

Marital Adjustment Mediated Acculturation on Depressive Symptoms Among Immigrant Women: A Cross-Sectional Study in Taiwan

Mei-Huei Lien

Chung Shan Medical University

Sheng-Shiung Huang

Chung Shan Medical University

Hao-Jan Yang (✉ hjyang@csmu.edu.tw)

Chung Shan Medical University <https://orcid.org/0000-0002-9565-0799>

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Abstract

Background: Immigrant women in Taiwan experience a variety of acculturative and marital problems that result in an inequity of mental health. This study examined the mediational role of marital adjustment on the relationship between the acculturation and depressive symptoms of immigrant women in Taiwan.

Methods: All the participants ($N = 127$) were interviewed to collect data regarding their basic sociodemographics, depressive symptoms, acculturation (using language proficiency and years in Taiwan as indicators), and marital adjustment. The correlation between the various variables was calculated by Pearson correlation coefficients and a Sobel test was used to examine the mediational effect of marital adjustment between acculturation and depressive symptoms.

Results: Results from the Sobel test indicated that the length of residency alleviated depressive symptoms ($\beta = -0.62$, $p = 0.03$) and marital adjustments have a mediational effect on the relationship between years in Taiwan and depressive symptoms.

Conclusion: Marital adjustment deteriorates with the length of residency, thereby causing the occurrence of depressive symptoms. Findings suggest providing immigrant families with programs and resources to assist them in adapting to their marriages and enhance the mental health of immigrant women.

Background

It has been around three decades since Taiwan government recognized marriage immigration. The number of immigrant women as of the March of 2020 reached 561,001 persons, comprising 2.4% of the overall population in Taiwan. The distribution of immigrant women were composed by Mainland China (62.41%), Vietnam (19.61%), Indonesia (5.47%), Hong Kong and Macao (3.12%), Philippines (1.84%), Thailand (1.66%) and others (5.99%) [1]. According to statistics released by the National Immigration Agency in 2020, the number of divorced immigrant women over the past 5 years reached 52,878 persons with an average marriage–divorce ratio of 1.95, meaning that one out of every 1.95 pairs of transnational marriages may end in divorce, which is markedly lower than that for Taiwanese women (2.70) [1]. The high divorce rate for immigrant women highlights the adjustment problems that exist in transnational marriages.

Marital adjustment refers to the happiness and satisfaction perceived by the husband and wife toward their marriage [2] and exhibits a significant correlation with physical and mental health [3]. For the majority of immigrant families in Taiwan, the marriage between husband and wife is typically facilitated by a marriage agency. Such fast and transnational marriage can be characterized by couples being not acquainted with each other before, having large age gaps, speaking different languages, existing cultural and background disparities, having low socioeconomic status, and embracing distinct goals with the marriage (husband mainly for carry on his ancestral line and wife for providing her family of origin financial supply in chief) [4]. Without an emotional foundation, couples in this type of marriage showed insufficient interaction and lacked of cohesion, intimacy, and dependability. Some immigrant women

even experienced denigration, criticism, or verbal/physical aggression from their husbands [5]. As a result, adjusting to marriage and family life becomes more difficult for immigrant women than their native-born counterparts. This is especially the case because immigrant women married to Taiwan alone and they barely have social support from outside the new family. According to the marital discord model of depression [6], the aforementioned disadvantages emerged in transnational marriages may increase the risk of depression in immigrant women by increasing stress and decreasing support.

Newly married immigrant women in Taiwan are not only required to adjust to their marriage, but they also experience numerous types of acculturative stresses. Acculturation refers to the process in which immigrant groups choose to retain their original cultural qualities, such as language, lifestyle, and cultural identity and attitudes, when exposed to another culture, or to transition away from these qualities to fit the new culture [7]. The Taiwanese society is a paternalistic society based on Confucian culture. Families in nonurban regions typically maintain united or compromised family constitution types, forcing the majority of immigrant women to learn at least two common languages (Taiwanese and Mandarin), familiarize themselves with the complicated social etiquette and norms of a Confucian society, cook Taiwanese meals for the entire family, share the burden of family finances, and bear and educate children. These women often demonstrate maladjustment to acculturative stresses when social network support is unavailable [8], which further results in mental illnesses such as depression [9, 10].

Language proficiency and years in host country are key indicators when measuring acculturation [9, 11]. These factors not only correlate with depressive tendency, but also determine marital adjustment [11]. The findings of a U.S. survey conducted on immigrant women from the former Soviet Union suggested that depressive tendency decreases with an increase in English proficiency [7]. Similar results were proposed in a study on Korean immigrants in the United States [9], suggesting that lack of English proficiency is correlated with depression. Moreover, language proficiency influences communication quality, and poor communication may result in conflicts, which deteriorate marriage relationships [12]. Language preference is also a representation of ethnic identity and the basis of trust. Immigrant women who frequently speak a language that is unfamiliar to the spouse or spouse's family members may cause them to feel that these women do not identify with Taiwan, and may even lead them to suspect that these women are dissatisfied with or are concealing certain matters. Thus, ethnic identity and trust are the factors that diminish marriage relationship satisfaction. When immigrant women begin to demonstrate maladjustment to their marriage, they immediately become marginalized entities [13] that are prone to mental illnesses such as depression [14].

In addition to language proficiency, years in Taiwan is another measure of acculturation. Gonidakis et al. [15] asserted that short duration of stay and lack of a steady job negatively influences the mental health of immigrant groups. Newly married immigrant women are required to live for a relatively lengthy period in Taiwan to obtain citizenship (four to eight years). However, numerous factors, such as language barriers, low education level, and family disapproval, impede immigrant women from securing full-time employment in Taiwan, which consequently hinders their adaptation to Taiwanese culture and reduces the opportunities for them to expand their social networks. Furthermore, the majority of immigrant

women are required to financially support both their family in Taiwan and that in their country of origin [16], and are expected to bear children as soon as possible. Therefore, the life stress that these women experience during their initial years in Taiwan is a key factor influencing the prevalence of mental problems. As their stay in Taiwan lengthens, numerous types of stress are steadily mitigated, and immigrant women are gradually able to confront and solve the life stress they experience. As these women adjust to the new language, eating habits, and living habits, their mental health gradually improves [17].

Acculturation is not only associated with mental health but also affects marital adjustment among immigrant women. Mona et al. [18] found that longer residence in the U.S. was associated with greater acculturation to U.S. society, but with reduced family satisfaction, a measure highly correlated with marital adjustment. This finding implied that good acculturation may be helpful for developing marital adjustment, which further decreases the risk of occurrence of depressive symptoms, and vice versa. As such, divorced immigrant women suffered from a higher incidence of depressive symptoms than their married counterparts [19]. Results of Mexican immigrant couples showed that the wives' marital discontent was shown to be uniquely vulnerable to their own depressive symptoms and marital negativity [20]. Moreover, the marital satisfaction can be a powerful buffer against various stress life events [11]. This information clearly suggests that although the depressive symptoms exhibited by immigrant women are correlated to their acculturative stresses, this correlation is likely mediated by their marital adjustment. Thus, when immigrant women experience acculturative stresses, specific adjustment problems indicate that these stresses are associated with poor marital adjustment and increased risks of depressive symptoms. Therefore, the present study examined immigrant women in Taiwan to determine the mediational effect that marital adjustment has on the correlation between acculturation stress and depressive symptoms.

Methods

Participants

The participants of the cross-sectional study were recruited from a population of immigrant women located in Central Taiwan by using a snowball sampling method. Because the majority of immigrant women seek the support and assistance of civil immigrant associations for adapting to life in Taiwan, we selected eligible participants from lists provided by three such associations. These associations were established mainly for serving immigrant women, especially for those underprivileged in society or socioeconomic disadvantaged. Nevertheless, these target cases accounted for only a small part of the members. The majority of the members were "general" immigrant women who joined the associations to make friends with similar backgrounds and, through this way, to establish their social network and support system. As such, enrolling participants from these associations was contributive to provide sufficient variance to clarify effects of potential factors. The sampling was conducted at the associations by selecting eligible immigrant women among the daily visitors. The consents of these women to participate in a questionnaire survey was obtained before association staff transferred the participant list

to the researchers of the present study. Subsequently, accompanied by an association staff member, the researchers traveled to designated locations to interview the participants and request that they nominate other women they deemed eligible. The eligibility criteria included marriage immigrant women (a) of Southeast Asian or Chinese origin who were (b) between the ages of 20 and 50. Initially, the potential participants or social workers from the immigrant associations were instructed to solicit the participatory willingness of the nominees by telephone. Then, the introducing participant and a trained interviewer from the association accompanied the researchers during the survey process to reduce the anxiety or defensiveness of the participants. Based on literacy level, the participants underwent either an interview or a questionnaire survey, which required approximately 15 to 20 min to complete. Each research participant was awarded NT\$150 for completing the survey and NT\$50 for each potential participant they nominated. The interviewers from the immigrant associations were awarded NT\$100 for each participant they assisted in successfully completing the survey. Ultimately, 127 participants were surveyed. The present study was approved by the Chung Shan Medical University Hospital Institutional Review Board (Case no. CS12084).

Measures

Depressive symptoms

The present study adopted the Center for Epidemiologic Studies Depression Scale (CES-D) to evaluate the depressive symptoms of immigrant women. This questionnaire has been widely employed in numerous studies and proven to possess excellent reliability and validity [21]. The CES-D comprises 20 items, which is scored using a 4-point Likert scale. Based on degree, each item could produce one of four possible answers; specifically, *very rarely* (0 points), *rarely* (1 point), *often* (2 points), and *very often* (3 points), for a total of 0 to 60 points. A high score denotes great depression severity. The Cronbach's α for the CES-D employed in the present study achieved 0.88.

Acculturation

The present study adopted language proficiency and years in Taiwan as two indicators for measuring the acculturation of immigrant women. For language proficiency, listening, speaking, reading, and writing abilities were evaluated, with each ability presenting one of three possible proficiency levels; namely, *fluent* (3 points), *intermediate* (2 points), and *limited* (1 point). These information was collected by a research assistant with in-person interview. Thus, the participants obtained a summing language proficiency score of between 4 and 12 points. For the convenience of analysis, the participants who obtained a score between 4 and 8 were classified as having low language proficiency, and those who obtained a score between 9 and 12 were classified as having high language proficiency. The Cronbach's α for the acculturation variables proposed in this study achieved 0.77. For years in Taiwan, the participants provided their actual years of residency in Taiwan.

Marital adjustment

The present study adopted a scale for measuring marital adjustment as proposed by Wu [22]. The scale comprises eight items including facets of marital adjustment like communication with family members, caring and respect for the partner's individual needs and temperament, cooperation in problem solving, and rearing of children. Examples of the items include "Do you feel that you have come to a mutual understanding in your marriage since you moved to Taiwan?" and "Do you feel that you get along with all the members of the household after moving to Taiwan?" A 4-point Likert scale was employed to measure each item. The participants selected one of four possible answers based on their adjustment level; specifically, *strongly agree* (3 points), *agree* (2 points), *disagree* (1 point), and *strongly disagree* (0 points). Thus, the participants obtained an adjustment score between 0 and 24 points. A high score denotes highly favorable marital adjustment conditions. The Cronbach's α for the marital adjustment scale employed in the present study achieved 0.82.

Control variables

Age, marital status, education level of husband and wife, personal income, occupation, and the original nationality of the immigrant woman were adopted as the control variables; of these variables, marital status was categorized into two groups, the married group and the divorced/widowed group.

Data Analysis

Data analysis was performed using the SAS 9.2 software. A descriptive analysis was used to determine the distribution of the sociodemographic variables. Then, Pearson or Spearman correlation coefficients were calculated to understand the correlation and directionality between the various variables (i.e., language proficiency, years in Taiwan, and marital adjustment) and the depressive symptoms of immigrant women. Finally, a Sobel test was employed to examine the mediational effect of marital adjustment between acculturation and depressive symptoms. To conduct Sobel test, direct effects (represented as c') were subtracted from the total effects (represented as c) between predictive variables (acculturation) and outcome variables (depressive symptoms). A value of $(c-c')$ significantly different from 0 represents mediational effects existed. The 95% confidence interval (CI) for the $(c-c')$ value was calculated using bootstrapping method; and the number of simulation was set at 5,000 make sure the 95% CI for the $(c-c')$ value can be converged and stable. To obtain regression coefficients and their standard errors (SE) for performing Sobel test, multiple regression analyses were implemented controlling for age, personal income, husband's income, education, employment status, original nationality, and years in Taiwan. Under such analytical framework, the participant sample size was determined at $n=81$ by setting a significant level of 0.05, a statistical power of 0.8, and a median effect size of 0.2 [23].

Results

A total of 127 immigrant women completed the questionnaire; 18 were divorcees (14%), 12 were widows (9%), and 97 were married immigrant women (76%). Approximately half (48%) of the participants had resided in Taiwan for between 10 and 14 years and are currently raising two children (46%), and approximately two thirds of the participants were between the ages of 30 and 39 (65%). Most of the

immigrant women (89%) and their spouses (79%) presented an educational level less than or equal to high school. A proportion of the immigrant women (57%) and their spouses (38%) earned a monthly salary of between NT\$15,000 and NT\$29,999. These statistics suggest that the socioeconomic status of the participants was generally low, with only 43% of the participants demonstrating favorable English proficiency (Table 1).

Table 1

Sociodemographic distribution, acculturation, and depressive symptoms among immigrant women (N = 127)

Variables	<i>n</i>	%
Marital status		
Married	97	76.38
Divorced	18	14.17
Widowed	12	9.45
Number of children		
0	18	14.17
1	41	32.28
2	59	46.46
3+	9	7.09
Age		
20–29	17	13.39
30–39	82	64.57
40+	28	22.05
Education		
Primary school or lower	34	26.77
Middle school	39	30.71
High school	40	31.50
College/university or above	14	11.02
Education of husband		
Primary school or lower	11	9.65
Middle school	33	28.95
High school	46	40.35
College/university or above	24	21.05
Personal monthly income (NTD ^a)		

^a NTD = New Taiwan Dollar, 1 NTD = 0.033 USD; ^b including home OEM, translator, and international trade secretary; ^c including mason, civil engineer, plumber, and electrician

Variables	<i>n</i>	%
0	16	12.60
1–14,999	22	17.32
15,000–29,999	72	56.69
30,000–49,999	13	10.24
≥ 50,000	4	3.15
Husband's monthly income (NTD)		
0	16	12.60
1–14,999	5	3.94
15,000–29,999	49	38.58
30,000–49,999	45	35.43
≥ 50,000	12	9.45
Job of immigrant women		
Public servant	0	0.00
Businessman	16	12.60
Agriculture	7	5.51
Labor	43	33.86
Service industry	35	27.56
Unemployed	16	12.60
Others ^b	10	7.87
Job of husbands		
Public servant	2	1.57
Businessman	17	13.39
Agriculture	11	8.66
Labor	52	40.94
Service industry	16	12.60
Unemployed	12	9.45

^a NTD = New Taiwan Dollar, 1 NTD = 0.033 USD; ^b including home OEM, translator, and international trade secretary; ^c including mason, civil engineer, plumber, and electrician

Variables	<i>n</i>	%
Others ^c	17	13.39
Employment status		
Full time	93	73.23
Part time	16	12.60
Unemployed	18	14.17
Employment status of husband		
Full time	106	83.46
Part time	7	5.51
Unemployed	14	11.02
Original nationality		
Vietnam	93	73.23
Thailand	1	0.79
Philippines	2	1.57
Mainland China	25	19.69
Indonesia	6	4.72
City of residence		
Taichung	49	38.58
Changhua	75	59.06
Nantou	3	2.36
Mandarin language proficiency		
Low	73	57.48
High	54	42.52
Years in Taiwan		
0–4	15	11.81
5–9	43	33.86
10–14	61	48.03

^a NTD = New Taiwan Dollar, 1 NTD = 0.033 USD; ^b including home OEM, translator, and international trade secretary; ^c including mason, civil engineer, plumber, and electrician

Variables	<i>n</i>	%
15–20	8	6.30
Depressive symptoms (CES-D Score) (mean, SD)	15.68	10.62
^a NTD = New Taiwan Dollar, 1 NTD = 0.033 USD; ^b including home OEM, translator, and international trade secretary; ^c including mason, civil engineer, plumber, and electrician		

We employed Pearson correlation coefficients to analyze the correlations between the depressive symptoms, language proficiency, years in Taiwan, marital adjustment, and the sociodemographics of immigrant women (Table 2). The analysis results indicated that the depressive symptoms of immigrant women were correlated to acculturation, but was only significant in the aspect of years in Taiwan. Language proficiency failed to achieve significant correlations with the other research variables. Increasing years in Taiwan elevated the severity of the depressive symptoms exhibited in immigrant women ($r = 0.24, p = 0.0076$) and decreased their marital adjustment ($r = -0.29, p = 0.0009$). Marital adjustment was also correlated to depressive symptoms. The participants who demonstrated high marital adjustment conditions showed less signs of depressive symptoms ($r = -0.34, p = 0.0001$).

Table 2
Correlation coefficients between study variables

Variable	1	2	3	4	5	6
1. Depressive symptoms	—					
2. Mandarin language proficiency	-0.12	—				
3. Years in Taiwan	0.24 ^{**}	-0.02	—			
4. Marital adjustment	-0.34 ^{***}	0.16	-0.29 ^{***}	—		
5. Marital status	0.49 ^{***}	0.01	0.32 ^{***}	-0.41 ^{***}	—	
6. Husband's income	-0.26 ^{**}	0.16	-0.11	0.09	-0.18 [*]	—
7. Education of husband	-0.24 ^{**}	0.25 ^{**}	-0.08	0.26 ^{**}	-0.23 [*]	0.34 ^{***}
Coefficients were calculated with Pearson correlation method or Spearman correlation method where necessary.						
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$						

These results suggest that acculturation (particularly years in Taiwan) possibly influences marital adjustment, thereby leading to the occurrence of depressive symptoms. Thus, the Sobel test was performed to analyze mediational effects (Fig. 1). After controlling the various sociodemographic variables of income, education level, occupation, and original nationality, participants with a

comparatively longer residency in Taiwan showed a comparatively unfavorable marital adjustment ($\beta_a = -0.26$, $SE = 0.08$, $p = 0.002$), which consequently increased depressive symptom scores ($\beta_b = -0.92$, $SE = 0.29$, $p = 0.002$). Prior to the inclusion of marital adjustment as a mediational factor, participants with more years in Taiwan presented lower depressive symptom scores ($\beta = -0.62$, $SE = 0.27$, $p = 0.03$). Nevertheless, after marital adjustment was included, the influence that years in Taiwan had on the depressive symptoms of immigrant women failed to achieve significance, demonstrating that marital adjustment is the mediational factor between acculturation and mental health.

Discussion

The findings of the present study showed that the depressive symptoms of immigrant women living in Taiwan are associated with their acculturation stresses and marital adjustment, and that marital adjustment is the mediational factor influencing the relationship between acculturation and depression. The transnational marriage immigrant sample was predominantly from Southeast Asian countries, young women who married Taiwanese husbands with relatively low socioeconomic status, and around a half stay in Taiwan more than 10 years and with good local language proficiency.

Between the two acculturation measures performed in the present study, only years in Taiwan was able to predict depressive symptoms. Language proficiency failed to exhibit a significant association with depressive symptoms. Although the findings of the bivariate correlation analysis indicated that increased years in Taiwan elevates the depressive symptoms of immigrant women, decreased depression with increased years in Taiwan was exhibited when the sociodemographic variables were controlled in the regression analysis, suggesting that acculturation improves over time, which simultaneously enhances mental health. These results were similar to the findings presented by Madianos et al. [17]. As the majority of the control variables employed in the present study were SES-related variables, discrepant findings between the two analytic strategies demonstrated the confounding effects of socioeconomic variables on the relationship between acculturation and depressive symptoms.

Moreover, the present study found that the correlation between years in Taiwan and depression severity is mediated by marital adjustment; the participants who had lived for long periods in Taiwan demonstrated poor marital adjustment. Thus, poor marital adjustment further elevates depression severity. In immigrant households in Taiwan, marital adjustment problems typically gradually develop because of a lack of affection in the marriage and poor relationships with the mother-in-law [24–27]. Most couples in immigrant families do not possess an emotional foundation [28]. Instead, they are rapidly brought together by marriage agencies to satisfy the separate needs of the couple (e.g., the husband desires to continue the family line, whereas the wife desires to improve the financial condition of her family in the country of origin). In such households, the tolerance and understanding within couples gradually deteriorates after the couple achieves their separate goals, and marital satisfaction slowly decreases. This may be a reason why an increased number of years in Taiwan negatively influence marital adjustment. Furthermore, immigrant women who marry a Taiwanese husband and move to Taiwan often marry into families where it is customary for three generations of the husband's family to live together.

Immigrant women are required to not only resolve problems with their husbands, but also resolve those with their mother-in-laws and children, which might also indirectly induce poor marital adjustment. Problems that such intergenerational cultural differences generate [29] are not easily resolved over time. Thus, the accumulation of these problems over multiple years causes marital adjustment to continuously deteriorate, consequently causing depression. Scholars have further argued that poor marital adjustment is correlated to the education level of the husband, where a low education level increases conflicts between couples attempting to communicate with each other, influencing the harmony of the marriage [12] and causing poor marital adjustment [30]. Unfortunately, the spouses of immigrant women in Taiwan often exhibit low socioeconomic statuses [16] and poor education levels. In the present study, we supported that the education level of the spouse correlates to marital adjustment. Numerous studies have also indicated that mental problems are associated with low socioeconomic status and a lack of social capital [31–33]. A large number of immigrant women find that their husbands' income is far less than they had originally anticipated, leading them to file for divorce [28]. Although the analysis results of the present study failed to indicate a significant correlation between husband's income and marital adjustment, a significant and negative correlation between husband's income and the depressive symptoms of immigrant women was shown. These results explained the complex correlation between the marital adjustment of immigrant women and their years in Taiwan and depressive symptoms. Some factors that were not included in this study yet probably confounded the effect of years in Taiwan may also partly contribute to the sophisticated mechanism which warrant further investigation, such as the effects of the older age with longer years in Taiwan, a larger age gap between the couple [34], and a higher proportion of physical and mental disabilities of husbands [34].

Although some previous study asserted that the length of immigration is positively associated with severity of depression [35], the language proficiency of the participants played a key role in the relationship [7]. In other words, immigrants who are able to eventually gain fluency in the local language understand local culture. Subsequently, these immigrants gain confidence and are able to feel in control in their new life and environment. Typically, this resolution stage of acculturation occurs three to five years following immigration. Compared with those who reach the resolution stage, immigrants who are unable to complete this stage are at a higher risk of falling into depression [9]. Most of the immigrant women examined in the present study have resided in Taiwan for 10 to 14 years, and were already linguistically proficient. Additionally, immigrants who encounter adjustment problems typically return to their country of origin [36, 37]; therefore, the chances of such immigrants becoming participants in the present study were unlikely. This may explain why language proficiency failed to significantly influence depressive symptoms, and why increased years in Taiwan enhanced acculturation and reduced the severity of depressive symptoms.

Several limitations should be considered when elaborating on the results presented in the current study. First, as acculturation is a multidimensional concept, the assessment of acculturation in this study (language proficiency and years of living in Taiwan) may be not robust and sound. Second, this is a cross-sectional study and is thus unable to clarify the time sequence of the causal relationships between variables. Third, the limited sample examined in this study may limit statistical power and produce

unstable estimates. Fourth, because a snowball sampling method was employed, the majority of immigrant women included in the present study were originally from Vietnam. This bias toward one ethnic group may create problems related to representation and generalization.

Conclusion

In conclusion, years in Taiwan is an acculturation indicator that effectively predicts the mental health of immigrant women, where increased years in Taiwan reduces the occurrence of depressive symptoms. Nevertheless, couples in transnational marriages often experience greater difficulty in overcoming cultural, social, and family challenges than those in general marriages because the emotional foundation of transnational marriages is relatively weaker than that of general marriages. In this context, the marital adjustment and satisfaction of immigrant women decline the longer they stay in Taiwan, consequently and indirectly causing depressive symptoms. The results suggest that programs or resources should be provided for assisting immigrant families adapt to married life and reduce depression among the women. Relevant units can consider incorporating premarriage counseling mechanisms (e.g., courses that introduce the country and culture of partners and couple interaction skills) and establishing specific agencies that actively care for immigrant women, help them achieving the resolution stage of acculturation, and provide solutions to marital adjustment problems.

Abbreviations

CES-D

Center for Epidemiologic Studies-Depression Scale; SE:standard error

Declarations

Ethics approval and consent to participate

The present study was approved by the Chung Shan Medical University Hospital Institutional Review Board (Case no. CS12084). Written informed consent was obtained from all participants prior to their participation.

Consent for publication

Not applicable.

Availability of data and materials

The datasets used and analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that there are no competing interests.

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Authors' contributions

MH and HJ conceived and designed the study. MH and SS carried out the statistical analysis and critically contributed to the interpretation of results. SS participated in a modification of the manuscripts. HJ led the study and completed the manuscript and assumes responsibility for the accuracy of this article. All authors have read and approved the manuscript.

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Figures

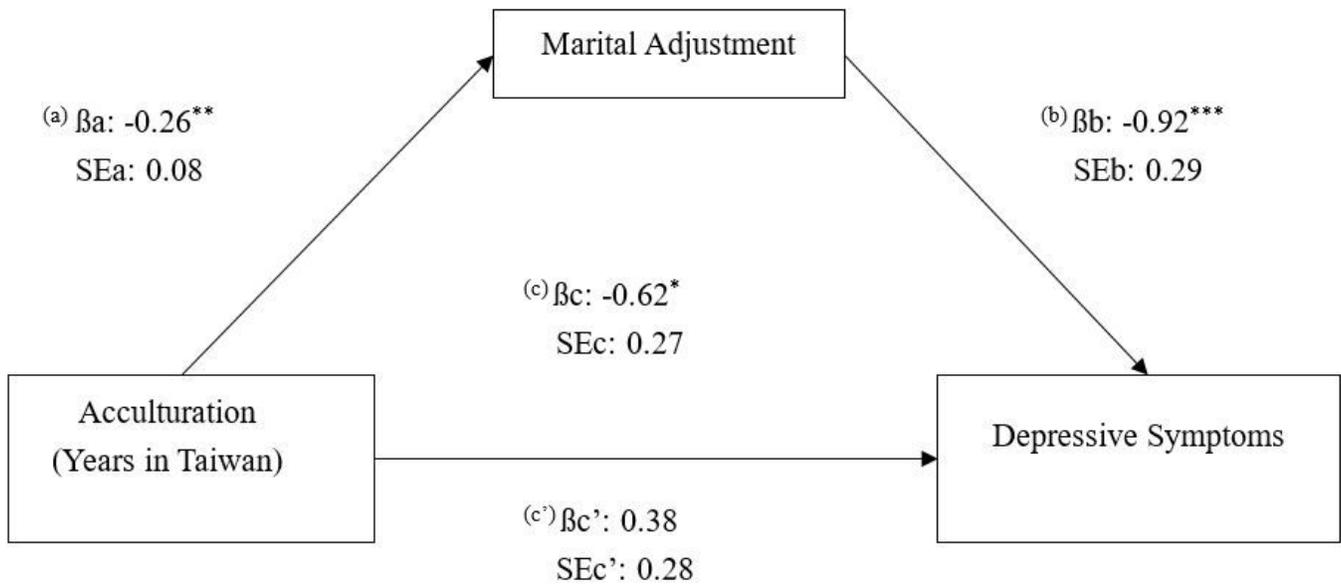


Figure 1

Mediational effect of marital adjustment between acculturation and depressive symptoms among immigrant women by using Sobel test. Path (a) modeled marital adjustment as a dependent variable and acculturation as an independent variable (β_a and SE_a are the regression coefficient and its standard error, respectively in the model); Path (b) modeled depressive symptoms as a dependent variable and marital adjustment as an independent variable (β_b and SE_b are the regression coefficient and its standard error, respectively in the model); Path (c) modeled depressive symptoms as a dependent variable and acculturation as an independent variable (β_c and SE_c are the regression coefficient and its standard error, respectively in the model); Path (c') is the model c added in the marital adjustment as a control variable ($\beta_{c'}$ and $SE_{c'}$ are the regression coefficient and its standard error, respectively in the model). All models have controlled for age, personal income, husband's income, education, employment status, original nationality, and years in Taiwan. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

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