# Marital Status and Positive Mental Health of Psychiatric Outpatients

**Dear Editor,**

Marriage has been associated with positive effects for individuals—a stronger sense of self-identity, improved psychosocial outcomes, increased economic resources and companionship especially during stressful life events.[1] The social and emotional support experienced by married individuals may be an important catalyst for greater life satisfaction and better coping mechanisms against the hardships of life, leading to improved psychological well-being.[2] In particular, married individuals with anxiety, mood and substance abuse disorders reported lower prevalence of mental health issues such as depression or alcoholism, lower rates of suicide and fewer admissions to psychiatric facilities.[3] The protective effects of marriage have been attributed to companionship that serves as a stress buffer and imparts feelings of happiness, life satisfaction, purpose and belonging.[3]

Jahoda[4] first introduced the concept of positive mental health (PMH) as a "personal matter involving humans" and a "condition of an individual human mind" that concentrates on the individuals' attitude towards themselves, the way they perceive the world around them and their ability to take life as it comes. PMH introduces a wide range of emotional and cognitive aspects that are essential for the well-being of individuals, their family and society.[5] In addition, the beneficial effects of PMH in individuals with mental illness have been associated with decreased clinical symptoms and better recovery.[5] Many studies have examined the relationship between marital status and psychological well-being in patients with mental illness. However, a majority of these studies involved Western populations. Hence, there is a need for local studies to examine the differences especially in a multiethnic country such as Singapore. This study aimed to investigate the differences and associations between marital status and PMH total and domain scores among outpatients with schizophrenia, depressive and anxiety disorders.

## Materials and Methods

From January 2014 to June 2015, a total of 308 outpatients with clinical diagnosis of schizophrenia spectrum, depressive and anxiety disorders (according to the International Classification of Diseases, 9th Revision)[6] from the Institute of Mental Health were recruited for the study. Participants were: 1) aged 21–65 years old, 2) from the Chinese, Malay and Indian ethnic groups, 3) literate in the English language, and 4) able to self-complete the questionnaires. Those with intellectual disabilities, who were attending the clinic on their first visit or unable to read English were excluded from the study. Written informed consent was obtained from all participants. The study was approved by the relevant ethics committee (Domain Specific Review Board of the National Healthcare Group, Singapore).

Sociodemographic information was collected using a structured questionnaire. Clinical information such as psychiatric diagnosis was collected through a review of medical records. Participants' functional status was evaluated using Global Assessment of Functioning (GAF) which was administered by trained interviewers. The PMH instrument and Satisfaction With Life Scale (SWLS) were self-administered questionnaires completed by participants.

The 47-item PMH is a self-administered instrument that was developed and validated in Singapore to measure levels of PMH in the local general population[7] and among the psychiatric population.[5] It contains 6 domains: 1) General Coping (GC), 2) Emotional Support (ES), 3) Spirituality (S), 4) Interpersonal Skills (IS), 5) Personal Growth and Autonomy (PGA), and 6) Global Affect (GA). Higher total scores indicate greater levels of PMH. An earlier article has reported detailed information on the study methodology.[5]

The 5-item SWLS[8] is an instrument used to assess global cognitive judgement of satisfaction with one's life. The items in the SWLS subscale are scored on a 7-point scale from "strongly disagree" to "strongly agree". Higher total scores on the SWLS indicate greater life satisfaction.

The GAF[9] was used to evaluate the psychological, social and occupational functioning of the participants using a 100-point single-item rating scale for overall psychosocial functioning during the past 1 month. An accurate description of functioning for each participant is reached as per the rater's judgement. Higher total scores on the GAF indicate greater levels of individual functioning.

## Results

Sociodemographic and clinical characteristics of the participants are shown in Table 1. Among the participants,

Table 1. Sociodemographic and Clinical Characteristics of Never-Married and Married Outpatients With Mental Disorders (n = 308)

| Variable | Overall Sample | | Never-Married | | Married | | *P* Value* |
|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | |
| Age (years) | | | | | | | <0.001 |
| 21 – 39 | 169 | 54.9 | 135 | 67.5 | 34 | 31.5 | |
| 40 – 65 | 139 | 45.1 | 65 | 32.5 | 74 | 68.5 | |
| Marital status | | | | | | | |
| Never-married | 200 | 64.9 | | | | | |
| Married | 108 | 35.1 | | | | | |
| Gender | | | | | | | 0.01 |
| Male | 163 | 52.9 | 116 | 58.0 | 47 | 43.5 | |
| Female | 145 | 45.1 | 84 | 42.0 | 61 | 56.5 | |
| Ethnicity | | | | | | | 0.14 |
| Chinese | 134 | 43.5 | 92 | 46.0 | 42 | 38.9 | |
| Malay | 87 | 28.2 | 49 | 24.5 | 38 | 35.2 | |
| Indian | 87 | 28.2 | 59 | 29.5 | 28 | 25.9 | |
| Education | | | | | | | 0.39 |
| Some formal/primary | 26 | 8.40 | 14 | 7.00 | 12 | 11.1 | |
| Secondary/junior college/pre-university | 204 | 66.2 | 132 | 66.0 | 72 | 66.7 | |
| Vocational | 36 | 11.7 | 27 | 13.5 | 9 | 8.30 | |
| Tertiary/postgraduate | 42 | 13.6 | 27 | 13.5 | 15 | 13.9 | |
| Employment status | | | | | | | 0.86 |
| Unemployed | 167 | 54.2 | 109 | 54.4 | 58 | 53.7 | |
| Employed | 140 | 45.5 | 90 | 45.0 | 50 | 46.3 | |
| Diagnostic group | | | | | | | <0.001 |
| Depressive disorders | 108 | 35.1 | 58 | 29.0 | 50 | 46.3 | |
| Anxiety disorders | 74 | 24.0 | 43 | 21.5 | 31 | 28.7 | |
| Schizophrenia spectrum disorders | 126 | 40.9 | 99 | 49.5 | 27 | 25.0 | |
| | **Mean** | **SD** | **Mean** | **SD** | **Mean** | **SD** | |
| Global Assessment of Functioning | 51.8 | 16.4 | 51.2 | 16.6 | 52.8 | 15.9 | 0.41 |
| Satisfaction With Life Scale | 19.7 | 7.93 | 18.7 | 8.09 | 21.7 | 7.25 | <0.001 |
| Positive Mental Health scores | | | | | | | |
| Positive Mental Health total | 3.94 | 0.96 | 3.84 | 0.98 | 4.12 | 0.88 | 0.01 |
| General Coping | 3.82 | 1.15 | 3.75 | 1.19 | 3.95 | 1.07 | 0.15 |
| Emotional Support | 4.01 | 1.31 | 3.86 | 1.33 | 4.28 | 1.22 | 0.01 |
| Spirituality | 3.95 | 1.48 | 3.86 | 1.50 | 4.13 | 1.41 | 0.12 |
| Interpersonal Skills | 4.25 | 1.03 | 4.11 | 1.05 | 4.48 | 0.95 | <0.001 |
| Personal Growth and Autonomy | 3.92 | 1.17 | 3.79 | 1.19 | 4.15 | 1.09 | 0.01 |
| Global Affect | 3.70 | 1.17 | 3.67 | 1.17 | 3.75 | 1.16 | 0.55 |

SD: Standard deviation
*Derived from independent t-test and chi-square test for continuous and categorical variables.

majority (43.5%) was Chinese, had secondary/junior college/pre-university education (66.2%) and was diagnosed with schizophrenia spectrum (40.9%), depressive (35.1%) and anxiety disorders (24.0%). The mean GAF score was 51.8 (standard deviation [SD] = 16.4) and the mean SWLS score was 19.7 (SD = 7.93). The married sample scored significantly higher in PMH total and domain scores, and in GAF and SWLS scores (compared to the never-married sample).

After adjusting for sociodemographic characteristics and diagnosis in multivariate analyses, marital status remained significantly and positively associated with PMH total scores and ES and IS domains (Table 2).

Table 2. Relationship Between Marital Status and Positive Mental Health After Adjusting for Sociodemographics and Diagnostic Group

| Positive Mental Health and Domain Score | β | 95% CI | *P* Value* |
|---|---|---|---|
| Positive Mental Health total | -0.31 | -0.55 – -0.07 | 0.01 |
| General Coping | -0.21 | -0.50 – 0.08 | 0.16 |
| Emotional Support | -0.46 | -0.80 – -0.13 | 0.01 |
| Spirituality | -0.24 | -0.60 – 0.13 | 0.20 |
| Interpersonal Skills | -0.39 | -0.66 – -0.12 | <0.001 |
| Personal Growth and Autonomy | -0.28 | -0.58 – 0.01 | 0.06 |
| Global Affect | -0.28 | -0.57 – 0.01 | 0.05 |

β: Beta coefficient; CI: Confidence interval
*Derived from multiple linear regression analyses by using Positive Mental Health total and domain scores as dependent variable, other sociodemographic (age group, ethnicity, gender, marital status, education, employment status) and diagnostic group as independent variables.

In Table 3, among the never-married sample, Malay ethnicity (vs Chinese) was found to be significantly and positively associated with higher PMH total score (β = 0.45) and domain scores (PGA, [β = 0.55]; IS, [β = 0.43]; S, [β = 0.93]; and GC, [β = 0.54]). Those with some formal/ primary education (vs tertiary/postgraduate) reflected lower IS (β = -0.73). On the other hand, those with anxiety disorder (vs schizophrenia spectrum disorder) had significantly lower GA (β = -0.54), S (β = -0.64) and GC (β = -0.43) scores. The GAF score was significantly and positively associated with PMH total score (β = 0.02) and domain scores for GA (β = 0.02), PGA (β = 0.02), IS (β = 0.02), ES (β = 0.02) and GC (β = 0.01).

Among the married sample, those with depressive and anxiety disorders (vs schizophrenia spectrum disorders) had significantly lower GA (β = -0.63 and β = -0.98, respectively) (Table 3). Additionally, those with secondary/junior college/ pre-university education (vs tertiary/postgraduate) reflected higher PGA score (β = 0.63). Similarly, Malay and Indian ethnicities (vs Chinese) were found to be significantly and positively associated with higher S scores (β = 1.18 and β = 1.01, respectively). Lastly, GAF was associated with significantly higher scores in GA (β = 0.01), PGA (β = 0.01), ES (β = 0.02) and GC (β = 0.02).

## Discussion

Similar to earlier studies,[10,11] our study revealed that married individuals had higher mean scores for PMH total and domain scores. A significant association was also found between PMH total scores and marital status. Such differences have been attributed to marriage-related gains such as long-term social support that has in turn been associated with increased economic resources.[1] Possible reasons posited include combined accumulation of resources leading to higher levels of financial satisfaction, health and self-esteem contributing to a higher level of life satisfaction, better coping skills and psychological well-being.[1]

As expected, ethnic differences in PMH were observed in both married and never-married individuals. The never-married Malay participants had higher PMH total, PGA, IS and GC scores compared to Chinese participants (Table 3). One possible explanation is related to religious beliefs, practices and values (e.g., meaning in life) that are more deeply held among Muslims (the Malay population is predominantly Muslim).[12] In addition, Radzi et al[13] have also found significant relationship between higher spirituality and its positive effect on mental well-being.

The current study also found that never-married patients with depressive and anxiety disorders had lower GA, S and GC scores, while married patients with depressive and anxiety disorders showed a negative association only with GA domain. Fagan[14] has proposed that marriage is associated with low prevalence of mental illness and likely mitigates health-damaging effects due to advantages conferred through psychosocial support and economic resources thus buffering the impact of adverse life events and allowing married individuals to have better relationship stability, religious participation, coping skills and lower risk of depression.[1]

Lastly, SWLS scores for both never-married and married samples were significantly associated with PMH total and all domain scores. Holt-Lunstad et al[15] have proposed that marriage per se may not be beneficial—instead, the quality of the relationship is important to influence individuals' life satisfaction. Hence, individuals in non-marital but committed relationships may also be able to receive a feeling of purpose, social identity and social integration.[15] However, these findings need to be confirmed by further studies.

To the best of our knowledge, this is the first study to investigate the relationship between marital status and the components of PMH among mental health service users. However, the study has some limitations. Firstly, the study excluded individuals who were once married but divorced or separated at the time of the study (due to their relatively small sample size). Secondly, the study did not collect information on outpatients who were not married but in a stable relationship or were in a relationship at some point in time (which presents another sample of similar social environment). Thirdly, only outpatients who were literate in English and capable of self-administering the PMH instrument were recruited. Lastly, the self-report responses by the participants might be influenced by social desirability bias. However, we tried to minimise this by having self-administered questionnaires completed in a private setting and asking participants to return their responses within the next 3 days in a sealed envelope.

Table 3. Factors Significantly Associated With Positive Mental Health Total and Domain Scores in Never-Married and Married Outpatients With Mental Disorders

| Positive Mental Health and Domain | Never-Married | | | Married | | |
|---|---|---|---|---|---|---|
| | β* | 95% CI | *P* Value | β* | 95% CI | *P* Value |
| Positive Mental Health total score | | | | | | |
| Ethnicity | | | | | | |
| Malay | 0.45 | 0.20 – 0.71 | 0.00 | | | |
| Indian | 0.17 | -0.07 – 0.42 | 0.16 | | | |
| Chinese | Reference | | | | | |
| Satisfaction With Life Scale | 0.06 | 0.05 – 0.08 | 0.00 | 0.06 | 0.04 – 0.08 | <0.001 |
| Global Assessment of Functioning | 0.02 | 0.01– 0.02 | 0.00 | | | |
| Global Affect | | | | | | |
| Diagnostic group | | | | | | |
| Depressive disorders | -0.43 | -0.74 – -0.13 | 0.01 | -0.63 | -1.11 – -0.14 | 0.01 |
| Anxiety disorders | -0.54 | -0.87 – -0.21 | 0.00 | -0.98 | -1.50 – -0.46 | <0.001 |
| Schizophrenia spectrum disorders | Reference | | | Reference | | |
| Satisfaction With Life Scale | 0.07 | 0.05 – 0.09 | 0.00 | 0.07 | 0.05 – 0.10 | <0.001 |
| Global Assessment of Functioning | 0.02 | 0.01 – 0.03 | 0.00 | 0.01 | 0.00 – 0.03 | 0.03 |
| Personal Growth and Autonomy | | | | | | |
| Age (years) | | | | | | |
| 21 – 39 | -0.45 | -0.75 – 0.16 | 0.00 | | | |
| 40 – 65 | Reference | | | | | |
| Gender | | | | | | |
| Male | | | | 0.46 | 0.03 – 0.88 | 0.04 |
| Female | | | | Reference | | |
| Ethnicity | | | | | | |
| Malay | 0.55 | 0.22 – 0.87 | 0.00 | | | |
| Indian | 0.42 | 0.11 – 0.73 | 0.01 | | | |
| Chinese | Reference | | | | | |
| Education | | | | | | |
| Some formal/primary | | | | 0.38 | -0.41 – 1.18 | 0.34 |
| Secondary/junior college/pre-university | | | | 0.63 | 0.06 – 1.19 | 0.03 |
| Vocational | | | | 0.69 | -0.14 – 1.51 | 0.10 |
| Tertiary/postgraduate | | | | Reference | | |
| Satisfaction With Life Scale | 0.06 | 0.05 – 0.08 | 0.00 | 0.07 | 0.04 – 0.10 | <0.001 |
| Global Assessment of Functioning | 0.02 | 0.01 – 0.03 | 0.00 | 0.02 | 0.00 – 0.03 | 0.01 |
| Interpersonal Skills | | | | | | |
| Ethnicity | | | | | | |
| Malay | 0.43 | 0.11 – 0.75 | 0.01 | | | |
| Indian | 0.19 | -0.12 – 0.49 | 0.23 | | | |
| Chinese | | | | | | |
| Education | | | | | | |
| Some formal/primary | -0.73 | -1.37 – -0.08 | 0.03 | | | |
| Secondary/junior college/pre-university | -0.13 | -0.52 – 0.25 | 0.49 | | | |
| Vocational | -0.04 | -0.53 – 0.45 | 0.88 | | | |
| Tertiary/postgraduate | Reference | | | | | |
| Satisfaction With Life Scale | 0.05 | 0.04 – 0.07 | 0.00 | 0.04 | 0.02 – 0.07 | <0.001 |
| Global Assessment of Functioning | 0.02 | 0.01 – 0.03 | 0.00 | | | |

β: Beta coefficient; CI: Confidence interval
*Derived using multiple linear regression analyses using backward stepwise method after adjusting for all covariates.

Table 3. Factors Significantly Associated With Positive Mental Health Total and Domain Scores in Never-Married and Married Outpatients With Mental Disorders (Cont'd)

| Positive Mental Health and Domain | Never-Married | | | Married | | |
|---|---|---|---|---|---|---|
| | β* | 95% CI | *P* Value | β* | 95% CI | *P* Value |
| Spirituality | | | | | | |
| Ethnicity | | | | | | |
| Malay | 0.93 | 0.46 – 1.41 | 0.00 | 1.18 | 0.52 – 1.85 | <0.001 |
| Indian | 0.15 | -0.02 – 0.61 | 0.50 | 1.01 | 0.26 – 1.76 | 0.01 |
| Chinese | Reference | | | Reference | | |
| Education | | | | | | |
| Some formal/primary | | | | 0.04 | -1.09 – 1.78 | 0.94 |
| Secondary/junior college/pre-university | | | | 0.68 | -0.13 – 1.48 | 0.10 |
| Vocational | | | | 1.15 | -0.02 – 2.33 | 0.05 |
| Tertiary/postgraduate | | | | Reference | | |
| Diagnostic group | | | | | | |
| Depressive disorders | -0.53 | -1.03 – -0.05 | 0.03 | | | |
| Anxiety disorders | -0.64 | -1.15 – -0.14 | 0.01 | | | |
| Schizophrenia spectrum disorders | Reference | | | | | |
| Satisfaction With Life Scale | 0.06 | 0.03 – 0.08 | 0.00 | 0.05 | 0.01 – 0.09 | 0.01 |
| Emotional Support | | | | | | |
| Age (years) | | | | | | |
| 21 – 39 | | | | 0.69 | 0.22 – 1.17 | <0.001 |
| 40 – 65 | | | | Reference | | |
| Gender | | | | | | |
| Male | -0.38 | -0.70 – -0.07 | 0.02 | | | |
| Female | Reference | | | | | |
| Satisfaction With Life Scale | 0.07 | 0.05 – 0.09 | 0.00 | 0.09 | 0.06 – 0.12 | <0.001 |
| Global Assessment of Functioning | 0.02 | 0.01 – 0.03 | 0.00 | 0.02 | 0.01 – 0.04 | <0.001 |
| General Coping | | | | | | |
| Ethnicity | | | | | | |
| Malay | 0.54 | 0.17 – 0.90 | 0.00 | | | |
| Indian | 0.38 | 0.03 – 0.73 | 0.03 | | | |
| Chinese | Reference | | | | | |
| Diagnostic group | | | | | | |
| Depressive disorders | -0.16 | -0.53 – -0.21 | 0.40 | | | |
| Anxiety disorders | -0.43 | -0.82 – -0.04 | 0.03 | | | |
| Schizophrenia spectrum disorders | Reference | | | | | |
| Satisfaction With Life Scale | 0.05 | 0.03 – 0.71 | 0.00 | 0.04 | 0.01 – 0.07 | 0.01 |
| Global Assessment of Functioning | 0.01 | 0.00 – 0.02 | 0.00 | 0.02 | 0.00 – 0.03 | 0.01 |

β: Beta coefficient; CI: Confidence interval
*Derived using multiple linear regression analyses using backward stepwise method after adjusting for all covariates.

## Conclusion

This study has made a preliminary yet valuable contribution to the understanding of the relationship between marital status and psychological health in people with mental disorders. It highlights the importance of further research on how marriage may influence mental health in different ways and promote better PMH in this population. The findings could also contribute to policy-making and mental health practices such as interventions or treatments designed to facilitate positive and holistic approaches for patients' recovery and improvement of their quality of life.

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