Reducing Self-Medication in Iranian Women Based on Health Belief Model: A Brief Report

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Abstract

Self-medication is a serious health problem in Iran. In this quasi-experimental study with a control group, four healthcare facilities were selected and divided into intervention and control groups. Based on the health files of women in healthcare facilities, 192 women were selected randomly and completed a self-reported questionnaire to measure Health Belief Model constructs and self-medication. After analyzing the data, perceived susceptibility was found as the main predictive factor for self-medication, and an intervention was developed to increase it. The intervention consisted of lectures and group discussions, along with distributing pamphlets and sending short messages for four weeks. Three months later, the data was collected again and analyzed. Perceived susceptibility was improved, and self-reported behavior was reduced significantly in intervention groups compared to the control groups.

Keywords: Self-Medication, Health Belief Model, Education

1. Background

Self-medication is considered an important health issue around the world, including Iran (1). According to the World Health Organization, 2% - 40% of the medical costs are spent on arbitrary medication purchases (2). Nearly 83.3% of Iranians do self-medication (3). It results in bad consequences such as high consumption of medications, high risk of reuse and prolonged use of medication, increased drug resistance, drug interactions, and side effects, making the disease symptoms hidden, and wasting financial resources (4).

The health relief model (HBM) is one of the most practical models that health educators use to explain and predict health behavior based on individual perceptions and beliefs (5).

2. Objectives

This study has been designed and implemented to reduce self-medication by Iranian women through using a common behavioral change model, HBM.

3. Methods

This study was quasi-experimental with a control group. It was conducted on women in Yasuj, a city located in the southwest of Iran. There are four urban health care facilities in Yasuj. All these facilities were selected, and two of them were considered as an intervention group and two others as the control group. For each group, 96 women over 15 years old were selected through random sampling. In other words, the sample consisted of 192 individuals who were randomly selected and divided into two groups of intervention and control. The data were collected by using a questionnaire which was developed to measure the constructs of HBM for self-medicational behavior. It has the content validity index of 0.81, content validity ratio of 0.75, and Cronbach's alpha of 0.82 (6).

During contact with women and after obtaining consent from women, they were invited to attend the facilities. After receiving written informed consent, they completed the questionnaire. The inclusion criteria include: having a health file in a health care facility, having the willingness to participate in the study, and having a disease. Women who did not want to continue attendance in the study, and were absent in more than one educational session, were ex-

cluded.

The educational intervention was implemented for four weeks. It was concluded with four 60-minute educational sessions established in the intervention facilities. The intervention consisted of lectures and group discussions on the subject of self-medication, along with distributing pamphlets and sending short messages. Three months after the intervention, the data was collected again for the intervention and control groups and compared with each other. For data analysis, SPSS 16 software was used. Results were considered significant at P < 0.05.

4. Results

The mean and standard deviation in the age of the women was 31.24 ± 7.81 years, 88.5% were married, all of them had one type of health insurance, 19.3% were employed, 50% had university degrees, and 73% had two or fewer children. Before the intervention, there was no significant difference in self-medication behavior in both intervention and control groups. After the intervention, there was a significant difference between these groups regarding the perceived susceptibility construct (Table 1). Table 2 shows the most frequent external cues to action.

5. Discussion

Self-medication is one of the major health issues in Iran. The results of the study showed that self-medication behavior was reduced significantly in the intervention group compared to the control group. The mean of perceived susceptibility in the intervention group was significantly higher than before intervention, while in the control group, it was not. It may be a good indication of the effect of educational intervention on improving the perceived susceptibility of individuals as an important predictor of self-medication behavior. Self-medication in the intervention group decreased compared to before intervention, which can be attributed to the positive impact of education, which is consistent with other studies (7-13).

The results also revealed that after the intervention, the susceptibility of the subjects to referral to physicians increased and self-medication, as a self-reported behavior, decreased. Regarding the above, it is necessary to educate the community about the correct use of medicine and develop appropriate training programs tailored to the culture and target group. In the present study, physicians and television after training were selected as the most important external cues to action, and fear of self-medication complications as the most important internal cues to action among the intervention group.

Table 1. Changes in Health Belief Model Constructs in Participants

Variable	After Intervention	Before Intervention
Perceived sensitivity		
Control group	83.51	101.02
Intervention group	109.49	91.98
Mann Whitney test	P = 0.001	P = 0.25
Perceived severity		
Control group	100.05	100.04
Intervention group	92.95	92.96
Mann Whitney test	P = 0.37	P = 0.37
Perceived benefits		
Control group	93.18	94.1
Intervention group	99.19	98.99
Mann Whitney test	P = 0.50	P = 0.53
Perceived barriers		
Control group	93.64	93.64
Intervention group	99.36	99.36
Mann Whitney test	P = 0.47	P = 0.47
Self-efficacy		
Control group	94.48	94.29
Intervention group	98.52	98.71
Mann Whitney test	P = 0.61	P = 0.58
Self-medication behavior		
Control group	102	90.50
Intervention group	91	102.5
Mann Whitney test	P = 0.10	P = 0.08

According to the study findings, the fear of drug complications was considered as an internal cue to action in both groups. Therefore, it is recommended in training programs to provide more information on the side effects of medicines and how to use them properly. The results of many studies around the world indicated that physicians, family members, radio, and television (mass media) were introduced as the first source of information and the most important cues to the action of drug use (14). Therefore, in the health-promoting programs, radio, TV (mass media), and physicians can be used to promote self-medication prevention behavior. In this study, observation of the outcome was not possible. So, we had to measure the self-medication behavior by using the self-reported questionnaire. This was an important limitation. Additionally, the facility would be a confounding factor to assigned subjects to intervention and control groups.

According to this study, a purposeful intervention focused on the stronger predictors of the intended behav-

Table 2. Cues to Action for Self-Medication Behaviors[a]

	Control Group	Intervention Group
Internal cues		
Physician	50 (50.4)	44 (45.3)
Family and acquaintances	4 (4.8)	11 (11.1)
Book and booklet	2 (2.2)	5 (5.1)
Magazine and publications	0 (0)	1 (1)
Television	34 (35.3)	18 (19.2)
Radio	1 (1.2)	5 (5.2)
Other patients	5 (6.1)	12 (13.1)
Total	96 (100)	96 (100)
External cues		
Fear of self-medication complications	61 (63.5)	59 (60.1)
Disbelief of self-medication	18 (18.8)	22 (22.6)
Favorable general situation	11 (11.3)	12 (13.5)
Other cases	6 (6.4)	3 (3.8)
Total	96 (100)	96 (100)

[a]Values are expressed as No. (%).

ior is effective. In our study, the perceived susceptibility needed to be considered as a priority in developing the content and structure of the intervention. This is the basis of theory/model-based health education. Therefore, if we want to modify the self-medication behavior in women in similar communities, we must focus on their susceptibility (changing their beliefs that they are at risk of health problems resulting from self-medication). To design more effective interventions, exploring the special predictors for the intended behavior is fundamental in different behaviors and different target audiences.

Acknowledgments

Footnotes

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