

Women's Knowledge, Beliefs and Practices Related to Breast Self-Examinations in Italy

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Correspondence: Sofia Colaceci - Saint Camillus International University of Health and Medical Sciences (UniCamillus); Email: sofia.colaceci@unicamillus.org

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Elena Stefanelli¹, Sofia Colaceci², Giancarlo Marcheggiani³, Nicola Ramacciati⁴

¹ Integrated University Hospital of Verona, Verona, Italy

² Saint Camillus International University of Health and Medical Sciences (UniCamillus), Rome, Italy

³ Umbria Region - Health Planning, Territorial Assistance and Socio-Health Integration Service, Perugia, Italy

⁴ Department of Pharmacy, Health and Nutritional Sciences, University of Calabria, Rende, Italy

Abstract

Introduction. Breast cancer is a significant global health issue. In Italy, it represents 30.3% of female cancer cases. Early detection through mammography is crucial, particularly for women who face a higher risk. Moreover, breast self-examination (BSE) is a tool that can help women become familiar with their breasts to identify breast changes and contact their physicians for clinical assessments. We conducted a study with an observational-descriptive survey design. The objective was to examine women's knowledge, beliefs and practices about breast cancer prevention and BSE.

Methods. Data collection relied upon the Italian-validated version of the Champion's Health Belief Model Scale, consisting of 31 items related to susceptibility, gravity, perceived benefits, perceived barriers and self-efficacy. The inclusion criteria required the women to be between 20 and 44 years of age and to be living in Umbria, Italy. The convenience sample was stratified according to the age distribution of women.

Results. A total of 252 questionnaires were collected. After screening for completeness and ensuring they met the required criteria, the final sample included 150 women according to the predetermined stratification. Most women had a university education (53.3%); about 44% were mothers, 75.7% of whom had breastfed. Most practiced BSE (73.3%), with no significant sociodemographic differences. Educational levels impacted perceived breast cancer risk, with 21.4% of lower-educated women fearing higher susceptibility ($p=0.049$). Self-efficacy was higher amongst self-examiners, but uncertainty was prevalent in both groups. Embarrassment and time constraints were barriers, but other Health Belief Model variables exhibited no significant differences between BSE and non-BSE groups.

Discussion and Conclusions. This study uncovered a strong

link between women's self-efficacy, confidence in performing a BSE and BSE practice. Education and health campaigns should consider socio-demographic factors (e.g. level of education, age) to promote BSE, especially amongst women who are not covered by mammography screenings.

Keywords: Breast Self-Examination, Breast Cancer, Health Belief Model, Prevention, Women

Introduction

Breast cancer is currently the most frequently diagnosed malignancy afflicting women on a global scale. In 2020, there were approximately 2.3 million reported cases of breast cancer, which represents the predominant form of cancer amongst females¹. Within the Italian context, a total of 54,976 cases was estimated, which constitutes a 30.3% of the female cancer cases in the country². Notably, due to the growing awareness amongst women regarding the importance of early detection, a promising trend of decreasing mortality rates has been noticed in Italy, with an estimated 12,300 breast cancer-related deaths in 2020, representing a 6% reduction compared to the statistics recorded in 2015.

Early detection of breast cancer can maximise the effectiveness of treatments if structured screening programs are implemented³. The most efficient and established method for promoting early detection is mammography, which is routinely conducted in Italy on a biennial basis for women aged between 50 and 69. However, specific regions extend invitations on an annual or biennial basis also to women aged 45 to 49 and 70 to 74 (4). Despite the lower risk of breast cancer amongst younger women⁴, it should be noted that it is the most common cancer of adolescents and young adult women aged 15 to 39 years⁵. Regrettably, breast cancer diagnosed in younger women often leads to a less favourable prognosis and an increased mortality rate compared to their older counterparts^{6,7}.

One fundamental approach for breast cancer prevention and early detection is the 'Breast Self-examination' (BSE), a safe and no-cost method that can help women become familiar with their breasts⁸. While there is evidence of BSE effectiveness in reducing breast cancer mortality and morbidity, this approach still remains a strategy of ongoing debate⁹, it is widely recommended that women commence this practice at the age of 20, as it enables them to gain

a comprehensive understanding of the 'normal' structure of their breasts, thus facilitating the early identification of any alterations in breast tissue¹⁰.

Although there is an extensive international literature on early breast cancer screening and BSE, data from Italy remains limited. The only recent study was conducted by Conte and colleagues¹¹ who explored women's attitudes towards breast cancer prevention, with a focus on their knowledge and use of dedicated BSE apps. Therefore, the objective of this research was to investigate Italian women's knowledge and beliefs surrounding breast cancer and the practice of BSE.

Methods

Study design

This research, conducted within the Umbria region of Italy, adopted an observational descriptive design. The primary objective was to explore the association between specific health beliefs and the practice of BSE among young women as a preventive measure against breast cancer.

Sample

This study adopted a convenience sampling approach, enrolling a total of 150 women, all of whom were residents of Umbria. We included females aged 20 to 44 years. Women who were unable to understand the Italian language or did not provide informed consent were excluded from participation.

The selected age range of 20 to 44 years was chosen as, although the mammographic screening is recommended starting at age 45, it is also true that for younger women, self-breast examination is recommended as well as an accessible preventive technique.

To ensure the representativeness of the sample relative to the female population in Umbria, we stratified participants according to the age distribution of women in the region within this specified age range, based on ISTAT demographic

data from January 1, 2021. This stratification process involved proportionally dividing the sample to reflect the actual age structure of women aged 20 to 44 years in Umbria, ensuring that each age subgroup within this range was represented in a manner consistent with the regional population distribution. This approach was implemented to minimize sampling bias and enhance the generalizability of the study's findings.

Instruments

Champion's Health Belief Model Scale (CHBMS)

This scale investigates women's beliefs and perceptions related to breast cancer and preventive behaviors, particularly self-breast examination. The CHBMS measures key psychological factors that influence these behaviors, based on the Health Belief Model framework. The questionnaire consists of 31 items divided into five constructs. Each construct represents a different aspect of health beliefs, as follows: (i) Perceived Susceptibility (3 items): this part assesses the respondent's perceived risk of developing breast cancer, reflecting how vulnerable they feel to the disease; (ii) Perceived Severity (6 items): this part measures beliefs about the seriousness of breast cancer, including its potential consequences for health and life; (iii) Perceived Benefits (4 items): this part evaluates the respondent's belief in the positive outcomes of preventive behaviors, such as the effectiveness of self-examination in early detection; (iv) Perceived Barriers (8 items): this part identifies obstacles that may prevent the respondent from engaging in preventive actions, such as discomfort, fear, or lack of time, and (v) Self-Efficacy (10 items): this construct captures the respondent's confidence in their ability to perform self-examinations effectively. Responses are scored on a five-point Likert scale, ranging from "strongly disagree" (1) to "strongly agree" (5). Total scores range from 31 to 155. Use of the Italian version of the Champion Health Belief Model Scale (CHBMS)¹² was authorized by Antonella Manna and Edda Oliva Piacentini, with formal permission granted on June 2, 2021.

Sociodemographic questionnaire

This tool was designed ad hoc by the researchers to collect various information including sociodemographic characteristics (such as age, marital status, education level, and employment status) and reproductive history (including whether the respondents have children and the

age at first childbirth).

Theoretical model of the study

The Health Belief Model, initially formulated by Rosenstock¹³, posits that individuals' health behaviors are influenced by their personal beliefs and perceptions. This model asserts that when individuals perceive a health threat, they are more inclined to engage in behaviours with the aim of averting the threat¹⁴. The Health Belief Model incorporates four central variables: the perceived susceptibility or vulnerability of an individual to the risk of incurring a disease or a health problem; the perceived severity, or the degree of personal damage resulting from the consequences of a disease; the perceived benefits concerning the expected positive results from the performance of the health behaviour; and the perceived barriers, namely the costs and obstacles related to the implementation of the health behaviour. Finally, the model also includes suggestions for actions which encourage healthy behaviours and self-efficacy, or confidence in one's ability to implement such behaviours¹³. Victoria Lee Champion, a nurse and researcher at the Indiana University School of Nursing, utilised the Health Belief Model as the foundational framework in her examination of women's beliefs concerning breast cancer and its prevention. Her work culminated in the Champion's Health Belief Model Scale^{15,16}. According to this model, if a woman perceives both the severity and the susceptibility of breast cancer in relation to her health and has knowledge of and belief in the benefits of preventative measures relative to the barriers, she is more likely to undertake and adhere to preventative behaviours¹⁷.

Data collection

Data was collected from October 1, 2021 to October 20, 2021 using Instagram® and Facebook® (Meta Platforms, Inc. - Menlo Park, California, United States), as well as WhatsApp® (Meta Platforms, Inc. - Menlo Park, California, United States) and Telegram® (Telegram Messenger LLP, Dubai, United Arab Emirates). A PDF version of the questionnaire was also available in case the participant requested it. A total of 252 individuals completed the questionnaires.

Statistical analysis

Categorical variables are described by means of frequencies and percentages, while the quantitative variables are described with means (M) and standard deviations (SD). Associations between categorical variables were tested

using the chi-squared or Fisher's exact test, and correlations between quantitative variables were assessed with Pearson's *r*. *P* values < .05 were considered statistically significant. The data were analyzed with IBM SPSS® version 20.0 (IBM Corporation, Armonk, NY, USA).

Ethical aspects

All participants received comprehensive information about the study objectives. Their voluntary and anonymous participation was confirmed verbally and through an online informed consent form. This research was reviewed by the Bioethics Committee of the University of Perugia (Protocol No. 164945) and obtained formal approval on September 21, 2021

(Protocol n. 219958).

Results

The sample consisted of 150 women living in the Umbria region, who had an average age of 32.8 ± 7.1 years. The largest age group was women aged 40 to 44. More than half of the sample reported being unmarried (57.3%) and had completed a university-level education (53.3%). Additionally, 44% of participants were mothers, and 75.7% of them had breastfed their children. Most of the participants reported no prior breast-related issues (87.3%). A more detailed description of the sociodemographic characteristics is provided in Table 1.

Table 1. Demographic Characteristics of Participants

Variable	Frequency n. (%)	Average Mean (SD)
Age		32.8 (7.1)
20-24	24 (16.00)	
25-29	26 (17.33)	
30-34	29 (19.33)	
35-39	33 (22.00)	
40-44	38 (25.33)	
Marital status		
Unmarried	86 (57.3)	
Married	55 (36.7)	
Divorced	9 (6.0)	
Widow	0 (0.0)	
Education level ^a		
ISCED 2 or lower	0 (0.0)	
ISCED 3	3 (2.0)	
ISCED 4	67 (44.7)	
ISCED 5 or higher	80 (53.3)	
Employment status		
Student	39 (26.0)	
Not employed - Homemaker	4 (2.7)	
Worker - Private sector	16 (10.7)	
Administrative employee and similar roles - Public administration	30 (20.0)	
Self-employed professional	21 (14.0)	
Retired	0 (0.0)	
Other employment	40 (26.6)	
Do you have children?		
Yes	66 (44.0)	
No	84 (56.0)	
Age at first childbirth		28.5 (4.7)

^aInternational standard classification of education ISCED 2011

ISCED Level 0: Early Childhood Education

ISCED Level 1: Primary Education

ISCED Level 2: Lower Secondary Education

ISCED Level 3: Upper Secondary Education

ISCED Level 4: Post-Secondary Non-Tertiary Education

ISCED Level 5: Tertiary Education (Short Cycle)

ISCED Level 6: Tertiary Education (Bachelor's or Equivalent)

ISCED Level 7: Tertiary Education (Master's or Equivalent)

ISCED Level 8: Tertiary Education (Doctoral or Equivalent)

Regarding BSE, 73.3% of the women reported having performed this practice either monthly or occasionally. Although this specific data is not presented in the tables, stratified analyses will be conducted to compare these two groups. As shown in Table 2, the practice of BSE did not exhibit statistically significant associations with any of the sociodemographic variables.

Table 2. Practice (or not) of BSE according to the socio-demographic characteristics of the sample

Variable	Perform Self-breast examination n. (%)	Not-Perform Self-breast examination n. (%)	Test Type and Value	p.value
Age group			Chi-squared (χ^2)	.130
20-24	18 (75.0)	6 (25.0)	7.107	
25-29	15 (57.7)	11 (42.3)		
30-34	25 (86.2)	4 (13.8)		
35-39	22 (66.7)	11 (33.3)		
40-44	30 (78.9)	8 (21.1)		
Marital status			Fisher's Test	.690
Unmarried	62 (72.1)	24 (27.9)	0.8611	
Married/Divorced	48 (75.0)	16 (25.0)		
Education level ^a			Fisher's Test	.324
ISCED 4 or lower	54 (77.1)	16 (22.9)	1.4464	
ISCED 5 or higher	56 (70.0)	24 (30.0)		
Employment status (ISTAT classification code)			Chi-squared (χ^2)	.155
Student (0911)	28 (71.8)	11 (28.2)	6.655	
Homemaker (9950) / Worker in Private sector (7221)	13 (65.0)	7 (35.0)		
Administrative employee and similar roles - Public administration (1210)	26 (86.7)	4 (13.3)		
Self-employed professional (1231)	12 (57.1)	9 (42.9)		
Other employment	31.77.5)	9 (22.5)		
Do you have children?			Fisher's Test	.358
Yes	51 (77.3)	15 (22.7)	1.4407	
No	59 (70.2)	25 (29.8)		
Did you breastfeed? *			Fisher's Test	.509
Yes	39 (78.0)	11(22.0)	1.6116	
No	11 (68.8)	5 (31.2)		
Have you ever experienced any breast problems in the past?			Fisher's Test	.405
Yes	16 (84.2)	3 (15.8)	2.099	
No	94 (71.8)	37 (28.2)		

Table 3 reports the average scores for the variables assessed through the Champion's Health Belief Model Scale. Regarding the perceived risk of illness and educational level, 21.4% of participants with a middle or high school education agreed about their heightened **susceptibility** to breast cancer in the coming years, compared to 10% of women with university degrees ($p = 0.049$). In terms of the perceived **severity**, the majority of women either agreed (38.4%) or strongly agreed (27.8%) with the statements about the severity of breast cancer. Nearly two thirds of the participants believed that breast cancer poses grave consequences and the potential for personal harm. Additionally, women aged 30 to 34 years (79.3% agreed; $p = 0.025$), unmarried individuals (94.2% agreed; $p = 0.050$) and civil servants (83.3% agreed; $p = 0.036$) displayed higher levels of fear concerning breast cancer.

Within our sample, the level of agreement regarding the **benefits** of breast self-examination was notably high (87.7%), but there was a statistically significant difference ($p=0.040$) in relation to self-care resulting from BSEs between

women who had breastfed and those who had not. The latter were more uncertain about whether performing BSE constitutes taking care of themselves. In contrast, barriers were found to be exceedingly low (6.1%).

However, distinctions emerged when considering **barriers** between women who practiced BSE and those who did not. The latter group exhibited higher levels of uncertainty and agreement in comparison to the former.

Concerning the statement 'Self-examination takes me too much time', 5% of women who did not perform self-examinations agreed with it, and 30% were uncertain ($p = 0.000$). In contrast, amongst women who practiced BSE, only 0.9% agreed with the statement, and merely 3.6% were uncertain. A similar pattern was evident in response to the statement 'It is difficult to remember to do breast examination' ($p = 0.002$). Lastly, women who had never performed BSE were more likely to believe (10% and 15%) that it is not necessary if a clinical breast examination ($p=0.003$) or mammography ($p=0.003$) is periodically performed, compared to 0.9% and 4.5% of women who do perform BSEs.

Regarding the influence of civil status and employment status on the belief that BSE is embarrassing, our results indicated that civil status ($p = 0.023$) played a role, with 10.9% of married or divorced women feeling embarrassed, compared to 2.3% of single women. Employment status ($p = 0.010$) also exerted an impact, with housewives and labourers (15%) expressing the

highest level of embarrassment, followed by civil servants (10%), students (5.1%) and freelancers (4.8%). In contrast, women engaged in other occupations did not find BSE embarrassing. Furthermore, employment status appeared to influence the perception that self-examination consumes excessive time ($p = 0.030$).

Table 3. Average scores of Champion's Health Belief Model Scale variables in the analysed sample

Variables	Item	Low score and high score	Average (DS)
Susceptibility	1. It is likely that I will get breast cancer	3-15	8.9 (2.0)
	2. My chances of getting breast cancer in the next few years are great		
	3. I feel I will get breast cancer during my life		
Seriousness	4. The thought of breast cancer scares me	6-30	22.3 (4.0)
	5. When I think about breast cancer, my heart beats faster		
	6. I am afraid to think about breast cancer		
	7. Problems I would experience with breast cancer would last long time		
	8. Breast cancer would threaten my relationship with my partner		
Benefits	9. If I had breast cancer, my whole life would change	4-20	17.4 (2.1)
	10. When I do BSE, I am taking care of myself		
	11. Completing BSE each month will allow me to find lumps early		
	12. Completing BSE each month may decrease my chances of dying of breast cancer		
Barriers	13. If I found a lump early through BSE, the treatment for breast cancer would be more effective	8-40	14.7 (4.1)
	14. BSE is embarrassing to me		
	15. BSE takes too much time		
	16. It is hard to remember to do breast examination		
	17. I don't have enough privacy to do breast examination		
	18. BSE is not necessary if I have a breast examination by a healthcare provider		
	19. BSE is not necessary if I have a routine mammogram		
	20. My breasts are too large for me to complete breast examination		
	21. I have more important problems than performing BSE		
Self-efficacy	22. I know how to perform BSE	10-50	32.0 (7.4)
	23. I can perform BSE correctly		
	24. I could find a breast lump by performing BSE		
	25. I am able to find a breast lump of 3 cm		
	26. I am able to find a breast lump of 2 cm		
	27. I am able to find a breast lump of 1 cm		
	28. I am sure of the steps to follow for doing BSE		
	29. I am able to tell something is wrong with my breast when I do BSE		
	30. I am able to tell something is wrong with my breast when I look in the mirror		
	31. I can use the correct part of my fingers when examining my breasts		

Regarding **self-efficacy** (Table 4), women who practiced BSEs consistently expressed agreement with each item, in contrast to women who did not practice them, demonstrating a statistically significant difference (p-values consistently

below 0.05 in all χ^2 tests). It is also noteworthy that a substantial level of uncertainty persisted in both groups, even though 73.3% of our sample engaged in BSE (either monthly or occasionally).

Table 4. Self-efficacy in relation to the implementation (or not) of the self-examination.

Item	Perform BSE n. (%)	Do Not Perform BSE n. (%)	Chi-squared (χ^2)	p-value
I know how to perform BSE			61.329	.000
Agree	67 (60.9%)	3 (7.5%)		
Uncertain	36 (32.7%)	12 (30.0%)		
Disagree	7 (6.4%)	25 (62.5%)		
I can perform BSE correctly			52.464	.000
Agree	61 (55.5%)	4 (10.0%)		
Uncertain	47 (42.7%)	19 (47.5%)		
Disagree	2 (1.8%)	17 (42.5%)		
I could find a breast lump by performing BSE			6.795	.033
Agree	85 (77.3%)	23 (57.5%)		
Uncertain	23 (20.9%)	14 (35.0%)		
Disagree	2 (1.8%)	3 (7.5%)		
I am able to find a breast lump of 3 cm			36.330	.000
Agree	51 (46.4%)	7 (17.5%)		
Uncertain	51 (46.4%)	13 (32.2%)		
Disagree	8 (7.3%)	20 (50.0%)		
I am able to find a breast lump of 2 cm			34.797	.000
Agree	42 (38.2%)	4 (10.0%)		
Uncertain	60 (54.5%)	17 (42.5%)		
Disagree	8 (7.3%)	19 (47.5%)		
I am able to find a breast lump of 1 cm			27.884	.000
Agree	19 (17.3%)	1 (2.5%)		
Uncertain	74 (67.3%)	16 (40.0%)		
Disagree	17 (15.5%)	23 (57.5%)		
I am sure of the steps to follow for doing BSE			57.044	.000
Agree	48 (43.6%)	2 (5.0%)		
Uncertain	51 (46.4%)	10 (25.0%)		
Disagree	11 (10.0%)	28 (70.0%)		
I am able to tell something is wrong with my breast when I do BSE			54.117	.000
Agree	66 (60.0%)	6 (15.0%)		
Uncertain	39 (35.5%)	12 (30.0%)		
Disagree	5 (4.5%)	22 (55.0%)		
I am able to tell something is wrong with my breast when I look in the mirror			22.010	.000
Agree	43 (39.1%)	0 (0.0%)		
Uncertain	37 (33.6%)	21 (52.5%)		
Disagree	30 (27.3%)	19 (47.5%)		
I can use the correct part of my fingers when examining my breasts			49.019	.000
Agree	47 (42.7%)	3 (7.5%)		
Uncertain	53 (48.2%)	12 (30.0%)		
Disagree	10 (9.1%)	25 (62.5%)		

Regarding the statement 'I could find a breast lump by practicing self-examination', 15.4% of women aged 25 to 29 and 2.6% of women aged 40 to 44 disagreed, compared to 0% in all other age groups ($p=0.004$).

Discussion

This study aimed to specifically examine the prevalence of breast self-examination (BSE) among women in Umbria, Italy, and to understand the psychosocial factors impacting these practices. Our findings indicated a high prevalence of BSE practice, largely independent of traditional sociodemographic correlates. Notably, perceived susceptibility to breast cancer was low, contrasting with a strong awareness of its potential severity. This study uniquely revealed a divergence from established associations between sociodemographic factors and BSE behavior. Moreover, it highlighted the interplay between low perceived susceptibility and high perceived benefits, alongside the significant role of employment status in shaping perceived barriers, and the persistent uncertainty surrounding BSE's efficacy, even among regular practitioners.

Approximately three quarters of the women in our study engaged in BSEs, and this distribution was not related to age, marital status, education level, employment status, motherhood, breastfeeding experience or prior breast issues. These findings contrasted with previous research, according to which older and highly educated women were more inclined to undertake preventive breast cancer behaviours^{18,19}. This discrepancy may stem from variations in the female populations studied. Notably, our study's average scores on the subscales of benefits were higher than those reported by Erbil et al. for Turkish women²⁰. Moreover, our study's average score for barriers was lower, considering the range between the lower and upper score limits of studies by Guliford et al.¹⁹ and Erbil et al.²⁰. Notably, perceived susceptibility, which reflects individuals' vulnerability to particular diseases, was not strongly perceived amongst the participants. Most of the surveyed women expressed uncertainty in their responses regarding their susceptibility to the disease. This uncertainty arose from the fact that two out of three women in our sample perceived their health positively and did not believe that they are at risk of developing breast cancer. This phenomenon could be attributed to an unrealistic optimism, wherein individuals underestimate

their likelihood of experiencing adverse events, judging their own risk levels to be lower than average²¹. These women may believe that the probability of developing breast cancer is higher for others than for themselves. Additionally, our study found that risk perception of developing breast cancer was lower amongst the highly educated women. One hypothesis to explain this difference is that women with higher levels of education may feel less vulnerable to a generic disease risk expressed in terms of a 'high risk of breast cancer in the next years'. Nevertheless, about two thirds of women considered the consequences of breast cancer to be severe and believed that it could cause significant harm. The fear of breast cancer within our sample was significantly associated with age, marital status and employment status. Similar to the findings of Abolfotouh et al.²² and Dewi et al.²³ regarding Saudi and Indonesian women, our study revealed that perceived susceptibility and perceived severity were not strongly associated with the practice of BSE. No significant differences were observed between individuals who performed self-examinations and those who did not. According to the Health Belief Model, individuals are more likely to engage in health behaviours if they perceive high benefits and reduced barriers associated with such behaviours¹⁴.

In our sample, awareness regarding the benefits of self-examinations was prevalent, while barriers were exceptionally low. However, differences emerged when considering barriers between women who practiced BSEs and those who did not. Employment status appeared to influence the perception that self-examinations consumed excessive time. Women employed as civil servants, housewives and labourers were more likely to agree with this sentiment compared to female students. This might be attributed to women in the workforce having less time to allocate to self-examination²⁴. The international literature suggests that the primary reasons for women not practicing BSEs include inadequate information regarding how to perform BSEs; anxiety and fear about detecting a serious disease; and a lack of conviction regarding its importance²⁴⁻²⁶. However, our study indicated that the reasons for not practicing self-examinations were related to the perception that it is time-consuming and challenging due to breast size. Additionally, some women found the examination embarrassing and unnecessary, while others simply forgot to perform it or lacked

the sufficient privacy to practice it. The failure to conduct BSE could also be linked to low levels of self-efficacy or confidence in one's abilities. Notably, women who practiced BSE consistently expressed agreement with each self-efficacy item, in contrast to women who did not practice it. Importantly, a notable level of uncertainty persisted in both groups of women, even though most of our sample engaged in self-examinations.

This study has some limitations: first, the participants were not selected through a randomised method, and all the women included in the survey were from one Italian region (Umbria). Second, we lack information about the women who declined to participate, making it impossible to estimate the response rate. Consequently, the findings might be subject to selection bias, limiting the generalizability of our results to the broader population. Third, our data collection relied on self-administered questionnaires, with participants asked only to report whether they had practiced BSEs without detailing the frequency of this practice (e.g., monthly, every 6 to 12 months or occasionally). Finally, the study did not assess or measure the levels of knowledge about breast cancer and BSEs amongst participants. This knowledge gap could potentially impact individuals' perceptions of risk, particularly within the susceptibility and severity subscales.

Clinical Implication

Our findings underscore the importance of tailored educational interventions to address misconceptions, improve self-efficacy, and mitigate barriers to BSE practice. Employment status notably influenced perceptions of time constraints for BSEs, suggesting the need for targeted interventions addressing time management and accessibility for working women.

Socio-demographic factors exerted notable influence on specific aspects of the Champion's Health Belief Model Scale, suggesting the need for a nuanced understanding of how socio-demographic factors intersect with health beliefs to inform targeted health promotion strategies.

Conclusion

This study revealed a strong correlation between women's self-efficacy, their confidence in performing BSEs and the actual practice of this form of self-examination. Notably, the study found a significant inverse correlation between 'embarrassment' and the 'time factor' concerning BSEs. No significant differences were found for the other Health Belief Model variables between

BSE practitioners and non-practitioners. However, socio-demographic characteristics, such as education, employment, age and civil status, appeared to exert a significant influence on specific perceptions related to breast cancer and BSE. These findings highlight the critical need to improve education on the advantages of evidence-based preventive practices to improve women's trust in screening programs and encourage greater participation. Establishing educational initiatives that teach proper BSE is essential, particularly since it can begin as early as age 20. Launching awareness campaigns in universities and women gathering places could further inform young women about breast health. Additionally, utilizing technology and promoting healthcare professionals training, especially on BSE, would enhance prevention strategies while also strengthening the role of nurses and midwives in health promotion.

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