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Evaluation of Breast Cancer Risk Calculators as Learning Tools

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Abstract

Many tools are available to teach women about breast cancer risk factors. Breast cancer risk calculators are tools that are available via the Internet to provide information to woman about their breast cancer risk. Women age 35 and older were recruited to participate in a study using online breast cancer risk calculators as learning tools. A total of 45 women participated in the study. A one group pretest post test survey questionnaire design was used to evaluate the impact of the risk calculator websites on women's knowledge and attitudes. The results indicate women identified more breast cancer risk factors after using the calculator, decreased their concern/worry about breast cancer and indicated they would do something with the information to help themselves.

Keywords:

patient education, health status indicators, risk assessment

Introduction

Methods to learn about breast cancer risk factors and risk take on many forms. Leaflets, brochures, TV, magazines, friends, family, personal counseling, group counseling and the Internet all provide information to woman about breast cancer risk factors. Breast cancer risk calculator websites are being used to give women an estimate of their risk for developing breast cancer by asking them questions related to some of the risk factors associated with the disease. The purpose of this study is to assess the learning of risk factors and risk levels using a breast cancer risk calculator, to evaluate changes in perception of risk, and explore behavior modification intent.

Methods

A convenience sample of women age 35 and older was recruited for participation in the study through e-mail invitations and flyers posted in the greater Houston, Texas area. Participants were directed via the e-mail to the informed consent website. If the participant agreed to participate they were directed to an online pretest survey. Once completed, the participant was directed to a public online breast cancer risk calculator. After completing the breast cancer risk calculator the participants clicked on the post test survey link from the e-mail and completed the post test survey. Questions on the surveys consisted of knowledge of risk factors, level of concern about developing breast cancer, and the intended use of the information they received.

Results

Fifty-two women who were aged 35 years old or older responded to the invitation. Of that group 35 completed the study. All of the women in the study indicated they had heard about breast cancer risk factors. The majority of women were Caucasian (86%) between the ages of 41-55 (60%) and had graduated from college (69%). A comparison of the pretest and post test knowledge of 17 breast cancer risk factors[1] showed that participants improved their identification of 9 of them. Interestingly, although 35 percent of the participants were surprised that their risk was higher than they thought, as a whole the participants worry or concern decreased (51%-17% respectively). Based on the information the participants received 80 percent indicated they were going to make changes to the risk factors they could affect. In addition the women indicated they would continue with their current breast cancer screening regimen (71%), begin a screening program (20%), find more information about breast cancer (29%) and talk to their physician (26%). Areas of confusion were the number of risk factors (26%), risk measurements and what they mean (29%), and their risk level in relation to the general population (23%).

Conclusion

The online breast cancer risk calculator appears to be a method that can promote knowledge about breast cancer risk factors and disease risk. However, the topic of risk and how it is communicated via the breast cancer risk calculator needs further investigation to assess ways the information can be presented and understood.

[1]http://www.cancer.org/docroot/CRI/content/CRI_2_2_2X_What_causes_breast_cancer_5.asp?sitearea