Abstract

**Background/ Objectives:** This study was conducted to identify the structural relationships between stress, depression, family system perception, mental violence, and well-being among 249 immigrant women in Chungcheongnam-do.

**Methods/ Statistical Analysis:** For the analysis, this study conducted frequency, reliability, and correlation analysis, structural equation modeling, and bootstrap validation. **Findings:** First, there were positive correlations between stress, depression, and mental violence and also between family system perception and well-being. Both well-being and family system perception had negative correlations with stress, depression, and mental violence. Second, depression in immigrant women had a positive impact on mental violence, whereas family system perception had a negative impact; stress also had a positive impact on mental violence. Moreover, mental violence, depression, and stress had significant negative impacts on well-being. In contrast, family system perception had a significant positive impact on well-being. Third, mental violence was a mediating variable in the relationships between stress and well-being, depression and well-being, and family system perception and well-being. **Application/ Improvement:** This study will be used the well-being of immigrant women.

**Keywords:** Depression, Family System Perception, Mental Violence, Immigrant Women, Stress, Well-being

1. Introduction

Modern societies are becoming multicultural ones in which diverse cultures coexist and interact with each other to conserve and develop the unique attributes of these cultures. In fact, a majority of countries have become multicultural. In Korean society, the multicultural environment has become a familiar concept. Due to this social trend, there has been a growing interest in immigrant women. These women seek opportunities for new lives with Korean men, but they experience a variety of conflicts and stresses due to the differences in language, living patterns, and lifestyles, and the stress they experience while adapting to Korean society after marriage affects their psychological health. In addition, such challenges may lead to more serious psychological problems such as depression and anxiety. Depression is a mental illness that manifests itself psychologically and physically. It can cause sufferers to feel that they are worthless and guilty, and it can cause loss of interest in things around them, reduce concentration and memory, cause fatigue and changes in appetite, weight, and sleep patterns, and potentially lead to suicidal ideation.

Domestic violence is the most important variable in immigrant women's depression. Meanwhile, depression is the most prominent symptom of domestic violence among these women. Marital violence or spousal abuse refers to physical, emotional, and/or verbal violence that takes place between legally married couples. Emotional, or mental, violence refers tormenting a victim by, e.g., belittling, insulting, undermining, and taking other types of actions in order to control, manipulate, or hurt the victim. It is one of the most frequently occurring types of domestic violence, but it does not leave visible wounds and is thus widely deemed more serious. Other types of mental violence include using a contemptuous or forceful
tone, criticizing (for instance, for being inferior or incompetent, threatening, and interfering with a person's decisions. The immigrant women in Korea who experience this type of violence can go on to commit serious domestic crimes because they suffer from psychological shock, chronic disease, depression, and lethargy.

Meanwhile, immigrant women who show higher self-esteem report greater life satisfaction, and another previous study reported that immigrant women's family-related stress had a negative correlation with life satisfaction. This particular finding allows us to deduce the relevance of stress, depression, and mental violence to immigrant women's life quality and satisfaction. The concept of life satisfaction is also referred to as well-being, welfare, and happiness. It is a subjective assessment of one's satisfaction with one's own life, and for immigrant women, it can include how well they are adapting and fitting into Korean society. They form new family systems, and how they perceive these new systems, including how they perceive their families' cohesion and adaptability, serves as a catalyst for communication within their families. Thus, family system perceptions can allow these women to perform their family functions more efficiently, and positive family system perceptions also enhance immigrant women's well-being.

Many studies on immigrant women have mainly focused on their cultural adaptation and living conditions; in contrast, only a handful have examined well-being, and no study has examined the relationships between well-being, stress, depression, family system perception, and mental violence.

Therefore, this study was conducted to identify these relationships among a group of immigrant women. To this end, the study established the following research questions. First, what if any are the correlations between stress, depression, family system perception, mental violence, and well-being? Second, what are the structural relationships between stress, depression, family system perception, mental violence, and well-being in immigrant women? Third, what if any is the mediating role of mental violence in the relationships between immigrant women's stress, depression, family system perception, and well-being?

2. method

2.1 Research Model

Based on the previous studies, this study developed the research model shown in Figure 1.

2.2 Participants and Data Collection

For the survey areas of this study, three cities in northwestern Chungnam Province were selected by purposive sampling based on the areas that have high populations of immigrant women residents: 115 (46.2%) from City S, 84 (33.7%) from City D, and 50 (20.1%) from County T—for a total of 249—were surveyed, and the data were collected using a questionnaire.

2.3 Tools

2.3.1 Stress

The Perceived Stress Scale (PPS) was originally developed and later translated by. It consists of 10 questions and measures respondents' perceptions of stress and stressors in their daily lives, and a higher score indicates greater perceived stress. The Cronbach's α reliability value for the scale in this study was 0.676.

2.3.2 Depression

To assess depression, this study used the depression sub-scale of the Symptom Checklist-90 that was translated by. It consists of 10 questions rated on a 5-point Likert scale, and a higher score means a higher degree of depression. The Cronbach's α of the scale used in this study was 0.805.

2.3.3 Mental Violence

To assess mental violence committed by spouses, this study used the 4 domestic violence questions from the Conflict Tactics Scale 2, which was developed by, modified by the Ministry of Gender Equality and Family, and uti-
lized by\textsuperscript{19}. This study measured spouses. Mental violence frequency over the past year on a 5-point Likert scale. The Cronbach’s $\alpha$ was 0.334, but given that there were so few questions (4), this was considered reliable\textsuperscript{20}.

### 2.3.4 Well-being

Well-being was measured with the Satisfaction with Life Scale from \textsuperscript{21}, which was translated by \textsuperscript{22} and was further modified\textsuperscript{23}; Kim’s version is the one that was used in the present study. The scale consists of 5 items rated on a 5-point Likert scale, and a higher score indicates a higher degree of well-being. The reliability for this scale was $\alpha=0.840$.

### 2.4 Data Analysis

Data were analyzed using SPSS PC+ Win. 21.0 and Amos 21.0. For the statistical analysis, descriptive statistics, reliability analysis, correlation analysis, mean comparison analysis, and structural equation modeling were utilized.

### 3. Results

#### 3.1 Correlation Analysis and Descriptive Statistics

This study performed Pearson’s correlation analysis to identify the correlations between the variables. The results are shown in Table 1. Stress had statistically significant positive correlations with depression and mental violence, and family system perception had a significant positive correlation with well-being. However, well-being and family system perception had negative correlations with stress, depression, and mental violence. Specifically, the correlation coefficient between well-being and stress was -0.411, and those between well-being and depression and between well-being and mental violence were the same, -0.450. The correlation coefficient between well-being and the sub-factors of family system perception ranged from 0.240 to 0.473.

The means for stress, depression, and mental violence did not surpass the median, whereas family system perception and well-being did. For family system perception, the mean for the cohesiveness sub-factor was higher than that for adaptability.

For skewedness all absolute values were less than 3, and for kurtosis, all were less than 7, thereby indicating that the requirements of a normal distribution were met\textsuperscript{24}.

#### 3.2 Validating the Modified Model

To verify the research model, the following were conducted: a confirmative factor analysis (measurement model), convergent validity evaluation, and research model analysis. As shown in Table 2, the criterion for goodness of fit of the measurement model is the $\chi^2$ value, and this had no statistically significant differences. Both the Tucker Lewis Index (TLI) and the Comparative Fit Index (CFI) were above 0.9, and the root mean square error of approximation was less than 0.1\textsuperscript{25}. The convergent validity of the measurement model was verified by confirming that the standardized factor loading was higher than 0.5, the $z$ value was significant, and the average variance extracted and concept reliability were 0.5 and 0.7, respectively\textsuperscript{26}.

Based on the above tests, the research model was validated. Specifically, $\chi^2$, which refers to the overall model fit, was 11.442 (df=4), a significant difference at the level of $p<0.05$, suggesting that the model was not adequate. However, $\chi^2$ becomes meaningless when the

|  | 1 | Stress | 2 | Depression | 3 | Cohesiveness | 4 | Adaptability | 5 | Mental violence | 6 | Wellbeing | M | SD | Skewness | Kurtosis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2 |  | 0.487** | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 | -0.296** | -0.307** | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4 | -0.125* | -0.183** | 0.732** | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 5 | 0.299** | 0.309** | -0.406** | -0.283** | 1 |  |  |  |  |  |  |  |  |  |  |  |
| 6 | -0.411** | -0.450** | 0.473** | 0.240** | -0.450** | 1 | 3.6243 | 0.5182 | 0.002 | -0.197 |

* $p<.05$, ** $p<.01$
number of cases exceeds and therefore, this study utilized other indices; those values were: CMIN/df = 2.856, NFI (normed fit index) =0.976, TLI =0.941, CFI =0.984, and RMSEA =0.086, all of which were satisfactory. Therefore, this study selected this model as the final model.

The validation results for each path coefficient are shown in Figure 2 and Table 3. Specifically, depression in immigrant women had a positive impact (β=0.144, p<0.05) on mental violence, and family system perception had a negative impact (β=-0.324, p<0.001). Stress also had a positive impact (β=0.133, p<0.05) on mental violence. Mental violence (β=-0.226, p<0.001), depression (β=-0.222, p<0.001), and stress (β=-0.156, p<0.01) had significantly negative impacts on well-being. In contrast, family system perception had a significantly positive impact (β=0.267, p<0.001).

### 3.3 Verifying the Mediating Effects

To validate the mediating effects of mental violence in the relationships between immigrant women's stress, depression, family system perception, and well-being, this study utilized the bootstrap method, and the results are shown in Table 4. First, the indirect effect of mental violence in the relationship between stress and well-being did not include 0 at the upper or lower limits (-0.069, -0.003) at a 95 percent Confidence Interval (CI). Thus, this study confirmed that there was a mediating effect of mental violence (β= -0.033, p< 0.05). Second, the indirect effect of mental violence in the relationship between depression and well-being did not include 0 at the upper or lower limits (-0.063, -0.006) at a 95 percent CI, confirming a mediating effect (β= -0.033, p< 0.05). Third, the indi-

### Table 2. Goodness of fit indices model

|       | χ²       | df | CMIN/df | NFI | TLI | CFI | RMSEA |
|-------|----------|----|---------|-----|-----|-----|-------|
|       | 11.422*  | 4  | 2.856   | 0.976 | 0.941 | 0.984 | 0.086 |

*p<0.05

### Table 3. The modified model paths

| Path between variables | B       | β       | S.E    | t     |
|------------------------|---------|---------|--------|-------|
| Stress → Mental violence | -0.181  | -0.156  | 0.067  | -2.685*** |
| Depression → Mental violence | -0.237 | -0.226  | 0.059  | -4.04**** |
| Mental violence → Wellbeing | -0.174  | -0.222  | 0.046  | -3.795*** |
| Depression → Wellbeing | -0.276  | 0.267   | 0.06   | 4.572**** |
| Stress → Wellbeing | -0.035  | -0.030  | -0.003 | (-0.069, -0.003) |
| Depression → Mental violence | -0.026 | -0.033  | -0.006 | (-0.063, -0.006) |
| Family system perception → Mental violence | 0.076 | 0.073   | 0.114  | (0.037, 0.114) |

*p<0.05, **p<0.01, ***p<0.001

### Table 4. Mediating effects of emotional intelligence and self-esteem

| Path | Unstandardized estimate | Standardized estimate | 95%CI (Bias-corrected bootstrap) |
|------|-------------------------|-----------------------|----------------------------------|
| Stress → Mental violence → Wellbeing | -0.035 | -0.030 | (-0.069, -0.003) |
| Depression → Mental violence → Wellbeing | -0.026 | -0.033 | (-0.063, -0.006) |
| Family system perception → Mental violence → Wellbeing | 0.076 | 0.073 | (0.037, 0.114) |

*p<0.05, **p<0.01
rect effect of mental violence in the relationship between family system perception and well-being did not include 0 at the upper or lower limits (0.037, 0.114) at a 95 percent CI, also confirming a mediating effect (β=0.073, p<0.05). That is, this study confirmed that mental violence was a mediating variable in the relationships between stress, depression, family system perception, and well-being in immigrant. These variables had a direct impact on well-being, but they also had an indirect impact through mental violence.

4. Discussion

This study was conducted to identify the structural relationships between stress, depression, family system perception, mental violence, and well-being among 249 immigrant women in Chungcheongnam-do. The study conducted frequency, reliability, and correlation analysis, structural equation modeling, and bootstrapping, and the results are discussed.

First, there was a positive correlation between stress, depression, and mental violence and between family system perception and well-being. Well-being and family system perception were positively correlated with stress, depression, and mental violence. That is, when immigrant women experienced less stress, mental violence, and depression, their family cohesiveness, family adaptation, and well-being increased.

Second, depression in the immigrant women had a positive impact on mental violence, whereas their family system perception had a negative impact; stress also had a positive impact on mental violence. Mental violence, depression, and stress had significantly negative impacts on well-being, whereas family system perception had a significantly positive impact. These findings are consistent with earlier study results that stress in immigrant women has serious impacts on their psychological health and also with the finding that psychological difficulties can lead to depression, anxiety, and other serious mental disorders.

Third, this study identified the indirect effect of mental violence in the relationships between stress and well-being, between depression and well-being, and between family system perception and well-being. Thus, the study confirmed that mental violence was a mediating variable in the relationships between the primary study variables.

The following recommendations can be made based on the above findings. This study confirmed that the mental violence experienced by the immigrant women was the major variable in their well-being. Thus, it is necessary to develop programs for immigrant women to enhance their family resilience and also domestic violence education and prevention programs for their husbands. In addition, it is also necessary to develop programs to improve the well-being of women in multicultural families.

5. References

1. Jung SH. Awareness of multicultural education by kindergarten teacher and survey on current status. Unpublished Master’s Dissertation; 1997.
2. Seol DH. Survey of current status of immigrant women for marriage and policy for supporting health and welfare. Ministry of Health and Welfare. 2005; 9(2):125–31.
3. Park EJ. Intermarried immigrant women’s acculturation, stress, and psychological health. Unpublished Master’s Dissertation. Chungnam National University. 2007; 14(4):248–56.
4. Jayasuriya L, Sang D, Fielding A. Ethnicity, immigration and mental illness: A critical review of Australian research. Bureau of Immigration Research. 1992:61.
5. Goh EJ. Relevance of stress for cultural adaptation, domestic violence, social support, self-esteem and post-traumatic stress to psychological health of female migrants through international marriage. Unpublished Master’s Dissertation. Chonnam National University. 2009; 205(1):201–2010.
6. Jang SN. The conditions/cases of domestic violence against married migrant women and possible way of improvement. Unpublished Master’s Dissertation. Donga University. 2012; 7(1):1–23.
7. Yang SM. An effects of the participation attitude in each social activity on Life satisfaction of married immigrant women in a Korean rural area. The Journal of Rural Society. 2010; 20(1):233–63.
8. Lee JH. Effects which social support has on life satisfaction according to family relation stress of women in multi-cultural homes. Unpublished Doctoral Dissertation. Daegu Hanny University. 2011; 8(1):301–25.
9. Yang OK. Development of life satisfaction scale. Korean Journal of Social Welfare. 1994; 1(2):157–98.
10. Maeng YI. The relationships among family system, psychological separation and career indecision. Unpublished Doctoral Dissertation. Hongik University. 2002; 57(3):348–64.
11. Lee KS. Investigation of the actual condition of women immigrants in international marriages and a study of educational programs for adaptation to Korean society. Unpublished Doctoral Dissertation. Kangwon National University. 2007:b1–23.
12. Kim SY. Analysis of social adaptation cases of multicultural families and government support policy measure: focused on international marriage immigrant women. Unpublished Doctoral Dissertation. Kyonggi University. 2011; 8(1):307–14.

13. Jung JS. Pregnancy, delivery and cultural integration of international marriage migrant women. Unpublished Doctoral Dissertation. Inje University. 2011; 68(3):452–61.

14. Kim EJ. Leisure activity of married immigrant women influencing cultural adjustment: Focusing on moderating effects by language proficiency and language use. Unpublished Doctoral Dissertation. Sejong University. 2013; 20(3):1–7.

15. Cohen S, Hoberman HM. Positive events and social supports as buffers of life change stress1. Journal of Applied Social Psychology. 1983; 13(2):99–125.

16. Eom TH. A study on the buffering effect in the occurrence of depression caused by hopelessness among North Korean defectors. Unpublished Doctoral Dissertation. Pusan National University. 2004; 53(2):502–9.

17. Choi HK. The process of care giving stress among Korean caregivers for elderly. Conel University Graduate School. A Thesis for Doctorate. 1992; 14(3):355–64.

18. Straus MA, Hamby SL, Boney-McCoy S, Sugarman DB. The revised Conflict Tactics Scales (CTS2) development and preliminary psychometric data. Journal of Family Issues. 1996; 17(3):283–316.

19. Jung HJ. The influence of complex trauma experience on adult women's altered self-capacities and depression. Unpublished Master's Dissertation. Ewha Womans University. 2008:1–108.

20. Mui AC. Multidimensional predictors of caregiver strain among older persons caring for frail spouses. Journal of Marriage and the Family. 1995:733–40.

21. Diener ED, Emmons RA, Larsen RJ, Griffin S. The satisfaction with life scale. Journal of Personality Assessment. 1985; 49(1):71–5.

22. Jo MH, Cha KH. Cross-national comparisons on quality of life. Seoul, Jipmundang. 1998; 68(3):443–54.

23. Kim JH. The relationship between life satisfaction/life satisfaction expectancy and stress/well-being: An application of motivational states theory. Korean Psychological Association. 2007; 12(2):325–45.

24. West SG, Finch JF, Curran PJ. Structural equation models with nonnormal variables. Problems and remedies. Hoyle RH, editor. Structural equation modeling: Concepts, issues and applications. Newbury Park, CA: Sage; 1995. p. 56–75.

25. Hong SH. The criteria for selecting appropriate fit indices in structural equation modeling and their rationales. The Korean Journal of Clinical Psychology. 2000; 19(1):161–77.

26. Lee HS, Lim JH. SPSS Manual. Seoul, Seoulmoongo; 2011. p. 167–80.