



MARIE-Singapore (WP2a) study: A Mixed-Methods Study Exploring Menopause (Interim analysis)

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Background: Menopause is a significant life transition for women, often accompanied by various physical, emotional and psychological symptoms. In Singapore, the demographic shift towards an aging population has led to an increased number of women experiencing menopause and its consequences. Despite its prevalence, there is limited research on the experiences and management of menopausal symptoms among Singaporean women. Given the multiethnic local population with its varied beliefs, the importance of understanding the impact of menopause on Singaporean women’s physical and mental health is vital to providing holistic care.

Objective: To report the population characteristics of menopausal women and impact of menopause on women’s health.

Methods: A mixed-methods study was conducted following ethics approval by the Singhealth Institutional review board (IRB No.2024/2126). This was part of the global consortium of MARiE study initiated by Southern Health NHS foundation Trusts, United Kingdom. Participants provided informed consent and were recruited through the clinics at the KK Women’s and Children’s Hospital, which is the largest hospital specialising in healthcare for women and children in Singapore. The study consisted of a series of validated questionnaires that were completed online at Day 1 and Day 30. The Qualtrics XM platform was used to collect data.

An interim analysis was conducted using the first 75 participants aged between 18-90 years of age, residing in Singapore. The interim analysis focused on exploring population characteristics, outcomes derived from the Hospital Anxiety and Depression Scale (HADS) (a self-rating scale used to assess anxiety and depression particularly in the hospital setting) and Greene Climacteric Scale (GCS) (used to provide a brief measure of menopausal symptoms, covering 5 domains: anxiety, depression, vasomotor symptoms, somatic symptoms and sexual function). Descriptive statistics were employed to analyse the categorical data.

The mean (SD) age and age of first menopausal symptoms of the sample (n=75) were 54 (SD= ±6.42) and 49 years (SD=±4.25), respectively. The sample (n=75) included women in various menopausal statuses, including pre-menopause (still having regular menstruation), perimenopause (have started experiencing irregular periods), menopause (no periods for 12 months) and post-menopause (have completed menopause more than a year ago). Figure 1 represents the prevalence of women of various menopausal statuses in the data set.

Respondents by menopausal status

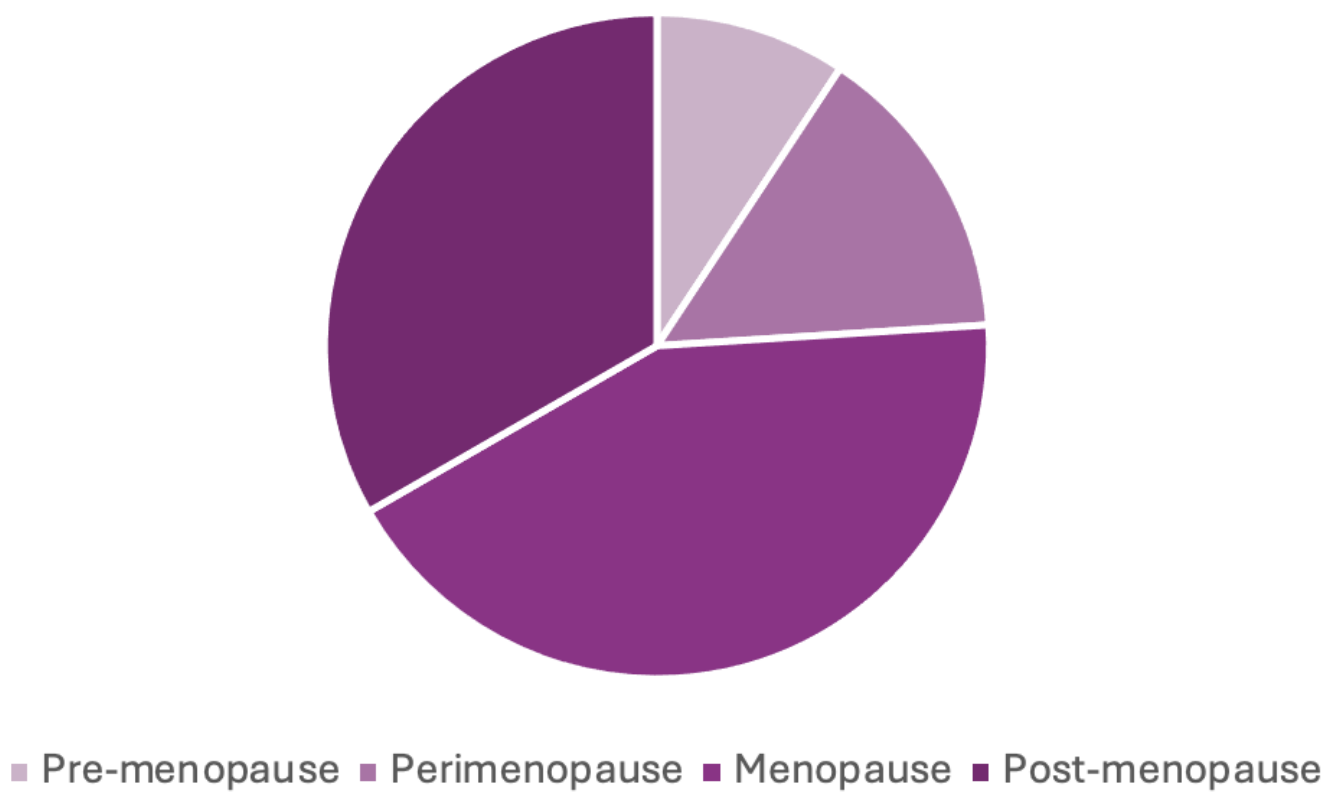


Fig 1: Prevalence of women of varying menopausal status.

The sample (n=75) comprised of multiple races and religions as represented in Tables 1 and 2 respectively. Majority of the sample was married (n=54) followed by women that were divorced (n=8), widowed (n=4), single (n=8) and non-disclosed (n=1).

Racial group	% of respondents
Chinese	57.3
British	1.3
Eurasian	1.3
Indian	20
Malay	6.7
Pakistani	1.3
Sri Lankan	1.3
Others	10.7

Table 1: Participants by racial group.

Religious group	% of respondents
Buddhism	29.3
Christianity	28
Hinduism	16
Islam	9.3
Mixed	2.7
Sikhism	1.3
Not religious	6.7
Undisclosed	6.7

Table 2: Participants by religious group.

Mean (SD) of total scores of HADS and subscales scores of anxiety and depressive symptoms were 9.4 (7.14), 5.7 (4.27) and 3.7(3.67), respectively. Figure 2 represents the results of the HADS scale.

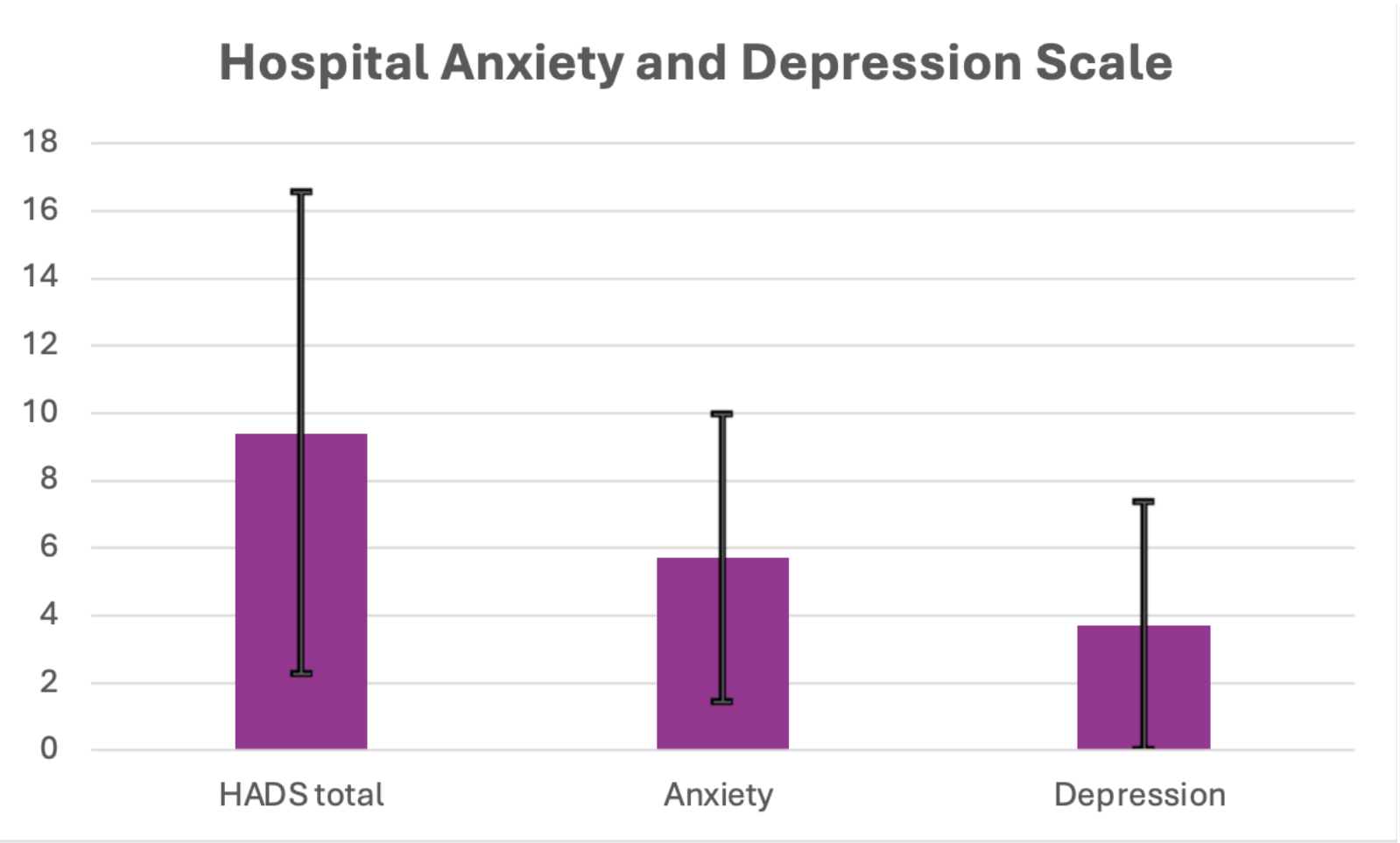


Figure 2: Results of the HADS scale.

Of the sample, 73.3% (n=55) were ‘Not anxious’, 13.3% (n=10) were ‘Borderline anxious’, while 13.3% (n=10) were ‘Anxious’. 84% (n=63) of the sample were ‘Not depressed’ while 6.7% (n=5) were “Borderline depressed” and 9.3% (n=7) were “Depressed”. Figures 3 and 4 represent the results of the anxiety and depression sub-scores respectively.

HADS Anxiety subscore

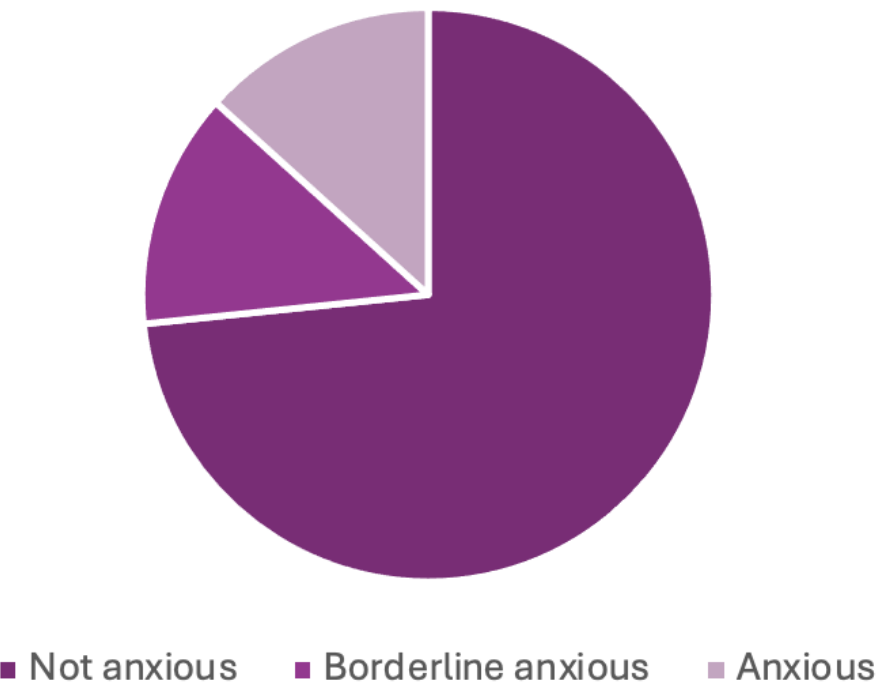


Figure 3: Anxiety sub-score

HADS Depression subscore

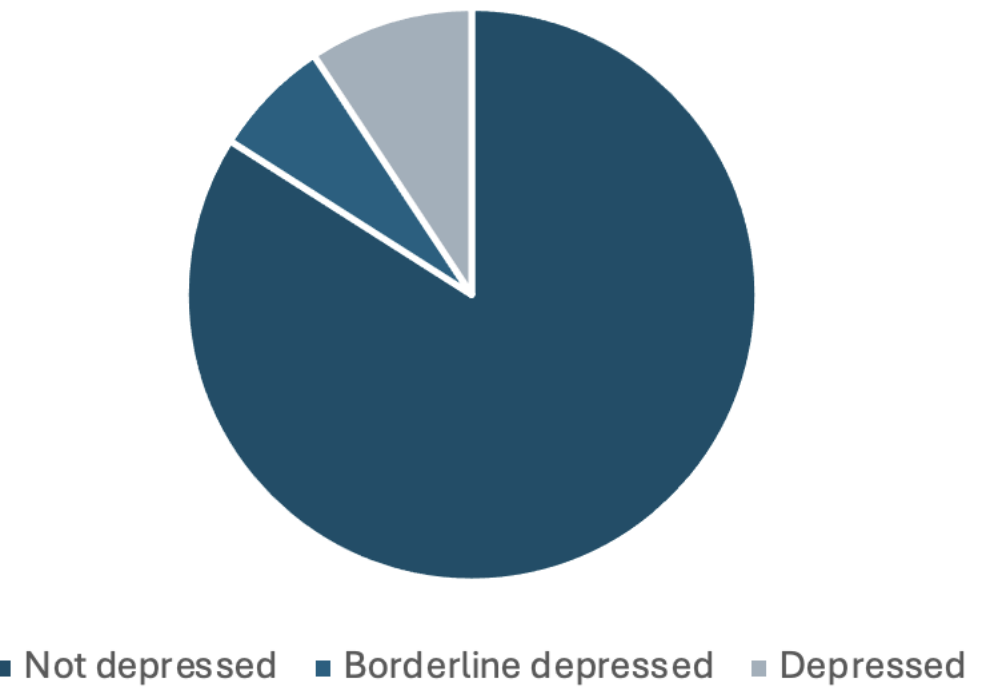


Figure 3: Depression sub-score

Mean (SD) of total score of GCS and psychological, somatic and vasomotor symptoms subscales scores were 16.47 (10.53), 8.88 (5.85), 1.96 (1.95) and 2.49 (0.97), respectively. Figure 5 represents the same. Of the sample, only 5.04% (3.27) were clinically anxious while 3.84% (3.08) of them were clinically depressed according to the GCS.

GCS subscores - symptoms

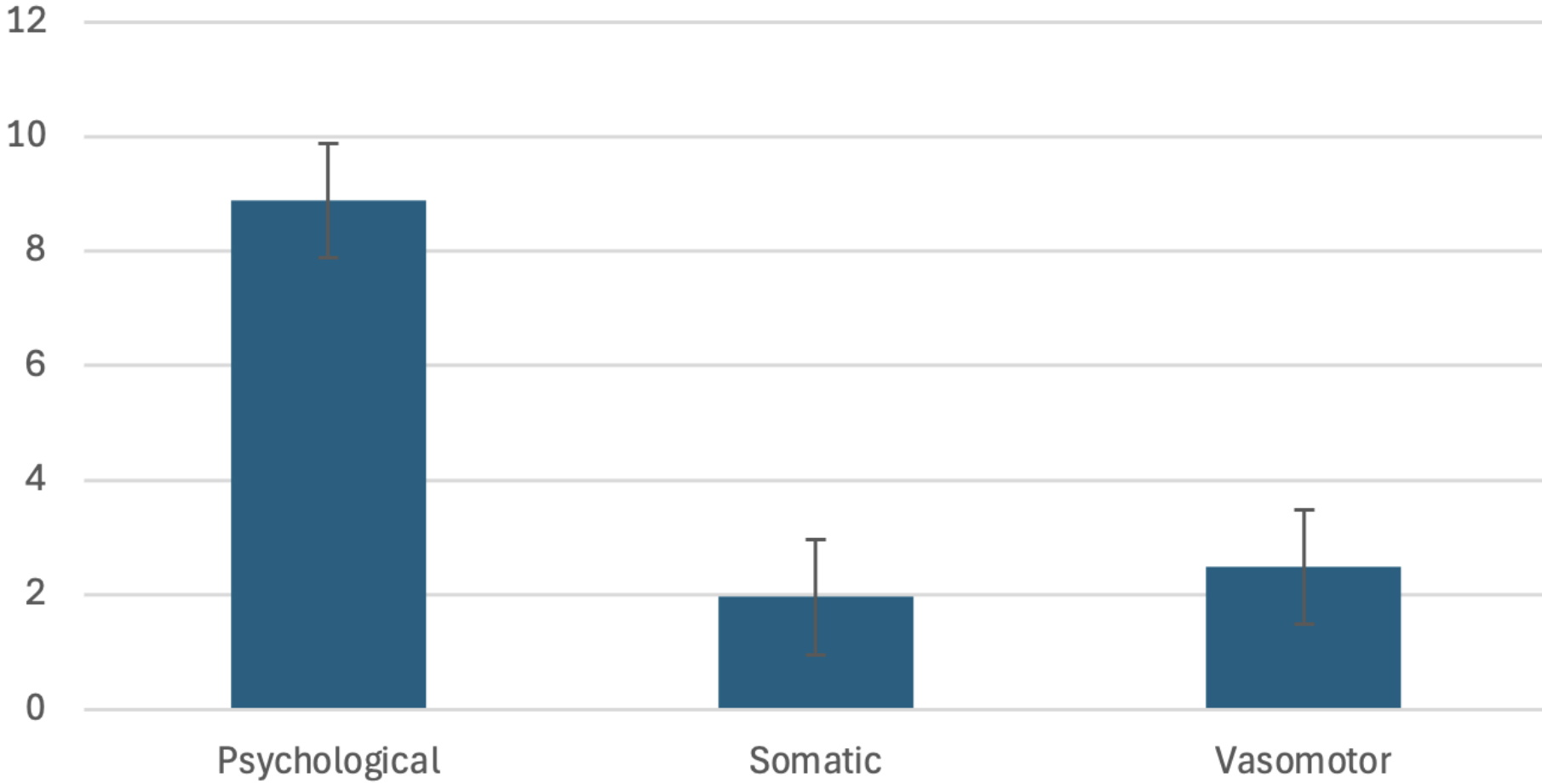


Figure 5: Represents the GCS sub-scores of psychological, somatic and vasomotor symptoms.

Conclusion: The interim evidence demonstrates a diverse sample of menopausal women who experience mild to moderate negative psychological symptoms. However, most of the women demonstrated a lack of depressive and anxiety symptoms. The study helps us understand the mental health and other symptoms experienced by women in Singapore, expanding our knowledge to improve the services provided to them.

References:
1. Goldstein, K. M. (n.d.). *Measurement Scales for Menopause*. Nonpharmacologic Treatments for Menopause-Associated Vasomotor Symptoms [Internet].
<https://www.ncbi.nlm.nih.gov/books/NBK447620/>