## Original Article

# Breast Cancer-Related Knowledge Levels and Health Literacy in Working Women

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**Abstract**

**Background:** Breast cancer is the most common type of cancer in women which can lead to death and has a steadily increasing incidence year by year both in developed and in developing countries in the world

**Aim:** The aim of this descriptive and relational study was to investigate the relationship between breast cancer knowledge and health literacy levels of women working in the textile sector.

**Method:** The study population included 122 women who working in a textile factory. The Individual Information Form, Comprehensive Breast Cancer Knowledge Test and Instrument for Assessment of Health Literacy were used to data collection.

**Results:** The rate of the women who had a clinical breast exam was 24.6% and who did not perform breast self-examination was 46.7%. While the participants in the ≥41 age group had mammograms more frequently (p=.00), the participants in the 31-40 years age group had breast self-examination more frequently (p =.00). The curability subscale' mean score of the primary school graduate participants was significantly lower than college graduates (p=.01). The women aged ≥41 years obtained higher mean scores from the Understanding (p=.02) and Evaluation (p=.02) and primary school graduates obtained higher mean scores from the Access (p=0.02) and Understanding (p=.02). As the age increased, so did the mean scores for Evaluation (p=.03) and Application (p=.04) subscales.

**In conclusion;** Initiatives based on women's health literacy levels would improve their self-management skills regarding their health. Assessment of women's health literacy will help increase the effectiveness of breast cancer education and programs, and will have a positive impact on the development of behaviors towards having screening tests.

**Key words:** Breast cancer, health literacy, nursing, textile workers,women

## Introduction

Breast cancer is the most common type of cancer in women which can lead to death and has a steadily increasing incidence year by year both in developed and in developing countries in the world (Ferlay et al., 2010). According to GLOBCAN 2012, breast cancer is the second most common cancer in terms of body location, with an incidence of 1.7 million new cases, or 11.9% of all cancers. Breast cancer is in the first place between cancer types suffered by women with an incidence rate of 40.6/100.000 (2009) (Turkey Cancer Statistics,2012). In developed countries, five-year survival rate for patients diagnosed with breast cancer ranges between 90% and 95% with an early diagnosis and treatment (Turkey Cancer Statistics,2012).

Among the early diagnosis practices are breast self-examination (BSE) (every month starting at the age of 20), clinical breast examination (CBE) (every three years between the ages of 20 and 40, and once a year after 40 years of age by healthcare professionals) and mammography (once a year after 40 years of age) (American Cancer Society,2013).

Health literacy refers to a person' ability to obtain, interpret and understand basic health information and services in such a way as to promote and maintain good health, and to recover the deteriorating health (Nutbeam, 2014). Health literacy enables the individual and family to know where to apply, what to do and what they need to access health care services, to make better decisions, to manage and maintain health

care more easily, and to participate in the treatment. Health literacy also teaches individuals how to manage their chronic diseases, and promotes their ability to better benefit from preventive health services (Berkman et al., 2011).

Individuals with a sufficient level of health literacy can act more actively and strongly to obtain information about their health, to recognize their health problems, to apply to healthcare centers at the right time, to solve problems faced in case they have a health problem, and to make changes in their behaviors towards promotion of health (Abel, 2007; Cho, Lee, Arozullah & Crittenden,2008; Mancuso,2009; Nutbeam, 2014) .

For women in working life, it is very difficult to spare time for themselves not only because of the hectic pace of business life but also because of their obligations to fulfill traditional tasks in the family, which affects their health status as well. Textile sector is an area where mainly women work. Nurses dealing with people in this field should develop training programs not only to help women develop positive attitudes in order to maintain and improve their health, but also to guide them to make accurate decisions about their health through early diagnoses (Ceber, Turk & Cicekoglu, 2010). The planning of these training programs in parallel with women's health literacy level will gain them positive behavioral changes.

The aim of this study is to investigate the relationship between breast cancer knowledge and health literacy levels of women working in the textile sector. Raising the awareness of individuals working in the textile sector regarding the early diagnostic methods is expected to contribute to the development of health promotion programs in the workplace.

In this present study, the participants were compared in terms of their age, education, marital status, the status of being blue- or white-collar worker, family history of breast cancer, and having breast cancer education and responses to the following research questions were sought:

• Is there a difference between their breast cancer-related knowledge levels?

• Is there a difference between their health literacy levels?

• Is there a correlation between their health literacy levels and breast cancer-related knowledge levels?

**Method**

This descriptive and relational study was conducted in a textile factory between January 2, 2016 and February 15, 2016. The factory manufacturing underwear is classified as a dangerous workplace according to the workplace safety legislation. Opening hours of the factory are between 08:00 and 18:00. The factory has a occupational health doctor and nurse working regularly. The reason this factory was selected as the study area was that it was easily accessible and the owners were willing to cooperate. The study population comprised 200 women aged ≥18 years and working in a textile factory. No sampling method was implemented in this present study. The entire population was intended to include in the sample. However, of these 200 women, 60 who disagreed to participate in the study and 18 who had a history of breast cancer or were illiterate excluded from the study. Therefore, the study sample included 122 women (participation rate: 61%)

The independent variables were age, marital status, education, type of work, family history of breast cancer, training on breast cancer and early diagnosis methods, implementing early diagnosis methods (BSE and CBE, and mammography for those aged ≥40 years). The dependent variables were the participants' "Breast Cancer Knowledge levels" and "Health Literacy levels."

In the study, the Individual Information Form, Comprehensive Breast Cancer Knowledge Test and Instrument for Assessment of Health Literacy were used to collect the study data.

*Individual Form:* Questions were adapted from previous studies (Islam, Kwon, Senie & Kathuria, 2006; Cho, Lee, Arozullah & Crittenden,2008; Acıkgoz, Cehreli, & Ellidokuz,2009; Koc & Saglam,2009; Ceber, Turk, & Cicekoglu,2010; Özen et al., 2013). The form includes 27 questions on the participants' sociodemographic characteristics (eight questions), breast cancer, early diagnosis methods, training on and implementation of early diagnosis practices.

*The Comprehensive Breast Cancer Knowledge Test (CBCKT)*: The test developed by Stage in 1993 consists of 20 questions (Stage, 1993). The reliability and validity study of the Turkish

version of the test was conducted by Başak (2014). The scale is a 2-point Likert-type scale. While each "correct" answer was given 1 point, "incorrect" or "unanswered" items were given 0 points. Of the items, 8 have true and 12 have false statements. The CBCKT consists of two subscales: general knowledge and curability. While the items from 1 to 12 are on general knowledge of breast cancer; the items from 13 to 20 are on the curability of breast cancer. In the scale's internal consistency analysis, the Cronbach's alpha coefficient was 0.60 for the general knowledge subscale, 0.62 for the curability subscale and 0.71 for the overall scale. In this present study, the Cronbach's alpha coefficient was 0.70 for the general knowledge subscale, 0.71 for the curability subscale and 0.82 for the overall scale.

*Instrument for Assessment of Health Literacy:* The instrument was developed by Toci et al. (2014). The reliability and validity study of the Turkish version of the instrument was conducted by Cimen (2015). The instrument is a 5-point Likert-type scale (1: I have no difficulty at all, 2: I have a little difficulty, 3: I have some difficulty, 4: I have a lot of difficulty, 5: I cannot do it), and consists of 25 questions and 4 subscales. The subscales and the items addressed in the subscales are as follows:

- Application (5 items, 5-25 points): The subscale assesses whether the individual complies with recommendations, gets vaccinated, quits dangerous habits, accesses healthy products and uses health-related knowledge due to its benefits".

- Evaluation (8 items, 8-40 points): This subscale assesses an individual's ability to measure medical knowledge, to consider benefits / risks) of treatment options, to decide which of the medical advices is best for himself, to evaluate knowledge obtained from social media, to evaluate habits, to assess benefits / risks of health choices.

- Understanding (7 items, 7-35 points): This subscale assesses an individual's criteria to understand the content of patient information leaflets and medicine prescriptions, concept of nutritional interaction, and the importance of a healthy lifestyle".

- Access (5 items, 5-25 points): This subscale assesses an individual's ability to access

information about how to stay healthy, about treatment, and about diseases".

In the original scale, the Cronbach's alpha coefficient ranges between 0.90 and 0.94. In the present study, Cronbach's alpha value for the overall scale was 0.88. For the subscales, it was 0.86, 0.82, 0.88, and 0.86 respectively. The permission to use the scale was obtained from Aras via an e-mail.

Prior to the study, the women in the sample were informed about the purpose of the study and taught how to fill in the data collection tools. The data were collected using the paper-and-pencil technique. Because the administrators of the factory objected to the completion of the data collection tools during working hours. While the tools were collected, they were asked whether there were any questions they did not understand. After the questions they did not understand were clarified to them, they completed the data collection tools.

The data were analyzed using the SPSS. Whether the early diagnosis behaviors of the participants varied or not in terms of their socio-demographic characteristics (age, marital status, education), breast cancer characteristics associated with early diagnosis (hearing about / performing early diagnosis practices, previous breast cancer history, training on breast cancer) and type of work (blue/white collar) was analyzed with the chi square test. Relations between the two scales were tested with the correlation analysis. Differences between the scores obtained from the scales in terms of sociodemographic characteristics and early diagnosis practices were analyzed with the significance of the difference between the group means (t test) and One-Way ANOVA. P-value < 0.05 was considered statistically significant at the 95% confidence interval.

Approvals were obtained from the Non-Interventional Clinical Research Ethics Committee (December 31, 2015, No. 241) and the administration of the factory where the study was to be conducted. Then, the participants' written consent was obtained.

## Results

The participants' mean age was 32.4 ± 7.3, 42.6% were in the 21-30 age group, 42.6% were in the 31-40 age group, 14.8% were in the 41 and over age group, 63.9% were married, 34.4% were high school graduates, 27.9% were

university graduates, 74.6% were blue-collar workers and 25.4% were white-collar workers (data not shown).

**BSE Behaviours**

Of the participants, 94.3% did not have any education on breast cancer, and 74.6% on BSE. Of the participants who were knowledgeable about BSE, 32.2% obtained the information from a nurse, 30.3% from a physician and 35.5% from other sources (friends, media) (Table 1). While 46.7% of the respondents did not perform BSE, 7.7% performed it regularly every month, 38.5% sometimes, and 53.8% irregularly. The rate of the participants who had a clinical breast exam was 24.6%. Among the most common causes of having CBE were breast pain (38.2%) and breast swelling (35.2%). While 6.6% of the participants had mammograms at some time in their lives, 4.1% had it in the last 12 months (Table 1).

**Table 1.Knowledge Status and  Behaviours Related to Early Detection of Breast  Cancer (n=122)**

| Knowledge Status | n | % |
|---|---|---|
| **Breast Cancer Education** | | |
| Yes | 7 | 5.7 |
| No | 115 | 94.3 |
| **BSE education** | | |
| Yes | 31 | 25.4 |
| No | 91 | 74.6 |
| **Education resourse  (n:31)** | | |
| Nurse | 10 | 32.2 |
| Doctor | 10 | 32.2 |
| Other (friends, media) | 11 | 35.5 |
| **Performing BSE** | | |
| Yes | 65 | 53.3 |
| No | 57 | 46.7 |
| **Frequency  of BSE  (n:65)** | | |
| Every month | 5 | 7.7 |
| Sometimes | 25 | 38.5 |
| Irregularly | 35 | 53.8 |
| **Having CBE** | | |
| Examined | 30 | 24.6 |
| Not examined | 92 | 75.4 |
| **Reason of doing CBE (n=30)** | | |
| Routine | 7 | 20.6 |
| Swelling in breast | 12 | 35.2 |
| Pain in breast | 13 | 38.2 |
| Other | 7 | 20.5 |
| **Mammogram within 12 months** | | |
| Yes | 5 | 4.1 |
| No | 117 | 95.9 |
| **Total** | **122** | **100.0** |

**Table 2. Early Detection Behaviours According to Some Sociodemographics**

| Socidemographic Characteristics | BSE | | CBE | | Mammography | |
|---|---|---|---|---|---|---|
| | No | Yes | No | Yes | No | Yes |
| | n ( %) | n ( %) | n ( %) | n ( %) | n ( %) | n ( %) |
| **Age Group** | | | | | | |
| 21-30[a] | 34 (59.6) | 18 (27.7) | 44 (47.8) | 8 (26.7) | 51 (44.7) | 1 (12.5) |
| 31-40[b] | 19 (33.3) | 33 (50.8) | 40 (43.5) | 12 (40.0) | 50 (43.9) | 2 (25.0) |
| >40[c] | 4 (7.0) | 14 (21.5) | 8 (8.7) | 10 (33.3) | 13 (11.4) | 5 (62.59) |
| $\chi^2$ p | 13.78; 0.001 | | 11.74; 0.005 | | 15.67; 0.000 | |
| **Education** | | | | | | |
| Primary[a] | 13 (22.8) | 15 (23.1) | 22 (23.9) | 6 (20.0) | 27 (23.7) | 1 (12.5) |
| Middle[b] | 6 (10.5) | 12 (18.5) | 14 (15.2) | 4 (13.3) | 15 (13.2) | 3 (37.5) |
| Highschool[c] | 23 (40.4) | 19 (29.2) | 31 (33.7) | 11 (36.7) | 39 (34.2) | 3 (37.5) |
| University[d] | 15 (26.3) | 19 (29.2) | 25 (27.2) | 9 (30.0) | 33 (28.9) | 1 (12.5) |
| $\chi^2$ p | 2.48; 0.47 | | 0.32; 0.95 | | 4.15; 0.24 | |
| **Marital Status** | | | | | | |
| Single | 20 (35.1) | 24 (36.9) | 35 (38.0) | 9 (30.0) | 42 (36.8) | 2 (25.0) |
| Married | 37 (64.9) | 41 (63.1) | 57 (62.0) | 21 (70.0) | 72 (63.2) | 6 (75.0) |
| $\chi^2$ p | 0.04; 0.83 | | 0.63; 0.51 | | 0.45; 0.50 | |
| **Job** | | | | | | |
| Blue worker | 43 (75.4) | 48 (73.8) | 68 (73.9) | 23 (76.7) | 84 (73.7) | 7 (87.5) |
| White worker | 14 (24.6) | 17 (26.2) | 24 (26.1) | 7 (23.3) | 30 (26.3) | 1 (12.5) |
| $\chi^2$ p | 0.04; 0.84 | | 0.09; 0.76 | | 0.75 0.38 | |

## Table 3. Scores of CBCKT and Health Literacy

| CBCKT's points | X | ± SS | Min-maks | Original Scale Min-Max |
|---|---|---|---|---|
| General | 27.9 | ± 4.6 | 2-35 | |
| General Knowledge | 16.6 | ± 2.9 | 2-22 | |
| Curability | 11.5 | ± 2.0 | 2-15 | |
| **Healt Literacy** | | | | |
| Access | 8.6 | ± 4.25 | 4-22 | 5-25 |
| Understanding | 13.1 | ± 5.15 | 5-32 | 7-35 |
| Evaluation | 14.5 | ± 6.7 | 7-38 | 8-40 |
| Application | 8.8 | ± 4.3 | 3-22 | 5-25 |
| Total Scale points | 45.1 | ± 17.9 | 22-113 | 25-125 |

Distribution of having BSE in terms of socio-demographic characteristics is shown in Table 2. The participants in the 41 and over age group performed BSE more often than the participants in other age groups ($\chi 2 = 13.78$, p = 0.001). While the participants in the 41 and over age group had mammograms more frequently ($\chi 2 = 15.67$, p = 0.000), the participants in the 31-40 years age group had CBE more frequently ($\chi 2 = 11.74$, p = 0.005).

Although high school and college graduates displayed preventive behaviors but the difference was not significant. Marital status and type of work did not affect the participants' displaying preventive behaviors either (p> 0.05) (Table 2).

**Breast Cancer Knowledge Level**

While the participants' CBCKT mean total score was 27.9 ± 4.6 (min-max: 2-35), general information subscale mean score was 16.6 ± 2.9 (min-max: 2-22) and curability subscale mean score was 11.5 ± 2 (min-max: 2-15). The participants obtained the following mean scores from the Instrument for Assessment of Health Literacy and its subscales: 45.1 ± 17.9 (overall scale), 8.60 ± 4.25 (access subscale), 13.1 ± 5.1 (Understanding subscale), 14.5 ± 6.7 Evaluation subscale), 8.8 ± 4.3 Application subscale) (Table 3).

The mean score the primary school graduate participants obtained from the curability subscale of the CBCKT was significantly lower than that of the college graduates (F = 3.62, p = 0.01). The participants' CBCKT subscale mean scores were not affected by such variables as age, marital status, type of work, and behaviors of performing BSE and having CBE (p> 0.05) (Table 4).

**Health Literacy Level**

Comparison of the Instrument for Assessment of Health Literacy scores of the participants revealed that the participants aged ≥41 years obtained higher mean scores from the Understanding (F = 3.91; P = 0.02) and Evaluation (F = 3.91; P = 0.02) subscales than did the participants in the other age groups (F = 3.91; P = 0.02), and primary school graduates obtained higher mean scores from the access (F = 3.91; P = 0.02) and Understanding (F = 3.91; P = 0.02) subscales than did the university graduates. Marital status and type of work did

not affect the Instrument for Assessment of Health Literacy scores (p> 0.05) (Table 4).

**Correlations**

According to the results of the correlation analysis between the participants ages and their scores for the CBCKT and Instrument for Assessment of Health Literacy. There is a weak positive correlation between the increasing age and the mean scores they obtained from the Evaluation (r = 0.019, p = 0.03) and Application (r = 0.018, p = 0.04) subscales. As the age increased, so did the mean scores for these two subscales (p <0.05). No correlation was determined between the CBCKT and Instrument for Assessment of Health Literacy scores (p> 0.05) (data not shown).

**Discussion**

The findings of this present study conducted to determine the relationship between breast cancer knowledge and health literacy levels of women working in the textile sector is expected to increase these women's awareness of early diagnostic methods and to contribute to the development of health promotion programs aiming to protect employees from cancer in the workplace.

Although breast cancer is the most common cancer type in women, it can be diagnosed and treated in the early stage, which reduces breast cancer-related mortality rate. International authorities recommend that every woman should regularly perform BSE and have specialists carry out CBE after age 20, and have regular mammograms after age 40 (American Cancer Society,2013). In the present study, one out of three participants (only 7% of them regularly) performed BSE, and one out of four participants had CBE. These results are quite lower than were the results of other studies conducted in Turkey (Esin, Bulduk & Ardic, 2011; Secginli & Nahcivan, 2011; Demir Yıldırım & Özaydın,2014; Acıkgoz, Cehreli & Ellidokuz, 2015), which indicates that the awareness of women working in the textile sector is not sufficient. On the other hand, the result indicating that the participants aged ≥41 years in this study performed early diagnosis practices more than those in the other age groups overlaps with the results of studies conducted in other studies (Parvani, 2001; Acıkgoz, Cehreli & Ellidokuz, 2015). The rate of performing BSE regularly is very low in other countries (2.9% in

South Korea (Cho, Lee, Arozullah, & Crittenden, 2008), 28.9% in Singapore (Kwok, Cant, & Sullivan,2005), 32% in African Americans (2006), and 38.5% in Saudi Arabia (Al-Zalabani, et al., 2016). In a study, women's lack of knowledge is reported to be among the barriers to the implementation of breast cancer early diagnostic tests (Esin, Bulduk, & Ardic, 2011). For instance, in this study, of the participants, 94.3% did not have any education on breast cancer, whereas 74.6% did not have any education on BSE. These findings are similar to those of other studies (Kwok, Cant , & Sullivan,2005; Dolgun, Kabatas & Ertem, 2009; Esin, Bulduk & Ardic, 2011; Veena, Kollipaka, & Rekha 2015; Al-Zalabani et al., 2016). All these suggest that training on screening tests is not carried out and behaviors towards screening tests are not developed at a desirable level, and that it is important to eliminate barriers to lack of knowledge.

According to international and national screening standards, women aged ≥41 years are recommended to have mammograms every two years (American Cancer Society, 2013). Of the participants aged ≥41 years (14.8% of the sample) in this current study, only 62.6% had mammograms. In a community-based study (Ozmen et al., 2010), the rate of having mammograms within the last two years was 41.6%. The rate of having mammograms ranges between 25 % and 49.1% in studies conducted in Turkey (Ozaydın et al., 2009;  Secginli & Nahcivan,2011; Nur, 2010; Acıkgoz, Cehreli & Ellidokuz, 2015), and between 4.5% and 70% in studies conducted in other countries (Moodi, Rezaeian, Mostafavi, Sharifirad  & Kwok, 2002; Islam, Kwon, Senie & Kathuria, 2006)  These rates show that the rate of having mammograms in Turkey is lower than that in other countries.

In this present study, the participants' knowledge levels related to the general knowledge subscale of the CBCKT were high, but were low related to the curability subscale of the CBCKT. Another striking finding is that although the rate of performing BSE was high among the participants, their knowledge on BSE was not sufficient. Some other variables such as age group, type of work and performing behaviors to prevent breast cancer did not affect their knowledge scores either (p> 0.05). All these results show that no matter what their education level and age are, women need to receive education on breast cancer. In another study in

which the same measurement instrument was used, nurses' knowledge level of breast cancer was reported to be high (Yilmazel, 2013). However, lack of other studies in which the same measuring tool was used limited the discussion of the findings of the present study.

Health literacy levels of the participants were moderate for the understanding and Evaluation subscales, and low for the access (access to treatment- / disease-related information etc.) and Application (compliance with the suggestions, quitting dangerous habits, access to healthy food, being aware of how to stay healthy etc.) subscales. In a study, health literacy levels of the elderly with chronic diseases were low for the application subscale but high for the evaluation subscale (Cimen, 2015). Their findings related to the application subscale were similar to the findings of the present study (Cimen, 2015). In the present study, while the mean scores the participants aged ≥41 obtained from the understanding and evaluation subscales were higher than those of the participants in the other age groups, the mean scores the primary school graduate participants obtained from the access and understanding subscales were significantly lower than were those of the college graduates. The participants aged ≥41 were able to comply with  the following items better than were the participants in the other age groups: considering the  benefits / risks) of treatment options, deciding which of the medical advices is best for themselves, evaluating knowledge obtained from social media, assessing benefits /risks) of health choices, understanding the content of patient information leaflets and medicine prescriptions, understanding the content of nutritional interaction, and understanding the importance of a healthy lifestyle. Marital status and type of work did not affect health literacy scores (p> 0.05). In a study of the elderly (65-74 age group) participants with chronic diseases, high school and higher school graduates, living in metropolises or abroad, and employed had significantly higher health literacy levels than did the other participants. In a study in which a different health literacy assessment tool was used conducted with 156 patients aged between 20 and 50 years, the rate of the participants with adequate health literacy was significantly low (28.2%), and age and education did not affect the participants' health literacy levels (Sales 2015).In this present study, the participants' health literacy levels did not affect their early

diagnosis practices such as performing BSE, and having CBE and mammograms. On the other hand, several studies conducted in different subject areas and with samples varying in sizes and characteristics demonstrated that as the participants' health literacy levels increased, they took precautions against skin cancer more (24), and they utilized preventive health services more. Those studies also demonstrated that the rate of the women with adequate health literacy who had mammograms within the last two years was higher than women who has inadequate health literacy (ACSQHC, 2014), and there was an association between health literacy levels and behaviors of having mammograms (Berkman et al., 2011). In another study, of the three variables, limited health literacy caused the participants to have cervical cancer screening tests less than did ethnicity or education level (Lindau et al., 2002). In a study in which the REALM was used conducted with 519 women, the rate of the women with limited health literacy was high. These women's awareness of mammography was 6.53 times lower, and they had screenings 1.12 times less often (Yilmazel, 2016).

## Conclusion

Given the heavier workload and longer working hours of women working in the textile sector, providing training on health-protective and health-enhancing behaviors in the workplace will contribute to the improvement of women's quality of life. Initiatives based on women's health literacy levels would improve their self-management skills regarding their health. Therefore, workplace nurses can contribute to the enhancement of awareness of early diagnosis by carrying out programs aiming to improve the health literacy levels of employees. Assessment of women's health literacy will help increase the effectiveness of breast cancer education and programs, and will have a positive impact on the development of behaviors towards having screening tests.

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**Table 4. Health Literacy Scale' and CBCKT's Scores According to Some Sociodemographic Characters**

| Characteristics | n | Health Literacy | | | | Breast Cancer Knowledge | |
|---|---|---|---|---|---|---|---|
| | | Access | Understanding | Evaluation | Application | Genereal Knowledge | Curability |
| **Age Group** | | | | | | | |
| 21-30 [a] | 52 | 8.25 ± 3.6 | 12.30 ± 4.3 | 13.44 ± 5.3 | 8.26 ± 3.6 | 16,8±2,5 | 11,9±1,8 |
| 31-40[b] | 52 | 8.21 ± 4.3 | 13.09 ± 4.8 | 14.30 ± 6.7 | 8.55 ± 4.4 | 16,3±3,5 | 11,0±2,3 |
| >40[c] | 18 | 10.778 ± 5.3 | 15.55 ± 7.4 | 18.44 ± 9.3 | 10.94 ± 5.3 | 16,5±2,1 | 11,7± 1,8 |
| **F,p** | | 2.82; 0.06 | 2.72; 0.07 | **3.91; 0.02*** | 2.84; 0.06 | 0,39; 0,67 | 2,35; 1,00 |
| **Education** | | | | | | | |
| Primary[a] | 28 | 10.2 ± 4.9 | 15.10 ± 6.2 | 16.75 ± 8.3 | 9.3 ± 5.3 | 15,7±3,2 | 10,6±2,6 |
| Middle[b] | 18 | 10.8 ± 5.4 | 14.44 ± 7.4 | 16.44 ± 8.8 | 9.7 ± 6.2 | 15,6±3,9 | 11,8±1,6 |
| Highschool[c] | 42 | 7.9 ± 3.6 | 12.59 ± 3.7 | 13.71 ± 6.1 | 8.3 ± 3.4 | 17,3±2,6 | 11,4±1,9 |
| University[d] | 34 | 7.0 ± 2.6 | 11.44 ± 3.4 | 12.76 ± 3.9 | 8.5 ± 2.8 | 17,1±2,1 | 12,2±1,5 |
| **F,p** | | **5.44; 0.002**** | **3.03; 0.02**** | 2.57; 0.05 | 0.64; 0.59 | 2,72; 0,05 | **3,62; 0,01***** |
| **Marital Status** | | | | | | | |
| Single | 44 | 8.2 ± 3.8 | 13.22 ± 5.3 | 14.11 ± 0.9 | 8.61 ± 0.6 | 16,4±2,3 | 11,8±1,7 |
| Married | 78 | 8.8 ± 4.5 | 13.06 ± 5.1 | 14.79 ± 0.8 | 8.88 ± 0.5 | 16,7±3,2 | 11,3±2,1 |
| **t,p** | | **-0.86; 0.4** | **0.16; 0.8** | **-0.53; 0.6** | **-0.33; 0.7** | -0,46; 0,64 | 1,22; 0,22 |
| **Job** | | | | | | | |
| Blue worker | 91 | 8.97 ± 4.3 | 13.43 ± 5.2 | 14.94 ± 6.9 | 8.82 ± 4.5 | 16,4±3,01 | 11,4±2,1 |
| White worker | 31 | 7.51 ± 3.9 | 12.19 ± 4.9 | 13.38 ± 6.1 | 8.67 ± 3.6 | 17,0±2,6 | 11,7±1,8 |
| **t,p** | | 1.73; 0.08 | 1.16;0.24 | 1.11; 0.26 | 0.16; 0.85 | -0,9; 0,32 | -0,77; 0,44 |
| **Doing BSE** | | | | | | | |
| No | 57 | 9.07 ± 4.2 | 13.07 ± 4.9 | 14.64 ± 6.6 | 9.14 ± 4.5 | 16,8±3,3 | 11,7±2,1 |
| Yes | 65 | 8.20 ± 4.3 | 13.16 ± 5.4 | 14.46 ± 6.9 | 8.47 ± 4.1 | 16,4±2,5 | 11,3±1,9 |
| **t;p** | | 1.12; 0.26 | -0.10; 0.91 | 0.15; 0.87 | 0.85; 0.39 | 0,70;0,48 | 1,22; 0,22 |
| **CBE** | | | | | | | |
| Not examined | 92 | 8.60 ± 4.2 | 12.91 ± 5.1 | 14.25 ± 6.5 | 8.51 ± 4.3 | 16,6±3,1 | 11,4±2 |
| Examined | 30 | 8.60 ± 4.4 | 13.77 ± 5.4 | 15.47 ± 7.4 | 9.63 ± 4.2 | 16,5±2,2 | 11,7±1,9 |
| **t,p** | | 0.01; 0.99 | -0.78; 0.43 | -0.85; 0.39 | -1.25; 0.21 | 0,21;0,83 | -,83;0,40 |

**\*a<c ;  \*\*d>a,  \*\*\*a<d**