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Bi-Dimensional Acculturation and Depression During Pregnancy and Postpartum Period: Testing Berry's Model of Acculturation Strategies

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Purpose:

Evidence has suggested that acculturation could be a bi-dimensional concept. Berry's model of acculturation is the well-known and widely-researched model of bi-dimensional acculturation. However, only few studies have examined the effect of Berry's bi-dimensional acculturation and maternal depression trajectories among immigrant mothers. The study objective was to explore how Berry's four acculturation strategies affect depression during pregnancy and postpartum period.

Methods:

This study employed a prospective cohort study design. Marriage-based immigrant women who were at least twelve weeks pregnant were recruited from hospitals, clinics and health centers (N=310). The data were collected by face-to-face or telephone interview, mail or e-mail, using structured questionnaire in the 2nd and 3rd trimester during pregnancy and at 1 month, 3 months, 6 months, and 1 year postpartum during the period from March 2013 to December 2015. Maternal depression was measured by Edinburgh Postnatal Depression Scale. Bi-dimensional acculturation was measured by two self-developed 19-item parallel scales, adaptation to host culture and maintenance of heritage culture, with higher score indicating higher level in each. Besides the scale scores, the score for each of the two scales (adaptation to host culture; maintenance of heritage culture) was divided into high and low level, which yielded a total of four acculturation types (marginalization (low; low), separation (low; high), assimilation (high; low), and integration (high; high)). Social support was composed of three subscales (emotional, instrumental, and informational support) with higher score indicating higher level in each support. Generalized estimating equation (GEE) was used to examine the relationships.

Results:

The percentage was 22.3%, 24.5%, 27.1%, and 26.1% in the marginalization, separation, assimilation, and integration groups, respectively. The separation group had a higher level of depression than the other three groups. Emotional support interacted with four-type acculturation on maternal depression. In the separation group, emotional support had a more protective effect against maternal depression when compared to the other three groups.

Conclusion:

Immigrant women who were more likely to maintain the heritage culture and less likely to adapted the host culture (separation group) had higher depression symptoms than the other three groups (marginalization, assimilation, and integration). Emotional support was more beneficial to decrease maternal depression in the separation group when compared to the other three groups. To decrease maternal depression, strategies should be developed to target immigrant women who had separation orientation and to increase their emotional support.

Title:

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Keywords:

marginalization, separation, assimilation and integration, perinatal depression and social support

References:

- Abbott, M. W., & Williams, M. M. (2006). Postnatal depressive symptoms among Pacific mothers in Auckland: prevalence and risk factors. *Australian and New Zealand Journal of Psychiatry*, 40, 230-238. doi:10.1111/j.1440-1614.2006.01779.x
- Berry, J. W. (1998). Acculturation and health. In S. S. Kazarian & D. R. Evans (Eds.), *Culture clinical psychology: Theory, research and practice* (pp. 39-57). New York, NY: Oxford University Press.
- Berry, J. W. (2003). *Conceptual approaches to acculturation*. In K. M. Chun, P. B. Organista, & G. Marin (Eds.), *Advances in theory, measurement and applied research* (pp. 17-38). Washington: American Psychology Association.
- Chen, H. H., Hwang, F. M., Tai, C. J., & Chien, L. Y. (2013a). The interrelationships among acculturation, social support, and postpartum depression symptoms among marriage-based immigrant women in Taiwan: a cohort study. *Journal of Immigrant and Minority Health*, 15, 17-23. doi:10.1007/s10903-012-9697-0
- Chen, H. H., Hwang, F. M., Lin, L. J., Han, K. C., Lin, C. L., & Chien, L. Y. (2016). Depression and Social Support Trajectories During 1 Year Postpartum Among Marriage-Based Immigrant Mothers in Taiwan. *Archives of Psychiatric Nursing*, 30, 350-355. doi:10.1016/j.apnu.2015.12.008
- Chen, H. H., & Chien, L. Y. (2018). Ethnic drinking culture and acculturation in relation to alcohol drinking behavior among male immigrants in Taiwan. *American Journal of Men's Health*, 1, 557988318772744. doi:10.1177/1557988318772744
- Chien, L. Y., Tai, C. J., & Yeh, M. C. (2012). Domestic decision-making power, social support, and postpartum depression symptoms among immigrant and native women in Taiwan. *Nursing Research*, 61, 103-110. doi:10.1097/NNR.0b013e31824482b6
- Kunst, J. R., Thomsen, L., Sam, D. L., & Berry, J. W. (2015). "We Are in This Together": Common Group Identity Predicts Majority Members' Active Acculturation Efforts to Integrate Immigrants. *Personality and Social Psychology Bulletin*, 41, 1438-1453. doi:10.1177/0146167215599349
- Ministry of the Interior, ROC. (2017a). *The number of marriage distinguished by sex and mother countries*. Retrieved from http://www.ris.gov.tw/zh_TW/346

Ministry of the Interior, ROC. (2017b). *The number of marriage-based immigrants*. Retrieved from <https://www.immigration.gov.tw/ct.asp?xItem=1325434&ctNode=29699&mp=1>

O'Hara, M., & Swain, A. (1996). Rates and risk of postpartum depression: A meta-analysis. *International Review of Psychiatry*, 8, 37-54. doi:10.3109/09540269609037816

Roomruangwong, C. & Epperson, C. N. (2011). Perinatal depression in Asian women: prevalence, associated factors, and cultural aspects. *Asian Biomedicine*, 5, 179-193. doi:10.5372/1905-7415.0502.024

Ryder, A. G., Alden, L. E., & Paulhus, D. L. (2000). Is acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of personality, self-identity, and adjustment. *Journal of Personality and Social Psychology*, 79, 49-65. doi:10.1037/0022-3514.79.1.49

Shorey, S., Chee, C. Y. I., Ng, E. D., Chan, Y. H., Tam, W. W. S., & Chong, Y. S. (2018). Prevalence and incidence of postpartum depression among healthy mothers: A systematic review and meta-analysis. *Journal of Psychiatric Research*, 104, 235-248. doi:10.1016/j.jpsychires.2018.08.001

Underwood, L., Waldie, K., D'Souza, S., Peterson, E. R., & Morton, S. (2016). A review of longitudinal studies on antenatal and postnatal depression. *Archives of Women's Mental Health*, 19, 711-720. doi:10.1007/s00737-016-0629-1

Walker, J. L., Ruiz, R. J., Chinn, J. J., Marti, N., & Ricks, T. N. (2012). Discrimination, acculturation and other predictors of depression among pregnant Hispanic women. *Ethnicity and Disease*, 22(4), 497-503.

Abstract Summary:

Bi-dimensional acculturation (Berry's four-group acculturation) was a critical factor related to depression trajectory from the second trimester to one year postpartum. Emotional support was a moderator of the relationship between Berry's four-group acculturation and depression during pregnancy and postpartum period.

Content Outline:

Introduction:

Marriage-based immigration

During the past few decades, marriage-based immigration has been increasing in countries throughout the world, including Taiwan. Marriage-based immigrant women married to Taiwanese men composed nearly one-tenth of all marriages with more than 479 thousand foreign immigrant women in Taiwan in 2016 (Ministry of the Interior (ROC), 2017a; Ministry of the Interior (ROC), 2017b). Marriage-based immigrant women often face pregnancy or childbirth shortly after their arrival and migration (Chen et al., 2016).

Maternal depression during pregnancy and postpartum period

In contrast to native women, immigrant women had an even higher rate and risk of maternal depression during pregnancy and postpartum period (Chien, Tai, Yeh, 2012; Chen et al., 2016; O'Hara & Swain, 1996; Roomruangwong & Epperson, 2011; Shorey et al., 2018; Underwood, Waldie, D'Souza, Peterson,

& Morton, 2018). The depression trajectories may differ by population characteristics, including sociocultural characteristics (e.g., acculturation).

Acculturation and Berry's model

Evidence has suggested that acculturation could be a bi-dimensional concept, including adaptation to host culture and maintenance of heritage culture (Chen & Chien, 2018; Ryder, Alden, & Paulhus, 2000). Berry's model of four acculturation strategies (marginalization, separation, assimilation, and integration) is the well-known and widely-researched model of bi-dimensional acculturation (Berry, 1998; Berry, 2003; Kunst, Thomsen, Sam, & Berry, 2015). The investigations of perinatal depression trajectories differed by the four acculturation strategies may help researchers to target the specific acculturation group at high risk for depression among immigrant women. However, only few studies have examined the effect of Berry's bi-dimensional acculturation and maternal depression trajectories among immigrant mothers (Abbott & Williams, 2006; Walker, Ruiz, Chinn, Marti, & Ricks, 2012).

Interaction effect

According to our previous study, social attitude (defined as accepting attitudes toward mainstream society; one of the indicators of uni-dimensional acculturation) was a moderator of the relationship between depression at 1 month and social support at 6 months postpartum (Chen, Hwang, Tai, & Chien, 2013). Nonetheless, the mechanism linking bi-dimensional acculturation, social support and depression during pregnancy and postpartum period remained unclear.

Research Objective:

The study objective was to explore how Berry's four acculturation strategies (marginalization, separation, assimilation, and integration) affect depression trajectory during pregnancy and postpartum, and further examine the moderating effect of social support on the relationship between acculturation strategies and maternal depression.

Methods:

Study design

In this prospective longitudinal study, immigrant women were recruited to completed structured questionnaires in the second and third trimester, as well as 1, 3 and 6 months and 1 year postpartum. The data collection period was from March 2013 to December 2015. The study was approved by the institutional review boards at respective hospitals, including Mackay Memorial Hospital, Tzu Chi General Hospital Taipei Branch, Taipei City Hospital, and Saint Mary's Hospital Luodong.

Study participants

The study population was pregnant immigrants who were born outside of Taiwan and married to Taiwanese men, were at least 20 years of age, and were more than 12 weeks pregnant living in Taiwan. The final sample for this analysis was consisted of 310 participants.

Measures

Maternal depression was measured by Edinburgh Postnatal Depression Scale. Bi-dimensional acculturation was measured by two self-developed 19-item parallel scales, adaptation to host culture and maintenance of heritage culture, with higher score indicating higher level in each. Besides the scale scores, the score for each of the two scales (adaptation to host culture; maintenance of heritage culture) was divided into high and low level, which yielded a total of four acculturation types (marginalization (low;

low), separation (low; high), assimilation (high; low), and integration (high; high)). Social support was composed of three subscales (emotional, instrumental, and informational support) with higher score indicating higher level in each support.

Data Analysis

Berry's four acculturation groups were described using percentages. Generalized estimating equation (GEE) was used to examine the relationships.

Results:

The percentage was 22.3%, 24.5%, 27.1%, and 26.1% in the marginalization, separation, assimilation, and integration groups, respectively. The separation group had a higher level of depression than the other three groups. Emotional support interacted with four-type acculturation on maternal depression. In the separation group, emotional support had a more protective effect against maternal depression when compared to the other three groups.

Discussion:

The relationship between four acculturation groups and depression during pregnancy and postpartum period

The four-group acculturation was a critical factor related to depression trajectory from the second trimester to one year postpartum. Immigrant women who had separation orientation had a significantly lower risk for depression during pregnancy and in the postpartum period than those had marginalization, assimilation and integration orientation. However, our result was different from one study reporting immigrant women who had marginalization orientation had significantly higher opportunities for postpartum depression when compared to those had separation orientation among Pacific Island samples in New Zealand (Abbott & Williams, 2006). The different results could be due to different populations with different sociocultural and immigrant backgrounds.

Acculturation, social support, and depression during pregnancy and postpartum period

This study confirmed the interaction between acculturation and social support on maternal depression as demonstrated in our previous study (Chen et al., 2013). Different from our previous study, we took Berry's model of four acculturation strategies (bi-dimensional concept of acculturation) into consideration in the current study. In comparison to the marginalization, assimilation and integration groups, emotional support was more beneficial to decrease maternal depression in the separation group. The accumulated evidences from our study can adequately inform policy makers regarding the important role of emotional support during pregnancy and postpartum period for marriage-based immigrant women.

Conclusions:

Immigrant women who were more likely to maintain the heritage culture and less likely to adapted the host culture (separation group) had obviously higher depression symptoms during pregnancy and postpartum period than the marginalization, assimilation and integration groups. Policies should target immigrant women who had separation orientation. To detect the potential group at high risk for depression, acculturation and enculturation should be screened during pregnancy among marriage-based immigrant women. From a sociocultural perspective, policy makers should pay more attention to provide marriage-based immigrant women a friendly environment to maintain their heritage culture and obtain enough assistance in host country at the same time. Of the three-dimensional support, emotional and informational support were protective factors against maternal depression. Emotional support was more beneficial to decrease maternal depression in the separation group than in the other three groups.

Strategies regarding emotional support should be developed to improve mental health during pregnancy and postpartum period among immigrant women.

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