

## Relationship Satisfaction Mediates the Association Between Emotional Expressiveness and Depressive Symptoms Among Asian Women

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### Abstract

**Introduction:** Few studies in Asia have examined the association among depressive symptoms, relationship satisfaction, sexual dysfunction and emotional expressiveness. Examining the role of emotional expressiveness in the context of depression and relationships is important as it can be a point for therapeutic intervention. **Materials and Methods:** Guided by the Marital Discord Model of Depression and based on data from partnered women in Singapore ( $n = 193$ ), we conducted a path analysis to examine the mediating role of relationship satisfaction and sexual dysfunction in the link between difficulty in emotional expression and depressive symptoms. **Results:** Controlling for age and health, lower relationship satisfaction ( $\beta = -0.213$ ;  $P < 0.001$ ), higher sexual dysfunction ( $\beta = 0.139$ ;  $P = 0.010$ ) and greater difficulty in emotional expression ( $\beta = 0.908$ ;  $P < 0.001$ ) were associated with increased depressive symptoms. Relationship satisfaction partially mediated the association between emotional expressiveness and depressive symptoms (indirect effect, 0.169; 95% confidence interval, 0.043–0.379). **Conclusion:** The findings suggest the importance of effective communication in mitigating relationship- and self-distress.

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**Keywords:** Emotional expression, Marital Discord Model of Depression, Sexual dysfunction

### Introduction

Marital relationship satisfaction accrues many benefits for both men and women, including greater physical and psychological well-being.<sup>1–4</sup> Conversely, marital relationship dissatisfaction has been reported to be associated with negative outcomes such as psychiatric morbidity, poor health and decreased work satisfaction.<sup>5–7</sup> Marital well-being affects not only the spouses involved but also children, family and society as a whole.<sup>8–9</sup>

The Marital Discord Model of Depression (MDMD) posits that marital distress is a significant antecedent to depression for those who are married.<sup>10</sup> Although the

literature has been consistent in showing a relationship between marital distress and depression,<sup>11,12</sup> most of the studies have been conducted in Western cultural settings and little is known about marital relationship satisfaction and its consequences in other cultural settings including Asia. One study that examined 391 couples living in 2 major cities in China reported that husbands' and wives' marital satisfaction significantly predicted their depressive symptoms.<sup>3</sup> In Singapore, it has been reported that those who are divorced/separated were significantly more likely to report suicidal attempts compared to those who are single.<sup>13</sup> A recent qualitative study using thematic analyses found

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that having relationship issues was an important precipitant for suicide.<sup>14</sup> These studies lend support to MDMD.

Nevertheless, there continues to be a paucity of studies examining relationship satisfaction from an Asian cultural context where the expectations of, attitudes towards and communication styles within a marriage may be different from Western romantic relationships (which the majority of studies are based on). Examining the role of emotional expressiveness in the context of depression and relationship distress is important as it can be a point of therapeutic intervention.

The literature suggests that sexual engagement and well-being are associated with relationship satisfaction and psychological well-being.<sup>2,15,16</sup> The literature also suggests that the ability to self-disclose and communicate one's emotions is a stable, individual characteristic that is related to relationship satisfaction, sexual well-being and ultimately psychological health.<sup>17–21</sup> These specific aspects of a marital relationship are important to understand as they offer opportunity for problem-focussed couples intervention. However, these constructs have not been explored in Asian cultural settings.

Singapore is a small nation in Southeast Asia with a developed economy and high per capita income.<sup>22</sup> Due to fast economic growth, the shape and dynamics of the family have changed in the last generation with an increase in dual-income families, later marriages, fewer children and higher divorce rates.<sup>23,24</sup> Local studies have reported that marital status—specifically being divorced or widowed—is associated with psychiatric morbidity.<sup>25</sup> Like many other countries in the region, Singapore is experiencing a shift in openness in discussing one's marital and sexual relationships.<sup>26,27</sup> It is thus timely and important to examine the state of the different aspects of romantic relationships and their association with psychological well-being in this population.

The aim of our study was to examine the associations among depressive symptoms, relationship satisfaction, sexual dysfunction and emotional expressiveness as well as the extent the relationship between emotional expressiveness and depressive symptoms is accounted for by relationship satisfaction and sexual dysfunction in a sample of women in Singapore. Understanding the mediating relationships among the study variables can help to identify treatment intervention targets for couples. We expected that depressive symptoms will be negatively associated with relationship satisfaction and emotional expressiveness, and positively associated with sexual dysfunction. Specifically, we hypothesised that relationship satisfaction (hypothesis 1) and sexual dysfunction (hypothesis 2) would mediate the relationship between emotional expressiveness and

depressive symptoms. The findings will help elucidate the relationships among these constructs in an Asian cultural setting that will in turn have implications for clinical practice and further research.

## Materials and Methods

### *Participants*

We conducted a cross-sectional study. A total of 193 women who were married/romantically-partnered were recruited from the waiting rooms of a public hospital for women in Singapore. This study sample is a subset of a larger project where women with no history of gynaecological cancer were recruited to serve as a control comparison group. Eligibility criteria for the study participants were: 1) no history of gynaecological cancer, 2) female, 3)  $\geq 21$  years old, 4) living in Singapore, and 5) able to read and understand English.

### *Procedures*

Eligible participants filled up an anonymous survey that took approximately 10 minutes to complete. Electronic data collection was conducted using the Qualtrics platform. Participants were exempted from signing informed consent as no identifying information was collected. Approval for the study was obtained from the SingHealth Centralised Institutional Review Board (reference: 2015/2888).

### *Measures*

Depressive symptoms were measured using the depression subscale of the Hospital Anxiety and Depression Scale (HADS).<sup>28</sup> The HADS was designed for detecting clinically significant levels of depression in an outpatient setting and has been validated for use in Singapore.<sup>29–31</sup> There are 7 items measuring depressive symptoms (e.g., “I feel as if I am slowed down”) and participants reported their responses on a 4-point scale with higher scores indicating greater symptoms. The internal reliability of the subscale in this study was  $\alpha = 0.71$ .

Relationship satisfaction was measured using the Dyadic Adjustment Scale-4 (DAS-4).<sup>32</sup> The DAS-4 is a brief 4-item version of the original 32-item Dyadic Adjustment Scale<sup>33</sup> that measures satisfaction in a romantic relationship. Higher scores indicate greater relationship satisfaction (e.g., “Do you confide in your partner?”). The internal reliability of the scale in this study was  $\alpha = 0.68$ .

Sexual dysfunction was measured using the Arizona Sexual Experience Scale<sup>34</sup> which consisted of 5 items. Responses were reported on a 6-point scale with higher scores indicating greater problems with sexual drive, arousal, lubrication, ability to reach orgasm and sexual satisfaction. The internal reliability of the scale in this study was  $\alpha = 0.88$ .

Emotional expressiveness was measured using 2 items from the Ambivalence over Emotional Expressiveness Questionnaire (AEQ)<sup>19</sup> that inquired about general difficulty in expressing one's emotions: "It is hard to find the right words to indicate to others what I am really feeling" and "I often cannot bring myself to express what I am really feeling". Responses are reported on a 5-point scale (Never – Frequently). In the current study, the mean of the 2 items was calculated, with higher scores indicating greater difficulty in emotional expression. The internal reliability of the 2 items in this study was  $\alpha = 0.87$ .

Demographic questions that were asked included the participant's age, race/ethnicity, highest education, work status, marital status and number of children aged  $\leq 21$  years old. Participants also indicated any chronic illness they may have using a checklist. Covariates that were included into the model included age (entered as a continuous variable) and health (which was a dichotomous categorical variable indicating the presence of a chronic illness).

### Analysis

Demographic characteristics of the sample were presented descriptively. We conducted a path analysis to evaluate whether the association between difficulty in expressing emotion and depressive symptoms was mediated by relationship satisfaction and sexual dysfunction, controlling for age and health (coded as yes/no to having a chronic illness) using Mplus v8.<sup>35</sup> The model fit was examined using the  $\chi^2$  test, comparative fit index (CFI), Tucker-Lewis index (TLI), root mean square error of approximation (RMSEA) and standardised root mean square residual (SRMR). Values  $>0.90$  for CFI and TLI represent an acceptable model.<sup>36–38</sup> RMSEA and SRMR values ranging between 0.08–0.10 indicate fair fit and values  $>0.10$  suggest model rejection.<sup>36,38,39</sup> The indirect effect, which refers to the product term between the path coefficient of predictor-mediator relationship and that of mediator-outcome relationship was examined. Bootstrapping (2000 samples) was employed to address the significance level of the indirect effect. A 95% bias-corrected bootstrap confidence interval (CI) that does not include zero indicates that the indirect effect is significant.

## Results

### Participant Characteristics

Participant demographic characteristics are presented in Table 1. Majority of the sample are ethnic Chinese with mean age of 37 years. Majority have at least 12 years of education, are currently working full-time and have a monthly household income of  $>S\$3000$  per month. Majority of the sample are also currently married and have at least 1 child. Nearly 30% of our study participants reported a diagnosis of a chronic illness.

Table 1. Characteristics of Study Sample (n = 193)

Variable	Mean $\pm$ SD	n (%)
Age (years)	37.21 $\pm$ 8.72	
Ethnicity		
Chinese		108 (56)
Indian		40 (21)
Malay		34 (18)
Others		11 (6)
Religion*		
Buddhism/Taoism		50 (26)
Christianity		29 (15)
Hinduism/Sikhism		28 (15)
Islam		46 (24)
Free-thinking/atheism		34 (18)
Others		2 (1)
Highest education (years of education)		
Primary school or lower ( $\leq 6$ years)		5 (3)
Secondary (10 years)		35 (18)
JC/polytechnic/ITE (12 years)		71 (37)
University and above (16 years)		82 (42)
Work status*		
Full-time		118 (61)
Part-time		16 (8)
Retired/not working		5 (3)
Homemaker		50 (26)
Monthly household income*		
$<S\$999$		12 (6)
$S\$1000 - 2999$		34 (18)
$S\$3000 - 4999$		45 (23)
$\geq S\$5000$		98 (51)
Marital status		
Married		182 (94)
In a relationship but not married		11 (6)
Have children $<21$ years old?		
Yes		120 (62)
Chronic illness		
Cancer		2 (1)
Cardiovascular disease		0 (0)
Chronic lung disease		12 (6)
Diabetes		14 (7)
Hypertension/hyperlipidaemia		12 (6)
Liver disease		1 (0.5)
Others		18 (9)

ITE: Institute of Technical Education; JC: Junior college; SD: Standard deviation  
\*Does not add up to 193 due to missing data.

Percentages may not add up to 100% due to rounding or missing data.

*Depressive Symptoms, Relationship Satisfaction and Sexual Dysfunction Characteristics*

Table 2 presents the mean (standard deviation) and number of participants who met the cutoff criteria for depression,<sup>40</sup> relationship satisfaction<sup>32</sup> and sexual dysfunction.<sup>34</sup> The mean scores did not meet any of the recommended cutoff criteria. Nevertheless, 15%, 18% and 26% of the sample met the recommended cutoff for depression, relationship satisfaction and sexual dysfunction, respectively.

*Path Analysis Findings*

Our path model fit the data well:  $\chi^2(3) = 2.332; P = 0.506$ ; CFI = 1.000; TLI = 1.000; RMSEA = 0.000; SRMR = 0.019 (Fig. 1). All significant individual paths and indirect effects were in the expected direction. The model indicated that controlling for age and health, difficulty in emotional expression was negatively associated with relationship satisfaction ( $\beta = -0.791$ ; standard error [SE] = 0.259;  $P = 0.002$ ) and increased depressive symptoms were directly

predicted by decreased relationship satisfaction ( $\beta = -0.213$ ; SE = 0.054;  $P < 0.001$ ), increased sexual dysfunction ( $\beta = 0.139$ ; SE = 0.054;  $P = 0.010$ ) and increased difficulty in expressing emotion ( $\beta = 0.908$ ; SE = 0.201;  $P < 0.001$ ). Bootstrapping procedures showed that the indirect effect of difficulty in emotional expression on depressive symptoms via relationship satisfaction was significant (indirect effect, 0.169; 95% CI, 0.043–0.379). This indicates that relationship satisfaction partially mediated the linkage between emotional expressiveness and depressive symptom, which supported our hypothesis 1 (27.3% in the variance of depressive symptoms was explained by the model).

Sexual dysfunction was not significantly predicted by difficulty in expressing emotion ( $\beta = 0.492$ ; SE = 0.352;  $P = 0.162$ ). Hence, sexual dysfunction did not emerge as a mediator for the relationship between difficulty expressing emotion and depressive symptoms (indirect effect, 0.069; 95% CI, -0.032–0.260). Hypothesis 2 was not supported. Also, relationship satisfaction and sexual dysfunction were not related ( $r = -0.622$ ; SE = 1.151;  $P = 0.589$ ).

Table 2. Mean (SD) of Study Outcomes and Number of Participants Who Met the Recommended Cutoff Scores

Variable	Aggregate	Mean ± SD	Recommended Cutoff Score	Number Who Met Cutoff Score (%)
Depression (Hospital Anxiety Depression Scale)	193	4.140 ± 2.999	≥7	29 (15)
Relationship satisfaction (Dyadic Adjustment Scale-4)	191	15.440 ± 3.509	≤12	34 (18)
Sexual dysfunction (Arizona Sexual Experience Scale)	156	14.990 ± 4.134	≥19, 1 item ≥5 or 3 items ≥4	41 (26)

SD: Standard deviation

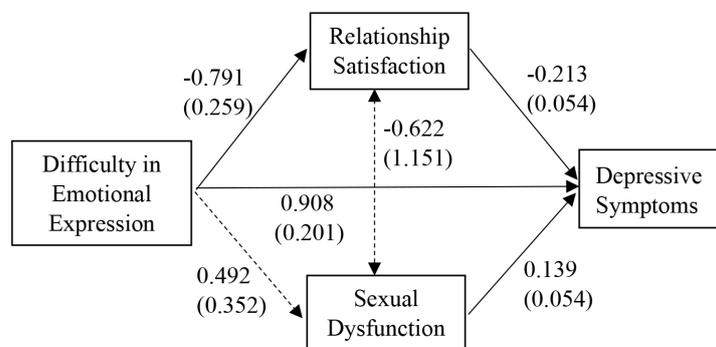


Fig. 1. Estimated unstandardised coefficients (standard errors) for the fitted path model controlling for age and health. Solid line represents significant relationship; dotted line represents non-significant relationship.

## Discussion

The aim of the current study was to examine the associations among depressive symptoms, relationship satisfaction, sexual dysfunction and emotional expressiveness. The extent association between emotional expressiveness and depressive symptoms was accounted for by relationship satisfaction and sexual dysfunction. Our sample included 193 adult women who were married/romantically-partnered in Singapore. Approximately 1 out of 7 women (15%) met the cutoff score for depression, 1 out of 5 women (18%) for marital dissatisfaction and 1 out of 4 (26%) for sexual dysfunction. Although clinician-interviews are needed for formal diagnoses, these numbers may be helpful as a tentative gauge of the prevalence of the issues under study in our sample of women.

As hypothesised, the path analysis model indicated that higher levels of depressive symptoms were predicted by lower relationship satisfaction, higher sexual dysfunction and greater difficulty in emotional expressiveness, controlling for age and health. This is consistent with the findings from previous studies that support MDMD<sup>3,41</sup> and other studies that have found depression to be associated with sexual dysfunction<sup>15,42</sup> and emotional expressiveness.<sup>17,43</sup> Our data suggest that just like their Western counterparts, Asian women who have problems expressing themselves and their needs and who face marital or sexual difficulties have a higher risk of being distressed.

We further found that the relationship between depressive symptoms and emotional expressiveness was partially mediated by relationship satisfaction. Our finding underscores the fact that being able to communicate one's emotions affects both an individual's romantic relationship and psychological well-being. Although seemingly intuitive, our findings add to the body of knowledge by showing that the ability to express one's self is important even in a society where open communication between spouses or romantic partners is stereotypically not always expected and may not be highly valued. In many Asian cultures, a couple who are experiencing distress/discord may choose to suppress their emotions to maintain harmony within the larger family. However, this may come at a cost. Further, this behaviour is perpetuated across generations as parental socialisation of emotions is predictive of a person's emotional regulation and expression.<sup>44</sup>

Contrary to expectations, sexual dysfunction was not associated with relationship satisfaction or emotional expressiveness. A possible explanation is that sexual function—which affects the physical aspects of a romantic relationship—is given less importance as a measure of satisfaction in Asian romantic relationships. One epidemiological study conducted in 10 Asian countries has reported that >30% of women reported at least 1 sexual

dysfunction<sup>45</sup> and another worldwide epidemiological study reported that lack of interest in sex for women in Asia is higher than in European and non-European Western countries.<sup>46,47</sup> It may be that sexual well-being is not necessarily a significant predictor of marital success, especially in a cultural setting where other aspects of marriages may be considered more important such as parental responsibilities, harmonious relationships with the larger family, etc. Given this explanation, it follows that communicating and expressing one's self has small bearing on sexual difficulties faced.

From a clinical standpoint, it is important that individuals who present with distress be assessed comprehensively, including in the areas of relationship happiness, sexual functioning and interpersonal effectiveness (i.e., being able to express themselves verbally to others). In particular, we may extrapolate that interventions aimed at increasing an individual's awareness of their emotions and expressing them effectively may be helpful for their relationship satisfaction and psychological well-being. The challenge will be how to intervene. There continues to be a lingering societal taboo surrounding participation in psychological therapies or marital counselling, which is unfortunate given the increasing levels of stress reported in the nation. It is hoped that the findings from the current study can spur further research on ways to mitigate distress through communication training and emotional expressiveness in a culturally appropriate manner.

## Limitations

Although our proposed model posits that decreased relationship satisfaction, sexual dysfunction and decreased emotional expressiveness give rise to depressive symptoms, the causal direction of the relationship cannot be confirmed using our cross-sectional data. It is possible that individuals who are depressed have poorer interactions with their spouses that negatively affected their relationship and sexual well-being. Other limitations include not using a full version instrument to measure emotional expressiveness (we had used a subset of items of the AEQ as that was our best option available). We did not assess the length of romantic relationship and menopausal status in this study which are potentially important to consider. The study also included only women. Additionally, although we controlled for study participants having chronic illness, we did not examine specific illness subgroups (e.g., diabetes) that may place individuals at higher risk for poorer mood and sexual functioning. Future studies are needed to consider longitudinal designs and include both partners, as well as consider disease-specific factors in further investigations on the interplay among elements of romantic relationships and psychological well-being.

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