Health Promotion and Related Factors Among Korean Goose Mothers

Chiyoung Cha, PhD, RN
Lecturer, Ewha Womans University, Seoul, Korea

Purpose The purpose of this study was to further understand the health promotion behaviors of Korean goose mothers in the North America area. Health promotion behaviors measured in this study were self-actualization, health responsibility, physical activity, nutrition, interpersonal relations, and stress management.

Methods The study is part of a larger study which used surveys (N = 140) and in-person interviews (n = 18). In this study, analysis of survey results is presented. Advertisements and snowballing technique were used to recruit study participants. Pearson’s correlation was used to explore the relationships between health promotion and social support, acculturation attitudes, and perceived family health. Multiple regressions were used to examine the predictors of health promotion behaviors.

Results Women in the study were most frequently engaging in self-actualization and least in physical activity. Physical activity did not correlate with any of the study variables. When multiple regressions were performed, the model for each health promotion behavior was found to be statistically significant except for that of physical activity. Overall, study variables worked differently across models. Social support predicted self-actualization, health responsibility, interpersonal relations, and stress management. None of the acculturation attitudes predicted health promotion behaviors. The subdimensions of perceived family health predicted health promotion behaviors except physical activity.

Conclusions The findings of this study contributed to the body of knowledge of health promotion among international migrant populations by identifying the differential effects of social support, acculturation attitudes, and perceived family health for six areas of health promotion. [Asian Nursing Research 2010;4(4):205–215]

Key Words emigration and immigration, health promotion, women’s health

INTRODUCTION

According to the International Organization for Migration (2008), international migration is a movement of persons who leave their home country to establish themselves either permanently or temporarily in another country. Goose mothers, one of the fastest growing groups of international migrants, are a group of Korean women who migrate to foreign countries for a prolonged period of time for their children’s education while their spouses remain in Korea as breadwinners (Lee, 2010). The Asian Pacific Post (2004) reported that these families were named after geese, because they fly between continents on a regular basis for family reunions which resembles the migrating patterns of geese. This phenomenon
started in the early 1990s in response to the Confucian values in children’s education and equating mothers’ achievement with children’s educational success (Chiang, 2008). Women’s sacrifice to give up their personal and marital lives for children’s future and move to a foreign country is taken for granted in this type of family. Other Asian countries influenced by Confucianism also produced internationally separated families with same family structure for children’s education which were referred to astronaut wives (Chang & Darlington, 2008) and study mothers (Huang & Yeoh, 2005).

When women become goose mothers they become vulnerable to health promotion for several reasons. In addition to their social position as international migrants (Weerasinghe & Mitchell, 2007), goose mothers’ position in the family as traditional care provider role limit their time and effort to pursue health promotion. As the women move to the foreign country to educate their children, they experience a transformation of their identities (Lee, 2010) to assume traditional mother role (Chiang, 2008). Women who assume traditional mother role in the family put other family members’ health such as children’s before theirs (Choudhry et al., 2002). Moreover, women separated from their spouses were less likely to engage in health promotion behaviors compared to their counterparts (Young, Cunningham, & Buist, 2005). Limitations to health promotion behaviors might lead to the health disparity for goose mothers.

Health promotion behaviors are multidimensional and socioculturally oriented activities (Burke, Joseph, Pasick, & Barker, 2009). Social support and family played significant role in the health promotion behaviors of Korean women (Jang et al., 2000; Jin, Oh, & Kim, 2007). However, the characteristics of social factors change with migration and their influence on health promotion behaviors might also change. For example, positive relationships between social support and health promotion behaviors such as physical activity (Choe, Hah, Kim, Yi, & Choi, 2008) and stress management (Oh, Kim, & Kim, 2008) were documented among Korean women. Temporary international migrants such as goose mothers are known to utilize support from their home country as well as their hosting country (Walton, 1990) which might result in change in the relationships between the social support and health promotion behaviors among goose mothers. Also, the dynamics of the relationships between family and health promotion behaviors may change as the goose mothers separate from their spouses. Korean families are characterized by strong familism (Lee, 1998), and the role of family on Korean women’s health promotion cannot be ignored. When goose mothers are separated from their spouses and the family dynamics change, their health promotion behaviors might be influenced. Among Korean middle age women in the United States, supports from one’s spouse played a significant role for physical activity (Yang et al., 2007). Absence of spouse might limit physical activities and other health promotion behaviors among goose mothers.

Acculturation is often considered as an influencing social factor for health promotion behaviors among international migrants such as goose mothers. However, the role of culture for the health promotion behaviors is in debate (Messias & Rubio, 2004). For example, previous study reported that Korean migrant women who accepted the culture of the hosting country were more likely to engage in mammography (Maxwell, Bastani, & Warda, 1998) while in recent studies no correlation were reported between cultural factors and mammography (Lee, Kim, & Han, 2009; Sohn & Harada, 2005). Thus, there is a need to examine the relationships between social support, culture, and family on various aspects of health promotion behaviors of goose mothers.

The purpose of this study was to further understand the health promotion behaviors of Korean goose mothers in the North America area. Health promotion behaviors explored in this study were self-actualization, health responsibility, physical activity, nutrition, interpersonal relation, and stress management. Specific aims were (a) to describe the levels of health promoting behaviors and related social factors such as social support, acculturation attitudes, and perceived family health, (b) to explore the relationships between health promotion behaviors and related
social factors, and (c) to predict the extent to which social factors explained six areas of health promotion behaviors.

METHODS

Study design
This study is part of a larger study (Cha, 2010) which used cross sectional surveys and in-person interviews. In this study, analyses of surveys were presented to explore how social support, acculturation attitudes, and perceived family health were related to six areas of health promotion behaviors.

Setting and samples
The inclusion criteria were Korean married women who migrated to the United States or to Canada with children between 5 and 18 years of age for their children’s education while their husbands remained in Korea. Advertisements with at Korean grocery stores and Korean cyber communities as well as snowballing technique were used to recruit goose mothers for surveys. Flyers were posted at Korean grocery stores with large Korean communities in the United States and in Canada such as Los Angeles area and San Francisco area (California), greater Seattle area (Washington), Chicago area (Illinois), and Vancouver area (British Columbia, Canada). From 206 surveys sent out, 142 were returned. Two were excluded because one woman had children over 18 and the other migrated after her husband passed away. Finally, 140 surveys were analyzed. 62 from California, 26 from Washington, 24 from other areas of the United States (20 from Illinois, 1 from Arizona, 1 from Nebraska, 1 from New Jersey, and 1 from New York), and 28 from British Columbia, Canada. Distribution of the sample is in accordance with the report from the Asian Pacific Post (2004) that most goose mothers make their second home in California.

Measurements
A demographic questionnaire was written by the author for this study. It included questions related to age, education, family budget, time in the hosting country, contact with the home country, health insurance, health care utilization for routine checkups, and children.

The Health Promotion Lifestyle Profile (HPLP) measures the frequencies of health promotion behaviors in six areas: self-actualization, health responsibility, physical activity, nutrition, interpersonal relation, and stress management (Walker, Sechrist, & Pender, 1987). The scale consists of 48 items with a 4-point Likert-type rating. Walker et al. (1987) established construct validity and reliability (Cronbach’s alpha = .92) of this instrument. In this study, the 47-item HPLP translated and modified by Suh (1996) was used. Cronbach’s alpha was .92 for this study.

The Index of Sojourner Social Support (ISSS) measures support of international migrants from both the hosing country and one’s home county (Ong & Ward, 2005). It consists of 18 items with a 5-point Likert-type rating. Ong and Ward established construct validity, concurrent validity, and reliability (Cronbach’s alpha = .94–.95) of this instrument. The scale was translated, back-translated, and the content was validated by four experts and three lay persons. In this study, Cronbach’s alpha was .97.

The Acculturation Attitude Scale (AAS) was developed in English and in Korean to measure the acculturation attitudes based on Berry’s model (2006): Integration, marginalization, separation, and assimilation (Kim, 1988). The scale has 56 items with a 5-point Likert-type rating. Kim (1988) established construct, concurrent, and convergent validity of this instrument. In this study, Cronbach’s alpha was .73, and it ranged between .64 and .80 for four subdimensions.

The Korean Family Strength Scale (KFSS) was developed to measure Koreans’ perceived family health in nine subdimensions: respect, commitment, appreciation and affection, positive communication, sharing values and goal, role performance, connectedness with social systems, economic stability, and ability to solve problems (Yoo, 2004). The scale has 68 items with a 5-point Likert-type rating. Yoo established construct validity, concurrent validity, and
reliability (Cronbach’s alpha = .91) of this scale. In this study, Cronbach’s alpha was .98. Three subdimensions were used for this study: Caring for each other, economic stability, and connectedness with social systems. Seven subscales were merged for caring for each other: respect, commitment, appreciation and affection, positive communication, sharing values and goal, role performance, and ability to solve problems. Koreans care for other family member not only through love but also through assuming one’s given role to pursue family goal (Lee & Koo, 2006). Thus, the seven subscales were conceptually merged as caring for each other. The items of caring for each other loaded on one factor (.54–.82) and had an alpha of .98. Interitem correlations ranged from .60–.81.

Procedure
A certificate of exemption from the Institutional Review Board at the University of Washington in the United States was obtained prior to the study. Potential participants contacted the researcher either directly or through previous participants. The purpose of the study and study criteria were explained to the potential participants by phone or e-mail and their willingness to participate in the study was assessed. Survey packets with consent forms, survey questionnaire, and a return envelope were mailed to the potential participants. Although participation was voluntary, $20 gift cards were mailed to the participants in appreciation.

Analysis
The software program, the Predictive Analytics Software 18 (SPSS Inc., Chicago, IL, USA) was used to facilitate data analysis. Descriptive statistics including M and SD was used to describe the sample and study variables. Pearson’s correlation was used to explore the relationships between health promotion behaviors and study variables. Graphical display and influence statistics such as standardized residuals were used to diagnose the outliers in dependent variables to insure the correlations were not driven by small number of cases. Multiple regression analyses were performed to examine the predictors for each area of health promotion behavior.

RESULTS

Demographic characteristics of participants
As seen in Table 1, participants were well educated middle aged women who were at various time points of migration. Most women relied on their husbands for living expenses, and some were also earning money. Women kept frequent contacts with their husbands, families, and friends in Korea. Women had an average of 1.84 ± .62 children, and the mean age of the first child was 14.49 ± 3.91 years old.

In this study, goose mothers from different regions participated in this survey. Multiple regression analysis was used to confirm whether there were any differences by region between the groups of women. There was no additional explained variation due to region. Thus, participants were treated as a homogeneous group in relation to health promotion behaviors.

Health promotion behaviors and social factors
As seen in Table 2, women in this study most frequently engaged in self-actualization (3.32 ± .44), followed by interpersonal relation (3.17 ± .50), nutrition (3.09 ± .47), stress management (2.72 ± .48), health responsibility (2.55 ± .54), and physical activity (2.08 ± .79) as measured by the HPLP. From the ISSS, most women reported having a few people for social support (2.71 ± .74). In terms of acculturation, women scored highest on integration (4.18 ± .32), indicating that they showed acceptance of both Korean culture and hosting country’s culture. In response to the KFSS which measured perceived family health, the majority of the women in this study agreed that they were caring for each other (3.88 ± .52).

Correlations between health promotion behaviors and social factors
Social support, acculturation attitudes, and perceived family health were correlated with self-actualization, health responsibility, interpersonal relation, and stress management while only perceived family health was correlated with nutrition (Table 3). None of the social factors correlated with physical activity. Outliers for physical activity were explored with scatter
plots and influence statistics to insure that the correlations between physical activity and other study variables were not driven by a few influential outliers. After removing outliers and rerunning the Pearson’s correlations for each study variable, the overall pattern that physical activity is less strongly correlated with the variables in the study compared to other components did not change.

**Predictors of health promotion behaviors**

Multiple regression analysis was used to explore how the independent variables were related to each dimension of health promotion (Table 4). Overall, models were found to be statistically significant except for physical activity. The full model for physical activity was not statistically significant ($F= .66$, $df= 8$, $131$, $p= .730$). For the other five significant models, variance explained ranged between 15.2% and 44.6%. Overall, variables worked differently across models, and there were no strong patterns of independent variables which were related to each area of health promotion behavior. None of the acculturation attitudes were significant predictors of five dimensions of health promotion behaviors.

**DISCUSSION**

Women in this study most frequently engaged in self-actualization, followed by interpersonal relation,
nutrition, stress management, and physical activity. These patterns of health promotion behaviors reported by the HPLP were universal among middle aged women in Korea (Lee, Kang, Lee, & Kwon, 2006; Lee, So, & Lee, 2010; Park, 2002), middle aged Korean migrant women (Han, 2000; Lee et al., 2010), and other ethnic groups of international migrant women (Bond, Jones, Cason, Campbell, & Hall, 2002;...
Table 4

Subdimensions of the HPLP Regressed on Social Factors (N = 140)

<table>
<thead>
<tr>
<th>Fit of the model</th>
<th>Self-actualization</th>
<th>Health responsibility</th>
<th>Nutrition</th>
<th>Interpersonal relation</th>
<th>Stress management</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R² = .34, p &lt; .000</td>
<td>R² = .22, p &lt; .000</td>
<td>R² = .15, p = .005</td>
<td>R² = .45, p &lt; .000</td>
<td>R² = .19, p &lt; .000</td>
</tr>
<tr>
<td></td>
<td>B       SE      Std β  t</td>
<td>B       SE      Std β  t</td>
<td>B       SE      Std β  t</td>
<td>B       SE      Std β  t</td>
<td>B       SE      Std β  t</td>
</tr>
<tr>
<td>Social support</td>
<td>.139    .052    .235  2.639**</td>
<td>.157    .068    .218  2.297*</td>
<td>.106    .062    .169  1.709</td>
<td>.300    .054    .445  5.553**</td>
<td>.128    .062    .199  2.056*</td>
</tr>
<tr>
<td>Integration</td>
<td>.045    .114    .033  .395</td>
<td>.002    .151    .001  0.010</td>
<td>.192    .137    .131  1.407</td>
<td>.099    .119    .063  0.832</td>
<td>.153    .137    .102  1.118</td>
</tr>
<tr>
<td>Marginalization</td>
<td>.060    .102    .054  .586</td>
<td>.116    .135    .080  0.855</td>
<td>.078    .123    .066  0.631</td>
<td>.023    .107    .018  0.214</td>
<td>.071    .123    .060  0.580</td>
</tr>
<tr>
<td>Assimilation</td>
<td>.033    .102    .027  .321</td>
<td>.089    .134    .060  0.600</td>
<td>.175    .122    .136  1.435</td>
<td>.079    .106    .057  0.746</td>
<td>.040    .122    .030  0.327</td>
</tr>
<tr>
<td>Separation</td>
<td>.118    .098    .096  1.208</td>
<td>.042    .129    .028  0.324</td>
<td>.172    .117    .131  1.464</td>
<td>.139    .102    .099  1.360</td>
<td>.071    .118    .053  0.602</td>
</tr>
<tr>
<td>Caring for each other</td>
<td>.256    .070    .136  3.658</td>
<td>.103    .092    .100  1.111</td>
<td>.254    .084    .285  3.022**</td>
<td>.064    .073    .067  0.873</td>
<td>.177    .084    .194  2.101*</td>
</tr>
<tr>
<td>Economic stability</td>
<td>.093    .055    .159  1.709</td>
<td>.022    .072    .026  0.299</td>
<td>.069    .065    .096  1.057</td>
<td>.132    .057    .170  2.316*</td>
<td>.087    .066    .118  1.330</td>
</tr>
<tr>
<td>Connectedness</td>
<td>.110    .059    .304  1.857**</td>
<td>.237    .078    .281  3.027**</td>
<td>.078    .071    .106  1.090</td>
<td>.127    .062    .162  2.060*</td>
<td>.063    .071    .084  0.888</td>
</tr>
</tbody>
</table>

Note. *Correlation significant at the .05 level (2-tailed). **Correlation significant at the .01 level (2-tailed).
Hulme et al., 2003; Misra, Patel, Davies, & Russo, 2000). In all studies, physical activity was the least frequently practiced health promotion behaviors. Several reasons can explain the low engagement in physical activity among goose mothers. First, cultural beliefs among Koreans which limited women’s roles as submissive and reserved might have been a barrier for physical activities (Hahm, 1997; Juarbe, Lipson, & Turok, 2003). Second, Korean women have limited time and energy for physical activity because they assume multiple roles (Im & Choe, 2001). Third, lack of prior experience and access to facilities were reported as reasons for low participation in physical activity among international migrant women (Södergren, Hylander, Törnvist, Sundquist, & Sundquist, 2008).

In this study, social support was positively correlated with and predicted self-actualization, health responsibility, interpersonal relation, and stress management. In accordance with this finding, social support was positively associated with stress management among Korean women (Oh et al., 2008) and health responsibility among international migrants (Donnelly, 2008; Lai & Hui, 2007). International migrants utilize social support from both home country and hosting country (Wong & Song, 2006) which requires the needs to explore the sources of social support and their influences on health promotion behaviors. In this study, social support predicted four dimensions of health promotion behaviors among goose mothers, yet we do not know the relationships between the sources of social support and health promotion behaviors because social support of goose mothers gained from both home country and hosting country were measured. Considering the goose mothers’ frequent contact with the home country, we can surmise that they were getting some portion of social support from Korea. It might be that social support from Korea played a significant role in interpersonal relation because promoting health through building or maintaining relationships with others could be done internationally. However, internationally gained support could not play a significant role for other health promotion behaviors. It is critical to identify the sources of social support and their differential effects on health promotion behaviors when developing interventions for international migrants who have multiple sources of social support.

Among acculturation attitudes, integration, accepting both the culture of Korea and hosting country, was positively correlated with self-actualization, health responsibility, interpersonal relation, and stress management. A study of health promotion behaviors of Hispanic adults in the United States which measured acculturation in terms of language use showed similar finding (Hulme et al., 2003). In the current study, rejecting Korean culture (assimilation and marginalization) was negatively correlated with interpersonal relation. Considering that Koreans are tightly connected to Korean communities in the hosting countries, it might be that women who do not accept Korean culture had limited opportunities to mingle with other Koreans and as a result had fewer chances for interpersonal relation. Acculturation attitudes did not predict any of the health promotion behaviors when other study variables were controlled. In accordance with this finding, studies of Korean migrant women reported that culture did not predict health promotion behaviors such as breast self-examination, pap smear, and physical exam (Lee et al., 2009; Sohn & Harada, 2005). It might be that acculturation attitudes had influence on health promotion behaviors through other social factors. A path analysis study with larger number of samples may identify the direct or indirect relationships of acculturation attitudes and health promotion behaviors. Another explanation for acculturation attitudes is that contacts with dominant cultural group yielded change of patterns in health promotion behaviors, but not necessarily in one direction. For instance, the more Korean migrants accepted the culture of hosting country, the more they eat the foods of hosting country (Park, Paik, Skinner, Ok, & Spindler, 2003). However, dietary change did not necessarily mean international migrants ate more unhealthy foods or more healthy foods (Lv & Cason, 2004).

Having a healthy family was positively correlated with frequencies of health promotion behaviors in all areas except physical activity. After controlling
other study variables, caring for each other predicted self-actualization, nutrition, and stress management. This can be understood in that Korean women are imposed with care provider responsibilities for their families (Abelmann, 2002). When women perceived that their family members were caring for each other, women had reduced role responsibilities in their family which gave them more time and energy for health promotion. Connectedness with the social systems predicted self-actualization, health responsibility, and interpersonal relations. When a family is more connected to the society, the members may have more opportunities to improve their health by utilizing social systems such as community centers and health care utilities. In addition, migrant women who did not engage in society were unlikely to get interpersonal relation from the hosting country (Llácer, Zunzunegui, del Amo, Mazarrasa, & Bolúmar, 2007).

CONCLUSIONS

This study explored the six areas of health promoting behaviors and related social factors. Overall, social support, acculturation attitudes, and perceived family health worked differently for each health promotion behavior. Among those health promoting behaviors, physical activity stood out because it was not related to any of the social factors measured in this study. Acculturation attitudes did not predict any of the health promotion behaviors after controlling other study variables. The findings of this study need to be interpreted with caution because they are based on self-report surveys. Also, some of the demographic characteristics which were not measured in this study such as English proficiency and religious activities might influence the dependent variables.

Replication studies with other international migrant women to identify the predicting factors for six areas of health promotion behaviors would increase generalizability. Qualitative studies may aid the understanding of the causal relationships between physical activity and social support, acculturation attitudes, and perceived family health which were not correlated in the current study. Studies examining the source of social support and the differential influences on health promotion behaviors are needed to further understand the differential effects of support from one’s home country and hosting country. With a larger number of participants, conducting a path analysis to examine the mechanisms of how the acculturation attitudes, social support, and perceived family health relate to health promotion behaviors may help health nurses further understand the interplay between study variables measured in this study.

Findings of the current study that social factors worked differently across six areas of health promotion behaviors suggest that nurses need to consider differential influences of social factors related to each area of health promotion behavior among goose mothers. For example, as social support predicted interpersonal relations among goose mothers, nurses can develop offline or online networks in the hosting country to aid goose mothers who are in need of interpersonal relation. As perceived family health predicted self-actualization, healthy eating, and stress management, nurses might need to assess the family relations before planning interventions for these health promotion behaviors for goose mothers.

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