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Effect of the BASNEF-based Educational Intervention on the Prevention of Cutaneous Leishmaniasis Disease in the Volunteer Health Workers and Families Covered by Them: A Quasi-Experimental Prospective Study

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Dear Editor,

One person, every second, gets the Cutaneous Leishmaniasis disease. It is endemic in 88 countries, and currently, 10 million people suffer from the disease worldwide. It is observed in the cities of 15 provinces in Iran. The rural Cutaneous Leishmaniasis in Iran occurs in Isfahan, Sarakhs, Esfarayen, Jajarm, Marvdasht Fars, etc. (1). Considering the importance of health education in controlling the vector of the disease, it is possible to use different educational models, such as BASNEF, for effective health education. The BASNEF model has been formed from the constructs of behavioral beliefs, attitudes, subjective norms, and enabling factors abbreviated as the BASNEF (2). The efficacy of this model has been proven to change the behavior of educators in volunteer health workers (VHWs) (3) as well as the behavior of the families covered by them regarding the prevention of Cutaneous Leishmaniasis (4, 5). Therefore, due to the high prevalence of the disease in Jajarm (1), undesirable levels of adoption of preventive behaviors in families living in endemic areas (4), the behavior of VHWs to inform people about this disease (3), the limited resources to educate all people in a region, and considering the fact that by training VHWs all people in a region can be informed (1), the present study was conducted to determine the effect of educational intervention based on the BASNEF model in the prevention of Cutaneous Leishmaniasis disease among VHWs and families covered by them.

This Quasi-experimental prospective study was conducted on 60 VHWs (30 cases in each intervention and control group) and 120 families (60 cases in each intervention and control group) randomly selected from two health centers in Jajarm in 2013.

The data collection tool was a valid and reliable BASNEF model-based questionnaire developed by Hazavehei et al. The questionnaire included questions about demographic characteristics, knowledge, attitude, subjective norms, behavioral intention, enabling factors and preventive behaviors of the Cutaneous Leishmaniasis (6) and completed in two stages of before and three months after the intervention. VHWs completed the questionnaires at the health center guided by a researcher, whereas the covered population filled the questionnaires by the household head at their homes guided by the researcher. The pre-test was performed before the intervention for the two intervention and two control groups. The educational intervention was provided according to the data obtained from the pre-test. Educational intervention for VHWs was held during 5 one-hour sessions at the health center based on the frameworks of the BASNEF model. Then, VHWs were given three months to train their covered population. Also, influential people on the VHWs were trained and asked to encourage them for educational activities.

Meanwhile, the VHWs also educated families, influencing people, such as clerics, local people, teachers, etc., and asked them to encourage people to take preventive measures. In addition, VHWs provided enabling factors required by families to facilitate preventive measures. After three months, the questionnaires were again filled

by VHWs and families, and the data were analyzed using SPSS 16 software, chi-square, *t*-test, paired *t*-test, and Mann-Whitney and Wilcoxon tests. The significance level was considered less than 0.05.

The results showed that in the target group of VHWs, there was a significant increase in the mean score of knowledge, attitude, behavioral intention, and (educational) behavior in the intervention group three months after the intervention ($P < 0.05$), but the increase in the mean score of the enabling factors was not significant ($P = 0.187$). The mean score of knowledge did not change significantly in the control group ($P = 0.423$), but the mean score of attitude, behavioral intention, enabling factors, and behavior decreased significantly ($P < 0.05$).

In the target group of families covered by VHWs, mean scores of knowledge, attitude, behavioral intention, enabling factors, and behavior significantly increased after the intervention in the intervention group ($P < 0.05$). In the control group, mean scores of behavioral intention, enabling factors, and behavior decreased significantly ($P < 0.05$), whereas mean scores of knowledge and attitude did not change significantly ($P > 0.05$).

In general, the results of this study showed that educational intervention based on the BASNEF model by improving the educational behavior of VHWs could promote the prevention of Cutaneous Leishmaniasis in families covered by them.

Data were collected by the self-report method, which was one of the limitations of this study. Also, the high number of questions sometimes reduced the accuracy and attention of the subjects. Training both VHWs and families covered by them was one of the strong points of this study.

Footnotes

Conflict of Interests: The authors declared that they have no conflict of interests.

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