Prevalence of Psychological Distress and Depressive Disorders among Married Working Women in Malaysia

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Abstract

This two-phase study examined the prevalence of depressive disorders among married working women in a sub-urban area in Malaysia. The Malay version of the General Health Questionnaire-12 (GHQ-12) was used for initial screening. Using multistage cluster sampling, there were 700 subjects from 25 workplaces that were approached, of which 307 filled out GHQ-12 in the initial phase. The prevalence of psychological distress (GHQ 2/3 cut off) is 22.8\% (n=70, 95\% CI 18.1-27.5). In the second phase, all 49 consenting patients who were screened positive for severe psychological distress (GHQ 3/4 cut off point) were telephone-interviewed by a trained psychiatrist with the Malay version of Mini International Neuropsychiatric Interview (M.I.N.I) to diagnose depressive disorders. The prevalence of depressive disorders was 5.5\% (n=17, 95\% CI 3.5-7.5). The prevalence of depressive disorders is comparable to those found in the working population worldwide.

Keywords: Prevalence; Depressive Disorder; Psychological Distress, Working Women

Introduction

Psychological distress and depression are highly prevalent in women and more so in women as compared to men. The lifetime prevalence rate of depression in women almost double that in men (21.3% versus 12.7\%) according to the United States National Co-morbidity Survey\(^1\). This ratio has been documented in different countries and ethnic groups\(^2\). The condition tends to peak at the age of 25-44 years; the child bearing age and most economically productive years for working women.

While there have been a number of studies characterizing the general population suffering from depression, it is still not clear as to what extent the general population is representative of the working population\(^3\).
Among the working population, the rate of depression in both male and female employees was found to be higher with 36% reported having high and 42% having moderate levels of depressed mood according to a Canadian survey⁴.

While those figures are for non-specific depression, the prevalence of clinical depression or depressive disorders are generally lower. Major depression, a type of depressive disorders, was estimated to range from 1.8% to 3.6% in the labour force in the United State¹. The figures are comparable as those in other countries: Canada 5.6%⁵ and South Korea 2.4%⁶. A more recent western epidemiological study showed prevalence of 4.9%⁷. Data on the prevalence of psychological distress or depressive disorders in working women is still lacking. This is an important area to be explored as there has been a steady increase in number of women getting into labour force over the years, particularly since the past few decades⁸, ⁹. In United States of America, women comprise approximately half of the United States labour force¹⁰. Similarly in Malaysia, female labour force participation registered an increase from 37% in 1970 to 44.5% in 2000¹¹. Important to note, while women are becoming an essential part of the labour force, they still continue to hold multiple other responsibilities associated with being wives, mothers and caretakers of others. Judging from these multiple roles assumed by women, it can be anticipated that they are vulnerable to psychological distress and depression.

The impact of depression and psychological distress in women can be paramount, extending beyond the individuals to the families, society and economy of a country. For those working, the impact extends to the productivity of the working organization through poor work performance (presenteeism), increased absenteeism, reduced production, increased cost and reduced profit and reduced moral of other staffs¹². These consequences of depression in this population clearly justify research on the subject. In Malaysia, there have been a series of researches studying psychological outcomes of combining work and family roles in Malaysian women. The outcomes studied included general wellbeing and psychological distress¹³, ¹⁴. These outcomes, even though useful for screening purposes and the planning of preventive measures, they do not provide information on the need for definite treatments at workplace, as clinical depression or depressive disorders requires specific treatments which are evidence-based¹⁵. To the authors’ knowledge, there has been no study yet in Malaysia looking at the prevalence of depressive disorders among working women.

This study was an expansion to the previous research in that it aimed to assess the prevalence of specific psychiatric diagnoses of depressive disorders in addition to the prevalence of psychological distress among working women who have families. It will provide timely information needed to support recommendations for employers, public policies and communities, and working families.

**Methods**

This is a two-phase cross-sectional study of working women in Bandar Baru Bangi, a suburban area near Kuala Lumpur, conducted from October to December 2007. The estimation of sample size was performed using the formula to estimate a population proportion with specified absolute precision with 95% confidence interval¹⁶. With the precision set at 4%, the
calculation was based on the 5.6% Canadian employed population. For the purpose of multistage cluster sampling, it was multiplied by the design effect (deff) of 2.4. It was oversampled by 40-45% based on a previous Malaysian study done on working women whereby the response rates ranged from 39% to 52% (14) to give the target sample of 700. The study protocol was reviewed and approved by the Research and Ethics Committee, Universiti Kebangsaan Malaysia.

In the first phase, the participants were required to answer self administered questionnaires on demographic data looking into age, ethnicity, level of education, monthly income, parental status and type of occupation.

The Malay version of GHQ-12 was used for screening. It is a self-administered questionnaire used extensively to measure the presence of mental health disorder in community and non-psychiatric clinical settings including workplaces and has been found comparable to the clinical interview for case identification or ‘caseness’.

Half the questions (concentration, playing a useful role, capable of making decisions, enjoying day-to-day activities, and ability to face problems) use the scale “not at all, no more than usual, rather more than usual and much more than usual”. The other half (loss of sleep, constantly under strain, problem overcoming difficulties, unhappy or depressed, losing confidence, feeling worthless) use the scale “better or more than usual, same as usual, less than usual, much less than usual.”

Scoring of the GHQ responses was done by combining all responses into a 12 point scale (which converts the four point response scale into a binary response), known as the caseness score. To determine prevalence of major depressive disorders in psychological distress, the conventional cut-off point 3 was used. For determination of caseness for depressive disorder, a cut-off point 4 is used. A higher cut off point was chosen based on a validation of GHQ-12 using sample of employees from England’s Health Care Services that suggested a 3/4 threshold to give the best balance between identifying the highest proportion of true cases and the lowest proportion of non-cases incorrectly identified as cases. This threshold estimated sensitivity of 0.69 and specificity of 0.88.

Validity and reliability of GHQ-12 had been studied in a Malaysian population showing a high degree of internal consistency for each of the 12 items with Cronbach's alpha value of 0.37-0.79, while total scores was 0.79. Test-retest correlation coefficient for the 12 items score were highly significant. Intraclass correlation coefficient was high (0.35-0.79). A Malay version of GHQ was used. Reliability analysis was conducted in the present study showing Cronbach Alpha value of 0.83.

For the second phase, those who screened positive for caseness were telephone-interviewed using M.I.N.I. It is a brief structured interview for Axis I diagnosis of major psychiatric disorders in Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition (DSM-IV) and International Classification of Diseases-Tenth Edition (ICD 10). M.I.N.I has been validated and compared against Structured Clinical Interview for DSM-III-R (SCID) and Composite International Diagnostic Interview (CIDI). It was shown to have acceptably high validity and reliability scores with an added advantage of being able to be administered in much shorter time (mean 18.7 minutes, median 15 minutes) than the above reference instruments.
therefore widely used in clinical studies\textsuperscript{24}. studies\textsuperscript{25, 26} and found to have good inter-rater reliability. M.I.N.I. was translated to Malay and back translated to English to maintain the content. The author as the interviewer was trained by a senior psychiatrist who had a good experience using M.I.N.I in researches.

Telephone interview was employed for efficiency in time and cost. It is also more convenient for working women because they can be interviewed without having to leave their workplace. At the same time it maintains their confidentiality because telephone interview ensures more privacy compared to face-to-face interview done at workplace. Telephone interview increases response rate and ensures standardized method used for all respondents as not everybody could be reached in person. Telephone interview is an increasingly popular research method, reflecting increase use of technology and telecommunications. Telephone interviews had been shown to have a good reliability compared to face-to-face interviews in previous studies\textsuperscript{27, 28}. Telephone interview using MINI had been carried out in previous researches\textsuperscript{29}.

The inclusion criteria were women who were married or/and a parent of a child age 18 years and younger, a Malaysian citizen, employed in full-time paid employment (at least 20 hours a week) and consented for the study. The criteria were consistent with previous research in work and family area\textsuperscript{30}. Excluded were foreign workers and subjects who did not give consent.

The sample was based on a multistage cluster sampling of workplaces in Bandar Baru Bangi whereby workplaces were randomly selected from a master list. After permission was granted, the number of workers who fulfilled the inclusion criteria

The instrument had also been used in local would be ascertained. Management informed the employees about the study and encouraged participation.

All questionnaires were checked for completeness. If there was one missing value in GHQ-12, it would be replaced with 0\textsuperscript{20}. Missing values for age could be counterchecked from respondents’ identification number. To fill in other missing values, some respondents were contacted again. Large amount of missing values would make a questionnaires excluded from analysis. Participants who were potential case subjects were interviewed using M.I.N.I as a diagnostic instrument.

After completion of M.I.N.I interview, participants who had been diagnosed to have depressive disorders were asked two additional questions. These questions were: “Have you ever taken any medication to help you with your mood?” and “Have you ever sought any help for your psychological problems?”. The participants were informed of a diagnosis if any and all were offered referral or assistance for further management.

Analysis of the data was done using SPSS 12.0.1 for Windows. The differences between prevalence in the subgroups were analysed using Pearson Chi-square with Yates correction.

Results

The socio-demography of the respondents is shown in Table 1. The prevalence of psychological distress is 22.8\% (n=70, 95\% CI 18.1–27.5). Table 2 presents the prevalence of psychological distress according to socio-demographic, family and work characteristics. The prevalence of
psychological distress is significantly higher in younger age group. \( p=0.02 \). The prevalence of more severe psychological distress that approached ‘caseness’ is 16\% (\( n=49 \), 95\% CI 12-18).

Table 1: Sociodemographic characteristics of respondents (N=307)

| Sociodemographic characteristics | Median | Mean (SD) | n (%)
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>34</td>
<td>35 (7.6)</td>
<td></td>
</tr>
<tr>
<td><strong>Age group</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-29</td>
<td></td>
<td></td>
<td>107 (34.9)</td>
</tr>
<tr>
<td>30-39</td>
<td></td>
<td></td>
<td>129 (42)</td>
</tr>
<tr>
<td>40-49</td>
<td></td>
<td></td>
<td>60 (19.5)</td>
</tr>
<tr>
<td>Above 50</td>
<td></td>
<td></td>
<td>11 (3.6)</td>
</tr>
<tr>
<td><strong>Ethnic</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malay</td>
<td>295</td>
<td>(96.1)</td>
<td></td>
</tr>
<tr>
<td>Chinese</td>
<td>6</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>Indian</td>
<td>4</td>
<td>(1.3)</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>2</td>
<td>(0.7)</td>
<td></td>
</tr>
<tr>
<td><strong>Education Level</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>4</td>
<td>(1.3)</td>
<td></td>
</tr>
<tr>
<td>Secondary</td>
<td>101</td>
<td>(32.9)</td>
<td></td>
</tr>
<tr>
<td>Tertiary</td>
<td>202</td>
<td>(65.8)</td>
<td></td>
</tr>
<tr>
<td><strong>Monthly salary (mean, SD)</strong></td>
<td>2000</td>
<td>2468 (1863)</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: The prevalence of psychological distress according to socio-demographic, family and work characteristics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Prevalence of psychological distress (n)</th>
<th>( x^2 )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-29</td>
<td>107</td>
<td>32.7 (35)</td>
<td>9.16*</td>
<td>0.02*</td>
</tr>
<tr>
<td>30 and above</td>
<td>200</td>
<td>17.5 (35)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ethnic</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malay</td>
<td>295</td>
<td>21.7 (64)</td>
<td>5.25*</td>
<td>0.22</td>
</tr>
<tr>
<td>Non-Malays</td>
<td>12</td>
<td>50.0 (6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary/Secondary</td>
<td>202</td>
<td>22.8 (46)</td>
<td>0.00*</td>
<td>0.99</td>
</tr>
<tr>
<td>Tertiary</td>
<td>105</td>
<td>22.9 (24)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The prevalence of depressive disorders is 5.5% (n=17) (95% CI 3.5 – 7.5). Depressive disorders diagnosed in this study consisted of 3.2% major depressive disorders (n=10) and 2.3% dysthymia (n=7). Not even one of the women was on antidepressant. Only two (12%) consulted primary care doctors and one was given short term sleeping medications. One woman consulted a counsellor.

Table 3 presents the prevalence of depressive disorders according to socio-demographic characteristics, work and family characteristics. As shown, the prevalence of depressive disorders is significantly higher in age group below 30 years old (p=0.03).

<table>
<thead>
<tr>
<th>Table 3: The prevalence of depressive disorders according to socio-demographic, family and work characteristics</th>
</tr>
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<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>----------------------------------</td>
</tr>
<tr>
<td><strong>Age</strong></td>
</tr>
<tr>
<td>20-29</td>
</tr>
<tr>
<td>30 and above</td>
</tr>
<tr>
<td><strong>Ethnic</strong></td>
</tr>
<tr>
<td>Malay</td>
</tr>
<tr>
<td>Non-Malays</td>
</tr>
<tr>
<td><strong>Education</strong></td>
</tr>
<tr>
<td>Primary/Secondary</td>
</tr>
<tr>
<td>Tertiary</td>
</tr>
<tr>
<td><strong>Parental status</strong></td>
</tr>
<tr>
<td>No child</td>
</tr>
</tbody>
</table>

$^a$ Pearson chi square, $^b$ Yates correction *p<0.05 *Compared with other occupations
Discussion

The main findings of this study are the recognition that 22.8% of married working women are psychologically distressed; 16% having severe psychological distress or probable depressive disorders; and 5.5% having clinical depression which was undiagnosed and not treated.

The prevalence of psychological distress among working women in this study is comparable to the findings in earlier research both in Malaysia and worldwide. This information is important because it illustrates the prevalence of the high risk group vulnerable for depressive disorders. As for the prevalence of depressive disorders, although there is no other local data available for comparison; it is consistent with the findings from previous research done on working population worldwide. The findings support the notion that mental illness is universal. It affects working women similarly all over the world, both in developed and developing countries.

Among the socio-demographic factors measured, significant difference of the prevalence rate was only found according to the age group. In this study, the prevalence of both psychological distress and depression were higher in a younger age group of 20-29 years old. This is consistent with those obtained in the United States National Comorbidity Survey, which found a prevalence peak among the youngest subjects below 30 years old31, 32.

This could be attributed to the fact that women at this age group are usually just starting to assume additional responsibilities of adulthood. Factors like adjusting to marriage, starting family, having small children while adjusting to new working life may play a role in causing psychological distress and depression. Transition into parenthood is an established life event that may contribute to psychological distress33. Similarly, transition into a new career life is another established stressor. A study on newly qualified working female nurses showed a high level of stress associated with lack of confidence and exposure to unfamiliar circumstances34.

No significant difference was found in the prevalence of psychological distress and depressive disorders according to subgroups such as the level of education, parental status and monthly income. This is contradictory to the previous findings which yielded that psychological distress and depression is more prevalent in people with low level of education35, 36, increased number of children36, 37 and low income36.
The differences may not be captured in this study due to over-representation of a similar socio-economic group of middle class women.

Among all the subgroups mentioned above, type of occupation was the most researched area in association of psychological distress and job stress. This study determined that the prevalence of psychological distress according to types of occupation is 22.1% in professionals & technical group, 29.2% in managerial group, 20.5% in clerical group and 20% in service group, which were comparable to prevalence of job stress in Malaysia according to specific type of occupations. These prevalence of job stress were 23.7% among nurses\textsuperscript{38}; 21.5% among clerks\textsuperscript{38}, and 17.5 - 23.3% among medical lecturers\textsuperscript{39}. There is also no significant difference in the prevalence of psychological distress type of occupation subgroup.

Alarmaningly, this study also found that 82% of those being diagnosed as having depressive disorders had neither been diagnosed nor had contact with mental health services before. From literature, it is indeed a recognized issue that depressive disorders are commonly under diagnosed and not treated, especially in workplaces. The reasons involve personal, employer, societal and provider components. Of special concern in the workplace is that the identification of depression will lead to employment consequences and discrimination. Besides that, the common belief that there is no effective treatment also may keep employers from addressing depression at workplaces\textsuperscript{40}. The prevalence of undiagnosed and untreated depression among this population of women makes a case that mental health problem at workplace exist and something need to be done.

The time has come for developing countries to seriously incorporate mental health program into workplaces such as Employees’ Assistance Program (EAP), to help employees deal with personal problems that might adversely impact their work performance, health, and well-being. This type of program is more acceptable to working populations and can be linked to available psychiatric services\textsuperscript{41}. Other potential interventions for identification and addressing depression in workplace include depression screening at health fairs, confidential self rating sheets and recognition training for supervisors\textsuperscript{40}.

**Limitations and Recommendation**

The limitations of this study involved the concern of self-report bias, low response rate and generalizability. On the first concern on self-report bias, most of the time, self reports are often the only feasible way for gathering information about workers’ working condition\textsuperscript{42}, Secondly, the low response rate in this study could be a concern even though it is not unusual in this type of study\textsuperscript{14}. Additionally, this concern on bias of results coming from studies with low response rate has recently been challenged. In a meta-analytic study using 86 researches in occupational health psychology, it was found there was no statistical significance in the correlations between response rate and effect size; thus suggesting that non-response is unlikely to result in substantial bias in the results of the research\textsuperscript{43}. Third, this study captured mainly a group of middle class Malay women which reflects the population in this study setting and cannot be generalized to the whole population of married working women.
Future research can be extended to a larger scale to determine a prevalence that will reflect the whole population of married working women and to be able to determine the risk factors for depressive disorders. In line with organizational preferences, further study on cost analysis of workplace interventions should follow to attract employers to invest for their employees’ mental health.

Conclusion

This study provides preliminary data on the magnitude of problems related to psychological wellbeing of working women who are combining work and family. Psychological distress is highly prevalent (22.8%) among working women, and among them they were a concerning data on those reaching clinical depression (5.5%) but under diagnosed and not treated. The younger age group of below 30 years old is significantly having higher prevalence of psychological distress and depressive disorders.

References


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