ONLINE EXCLUSIVE

# Mental Illness and *BRCA1/2* Genetic Testing Intention Among Multiethnic Women Undergoing Screening Mammography

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**OBJECTIVES:** To examine associations between patient-reported mental illness diagnosis and symptoms and *BRCA1/2* genetic testing intention among women undergoing screening mammography.

**SAMPLE & SETTING:** 100 multiethnic women of lower socioeconomic status who were undergoing mammography screening and met family history criteria for *BRCA1/2* genetic testing.

**METHODS & VARIABLES:** Descriptive and bivariate nonparametric statistics and multivariate logistic regression were used to examine associations between mental illness and genetic testing intention. Variables were anxiety, depression, patient-reported mental illness diagnosis and symptoms, and testing intention.

**RESULTS:** Prevalence rates of mental illness symptoms were 36% for clinically significant depression and 36% for anxiety. Although 76% of participants intended to undergo genetic testing, only 5% had completed testing. History of mental illness and elevated levels of anxiety and depressive symptoms were positively correlated with testing intention in the bivariate analysis. In multivariate analysis, only younger age and less education were associated with testing intention.

**IMPLICATIONS FOR NURSING:** Future studies should address psychosocial needs and other competing barriers at the patient, provider, and healthcare system levels to increase access to *BRCA1/2* genetic testing among multiethnic women.

**KEYWORDS** mental illness; *BRCA1/2*; genetic testing; multiethnic women; mammography
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Genetic counseling and testing for *BRCA1/2* gene mutations and other cancer susceptibility genes related to hereditary breast and ovarian cancer (HBOC) (*ATM*, *BARD1*, *BRIP1*, *CDH1*, *CHEK2*, *EPCAM*, *MLH1*, *MSH2*, *MSH6*, *NBN*, *NF1*, *PALB2*, *PMS2*, *PTEN*, *RAD51C*, *RAD51D*, *STK11*, and *TP53*) are the standard of care for women who meet personal or family history criteria (National Comprehensive Cancer Network [NCCN], 2019). The application of multigene panel testing for hereditary forms of cancer has rapidly changed the clinical approach to genetic testing for at-risk patients and their families (NCCN, 2019). Women who have a deleterious *BRCA1/2* gene mutation have a 69%–72% absolute risk of developing breast cancer by age 80 years, compared to a 12% lifetime risk in the general population (National Cancer Institute, 2018). Therefore, the U.S. Preventive Services Task Force ([USPSTF], 2019) recommends that primary care providers assess women with a personal or family history who have an ancestry associated with *BRCA1/2* gene mutations with an appropriate brief familial risk assessment tool.

Risk management options include intensive breast cancer screening (Saslow et al., 2007), risk-reducing surgeries (Isaksson et al., 2019), and chemoprevention (Cibula, Zikan, Dusek, & Majek, 2011), which have been shown to improve early detection and reduce cancer incidence and mortality. As reported by Hughes (2017), most at-risk women have yet to be tested. Childers, Childers, Maggard-Gibbons, and Macinko (2017) found that, among 3.8 million survivors of breast and ovarian cancer in the United States, only 14% had been tested. Despite the clinical availability of *BRCA1/2* genetic testing for more than 20 years and its associated benefit, there is significant underuse of genetic testing. Less than 20% of eligible women screened in primary care are referred for