

Effects of Nurse-led Holistic Healthcare Home Visit Intervention Program on the Stress Index, Depression and Quality of Life in Korea Multi-cultural Couples

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Abstract

The purpose of this study is to develop a nurse-led home visit intervention program from the aspect of holistic health in order to maintain and improve holistic health of multi-cultural couples in rural areas, and to check its effects. This is an equality, control-group before and after similarity experimental study on 20 couples in the control group and 20 couples in the test group that were snowball sampled from multi-cultural couples introduced from agencies in the rural areas of Y-gun and G-gun in K Province, and couples introduced by these couples from June 13 to July 27, 2014. For research tools, the stress index, which is a physiological measurement variable, and depression and quality of life, which are structuralized survey tools, were used for measurement. The collected data were analyzed using the SPSS/WIN 21.0 program. Results of the study showed that stress index was lower for the test group of wives than the control group, but there was no significant difference ($t=-1.12$, $p=.136$). Meanwhile, the test group of husbands displayed significantly lower stress index compared to the control group ($t=-3.14$, $p=.002$). For depression, both the wife ($t=-3.75$, $p=.001$) and husband ($t=-4.20$, $p=.001$) were found to be lower in the test group compared to the control group. However, for quality of life, both the wife ($t=3.86$, $p=.001$) and husband ($t=5.28$, $p=.001$) showed higher levels in the test group than the control group. Therefore, the holistic healthcare home visit intervention program developed in this study was found to have positive effects for reducing the stress and depression of multi-cultural couples and in improving their quality of life.

Keywords: Multi-cultural Couples, Stress Score, Depression, Quality of Life, Nurse-led, Holistic Healthcare, Home Visit Intervention Program¹

1. Introduction

One health issue of multi-cultural couples in Korea is stress resulting from conflicts between couples. In particular, as most multi-cultural couples between Korean men and marriage immigrants matched through marriage brokers are wed without meeting each other enough and quickly have children, there are various health problems regarding physical, psychological, social, cultural and spiritual aspects. Also, foreign women who marry Korean men are commonly poorly skilled in managing childbirth, and the impact on the mother and

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infant is severe, causing them to be exposed to risks of disease [1]. Compared to Korean women, they have a higher rate of anemia and parasites, and they also have a higher rate of having hepatitis B, which can lead to low birth weight or vertical infection of hepatitis B that can be fatal to both the mother and child [2]. Marriage immigrants as mothers who play key roles in managing the health of families are more commonly from poorer countries with higher risk of exposure to health risks [3], have difficulty in using medical institutes due to medical expenses [2], and possess unclear health information making health care difficult [4]. There are many preceding studies on multi-cultural families in Korea thanks to the increased national interest on multi-cultural women and families, but most studies on marriage immigrant women focus on their features and family life, economic life and employment status, social discrimination, policy demands, and human rights issues [5]. Furthermore, there are few studies on home visit intervention by nurses for their self-healthcare by making an approach on the holist person including physical, mental, social/cultural, and spiritual sectors for multi-cultural couples. Therefore, this study aims at developing a nurse-led home visitation intervention program for the holistic health of multi-cultural couples in rural areas to examine its effect on stress index, depression and quality of life. The detailed objectives are as follows.

2. Research method

2.1. Research design

This study used a non-equivalent control group pretest-posttest design quasi-experimental research design to identify the impact of nurse-led holistic healthcare home visit intervention programs on the stress index, depression and quality of life of multi-cultural couples

2.2. Research subjects

The standard population of this study was multi-cultural couples residing in the community and the proximity population was comprised of multi-cultural couples comprised of foreign women married to Korean men registered in the multi-cultural centers of rural areas located in G-gun and Y-gun of K Province. One multi-cultural center from different regions was selected each to prevent the spread of experiment effects and they were selected randomly and assigned to test groups. A total of forty couples suitable to the final subject selection criteria were selected and 20 were placed in the test group and 20 in the control group. The test group was comprised of eight multi-cultural couples out of 12 multi-cultural couples introduced by the social welfare center in Y-gun at K Province, and 12 couples out of 16 multi-cultural couples that the above eight couples introduced to through the snowball sampling method. In order to prevent the spread of disposition, the control group was comprised of 10 couples introduced by the multi-cultural center of G-gun of K Province, which is another rural village with similar features as the test group but little interaction between the regions, and 10 couples introduced by the health care center, who were multi-cultural couples who listened to the purpose and need of the study and who gave their consent.

2.3. Research tool

For stress index, the SA-3000P (Medicareco. Ltd. KOREA) device was used for measurement. SA-3000P is an autonomic nervous balance test and measures the heart rate variability (HRV) to test the heart regulation functions related to autonomic nerves to

diagnose stress. The standard value of stress index is 110-90 and a lower number means lower stress. In order to measure the level of depression of subjects, the tool developed by [6] was edited and supplemented by [7] as a 20 question Korean version CES-D (Center for Epidemiologic Studies-Depression Scale) for use. For quality of life, the Korean version of the World Health Organization Quality of Life (WHOQOL-Bref) developed by [8] based on the WHOQOL-Bref was used.

2.4. Research procedure

2.4.1. Survey on health issues and demands of multi-cultural couples: In order to identify the health issues and demands of multi-cultural couples, web sites such as KERIS (Korea Education & Research Information Service), National Assembly Library, KISS (Korean Studies Information), DBPia (Nuri Media), RISS, and the Ministry of Health and Welfare, and dissertations published in the past five years and theses and policy reports published in theses and academic journals. Holistic health, which is a health field presented by the World Health Organization (WHO), was categorized into the physical, mental, social/cultural, and spiritual health fields. After the initial literature review, interviews were held with multi-cultural couples. The subjects of interviews were the four multi-cultural couples introduced by the social welfare center of region G.

2.4.2. Program development Process: This program used the JUMP [9] operation method to develop a nurse-led nursing intervention program. Home visits and telephone counseling was held for six weeks for one hour per session per week. Home visits were made by making appointments in advance with the subject at an hour of their convenience, and phone counseling was conducted for 5-10 minutes once a week to check changes in health behavior and improvement of marital relationships. At every session, vital signs were checked and it also included physical and mental relaxation therapy, counseling and prayer for holistic health care. Health counseling and education was provided based on the theme of orientation on the first sessions, couples learning about each other in the second session, healthy couples in the third session, wise and thrifty couples in the fourth session, and couples assimilating in the fifth session. On the sixth session for happy couples, it aimed at reminding multi-cultural couples on the value of holistic health and family so that they may lead happy married life.

2.5. Data collection method

Data collection underwent reviews of the Institutional Review Board of H University and after receiving approval (HYI-14-009-3), it was carried out from June 13, 2014 to July 27, 2014. Multi-cultural centers, social welfare centers and healthcare centers of Y-gun and G-gun of K Province were visited to explain the purpose and goal of the study, and the study was carried out after receiving consent for data collection.

2.6. Data analysis

Statistical analysis on the collected data was carried out using the SPSS WIN 21.0 Program.

1) The common features of subjects were found through frequency and percentage, and the homogeneity verification for general features was analyzed with the χ^2 test.

2) Pre-homogeneity test for the dependent variable of subjects was analyzed using t-test.

3) In order to verify the effects of the nurse-led holistic healthcare home visit program, intervention was made on stress index, depression, and quality of life, and the difference between the groups were analyzed using t-test.

3. Research results

3.1. Homogeneity verification for general characteristics of the two groups

The average age of subjects of this study was 35 for wife and 48 for husband in the test group, and 34 for wife and 48 for husband in the control group. Philippines was the top birth country of wives for both the test group and control group at 10 (50.0%) and 11 (55.0%), respectively, and for the marriage period, both the test group and control group had highest at more than 10 years with eight couples (40.0%) and seven couples (35.0%), respectively. For the number of children of test groups, 12 couples (60.0%) had two children, and for the control group, 12 couples (60.0%) had two children. Upon conducting homogeneity tests for the test group and control group, there were no items that showed statistically significant differences, so it was evident that the two groups were homogenous groups for general characteristics.

3.2. Homogeneity test for the dependent variable between the two groups

Upon conducting homogeneity tests for the dependent variable, in the case of the wife, the stress index was 101.75 ± 18.27 for the test group and 107.45 ± 13.28 for the control group ($t = -1.13$, $p = .266$). Depression was 0.79 ± 0.44 for the test group and 0.76 ± 0.47 for the control group ($t = 0.20$, $p = .846$). Quality of life was 3.32 ± 0.75 for the test group and 3.25 ± 0.25 for the control group ($t = 0.37$, $p = .715$), showing no statistically significant differences. In the case of the husband, the stress index was 115.40 ± 15.72 for the test group and 114.30 ± 15.69 for the control group ($t = 0.22$, $p = .826$). Depression was 0.72 ± 0.47 for the test group and 0.65 ± 0.43 for the control group ($t = 0.46$, $p = .650$). Quality of life for the test group was 3.30 ± 0.72 and 3.23 ± 0.45 for the control group ($t = 0.36$, $p = .725$), showing no statistically significant differences. Therefore, it was found that in the dependent variables of this study, the two groups were homogenous with no statistically significant differences.

3.3. Verification of Difference between the two groups after intervention

Upon comparing the effects of the two groups after intervention, it was found that the stress index was not statistically significant for wives in both the test group and control group, but in the case of husbands, the test group had significantly lower stress index than the control group. For depression, both the wife and husband had statistically significant lower levels for the test group compared to the control group, and for the quality of life, both the wife and husband had statistically significantly higher levels in the test group compared to the control group<Table 1>.

Table 1. Groups comparison of differences of stress index, depression, quality of life between group(N=80)

Variables	Exp.	Cont.	t	p
	M±SD	M±SD		
Stress Index	99.55±8.69	102.90±10.22	-1.12	.136
Wife Depression	0.30±0.22	0.68±0.40	-3.75	.001
Quality of life	3.88±0.56	3.35±0.24	3.86	.001
Stress Index	103.05±8.70	114.60±13.96	-3.14	.002
Husband Depression	0.26±0.13	0.81±0.57	-4.20	.001
Quality of life	4.03±0.43	3.32±0.42	5.28	.001

Exp. Experimental group(n=40), Cont. Control group(n=40)

4. Discussion

After intervention using the program developed in this study, both the wife and husband statistically significantly reduced levels of depression for the test group compared to the control group. This showed depression of immigrants as relevant variables such as age, motive for immigration, everyday stress, education level, employment status, social support, satisfaction with life, etc. in the research of [10]. In the study of [11], birth country, period of residence, monthly average income, religion, education, housemate, person or organization that helped with adapting to life in Korea after marriage were found to be statistically significant. Therefore, it is judged that the active support of the spouse is important. In addition, quality of life was found to be statistically significantly higher for both the wife and husband in the test group compared to the control group. It appears that the quality of life is affected by multi-dimensional aspects such as physical, emotional, sociocultural, and spiritual intervention [12], and considering that the intervention program used in this study is an intervention program applying holistic health, it is judged that there was improvement in the quality of life of multi-cultural couples through this.

5. Conclusion

After intervention through the holistic healthcare home visit program, it was found that the test group had lower depression and higher quality of life compared to the control group, which was statistically significant. The stress index was found to be statistically lower for the husband in the test group compared to the control group. Based on these research results, it is evident that the nurse-led holistic healthcare home visit program is an effective program to make improvements on stress, depression and quality of life for multi-cultural couples. Therefore, as the intervention program developed in this study is nurse-led home visits for the holistic health of multi-cultural couples, it is judged that it can be used at local social health centers or healthcare centers.

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