

Development and Evaluation of Educational Program to Prevent Cervical Cancer among Vietnamese Immigrant Women

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Abstract

Background/Objectives: This study was to develop and evaluate a cervical cancer prevention program for Vietnamese married immigrant women who show the high incidence of cervical cancer. In this regard, this study presents the grounds for the cervical cancer prevention program to be spread and adopted widely to promote Vietnamese married immigrant women's reproductive health.

Method/Statistical Analysis: Program was developed by the ADDIE model. The developed program was applied to Vietnamese immigrant women. Study design is random control group pre-test, post-test design. The effects of the program were assessed by health belief of Pap testing, knowledge of cervical cancer, and intention of preventive behavior. In the experimental group, four 120-minutes sessions of cervical cancer prevention education program intervention were provided once a week.

Findings: The results indicate that the educational program to prevent cervical cancer helps Vietnamese married immigrant women to lower the perceived barriers in cervical cancer prevention, to enhance the awareness about cervical cancer, and to raise the intention for cervical cancer prevention behavior, which proves the prevention program is very effective and useful.

Improvements/Applications: We expect that the devised program in this study be widely used in multicultural family support center to promote Vietnamese married immigrant women's reproductive health and quality of life.

Keywords: Vietnamese women, Cervix cancer, Prevention, Education program, Preventive behavior, Intention.

Introduction

Since the mid 1990s, the marriage between international women and Korean men has rapidly increased, and thus, multicultural families have also been rapidly increasing. In the Republic of Korea(ROK), a 'foreign' woman who married a Korean man is called a 'married immigrant woman'. The majority of their

nationalities are China, followed by Vietnam, Japan and Philippine^[1]. Most of them are women who have migrated from countries with a lower health-care level than ROK. It is difficult to comprehend their health status and preventive education regarding diseases^[2]. In recent years, Vietnamese immigrant women, who have a steady increase in the domestic (ROK) population, are known to have a higher risk of developing cervical cancer than women in other countries^[3,4].

In fact, Vietnamese married immigrant women living in the United States were twice as likely to develop cervical cancer as Caucasian women^[5]. The cervical cancer screening rate, one of the preventive health behaviors of cervical cancer, is significantly lower

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than that of other Southeast Asian women migrating to the United States^[6-8]. It implies that the possibility of missing early detection/intervention of cervical cancer is increased. As a result, it is a cause of the health and life threat of Vietnamese migrant women. Since early detection can increase the cure rate, the practice of preventive health behavior is particularly emphasized. Papanicolaou test, condom use and vaccination against cervical cancer are recommended for prevention of cervical cancer^[9]. In the case of preventive behavior for cervical cancer practiced by domestic, married immigrant women, the cervical cancer screening rate of Vietnamese, married immigrant women, in some areas of ^[2]was 10.9%. Condom use among the spouse of the immigrant women was examined and 63.5% did not use condoms^[10]. The vaccination rate for cervical cancer vaccination was 7.2% ^[11]. Previous studies indicate that the overall practice of prevention of cervical cancer is very low. Therefore, in order to improve the reproductive health of Vietnamese women who are married immigrants, it is urgently necessary to develop and apply customized education programs to promote the practice of prevention of cervical cancer. Prophylactic health behaviors such as the practice of cervical cancer prevention are known to be linked with individuals' health beliefs^[12]. The higher the perceived sensitivity, the perceived severity, the perceived benefit, and the less perceived barriers of the disease, the better the practice of preventive health behavior for the disease^[13]. However, Vietnamese women are reported to have very low perceived sensitivity and severity to cervical cancer^[14,15]. This study is based on the ADDIE model^[16], a systematic approach to effective teaching design for Vietnamese women who are vulnerable to cervical cancer and developed a cervical cancer prevention education program using illustrations, based on the health belief model. This study attempted to provide an empirical basis for the use of this study as an intervention program for prevention of cervical cancer in Vietnamese married immigrant women.

The hypotheses of this study are as follows.

Hypothesis 1: There will be differences in cervical cancer screening health beliefs in the experimental group and the control group.

Hypothesis 2: The experimental group will have higher cervical cancer knowledge scores than the control group.

Hypothesis 3: The experimental group will have a higher prevalence of preventive behaviors (condom use, Pap testing, vaccination) than the control group.

Method

This study used a randomized control group pretest-posttest design to develop an educational program to improve the prevalence of cervical cancer prevention in Vietnamese married immigrant women.

Subjects: Based on the research report of^[17] that proved its effectiveness after mediating the reproductive health promotion program for married immigrant women, and the research report of^[18] that provided the cervical cancer prevention education program and verified its effect, the significance level, power, and effect size were set as $\alpha = 0.05$, $1 - \beta = 0.8$ and $d = 0.80$, respectively. The minimum number of samples per group required for the independent t-test was 26^[19], which was calculated using G-power 3.1 program^[20]. In this study, a total of 60 subjects were recruited for the experimental group and the control group. Two subjects dropped out in the course of this study and 58 participants participated in the study.

Program development process and contents: The practitioners asked to translate all the lecture materials into Vietnamese and provide them with a Vietnamese interpreter at the lecture. They also requested to look for the most understandable way to communicate with the Vietnamese women. Table 1 shows the educational programs based on the above analysis results. In order to increase the perceived sensitivity of cervical cancer, as a material to be used in the very first class, stories about the incidence of cervical cancer of Vietnamese women who moved to other countries were provided with illustrations to make it easier to sympathize with the subject of learning [Figure 1].



Figure 1. Illustrated material examples

Table 1. Contents of program

Phase	Contents
1	perceived sensibility (structure and function of female reproductive organs, incidence of cervix cancer among female Vietnamese living in the U.S.A)
2	perceived seriousness(definition and cause of cervix cancer, relationship between cervix cancer and HPV, symptom of cervix cancer in each phrase, diagnosis method, treatment and prognosis)
3	perceived barriers(necessaries for examination without any symptoms, pap smear and process and benefits, cultural barriers, recommendation for examination)
4	perceived benefits(prevention method of cervix cancer, benefits of cervix cancer vaccine, use of condom and its expected result)

Measures: RSBB-V (Revised Susceptibility, Benefits, and Barriers Scale–Vietnamese version) developed by [26] was used for Pap testing health beliefs. The cultural barrier for cervical cancer screening was assessed with the CBSI–V (Cultural Barriers Screening Inventory-Vietnamese version) developed by [26]. The knowledge of cervical cancer is a tool developed by [27]. For the intention of cervical cancer prevention, an instrument developed by [28] was used in this study. The reliability of all the instruments was above .70. All the research devices used in this study were approved by the authors through email correspondence.

Result

1. General characteristics of the subjects: There was no significant difference between the two groups in terms of the general characteristics of the subjects, and the two groups were determined to be homogeneous.

2. Hypothesis Test:

The effects of program were as follows:

1. The experimental group has decreased in perceived barriers score significantly than that of the control group ($t = -2.65, p = .011$).
2. The experimental group has a statistically significant higher score in the knowledge of cervical cancer, compared to the control group ($t = 8.22, p < .001$).
3. The experimental group showed statistically significant higher intention score of prevention behavior compared to control group ($t = 5.56, p < .001$). Also the experimental group significantly increased the preventive behavior intention like condom use ($t = 2.63, p < .001$), Pap testing ($t = 3.24, p = .002$), HPV vaccination ($t = 2.46, p = .017$).

Discussion

The purpose of this study is to develop and apply a cervical cancer prevention education program to Vietnamese married migrant women who are known to have high cervical cancer incidence and to verify its effectiveness. The cervical cancer prevention education program developed by this study is unique from the existing education program developed in previous studies on women’s health for married immigrant women.

First, the educational program developed by this study is the first customized cervical cancer prevention education program developed in ROK to reflect the situational specificity of Vietnamese immigrant women. Considering that the proportion of Vietnamese nationality among married immigrant women in ROK is on the constant rise, the cervical cancer prevention education program developed by this study is timely and necessary for the improvement of preventive health behavior of Vietnamese married immigrant Vietnamese women. In the future, it will serve as an intervention program that contributes to the improvement of their health and quality of life. Second, the cervical cancer prevention education program developed by this study is a customized education program based on the cultural specificity and needs of Vietnamese immigrant women using the ADDIE model. [18] developed a cervical cancer prevention education program for immigrant women. In the study by [18], the origins of the married immigrant women were diverse. Thus, the cultural characteristics of the origins of married migrant women were not fully reflected. In this study, the research subjects were restricted to Vietnamese married immigrant women. In order to accurately grasp their current status, educational needs, vulnerabilities, and situational specificity, the contents and method of the education program were developed through the results of focus group interviews and the review of previous studies, thereby improving the participants understanding of the education program. Third, this study created and used illustrations in electronic lecture materials to help participants understand the goal of the education and to increase their intention to participate in preventive actions, which is the ultimate goal of the program. This feature is different from the cervical cancer prevention education program attempted in previous studies.

In this study, the first lecture was provided with a short story, “Booty Tam, American Married Immigrant Woman.” In each lecture, the participants were

encouraged to express their thoughts and obstacles to Pap testing through the main character in the illustration.

As a result, particular, the awareness of cervical cancer and the intention to prevent cervical cancer in the experimental group increased significantly compared to the control group. It indirectly suggests that the illustrations have been effective in inducing understanding and cooperation among Vietnamese married immigrant women who are not used to expressing their thoughts and feelings.

As a result of examining Pap testing within 6 months after providing educational program, the screening rate in this study was significantly higher than that in previous studies, suggesting that the educational program using illustrations was effective. Regarding the practice rate of cervical cancer screening within 6 months after the educational program, the research conducted by [23], which provided Chinese immigrant women in the U. S. with educational programs using videos, pamphlets and screening kits has the practice rate of 39.0%. A study on immigrant women residing in the United States by [22,29] has the practice rate of 61.7%, 65.8%. Compared to these previous studies, this study has the practice rate of 75.8%, indirectly indicating that the educational program was effective. Fourth, the educational materials developed by this study were produced in Korean and Vietnamese to share these materials with their spouses. This study is meaningful in that the Vietnamese married immigrant women actively participated in the program that includes their spouses in the curriculum.

Conclusion

In this study, randomized control study design was used to validate this study's effect, to provide a basis for practical application and widespread use of the cervical cancer prevention education program developed by this study. As a result of hypothesis test, the experimental group who received the cervical cancer screening program compared to the control group, has statistically meaningful 1) increase of the perceived sensitivity and 2) decrease of the perceived barriers among cervical cancer screening health beliefs. Through this, it can be concluded that the cervical cancer prevention education program developed by this study is a highly effective customized education program for promoting cervical cancer prevention behavior of Vietnamese married immigrant women. In the future, we hope that this educational program will be actively deployed to

multicultural family support centers, health centers, and various community organizations to prevent cervical cancer and to promote preventive health behaviors for cervical cancer.

Ethical Clearance: Not required

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Conflict of Interest: Nil

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