different scales and involved different populations. In the context of geographical variation, there were differences in the ethnic composition, economic growth and cultural background among different states in Malaysia. A study conducted by Siti et al in Selangor, one of the most developed states in Malaysia, showed that the prevalence of depression was 10.3%. In the study, Patient Health Questionnaire 9 (PHQ-9) with the cut-off score of 10 or more was used to determine the presence of depression<sup>8</sup>. This finding showed a slightly higher rate than a prior study by Sherina et al (8.3%), which also used a similar scale and was conducted among adult women in Selangor<sup>9</sup>. However, another study by Sidik et al, conducted in the government clinic in Selangor, reported the prevalence of depression as 12.1%<sup>10</sup>. This was in line with the finding of a study done in a poor urban district area in Selangor, in which the reported prevalence of depression was 12.3%<sup>11</sup>.

As comparison, a study by Wong et al, was conducted in the rural area in the East Coast of Malaysia. The aim of the study was to determine the rate of anxiety and depression among the rural folk in Malaysia using the Hospital Anxiety and Depression Scale (HADS)<sup>12</sup>. Results from the study showed that the rate of depression in the rural community was 11.3% and surprisingly corresponded with the studies involving urban or

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metropolitan communities in Malaysia. Overall, the prevalence of depression in the general population in Malaysia is about 8 to 12 % regardless of the geographical differences of the study settings.

## RISK FACTORS

### Depression in Women and during Pregnancy

Most studies found that mental illness was more prevalent in women. This could be associated with the hormonal changes in women during the fertility, pregnancy, and menopausal period<sup>13</sup>. In addition, there was generally higher level of stress in women due to their multitasking responsibilities. Most women, especially for those staying in the urban area have to juggle their job and household duties. In the long run, this creates an unbearable amount of mental burden for the women.

Based on the Malaysian National Health and Morbidity Survey (NHMS), the prevalence of poor mental health among Malaysian women was increased from 11.2 % to 12.1% within a decade<sup>4,5</sup>. Study by Sherina et al, showed that the prevalence of depression among Malaysian women was 8.3% and significantly associated with history of miscarriage within the past 6 months or absence of formal education<sup>9</sup>. In a subsequent study in a different setting, the authors found that the prevalence was as high as 12.3% and associated with social factors such as financial problem, parent-child relationship, family relationship, work stress and history of serious illness<sup>10</sup>. The figure was much higher in women from low socio-economic background. A study by Omar Din and Mohd Noor, which involved Malay women from rural and urban areas of low socio-economic status showed that the prevalence of current depression was as high as 34.5% and lifetime prevalence of depression was 27.5%<sup>14</sup>.

The occurrence of mood changes after delivery which is generally known as postpartum blues is common<sup>15</sup>. If the condition becomes severe and lasts longer than expected, it is considered postpartum depression. It has deleterious effects on the mother. There were two review reports of the prevalence of postpartum depression in Malaysia. The first review paper by Klainin P, Arthur<sup>16</sup> compared the prevalence of postpartum depression across Asian countries. A total of 64 studies from 17 countries were included in the review. One of the Malaysian studies displayed the lowest rate of postpartum depression (6.5%) but another study reported a prevalence as high as 22.8%<sup>16</sup>. These findings corresponds with the results of the second review paper by Firdaus and Tian<sup>7</sup>. There are various biological and psychological models postulated to explain postpartum depression. The physiological changes in the women during and after pregnancy were believed to contribute to the emotional changes<sup>13</sup>. The lack of self-control, learned helplessness and distorted thought processes in post-delivery women are some of the psychological models for postpartum depression<sup>17,18,19</sup>.

### Depression in Patient Groups

Existing medical conditions or chronic illnesses cause a lot of stress to the patients. As a result, depression is a common comorbidity in patients with chronic diseases. The co-existence of both conditions worsen the illness outcome and quality of life, reduce compliance to medication, and delay the recovery process of the patients. A study by Hairi et al, found that a higher proportion of older people with combined chronic diseases and depressive symptoms reported having functional limitation (44.7%) compared with older people with chronic diseases alone (12.5%) and depressive symptoms alone (18.1%)<sup>20</sup>.

Diabetes mellitus is a common medical condition in Malaysia. A study by Kaur et al, was conducted in 12 government clinics in Klang Valley, Malaysia to determine the prevalence of depression, anxiety and stress in diabetic patients. The results showed that the prevalence of depression was 11.5% which was not higher than the findings in community studies<sup>21</sup>. In contrast, another study by Ng showed that the prevalence of depression in diabetic patients was high as 22%<sup>22</sup>. The prevalence of depression was even higher in post stroke patients where the figure reported was 36% by Sulaiman et al and 66% by Glamcevski II et al<sup>23,24</sup>. This finding is similar with the study on vascular dementia patients by Khoo et al, in which the reported prevalence of depression was 31.6%<sup>25</sup>.

Overall, the prevalence of depression was significantly higher in patients with comorbid clinical condition as compared to the general community. However, there were lack of comparison studies between the two groups in Malaysia. Zuraida et al conducted a case control study to compare the prevalence of depression in patients with headache. The findings showed that the lifetime prevalence of major depression among the subjects with headache was 17% (n=18) vs 0.9% (n=1) among the controls. The current prevalence of major depression was 8.4% (n=9) among the subjects vs 0% among the controls<sup>26</sup>.

### Assessment Tools

Various assessment tools have been developed for the measurement of depression. Beck Depression Inventory was one of the most common tools used in Western studies. A review of the assessment tools used for depression in Malaysia were done by Firdaus and Tian. The common tools used were Beck Depression Inventory (BDI), Depression, Anxiety and Stress Scale (DASS), Patient Health Questionnaire (PHQ), and Hospital Anxiety Depression Scale (HADS)<sup>27</sup>.

All of the tools developed from the Western setting were in English. The applicability of the instruments in Malaysia was restricted by the language and cultural influence. Thus, it is important to translate the instruments into local languages if possible and establish their validity and reliability in the local setting in Malaysia.

Beck Depression Inventory II was translated into the Malay Language and its psychometric properties were studied by Wan Mahmud et al among a group of postpartum women in Malaysia. The findings showed that the internal reliability of the tool was high (Cronbach alpha =0.89). The tool also showed a good discriminant and concurrent validity<sup>28</sup>.

The validation study of Malay version of DASS 21 was done by Ramli et al. The results showed that Malay version of DASS-21 had very good Cronbach's alpha values of 0.75, 0.74 and 0.79, respectively for depression, anxiety and stress subscales. For construct validity, it also had good factor loading values for 17 out of 21 items<sup>29</sup>.

Criterion validity study of PHQ was conducted by Sherina et al in a primary care setting in Malaysia. The PHQ-9 was validated in the Malay language against the Composite International Diagnostic Interview (CIDI) depression module. The results showed that the PHQ-9 had a sensitivity of 87% (95% confidence interval 71% to 95%), a specificity of 82% (74% to 88%), positive Likelihood Ratio (LR) of 4.8 (3.2 to 7.2) and negative LR of 0.16 (0.06 to 0.40). The authors concluded that the Malay version of the PHQ-9 was a valid and reliable case-finding instrument for depression.

The psychometric properties of the Malay version of HADS were done by Nasir et al among husbands of cancer patients in Kuala Lumpur, Malaysia. The findings demonstrated the scale's excellent internal consistency, with Cronbach's alpha of 0.88 for the Anxiety subscale and 0.79 for the Depression subscale. The Malay version of HADS was recommended as an appropriate tool to measure depression and anxiety in Malaysia<sup>31</sup>.

#### MANAGEMENT AND OUTCOME

There were not many investigator-initiated studies on the treatment of depression in Malaysia. The review article by Firdaus and Tian, found that, until 2007, there were only 12 studies on the treatment outcomes of depression in Malaysia<sup>27</sup>. Out of these, 8 were randomised controlled trials. There was a recent study examining the efficacy of methylphenidate as add on therapy to mirtazapine for the treatment of depression in cancer patients and a positive rapid response was found in the intervention group<sup>32</sup>.

In Malaysia, the Ministry of Health with the collaboration of the Academy of Medicine and Malaysian Psychiatric Association had introduced a Clinical Practice Guideline (CPG) for the Management of Depression<sup>33</sup>. The guideline was developed to provide evidence-based guidance to manage major depressive disorder (mild/moderate/severe) in adults and the elderly. The guideline recommends both psychotherapy (Cognitive Behavioural Therapy, CBT) and pharmacotherapy. In severe cases of depression with psychosis, pharmacotherapy or electro-convulsive therapy was the main choice of treatment. With regard to the algorithm of pharmacotherapy, the first line treatment recommended in the guideline was monotherapy with selective serotonin reuptake inhibitor (SSRI). The treatment period recommended was 4 weeks or longer for the acute phase till remission, 6 to 9 months for the continuation phase, and at least two years for the maintenance phase.

## SECTION 2: RELEVANCE OF FINDINGS FOR CLINICAL PRACTICE

Despite the high prevalence of depression reported in the literature, we believe that there are still a significant number of undiagnosed depressed cases in Malaysia. This may be related to the lack of awareness and fear of stigmatisation among the Malaysian population, the clinicians' over focus on the physical complaints, and the culture of seeking alternative treatment. With the latest advancement in the treatment of depression, it is crucial to identify depressive cases at an early stage. This will enable patients to receive the necessary intervention to minimise the level of their suffering and ensure a better quality of life.

Primary care physicians are the gatekeepers of Malaysia's healthcare systems. Most of them have long-term follow-ups with the family members and established good rapport with the patients. They are the principal care provider who screen, identify and manage depression in the Malaysian population. In view of the high number of patients seen in the primary care setting, a quick and easy-to-use tool is needed for the physicians. The awareness of the risk of depression should be spread to encompass all subgroups of the population including those who are medically ill, cancer patients, children and adolescents, and their caretakers.

## SECTION 3: FUTURE RESEARCH DIRECTION

The reported rates for depression in Malaysia vary widely. A national large scale study using validated tool will be helpful to refine or determine a more accurate rate of depression in the country. There is also the need to study the prevalence of depression in some subgroup population such as children, adolescents, medically ill or cancer patients and their caretakers. In addition, there is no study on depression among the male population in Malaysia.

The psychometric properties of some depression screening tools were studied in previous research. The results were more academically relevant than practical, as all of the scales were designed by Western researchers; while the Malaysian population is multi-ethnic with different religious and cultural backgrounds. The presentation of depressive symptoms could be varied. As a result, items of existing scales need to be examined in detail to develop a locally applicable scale to increase the sensitivity of screening of depression among the Malaysian population.

Local treatment guidelines have recommended pharmacotherapy and psychotherapy. However, primary prevention such as public education, awareness programmes and screening activities are crucial and should be implemented regularly for all levels of the population. Collaboration between the media, private practices and the government are important to achieve these objectives and disseminate the information. Psychoeducation, community services and compliance therapy ensure the maintenance of psychological well-being among the depressed patients.

Local research findings are important to provide information about the current depression situation in the country and the efficacy of the treatment options. However, as there are many unpublished thesis and research projects on this topic in the local universities, the setting up of an online repository of all these publications would be helpful so that the information can be effectively disseminated to all relevant parties.

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