KNOWLEDGE OF BREAST CANCER SCREENING OF GREEK AND ITALIAN STUDENT MIDWIVES. A COMPARATIVE STUDY.

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Abstract

Background: Breast cancer is a cancer disease that more often affects women, (1:10 in Europe, 1:8 in America). Since midwives are engaged in the care of women throughout their reproductive life, they are in the ideal position to motivate women concerning the prevention of breast cancer.
The **aim** of this study was to assess the level of knowledge of student midwives on the secondary prevention of breast cancer.
Methodology: This study was a prospective, comparative study. The sample study included 116 Greek and 19 Italian student midwives, enrolled in the final year of their course of study for the academic year 2004-2005. The data were collected by the use of a questionnaire consisting of 25 closed-ended questions. The data were analyzed by using descriptive statistics.
Results: 69% of the Greek and 84% of the Italian students answered correctly, that the screening test for breast cancer concerns asymptomatic population, p=0,028. Seventy-four percent of the Greek and 84% of the Italian students responded that the clinical exam, the breast self-examination and the mammography are the screening tests that are done routinely, p=0,092. Fifty-three percent of the Greek and 57% of the Italian students were well informed regarding the risk factors of breast cancer, p=0,023.
Conclusions: The fore mentioned results suggest the presence of areas of weakness for both the Italian and the Greek students. It seems reasonable to propose the enrichment of their education; because they will be the future health providers that would be in charge of promoting the prevention of breast cancer and therefore should be well informed and trained on the relative subject.

Keywords: midwife's role, breast cancer prevention, screening, knowledge assessment midwifery students, enrichment of education

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Introduction

Breast cancer is one of the cancer diseases that more often affects women, in proportion 1:8 in America [1] and 1:10 in Europe.[2]Between 1975 and 1990 the mortality rate for all races increased by 0.4% annually, while between 1991 and 2000 decreased by 2.7% annually. [3] This decline in breast cancer mortality rate since 1991 could be attributed both to the improvement in early detection through the use of the mammography screening and to the improvement of the breast cancer treatment. As detection of breast cancer in early stages can lead to almost complete cure, it is important to educate the public concerning the need of early detection through breast cancer screening.

Many current studies have been conducted in order to assess the knowledge on breast cancer prevention of midwives, nurses and doctors. In 2004, a survey conducted in Poland attempted to estimate the knowledge on breast cancer risk factors among midwives representing different levels of education (licentiate students, master's degree students and participants of family nursing course) [4]. This study concluded that the general knowledge on this subject was satisfactory. In 2002, a study carried out in Singapore, aimed to examine the knowledge on breast cancer screening among midwives and nurses who were patient educators [5]. In this study 75% of the midwives' answered correctly to more than the half of the questions, while the majority of nurses had certain misconceptions in the knowledge of breast cancer and breast cancer screening. In 2003, a survey carried out in Brazil assessed the level of knowledge on the screening and diagnosis of breast cancer of gynaecologists [6]. This survey proved the good level of knowledge of the examined population on the relative subject. In 2000, a survey performed in Greece attempted to estimate the knowledge on breast cancer prevention of gynaecologists, which proved that the examined population had medium level of knowledge and needed better information and education [7].

Since midwives are the health providers engaged in the care of women throughout their reproductive life, they are in the ideal position to motivate women on breast cancer prevention. A midwife has a supportive role in educating women on the way in which breast self-examination should be performed, and in explaining the crucial importance of clinical examination and mammography. To secure these objectives effectively, midwives should be aware of breast cancer prevention and keep themselves updated with any new data concerning this issue. The aim of this study is to assess the level of knowledge of student midwives on the secondary prevention of breast cancer and to locate possible areas of weakness.

2. Methodology

This study was a prospective, comparative survey which involved collecting information from the participants by using a questionnaire.

Site of study

The study took place in Department of Midwifery of the Technological Educational Institution (T.E.I.) of Athens and at the University of Medicine in Parma, Italy. It is specified that the syllabus of university courses in midwifery includes classes on prevention, as it is previewed by the EU regulations which are common to all Member States [8].

Data collection and research instrument:

Data collection was conducted during the academic year 2004-2005. The research instrument was a self-administrated questionnaire, consisting of 25 closed-ended questions. The questionnaire items were designed based on the guidelines of the American Cancer Society for the prevention of breast cancer [9]. The questionnaire is divided into two parts. The first part includes information relative to the education of the examined population (courses on breast cancer prevention). The second part includes questions related to

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the primary and secondary prevention of breast cancer. Students provided information about the following demographic variables: age, sex, nationality, religion.

Translation and questionnaire pilot

The questionnaire in Greek was translated into Italian by two independently bilingual persons and then back translated to Greek by two other bilingual persons. After the translation was conducted, the researcher checked the translation in order to minimize misunderstandings concerning especially the terminology. In this study, the questionnaire were piloted using cognitive interviewing methods with the objective of examining the understanding of the questions, in order to eliminate any ambiguities in questions and to predict the timing for completion. The sample of the cognitive testing consisted of 5 Greek and 2 Italian students in order to ensure the representation of the main sample. The returned questionnaires were fully and appropriately completed and the response choices were adequate and understandable.

Sample

The population under consideration is the student midwives of TEI of Athens and of University of Parma. The study was applied to student midwives enrolled in the final year of their course of study. Therefore, the students of the last year of their studies were approached and asked to participate in the study. In all cases, informed consent was obtained. All students signed an informed consent form, according to the declaration of Helsinki. The researcher also gave to the students an information letter which was explaining the aim and hoped for benefits of the study and the questionnaire. Participants were given the opportunity to make questions and ask for clarification if it was necessary. During the recruitment period 150 students were asked to participate in the study; 93% of them (140/150) agreed to take part and finally 90% (135/150) of them returned completed questionnaires. Therefore the sample of this study consisted of 135 student midwives. The sample was made up of students from the Department of Midwifery of TEI of Athens (87%) and of students from the University of Parma (13%). Respondents' average age was 22,3 years, and of them 98,5 % were women. The majority, 86%, were of Greek nationality, while 87% stated that they were Orthodox Christians.

Statistical analysis: In this study the SPSS (version 11.0) programme was used for the statistical analysis of the results. The associations between the variables are expressed as values of Pearson chi-square and the statistical significance were expressed as p values. In this survey the p value is set as 0, 010.

3. Results

Student midwives, both in Greece and in Italy, attended theoretical courses on the prevention of breast cancer during their course of study. The total duration of such courses runs into 30 hours in the Greek course of study and 25 hours in the Italian one. When the students were asked whether they have provided nursing care to patients, who had undergone a breast surgery, 54,3% of the Greek students compared to 10,5% of the Italians replied positively. Moreover, 65,5% of the Greek students and 36,8% of the Italians stated that they have provided counseling on breast cancer prevention to the public.

At first, it is noticed a certain similarity between the pattern of answers given by the Italian and the Greek students. This similarity is noticed not only in the questions answered correctly but also in those answered erroneously. In addition, the Italian students seems to have a better preparation on the prevention of breast cancer, since they have reached, for the major part of the questionnaire, a higher percentage of correct answers in comparison to the Greek students. Specifically, the average of the correct answers of the Italian students is 65,1%, while the respective of the Greek students is 58,2%. The median of the Italian distribution is 68,4%, while the median of the Greek distribution is 60,3%. The standard deviation for the Italian population reaches the 27,1, while the

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corresponding for the Greek population is 25,44. (Figure 1 presents the percentage of the students that have given the correct answer for every question of the questionnaire).

Sixty-nine percent of the Greek and 84% of the Italian students answered correctly that the screening test for breast cancer concerns asymptomatic population [9]. Statistically significant higher percentage of better knowledge regarding the indications of the breast cancer screening [10] observed among Italian student midwives, p=0,028.

When the examined population was asked to determine which are the routinely offered examinations [9] for the prevention of breast cancer, an average of 74% of the Greek students and 84% of the Italian ones replied correctly, p=0,092. Figure 2 presents other interesting results. While the 89% of the Italian students has stated correctly that the breast self-examination is one of the screening tests that are done routinely for the prevention of breast cancer, only the 49,5% of the Greeks has done so, p=0,003. These statistically significant findings indicate that Italian student midwives have higher levels of knowledge regarding the routinely offered breast cancer screening tests. A significant percentage of the examined population (58% of the Italian students and 33% of the Greeks) considered erroneously that the ultrasound belongs to the screening tests that are routinely offered [11], p=0,041.

Fifty-three percent of the Greek students and 57% of the Italians were well informed about the risk factors of breast cancer [12], p=0,023. Only 46% of the Greek students compared to 68% of the Italians know that the early menarche and late menopause are risk factors for breast cancer. Ninety-five percent of the Italian students compared to 65,5% of the Greek population replied correctly that radiation is one of the risk factors for breast cancer [13]. Moreover, a low percentage of students (32% of the Italian students and 15% of the Greeks) is well informed that alcohol is a risk factor for breast cancer [14], p=0,074. In addition, 58% of the Italian students and 42% of the Greeks replied correctly that the mutated genes BRCA1 and BRCA2 are among the risk factors of breast cancer [15]. These statistically significant findings indicate that Italian student midwives have higher levels of knowledge regarding the risk factors of breast cancer. As far as it concerns the consumption of contraceptive pills for a period of more than 5 years [16], 67% of the Greek students compared to 32% of the Italians consider it correctly as a risk factor for breast cancer, p=0,032. The fore mentioned results are represented in Figure 3.

Figure 1 Diagram of correct answers of student midwives

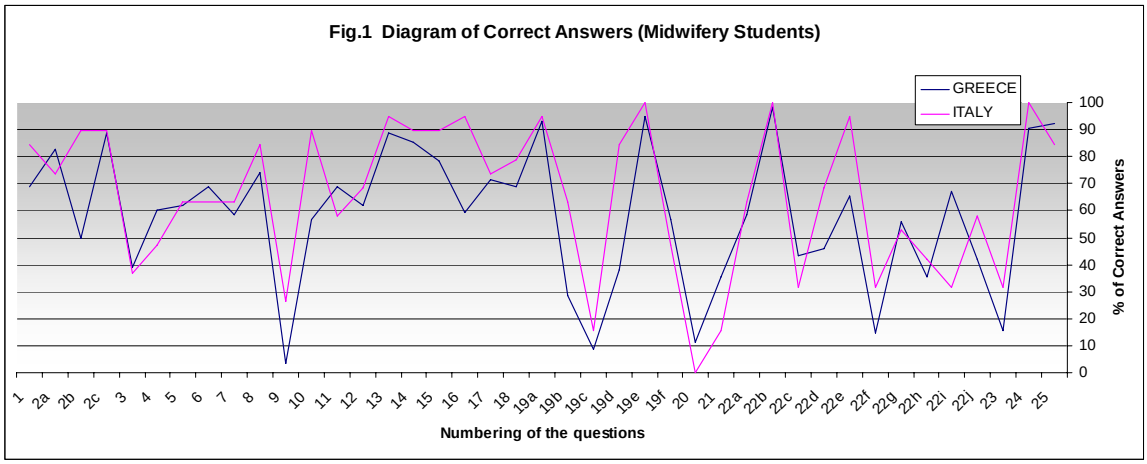

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Figure 2 Answers of student midwives regarding the breast cancer screening tests

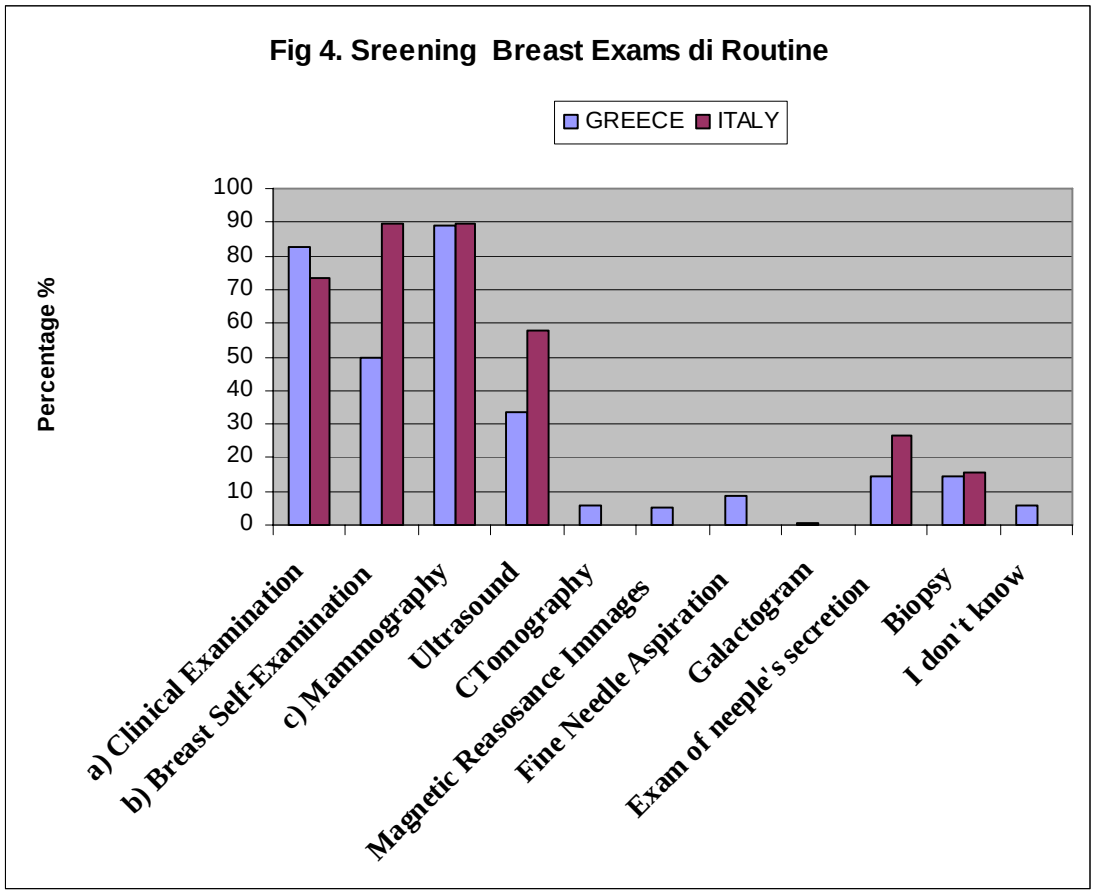
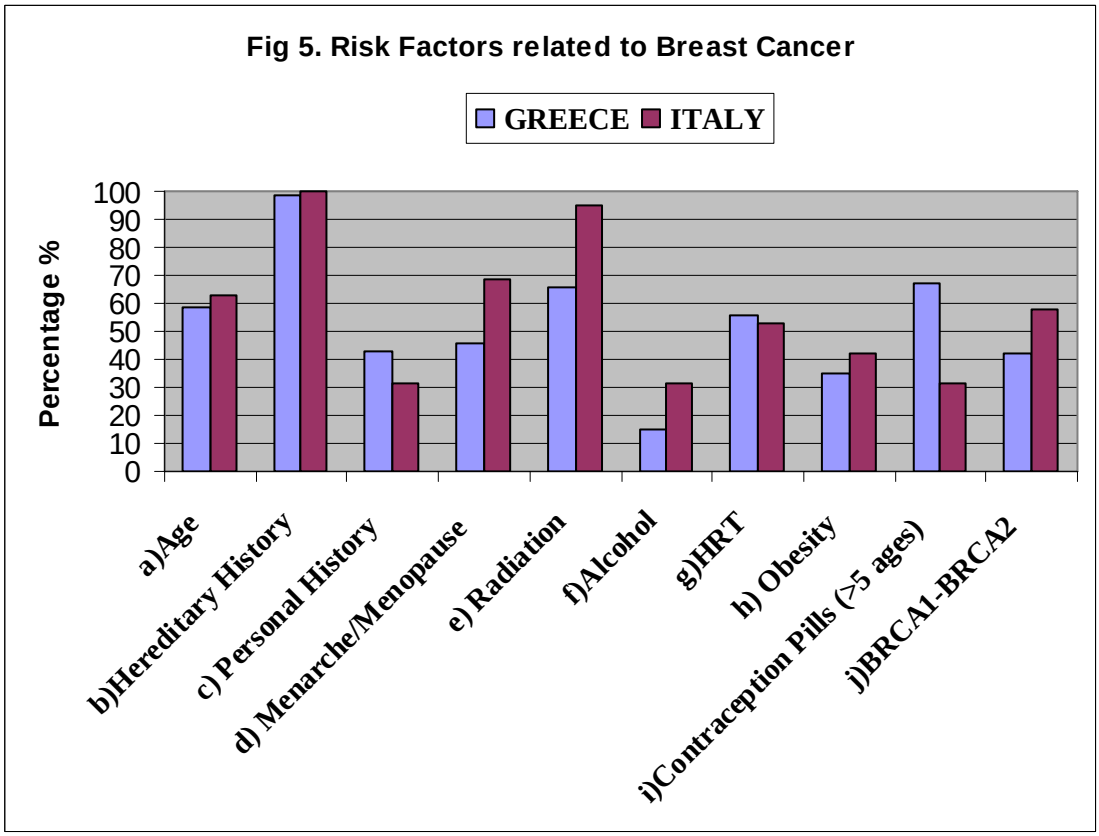


Figure 3 Answers of student midwives regarding the risk factors of breast cancer



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4. Discussion

According to the author's knowledge this is the first survey that investigates the levels of knowledge of student midwives. The fore mentioned results suggest that although there is a certain similarity between the pattern of answers given by the Italian and the Greek students, there is a need of a better preparation of the Greek students on the prevention of breast cancer. The study findings also suggest that there are areas of weakness for both the Italian and the Greek students in some specified areas.

The study has several strengths: the response rate was high (90%) ensuring a satisfactory sample size (n=135), all items in the questionnaire were answered by almost all participants and the questionnaire was validated through pilot studies. These strengths ensure the reliability of study findings. The study has two limitations. Firstly, the questionnaire that has been used in this study was developed by the study researchers since there wasn't an available valid questionnaire to be used. The second limitation of the current study is that involves only one School of Midwifery in Greece and one in Italy.

The prevention of breast cancer is definitely responsible for the decline in breast cancer mortality rate. It is statistically proved that 7% of women of the western world were completely cured due to the early detection of the lesions they had [1]. There are surveys that justify a decline of 30% in breast cancer mortality rate, which is due to the annual use of the mammography control [17]. The earlier detection through screening, the increased awareness and the improved treatment are believed to have decreased the breast cancer mortality rate.

Since broad surveillance of cancer began in 1975, the incidence rates of invasive breast cancer for all races combined, showed an increase by 3,7% per year between 1980 and 1987, and then followed a decrease which reached 3,5% per year between 2000 and 2004 [3]. Much of the long-term underlying increase in incidence is attributed to changes in reproductive patterns, such as delayed childbearing and having fewer children, which are recognized risk factors for breast cancer [18]. The rapid increase between 1980 and 1987 is due largely to greater use of mammography screening and increased early detection of breast cancers too small to be felt [19]. The decline in breast cancer incidence beginning around 2000 may reflect the decreased use of Hormone Replacement Therapy following the publication of the results of the Women's Health Initiative randomized trial in 2002 [20-21]. Therefore, a woman's best overall preventive health strategy is to reduce her known risk factors as much as possible.

The midwife can contribute to the secondary prevention of breast cancer through educating the women on the way the self-breast examination should be performed and explaining them the crucial importance of the clinical examination and mammography. It is also important for a midwife to be able to educate the public on the need for primary prevention, so as the women to adopt a lifestyle by reducing at least the modifiable risk factors (e.g. alcohol consumption, use of hormonal therapy, obesity). Indeed, the results of the midwives' contribution to the prevention of breast cancer have been demonstrated in the past, through the campaign that was carried out in Varese, in Italy, in 1977-78. Two hundred out of 5000 women, who were examined clinically by expert midwives, turned out to be subject to pathology and underwent a treatment or follow-up. The success of the campaign was based on the information of the public on breast cancer prevention [22].

CONCLUSION

Midwifery students will become the future health providers that would be in charge of promoting the prevention of breast cancer and therefore should be well informed and trained on the relative subject. Since the results of the present survey have demonstrated the presence of areas of weakness on breast cancer prevention, it seems reasonable to propose the enrichment

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of their education before and after the degree via the introduction of teaching that specifically refers to the prevention of breast cancer. It is though important these scientific courses to be based on internationally accepted guidelines, so as the different aspects on counselling to be avoided. In addition, this survey could be expanded on professional midwives since their level of knowledge on breast cancer prevention has not been investigated. Advanced continuous education on breast cancer prevention should be provided to midwives, which could be an initiative of the Technological Educational Institutions in collaboration with the Colleges of professional midwives in Greece. Health providers should be well educated in order the aim, which is the protection of women against breast cancer, to be fulfilled.

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