Body Image Distress and Post Mastectomy Women

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by

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Abstract

Introduction. Body image and breast cancer are closely associated in women who undergo unilateral or bilateral mastectomies. The literature has shown that even if women undergo reconstruction, they still experience adverse side effects with surgery or body image disturbances that may persist for years, affecting their quality of life. It is important for providers to recognize patients experiencing issues with body image distress and be able to provide appropriate care.

Aims. The purpose of this quality improvement project is to evaluate body image scores in women who have undergone breast cancer mastectomy within the past five years and educate those who admit to having body image distress on ways to improve their distress.

Methods. The project took place in a private GYN office in Jacksonville, Florida. Education was provided to the post mastectomy population based on their body image survey scores. The goal was to improve their body image distress scores from one month to three months in women post mastectomy within the past five years after surgery. This was done by provide education, including handouts, on ways to cope with body image changes and to help improve their overall outlook. The patients were reevaluated after three months with the body image scale to evaluate improvement in their overall body image score.

Results. Participant surveys indicated improvement in their overall body image scores from one-month pretest to three months post intervention although due to small sample size, the results did not meet statistical significance.

Conclusions. Implementation of a body image screening in all private GYN settings can provide emotional and psychological support and help to improve their overall confidence and self-esteem.

Keywords*: Post mastectomy, breast neoplasm, breast mammaplasty, body image distress, quality improvement (QI), BRCA mutation, body image scale*

Body Image Distress and Post Mastectomy Women

Breast cancer is the most common cancer among women worldwide. The breast cancer survival rate has increased throughout the years due to earlier detection and improvements made in chemotherapy, radiation, and surgical treatment. It is shown that 90 % of breast cancer patients in developing countries now survive over five years (Groarke, Curtis & Kerin, 2013). About 50 percent of cancer survivors suffer from physical and psychological effects related to treatment (Martínez Arroyo, Andreu Vaíllo, Martínez López & Galdón Garrido, 2019). Many women believe that the breast is a significant body part and how they identify themselves as female; without these women feel a lack of sexuality, feelings of motherhood and attractiveness. A decrease in physical functioning from a total mastectomy results in muscle stiffness, pain, breast sensitivity, and fatigue. The main concerns associated with women post mastectomy include feelings of mutilation, reduction in sexual desire, self-consciousness related to body image, depression, anxiety, fatigue due to dealing with chronic pain, and feeling unattractive sexually (Manganiello et al., 2011).

Many women with breast cancer experience body image distress post-mastectomy. Women view their breasts as means for feminine identity and loss of the breast may hinder their quality of life. Women may also fear rejection from their partners post-mastectomy. Women post-operatively are unaware of resources that could help them cope with body image changes. Counseling and other interventions post operatively may be useful to help these women with their overall well-being and self-esteem. Sherman et al. (2017) found that psychological well-being can return to pre mastectomy levels by one year after surgery with supportive care

measures. Many women view their body image as defining their self-worth, and as this alters it becomes more difficult for them to cope (Sherman et al. 2017). Based on the literature, body image disturbance is most common immediately after surgery, but research shows it can be present for more than one-year post-op (Martínez Arroyo et al., 2019). Body image disturbance has also been found in long term breast cancer survivors. Some of the risk factors for body image distress include a younger age, increased BMI and certain breast cancer treatments that contribute to disfigurement (Sherman et al. 2017). There is currently no system in place that identifies body image distress in women post mastectomy. Providers need to be aware of the psychological effects body image distress has on a woman and to be able to provide supportive care throughout their coping process. Supportive care after surgery should be initiated earlier to help these women cope with their body image distress and know what to expect following breast surgery and up to two years post operatively.

Background and Significance of Clinical Problem

Women face many decisions when diagnosed with breast cancer such as their form of treatment. The more invasive the procedure, the higher negative impact it has on the women's body image (Sherman, Woon, French & Elder, 2017). The clinical problem being evaluated in this quality improvement project is body image distress due to a mastectomy. Studies have shown that women post-mastectomy have a decreased quality of life due to a negative body image (Türk & Yılmaz, 2018). According to Kocan and Gursoy (2016), women viewed the breast as part of their femininity, beauty, and motherhood. Post mastectomy these women stated that they felt like a part of them was missing and their relationships with their husbands had changed overtime (Kocan & Gursoy, 2016). In order to support each woman's personal journey of becoming more comfortable in her body, providers need to be able to assess their body image

to know what resources and support to provide. Based on current research, it has found that most women with breast cancer are experiencing body image issues post-mastectomy. One GYN office in Jacksonville, Fl is concerned about body image disturbance among post mastectomy women. Patients were shown to have difficulty coping with their body image changes following a mastectomy as described by the providers at the GYN office. The providers and staff reported approximately 35% of their patients suffer from body image distress. The GYN office asked the DNP student to implement a body image scale that will help identify women at this office who have body image issues within the first five years post mastectomy. This will help to evaluate where the office stands and if screening the patients for body image distress would provide value to the practice for improving the patient's psychological wellbeing.

Project Purpose and Objective

The primary purpose of this quality improvement project was to assist women in coping with body image distress. The body image scale was used to evaluate patient's body image within the past five years post mastectomy. This was evaluated during their GYN appointment and then reassessed again three-months later. The objective was to identify women within the past five years post mastectomy with signs of body image distress by screening them with a validated body image scale. A body image scale was handed out to patients in the office that met the criteria of the project to evaluate how well they are coping with their body image changes following a mastectomy. Those participants who score high (15 to 27) on the modified body image scale, were then educated on the appropriate interventions to help them cope with body image distress. These interventions were provided within various educational handouts on diet, exercise and alternative medicine that were given in person to the patient during their GYN appointment.

Objectives

1) To identify patients suffering from body image distress by administering a body image score survey.
2) To provide education and resources to these women designed to alleviate body image distress.
3) To reevaluate body image distress three months after education and improve body image score by 25%.

Overview of Search

The articles were obtained from Cumulative Index to Nursing and Allied Health Literature (CINAHL), Wiley online library and ProQuest databases. Fifty-six articles were retrieved within these main databases. The key words were entered into the database such as *"breast cancer," "stress management," "coping," "women," "BRCA gene," "BRCA mutation," "body image", "disfigurement", "body image distress" and "emotional adjustment*". All of the articles obtained were peer-reviewed within a five-year period. A matrix was formed to organize the relevant literature into different sections: purpose, methods, framework, data findings, and level of evidence and implications of each of the studies. The exclusion criteria included women without breast cancer or BRCA mutation, and women without mastectomy or prophylactic mastectomy. Also, articles older than five years and not peer reviewed were not included in the search criteria. Providing a more precise search helped to identify more recent literature using variables within the search criteria such as English, within the past five years, peer reviewed and full text articles.

Review of Literature

Body Image

Body image is an important concept that many providers need to acknowledge when caring for breast cancer populations. The physical and psychological demands of cancer treatment on an individual can promote body image issues. Rhoten (2017) states that body image first was noted in patients with brain damage causing them to have distorted perceptions. It was found that the patient's perception of their body image was actually a coping method for stress of the condition than the actual brain damage itself. In 1950 Schilder first defined body image as how we perceive our body within our own mind. This is still the current definition today. Schilder used the psychoanalytic approach to explain how the person's unconscious mind that is experiencing any form of conflict has the ability to shape how they perceive their body and themselves. Pruzinski and Cash in 1990 expanded on the body image concept from a neurological aspect. They evaluated how an individual's interaction with the world can influence one's own body image perception. Body image continued to be studied from a solid concept that stated that an individual viewed their body image as the same throughout their life to a perception that could change throughout their life (Rhoten, 2017).

Body Image Distress

Martínez Arroyo et al. (2019) defines body image distress as a condition that the patient reports as psychosocial or physical suffering. It is a negative image or altered perception of one's shape that involves feelings of anxiety, depression, self-consciousness, and shame. The survival of cancer patients has increased throughout the years. According to the National Comprehensive Cancer Network, approximately 50% of cancer survivors have psychological and physical effects

related to their treatment. The NCCN guidelines for survivorship state there is a higher prevalence in the breast cancer population for psychological distress, depression and anxiety of up to twenty nine percent. This number is compared to the prevalence for cancer related distress that ranges from five to forty-three percent. Research suggests that younger age, lower education, being unmarried, lack of health insurance coverage, non-engagement in physical activity, and having other comorbid conditions are risk factors for psychological distress. Decreased levels of distress are often found in long-term survivors with the highest levels found in survivors less than five years from diagnosis (Martinez Arroyo et al., 2019).

Women experience distress from planned treatments and surgical procedures. Hair loss is also another concern contributing to women feeling unattractive. Losing hair in many ways is covered through scarves, wigs, Hijab, or they choose to just simply go bald (Barthakur, Sharma, Chaturvedi & Manjunath, 2017). Some of the women would shave their heads prior to chemotherapy and have a wig made out of their own hair. Women post-surgery have issues with clothing fitting differently. Barthakur et al. (2017) discussed how women are concerned if their V-neck shirts are too low and will expose their scars. If a woman develops lymphedema after surgery, they have to make sure the sleeve sizes are not too tight. Many women prior to surgery are not concerned about wearing sleeveless shirts, but when they experience lymphedema, they become self-conscious and do not want to wear anything to expose their arms (Barthakur et al., 2017).

In a qualitative study by Barthakur et al. (2017), many women after having a bilateral mastectomy, feel uncomfortable and become self- conscious with swimming, changing clothes, or having massages in another's presence. Many participants in the study did not feel comfortable regarding their sexual functioning. Women felt that after surgery there was no

intimacy left. The partners were concerned about touching their spouse post-mastectomy. Even years after surgery, women reported lack of arousal during sexual intimacy due to pain and vaginal dryness related to the radiation and chemotherapy (Barthakur et al., 2017).

Manganiello, Hoga, Reberte, Miranda and Rocha (2011) discuss how women with breast cancer cope with body image changes after a mastectomy. Women felt that their sexual functioning was impacted post mastectomy. Women identify the breast as a significant body part. Without the breast, women feel decreased sexuality, feelings of motherhood, attractiveness, and womanly identity. After surgery, women reported the main two positive factors that helped them adjust to the diagnosis of breast cancer was family and social support. A decrease in physical functioning from the total mastectomy resulted in muscle stiffness, pain, breast sensitivity, and fatigue. The lowest scores were found in women with anxiety, older women, and those experiencing financial issues. This study assessed sexual functioning in breast cancer patients post mastectomy. It is also looking at the patient's quality of life, therapies, surgery, cancer staging, breast reconstruction, and relationship between women and their partners (Manganiello et al., 2011).

The main concerns associated with women post mastectomy include feelings of mutilation, reduction in sexual desire, self-consciousness related to body image, depression, anxiety, fatigue due to dealing with chronic pain, and feeling unattractive sexually (Manganiello et al., 2011). An issue related to body image and sexual functioning was found in all women after a mastectomy, regardless of culture or background (Manganiello et al., 2011). Manganiello et al. (2011) found that women with a higher education showed increased well-being and physical functioning because they were able to understand the disease and the side effects of adjuvant therapies compared to women with a lower educational level who require additional teaching and support. The study also showed that young women displayed more distress in sexual function post

mastectomy because they have higher expectations to maintain physical appearance compared to those of older age. Women post mastectomy with immediate reconstruction showed a decrease in sexual function compared to those without reconstruction because of changes in sensation caused by the prosthesis, the absence of a nipple or the asymmetry between the normal and reconstructed breast (Yurek et al., 2000). Chemotherapy can cause vaginal dryness and atrophy, which is a major contributor to the decline in sexual desire and functioning among post mastectomy women. It has been shown that participating in regular physical exercise helps to improve fatigue, muscle stiffness, pain and quality of life in breast cancer patients (Manganiello et al., 2011).

Satinder and Hemant (2015) discuss how women with breast cancer are faced with trauma from disfigurement and fear of being denied or rejected by their partners. The women's family structure, occupation and financial status may have a direct impact on their cancer diagnosis. Many complications that can result from a mastectomy include asymmetry of the breasts, loss of sensation, lymphedema, and scarring. The psychological impact that breast cancer surgery can have on women includes feelings of unattractiveness and not wanting their partners to see them naked due to disfigurement and scarring. A total of 60 participants took part in this study. Approximately 62% of the women post mastectomy had issues with their well-being and 28% had no issues with their well-being after surgery. Forty-three percent of the women who participated in the study experienced issues with body image after a mastectomy. The younger individuals were more concerned with body image than the older individuals (Satinder & Hemant, 2015).

After a mastectomy, women can experience lymphedema, pain, and restricted range of motion decreasing the patient's quality of life. Thirteen percent of the women who had surgical treatment developed lymphedema over a five-year time period post-bilateral mastectomy (Miedema et al., 2011). Women feel an impact on quality of life with complications after

surgery. Decreased range of motion and stiffness in the arms after treatment, restricts a woman's ability to perform and participate in physical activities. Miedema et al. (2011) found that over a period of six to twelve months, forty-nine percent of women had issues participating in exercise, daily tasks and recreational activities.

Eight to forty-three months after surgery it was identified that there were increases in lymphedema causing range of motion restrictions and pain (Miedema et al., 2011). In this study, a total of 1,316 participants who had a mastectomy more than five years ago showed that 29% still experienced pain after surgery. In women two years after surgery, 61.3% reported developing lymphedema (Miedema et al., 2011). Individuals' difficulty with arm movement or breast lymphedema impacted their quality of life causing increased psychological distress. After a total of two years after breast surgery, 39% of the women with unrestricted physical activity and 34% restricted women reported having moderate to severe arm and breast pain (Miedema et al., 2011). Many of the women in this study expressed that there are more benefits than risks when participating in physical activity post-surgery. Physical activity can help improve mental and physical health.

Coping with Body Image Changes

Depression expressed in breast cancer patients is related to decreased quality of life. The framework consists of the Transactional Theory of Stress and looks at how one copes with such a diagnosis. In this instance breast cancer causes a threat to the individual's psychological well-being (Bigatti, Steiner, & Miller, 2012). Bigatti, Steiner & Miller (2012) state that women who view breast cancer as a threat show an increase in depressive symptoms. This study took place at Indiana University with a total of 65 women participants who were diagnosed with breast cancer. Criteria for each participant was set and coping strategies were measured using a coping

questionnaire. A total of twenty-three of the participants reported having depression or anxiety. The results of the study showed that based on the appraisals of the theory, the higher the appraisal of harm or loss and the greater the escape-avoidance coping method the higher the depressive symptoms.

Many psychosocial issues result from an individual's perception of stress. Women who are diagnosed with breast cancer have a higher level of stress, which has a negative impact on their quality of life (Groarke, Curtis & Kerin, 2013). Women who experience depression post-surgery cope differently. Denial and hopelessness are passive coping strategies that cause increased levels of stress and decreased ability to adapt to breast cancer. After a mastectomy, women reported 21% variance of stress from the baseline. Groarke, Curtis and Kerin (2013) state that 38% of women in the study who experience depression with high global stress, also suffer with high levels of depression. Fifteen percent of the women described the coping strategies of task-focused coping and fighting spirit as having a positive effect on their ability to adjust to body image and perceptions of stress. Cancer stress also showed increased levels of anxiety. Many women fear how they are going to manage treatment or maintain the role of motherhood with their families in the household. Stress and coping had more impact on the women than social support and having a positive mindset (Groarke, Curtis & Kerin, 2013).

Breast cancer and receiving a mastectomy produces a big impact on the sexual well-being of women. Women face physical and emotional distress for many years after surgery. Women associate their breasts with female identity and motherhood. Changes in the breast can strongly affect the women's feelings of sex and impact their sexual functioning (Özalp et al.,2015). Chemotherapy has shown to reduce quality of life and sexual functioning through decreased sexual desire, decreased ability to experience pleasure, and difficulties having an orgasm. Women

diagnosed with breast cancer express concerns with losing fertility, poor body image, low-self-esteem, depression and anxiety (Ozalp et al., 2015). A women's emotional state can be due to the fear of permanent disfigurement of their breasts, fear of losing the ability to have children or the ability to breastfeed, loss of hair and feeling old. Women had more self-esteem when undergoing breast reconstruction after a bilateral mastectomy than those who just had a total mastectomy with no reconstruction (Ozalp et al., 2015). Approximately 11.8% of the women were diagnosed with major depressive disorder and 4.7% with anxiety disorders (Ozalp et al., 2015).

Women face many feelings about being diagnosed with breast cancer and the various changes that will occur. Azevedo Batista, Conceição das Merces, Costa Santana, Pinheiro, Lua and Sousa Oliveira (2017) discuss how thirteen women underwent a mastectomy and their perception of the process. Some women felt that breast cancer results in a negative outcome that devalues their image as a woman. Many women are frightened and insecure throughout their treatment. The main feeling experienced was sadness and negative perceptions of self-image. These women have to learn how to adapt to this new body image after surgery. Many women feel different after a bilateral mastectomy, which causes psychological distress. This makes them feel vulnerable, with feelings of rejection and insecurity that interfere with her personal relationships and self-perception. The study had two categories that included experiencing the diagnosis of breast cancer and the feelings the women face with a mastectomy. It is shown that the older the women are when diagnosed, the more accepting they are of the procedure. Some women felt incomplete after their mastectomy due to the loss of their breasts and feared society would not accept them (Azevedo Batista et al., 2017).

Women face many decisions when diagnosed with breast cancer such as their form of treatment. Sherman, Woon, French and Elder (2017) found that the more invasive the procedure,

the higher the impact it may have on the women's body image. A mastectomy can sometimes cause scarring, asymmetry and a need for prosthetic expanders. Overall, this can have a major impact on their psychological well-being. Many women prefer to have nipple-sparring procedure performed with breast reconstruction at the time of a bilateral mastectomy. This has shown to result in decreased body image disturbance. By leaving the nipple it may preserve sensation. Sherman et al. (2017) showed that psychological well-being returns to pre mastectomy levels by one year after surgery. When women are diagnosed with breast cancer, they can face many body changes during cancer treatment. This can impact a woman's views and beliefs about her body contributing to her psychological distress. More research within oncology is focusing on self-compassion. Self-compassion is defined as treating yourself with compassion or kindness when facing personal inadequacies or difficult situations (Neff and Beretvas, 2012). Many women view their body image as defining their self- worth and as this alters it becomes more difficult for one to cope.

Participants in the Sherman et al. (2017) study ranged from 27 years to 66 years old. The results showed regarding depression and stress, that there was a significant effect on body image, with increased body image distress correlated with higher rates of depression. Higher self-compassion contributed to decreased anxiety. Comparing body image and appearance as well as body image and self- compassion were both associated with increased levels depression and stress (Sherman et al., 2017).

There have been many studies that have assessed a women's body image associated with breast cancer treatments. Cairo Notari, Notari, Favez, Delaloye and Ghisletta (2017) say that women who perform breast preserving therapy have a more positive outlook on body image than those who chose a mastectomy. The most stressful and psychological taxing issues were a result

from tissue damage due to radiation, sensory changes and weight gain. A total of 74 women were chosen who were already in an intimate relationship. A body image scale was completed at different intervals of their treatment and followed for up to one year after treatment. Many women in this study were shown to cope more successfully with body image changes because they had an established intimate relationship. Married women showed less body image disturbance than those who were not married. An unstable relationship was shown to make women feel less desirable and feel unattractive. Women having adjunctive therapy such as chemotherapy also showed increased distress with body image over time due to the treatment side effects such as hair loss. If a woman has a secure environment in which she feels loved, supported and accepted, it can help to reduce body image disturbance and decrease their negative outlook of the treatment (Cairo Notari et al., 2017). The study showed that both medical treatment and relationship factors affect body image distress over the course of one-year post mastectomy. Body image distress was still showed to affect post mastectomy women up to one year after surgery (Cairo Notari et al., 2017).

Breast cancer can have a long-term emotional impact on many women. Raque-Bogdan, Lent and Lamphere (2019) tested the social cognitive model of well-being in recovering breast cancer survivors at four years post-treatment. Structural equation modeling was used to examine relationships between affect, loneliness, self-compassion, self-efficacy for coping with cancer, well-being, and life satisfaction. The two model variations showed variance in well-being and life satisfaction. Coping efficacy showed the effects loneliness has on emotional well-being and life satisfaction (Raque-Bogdan, Lent & Lamphere, 2019).

Measuring Body Image Distress

Cuijpers, Melissant, Neijenhuijs, van Uden-Kraan, Verdonck-de Leeuw, Jansen, Aaronson, Groenvold, Holzner and Terwee (2018) describe that when measuring body image, it can be multidimensional because it includes various factors such as cognitive, behavioral, and factors of appearance. Patients can experience many feelings after cancer treatment including negative feelings about their body and avoiding social situations. Body image changes can have a negative impact on the patient's quality of life for years. Monitoring health related quality of life (HRQOL) and patient-reported outcome measures (PROMs) can help to identify and provide supportive care to patients with body image disturbances.

The Body Image Scale (BIS) is a patient reported outcome measure that is used in the form of an instrument to help measure body image in cancer patients. The Sexual Adjustment and Body Image Scale (SABIS-g) is used in gynecologic cancer patients, and Body Image Screener for Cancer Reconstruction (BICR) is used in patients with breast reconstruction. During the validation process for the BIS, it showed consistent properties associated with its measurement (Cuijpers et al., 2015). Cuijpers et al. (2015) states that the BIS is validated in many languages including Dutch, Greek, and Portuguese. It is used within many different cancer populations from breast cancer to colorectal cancer. In 2001, Penelope Hopwood developed a 10-item Body Image Scale was used to measure affective, behavioral, and cognitive body image symptoms. The four-point scale is used for patients to indicate their body image distress on a scale of zero to three. Zero indicates not at all and three indicates very much. To calculate the body image disturbance scores, adding up all ten items can indicate the level of disturbance. The scores can range from 0 to 30. The higher the score the more body image disturbance (Cuijpers et al., 2018). McDermott, Moloney, Rafter, Keegan, Byrne, Doherty, Cullen, Malone and

Mulcahy (2014) modified the orginal version of the body image scale by Penelope Hopwood in the form of only nine questions scored 0,1,2 and 3 points for each category. Zero indicates not at all and three indicates very much. This four-point scale only measures in the form of quantitative data and is out of a total of 27 points compared to the body image scale which is mostly qualitative and out of 30 total points (McDermott et al. 2014).

Özalp et al. (2015) used psychometrics to measure body image by using the Body Image after Breast Cancer Questionnaire (BIBCQ). The BIBCQ was developed in 2006 to measure a larger sample of women diagnosed with breast cancer. Many scales have been used to evaluate sexual activity in cancer patients. There have been numerous scales to evaluate body image, but there is not a particular scale to evaluate the sexual functioning in patients with breast cancer. The Sexual Function Questionnaire (SFQ) measured sexual functioning in cancer survivors and those without caner. The Sexual Activity Questionnaire (SAQ) measured sexual functioning in women at high risk for experiencing breast cancer, but it did not evaluate women who had been already diagnosed or treated for breast cancer (Ozalp et al., 2015).

Ozalp et al. (2015) developed the sexual adjustment and body image scale (SABIS) to assess body image disturbances and sexual functioning in breast cancer patients. In a study conducted on the Turkish population, it was shown to evaluate the differences in how patients perceive their body, self-esteem and sexual satisfaction among patients who had breast reconstruction and a total mastectomy, compared to women who had not undergone any type of surgery. The sexual functioning aspects of the scale was evaluated through a subscale called Golombok Rust Inventory of Sexual Satisfaction, and body satisfaction was measured using the Body Cathexis Scale. The self-esteem of the patients who had breast reconstructive surgery versus those who did not compared to women who had total bilateral mastectomies showed no

statistically significant differences among the three groups regarding their body image perceptions. The scale was utilized to evaluate breast-related items; it showed that there was dissatisfaction in the total mastectomy group out of the three groups. A general body image scale was not found suitable for assessing the perceptions of body image in breast cancer patients. In this study, issues associated with sexual satisfaction with their partners, such as avoiding intercourse was also found within the patients who had total mastectomies. This shows that a more accurate scale needed to be created to assess specific sexual and body image factors within patients with breast cancer. The Turkish study helped to validate an appropriate measure for patients to self-report their perceptions on body image and sexual adjustment by using the SABIS (Ozalp et al., 2015).

Jorgensen, Garne, Sogaard and Laursen, (2015) developed a questionnaire called indicators of distress that was implemented to help measure body image distress in women following a breast mastectomy. The distress thermometer was the tool used to measure body image distress in women newly diagnosed with breast cancer. The tool focused on women's psychological, social, physical and religious concerns. Approximately 1,079 women completed the questionnaires provided during their surgical follow up appointment. The majority of the women participants added quotes or comments in the questionnaire to explain their answers. The quotes were used from the questionnaires and the interview study were used to provide validation. The questionnaire was created through identifying important factors in the literature review and the focus group interview. The questionnaire was handed out to six breast surgery departments in Denmark to assist in item selection and reduction. Feedback was provided from psychologist, a social worker, doctors and nurses from the surgical departments (Jorgensen et al., 2015).

Jorgensen et al. (2015) states the items were created in the manner of statements to provide consistent and similar answers. A uniform response scale was created to make it easier to complete the questionnaire. The participants had a selection of options that included: to a great extent, to some extent, to a minor extent, and not at all. A small number of questions were to be answered with yes or no. A three multi-item questionnaire helped to identify different indicators for women experiencing distress at different times throughout their surgical care for breast cancer. Questionnaires implemented within clinical practice can help providers be aware of what causes distress in these women during different stages of their surgical care. The earlier identified, the faster one can initiate the process of rehabilitation and help to continually monitor the levels of body image (Jorgensen et al. 2015)

Zhou, He, Huo, An, Li, Wang and Li (2018) developed a questionnaire called Body Image Self-Rating Questionnaire for Breast Cancer (BISQ-BC) that focused on body-image concerns, change in behavior, shoulder/arm functioning, sexual activity, role, and psychological and social status. The items were used in a self-format to see how patients perceive themselves. The Delphi panel were either recruited within their own network or they received an invitation to participate from one of the recruited experts. The questionnaire consisted of two parts. The first part assessed age, education level, marital status, and employment status and the second part had items associated with body image in a random order. The items were rated on a scale of one being strongly disagree to five being strongly agree. The patients who scored high showed that they were dealing with effects associated with body image. If the patients struggled with reading and writing the survey was administered during an interview and they were recorded.

Zhou et al. (2018) states that because lymphedema is a common adverse effect caused from breast cancer surgery, the body image survey consisted of a functioning subscale to arm

appearance, including normal arm feelings, satisfied arm appearance, and the influences of arm swelling and pain on daily living. Sexual activity change was found to be very common following body image changes in patients with breast cancer. The subscale addressed a loss of feminine charm, avoiding close body contact, covering breasts during sex, sexual confidence, desire, and sex life quality.

Zhou et al. (2018) developed a psychological component that was addressed within the survey because body image changes correlate with patient's perceptions. Body image change influences feelings of appearance and was recommended to be included by the experts to evaluate the attitudes experienced that result in body image changes. Due to having a higher correlation, caring about treatment-related body image change was moved to the body-image-related behavior change subscale. Feeling uncomfortable about my body image was also recommended to be moved to the body-image role change subscale because of the higher correlation with another similar rating subscale. Body-image-related social change was the last subscale used to evaluate body image changes on the patient's social outlook. The survey showed after the first round that the items most picked were trying to avoid participating in social activity and limiting social activity due to body image change. The expert panel and a pilot cross-sectional survey produced accurate findings while using the tool to evaluate body image on the female breast cancer patients (Zhou et al., 2018).

Effects of BRCA Mutation on Body Image

Loi, Desideri, Olmetto, Francolini, Greto, Bonomo, Simontacchi, Di Brina, Meattini and Livi (2018) describe BRCA types one and two as the two tumor suppressor genes that are located on chromosomes 17 and 13. This mutation can be inherited or cause mutations to become inactive. Inactive mutations are defined as a gene that has completely lost its BRCA function.

This makes the gene prone to damage causing alterations in its DNA. This causes the gene that was once was a nontumorigenic cell to become tumor and cancer initiating cell (Gorodetska, Kozeretska & Dubrovska, 2019). This causes an increased risk for the development of breast cancer (Loi et al., 2018). Individuals with BRCA one and two genes become inactivated at an earlier age than those who are BRCA negative. BRCA1 carriers are known to have an earlier incidence of developing breast cancer before age 50 and are at increased risk to develop aggressive triple-negative breast cancer than BRCA2 carriers or those who do not carry the BRCA mutation (Franceschini & Masetti, 2019).

Individuals who carry the BRCA mutation have an increased risk of 45% to 80% of getting breast cancer from the BRCA 1 mutation and 18% to 40% risk of developing breast and ovarian cancer from BRCA 2 mutation. The germ line mutations in the BRCA1 and BRCA 2 genes are passed to the individual based on genetic factors such as familial breast cancer. Familial breast cancer accounts to up to three percent of breast cancer diagnosis (Loi et al., 2018).

Genetic testing and counseling are offered to patients who have high risk of developing breast cancer. Wevers, Hahn, Verhoef, Bolhaar, Ausems, Aaronson and Bleiker (2012) showed that 50 to 100 percent of patients with the BRCA mutation choose to have a prophylactic bilateral mastectomy. The aim of this study was to understand why women chose to have genetic counseling and how this influences their choice of treatment and levels of coping and stress. The majority of the women who underwent genetic counseling were satisfied with the timing and speed of the DNA results. Thirty-one women participated in the study and completed a questionnaire. It was determined that out of the nine patients with breast cancer who possessed the BRCA mutation five of these women underwent a prophylactic bilateral mastectomy. Fifty-four percent of the women

experienced psychological distress from the diagnosis of breast cancer alone. Additionally, 35% of the patients had undergone psychological counseling to help cope with the diagnosis. Women who carry the BRCA mutation had counseling more often than patients without the mutation. There was no association noted with cancer distress and age, education level or having children. Choosing surgical treatment did not differ between the DNA results of the BRCA one or two mutations. One-third of the women received psychological counseling. Women thought it was important to discuss cancer topics such as how to cope with cancer, fear of recurrence, body image and self-esteem issues following surgery. The younger women with positive DNA results reported more psychological distress (Wevers et al., 2012).

A bilateral prophylactic mastectomy (BPM) has been shown to be an effective way to reduce the risk of breast cancer in women with BRCA one or two mutations. Patients undergoing a prophylactic mastectomy have a higher psychological wellbeing and outlook on body image than those diagnosed with breast cancer (Razdan, Patel, Jewell, McCarthy, Razdan, & McCarthy, 2016). Patients with BRCA mutations feel vulnerable and experience psychological and emotional stress. Franceschini and Masetti (2019) showed that a bilateral prophylactic mastectomy can reduce cancer by 90% in women with BRCA mutations. Women with BRCA1 mutation have a lifetime incidence of 72% of developing breast cancer. BRCA2 has a lifetime risk at 69% of developing breast cancer (Franceschini & Masetti, 2019). Another option in women with a high family history or BRCA mutation consists of regular screenings and mammograms. Razdan et al. (2016) reviewed thirteen different literature articles and identified patient satisfaction after a bilateral prophylactic mastectomy (BPM) with or without reconstruction. About 61% to 100% of the women involved in the studies were satisfied with a BPM. The women's perceptions before surgery and following six months to one year after a bilateral mastectomy was shown to meet their

expectations. A total of 70% of the women who participated in the studies, were satisfied with their decision to have a BPM. Sixty-four percent of the women who had reconstruction were satisfied compared to the other 100% who did not have reconstruction following a mastectomy. Six months to one-year post-surgery, the participants showed an overall decrease in anxiety and cancer stress. Approximately, 66% of patients were shown to have positive thoughts about their body image after surgery (Razdan et al., 2016).

After one year following a BPM, fifty percent of the women felt low self-esteem, self-conscious, and felt unattractive (Razdan et al., 2016). Razdan et al. (2016) found that 95% of the women who underwent a BPM did not report any regret for receiving the surgery. Sixty-nine to ninety-four percent of the women showed to have a sensitivity to touch and temperature after a bilateral prophylactic mastectomy with reconstruction. This sensitivity lasted six months to one year in 73% of the patients. Overall, most of the women in the study were happy with their decision for a BPM and would choose to have it again if necessary (Razdan et al., 2016).

Women with the BRCA mutation have an increased risk of developing breast cancer. Genetic testing for these women has become increasingly more available. Flippo-Morton et al. (2016) gathered a total of 2,203 patients who had genetic testing for the BRCA one and two mutations. Out of all the individuals tested, 246 were found to have the gene present. Sixty percent of the patients already had a diagnosis of breast cancer when undergoing the genetic testing. Five out of 36 patients over a course of 30 months, or 14% were shown to develop breast cancer, after learning that they have the BRCA mutation. Women who carry the mutation were followed by a clinic for screenings, mammograms, and MRI at least every six months and a breast exam performed by a provider annually. Women who are BRCA positive can gain two to five years of life from having a prophylactic surgery. This study followed the participants over a

ten year period and found that 50% had undergone a prophylactic mastectomy (Flippo-Morton et al., 2016).

A bilateral prophylactic mastectomy is a beneficial way to reduce the risk surgically in women who are at an increased risk of developing breast cancer. Glassey, Hardcastle, O'Connor and Saunders (2018) recruited 26 women who previously had a mastectomy between one to six years post op. Approximately 38% of the patients received psychological counseling prior to undergoing a bilateral prophylactic mastectomy (BPM). Eight of the patients who underwent a psychological evaluation were referred to obtain treatment. Approximately 62% of the women who had a psychological evaluation prior to a BPM did not need to be referred to a treating physician. Out of all ten women who had a psychological evaluation only one woman had issues after surgery regarding intimacy within her relationship. Sixteen participants who did not receive a psychological consultation, approximately six of the participants had positive outcomes and 10 of the participants had negative outcomes with their psychological well-being and adjusting to their body image disturbance. Twenty-three of the participants had the BRCA mutation and only three of the participants did not have the BRCA mutation. Women who were less than 35 years of age who underwent a psychological consultation before BPM were noted to have an improved well-being, body image and intimacy post mastectomy compared to women who did not receive a consultation at all (Glassey et al., 2018).

Interventions to Help Improve Body Image Distress

Lewis, Diedrichs, Rumsey, Harcourt and Lewis-Smith (2018) studied a total of nine interventions that focused on improving body image by post intervention or at their follow up appointment after surgery. They recruited 27 colleagues to take part in an exercise program that gathers twice a week for a total of 10 weeks. The exercise group was led by a physiotherapist

and sports therapist. The physical activities within the program included gymnastics, movement games, relaxation, walking, jogging, and physiotherapeutic exercises. The participants also took part in a training program led by a fitness instructor that focused on strengthening their abdominal and back muscles. They also performed lower body weight-lifting exercises such as a seated row, bicep curls, leg press, and leg curl. The resistance for these workouts was increased gradually over the course of 10 weeks (Lewis et al., 2018). Over the course of the program, improvement in body image was found to be very beneficial during any stage of treatment.

Lewis et al. (2018) provided interventions for improving body image which focused on group counselling that was led by a midwife who educated the women with lectures and group discussions. The information in these lectures consisted of how one identifies and manages stress, how to manage changes to their body image or sexuality, and ways to improve their body image. Another intervention evaluated in the study was based on a psychotherapist calling participants one week after they underwent surgery for breast cancer. The patient education over the phone focused on physical therapy exercises and counselling on any stress the patient may be experiencing. The interventions were evaluated before and after surgery. The information given to patients before surgery focused on support for the disease, surgery, aftercare, and body image changes. The guidance given to patients after surgery focused on wearing a breast prosthesis and offering a referral for reconstruction to help the patient with their appearance (Lewis et al., 2018).

Behavior Therapy was led by a psychiatrist and educated the participants on reducing irrational beliefs, muscle relaxation training, adaptive skills, and problem solving, and participants completed homework between sessions (Lewis et al., 2018). The other two group interventions focused on meditation, body scans, yoga exercises, identifying reactions to stress,

and awareness of events on feelings, thoughts, and bodily sensations. The final intervention was a group that participated in a one-week residential program that was facilitated by a variety of different professionals. Participants were provided with information and support to help manage the physical, psychological, and economic consequences of the disease. The theoretical-educational lectures were mixed with physical activities, dance therapy, relaxation, and social activities (Lewis et al., 2018).

Lewis et al. (2018) showed that the most effective interventions were face to face in groups. This helps the participants to feel accepted and supported. These interventions also helped to benefit the practice, because it was more cost efficient to deliver these interventions in groups than on a one-on-one basis. Interventions adopting a physical activity-based approach tended to be delivered to women who had finished active treatment, as opposed to those who were still undergoing surgery, chemotherapy, and radiotherapy. The results showed that the support for body image can be beneficial at any stage of treatment and different approaches can accommodate different stages of treatment. Three of the interventions reporting the largest effect sizes indicated a high risk of bias overall. Four interventions that were beneficial included a multimodal residential program, a multiactivity exercise program, a strength training program and a mindfulness-based stress reduction program (MBSR). These interventions showed to be beneficial to this patient population and should be recommended to health professionals who want to help improve body image perceptions among women who have undergone treatment for breast cancer (Lewis et al., 2018).

Currently, many interventions for breast cancer and body image deal with make-up, skin care and group counseling to address psychosocial issues with breast cancer treatment (Lewis-Smith, Diedrichs & Harcourt, 2018). Lewis-Smith et al. (2018) states that cognitive behavioral

therapy (CBT) has been used to specifically focus on body image concerns. Women can have dissatisfaction with body image based on societal norms from the media, family and how we compare ourselves to others. The various interventions conducted showed to have long term improvement among women with body image following treatment. CBT has helped to reduce psychological issues associated with breast cancer treatment. CBT has shown to help women with self-acceptance and their opinions of self-worth (Lewis-Smith et al., 2018).

Lewis-Smith et al. (2018) performed a pilot study with two groups of individuals that took place seven days a week for two hours each day. The groups were recruited only if they had completed breast cancer treatment. The two groups were led by a clinical psychologist and an individual who had undergone breast cancer treatment. They had 135 women who were treated for breast cancer fill out an online questionnaire asking how they perceive their own body image. The questionnaire found that many of the participants preferred the counseling be offered by a peer who has lived through the experience and an educated psychologist. The participants were given education on cognitive and behavioral strategies to help change their views on body image. Each week the participants filled out a form to provide feedback for the intervention. The participants were overall satisfied with the intervention and the length of the sessions. Approximately 87% of the participants finished the CBT intervention. Improvements in body image were noted in the post test and program evaluation. The CBT intervention targeted women following breast cancer treatment and their appearance dissatisfaction. Appearance dissatisfaction may take longer to change than the length of the materials and content provided within the program. Overall, there was not significant change in the outcome from the pretest to post test. The evaluation also showed that body self-care attitude did not change among the participants. The secondary measures showed improvement in intimacy due to body image issues

and self-esteem among these women. The small sample size of the study may have limited the overall results of the trail (Lewis-Smith et al., 2018).

Interventions that focus on the mind and body have shown to improve body image in older adults with breast cancer. In a psychosocial study, Cieslak, Elkins, Banerjee, Marsack, Hickman, Johnson, Henry and Barton (2016) conducted a 90-minute randomized mindfulness cognitive behavioral therapy session. This showed improvement in all categories post treatment with sexual functioning, self-image, mental health and satisfaction in women with breast cancer. It has been shown that after the first postsurgical visit women reported a decreased sex life and it was getting worse with chemotherapy and one year after the completion of treatment. Another randomized, controlled study compared a control group that was provided with hardcopy materials and a group that was provided with a psychoeducational intervention for six weeks for two hours each week. The participants provided results that did not change drastically with emotional functioning. The other women participants had greater satisfaction with sex (Cieslak et al., 2016).

Cieslak et al. (2016) describes hypnotic relaxation therapy as “a state of consciousness involving focused attention and reduced peripheral awareness characterized by an enhanced capacity for response to suggestion.” Hypnotic relaxation involves promoting a relaxed mental state for the participant with suggestions on how one could improve their symptoms. Mind–body and cognitive behavioral techniques have shown to positively affect participants by changing negative thoughts, feelings, and behaviors to positive ones. Hypnosis can also provide one with the ability to separate themselves from surrounding distractions and become more focused on what they are experiencing. The suggestions are provided to the subconscious to help promote self-love and acceptance and positively affecting their self-esteem or body image. Hypnotic

techniques have shown to improve self-esteem and sexual dysfunction. Training is available for all licensed health care professionals. With the use of hypnosis, it has been shown to reduce 70% of hot flashes in fifty-one women with breast cancer (Cieslak et al., 2016).

Hypnotic relaxation therapy was found to be an appropriate intervention and provides positive outcomes on body image and sexual wellbeing in women with breast cancer (Cieslak et al., 2016). Cieslak et al (2016) found in the randomized control study that nine of the women had a positive outcome related to the intervention and were satisfied with the treatment. They also felt that they had a positive impact of change with their body image. This intervention was found to be appropriate for this group of women. The women particularly enjoyed the individualized scripts that helped them visualize a familiar place at which they could feel comfortable confronting their emotions. Although nearly all women expressed that finding the time to practice the intervention at home was difficult at some point during the study, they all were able to practice each week and experience some benefit and enjoyment from it (Cieslak et al., 2016).

Hopwood, Sumo, Mills, Haviland, Bliss and START Trials Management Group (2010) state that shoulder, arm and breast pain can be present up to five years post op in 30% to 40% of breast cancer patients (Hopwood et al., 2010). Some of the causes related to arm and breast pain include tissue damage, deep vein thrombosis, cellulitis, tendinitis, phantom breast pain and arthritis (Hopwood et al., 2010). Lymphedema affects up to 49% of women after breast cancer treatment and tends to worsen over time (Schmitz, Troxel, Cheville, Grant, Bryan, Gross, Lytle & Ahmed, 2009). Rehabilitation strategies for lymphedema include therapeutic exercises, manual lymphatic therapy, compression bandaging, intermittent pneumatic compression, skin care and elevation (Petrek, Senie, Peters & Rosen, 2001). One of the most common adverse effects that can be frustrating to many women after the treatment of breast cancer is a decline in

muscle strength and movement of the upper extremities. A systematic review on restricted upper extremity range of motion was examined in with 2,132 women after completing breast cancer treatment and found a wide variation in the prevalence of restricted shoulder range of motion of less than one percent up to 67% of women, arm weakness was present in 9% to 28% of women, shoulder/arm pain was present in 9% to 68% of women and lymphedema in 0% to 34% of women (Lee, Kilbreath, Refshauge, Herbert & Beith, 2008). Decreased shoulder range of motion and strength can persist for many years after treatment, and it is estimated that 15% to 30% of breast cancer survivors have some form of shoulder impairment at their 5-year follow-up (Hopwood et al., 2010). The presence of shoulder dysfunction in breast cancer survivors has been found to be associated with decreased physical activity, increased body mass index and poorer physical health (Sagen, Kåresen, Sandvik & Risberg, 2009). Restriction in shoulder range of motion also inhibits their ability to carry out their daily routine and to lift and carry objects (Amatya, Khan & Galea, 2017). Breast cancer rehabilitation for arm and shoulder deteriorating range of motion includes physical and occupational therapy to improve range of motion and muscle strength in the shoulder and pectoral girdle (Campbell, Pusic, Zucker, McNeely, Binkley, Cheville & Harwood, 2012).

Amatya, Khan and Galea (2017) discuss that physical therapy helps to improve upper extremity weakness, Shoulder and joint range of motion decreases pain and helps aid in the management of lymphedema. Physical therapy showed many long-term positive effects following consistent participation in physical therapy for up to six months in breast cancer patients including a decreased risk in lymphedema and longer survival in women with improvement in their overall physical health (Patterson, Saquib, Natarajan, Rock, Parker, Thomson & Pierce, 2011). Physical therapy exercises initiated earlier in patients after breast

cancer treatment helps improve arm and breast pain as well as helping to prevent deterioration in range of motion from occurring (Chan, Lui & So, 2010).

Preti, Landoni, Colombo and Dizon (2017) discuss how sexual health is often ignored partially because providers and patients are uncomfortable discussing this topic. There are various psychotherapy approaches for women with sexual dysfunction including cognitive behavioral therapy, sensate focusing, counseling, and relationship therapy. These approaches aim to address fear or anxiety around sexual activity, to improve intimacy, and to reduce the overall severity of sexual dysfunction. In addition, for women with partners, an aim may be to address communication skills between partners (Preti et al. 2017)

Preti et al. (2017) state that pelvic floor therapy is another intervention that can help with sexual dysfunction. This is common after surgery and radiotherapy and can contribute to pain during intercourse due to its effects on the skin, mucosa, muscle, connective tissue, nerves, and lymphatic vessels. Radiation and chemotherapy can reduce vaginal elasticity and lubrication contributing to pain and friction during intercourse. Postoperative physical therapy increases pelvic blood flow and stretches the pelvic floor, promoting healing of the vagina. Self-massage mobilizes soft tissues and may decrease scar formation, introital narrowing, and superficial dyspareunia. Vaginal dilators are important for radiated patients in order to reduce the risk of vaginal stenosis. The goal of dilation is frequent separation of the vaginal walls to minimize formation of adhesions while the tissues heal. Many women affected by cancer encounter physical difficulties, discomfort, and fear when beginning use of vaginal dilators on their own (Preti, et al. 2017).

Preti et al. (2017) discuss that first-line therapies that help to treat sexual dysfunction included the use of over-the-counter nonhormonal vaginal moisturizers to improve vulvovaginal

atrophy. Several therapies can be used including polycarbophilic preparations and a paraben-free preparation. The lubrications and preparations should be used daily without intercourse. The use of lubricants during vaginal intercourse may also reduce pain and irritation of the tissue. Hormonal pharmacological interventions such as Ospemifene and DHEA are not recommended in women with breast cancer or women at high risk for cancer (Preti et al., 2017).

Pieralli, Fallani, Becorpi, Bianchi, Corioni, Longinotti, Tredici and Guaschino (2016) implemented a study that assessed how CO_2 laser therapy in breast cancer survivors helped aid in the treatment for vulvovaginal atrophy. The study showed improvement in vulvovaginal atrophy and pain during intercourse in breast cancer survivors. Fifty two percent of the patients were satisfied at following up 11 months later. The patients stated that there were no side effects that resulted from the CO_2 laser treatment. The study showed that the vaginal laser treatment was beneficial for breast cancer survivors compared to the side effects from hormonal treatments (Pieralli et al., 2016).

There is limited research regarding how dietary factors help to improve the outcome for breast cancer survivors. The American Cancer Society provides a list of guidelines for cancer survivors and recommends eating a plant-based diet rich in vegetables and fruits, whole grains, and limited in red and processed meats (Kushi, Doyle, McCullough, 2012). Some breast cancer treatments increase the risk for ischemic heart disease and by improving their dietary pattern; it has shown to improve cardiovascular outcomes and decrease their risk for disease (McCullough, Gapstur, Shah, Campbell, Wang, Doyle & Gaudet, 2016).

According to the American Cancer Society Guideline for Diet and Physical Activity (2020) weight gain throughout adulthood has been shown to increase the risk of cancer in menopausal women. By losing this weight it may help to reduce the risk of breast cancer in this

population of women. Moderate physical activity also has been shown to lower the risk for pre-menopausal cancers. A high plant-based diet and low in red meat and refined carbohydrates such as the Mediterranean diet has been shown to lower the risk of breast cancer. Vegetables rich in carotenoids may lower risk of estrogen receptor-negative breast cancer. Diets higher in calcium and calcium-rich dairy may reduce the risk. Alcohol use increases the risk for both pre- and post-menopausal breast cancer (American Cancer Society Guideline for Diet and Physical Activity, 2020).

The American Cancer Society Guideline for Diet and Physical Activity (2020) states that weight gain is thought to be responsible for about 11% of cancers in women. To reduce the risk of cancer, 150 to 300 minutes of moderate intensity exercise or 75 to 150 minutes of vigorous intensity exercise should be performed each week or the combination of both. Studies have provided evidence that a healthy diet promotes a lower risk of cancer and prolongs longevity of life. Alcohol use is the third most preventable risk factor for cancer. Alcohol use accounts for about six percent of all cancers and four percent of all cancer deaths in the United States. The higher amounts of alcohol consumed the higher risk to the individual (American Cancer Society Guideline for Diet and Physical Activity, 2020).

Summary of Literature Review

Body image distress is an important consideration for women undergoing mastectomy. It is important that an educational intervention be available to help identify body image distress and provide women with resources and education to help them cope. Many women who had nipple-sparing or reconstructive procedures had a more positive outlook on body image. Out of the 56 articles appraised, the majority stated that the more invasive the procedure is, the higher impact it has on the women's psychological wellbeing. Many of the results were gathered through

surveys, BIS (Body image scale) or SABIS (sexual activity body image scale) scale or questionnaires.

Emotional adjustment in women with breast cancer can be difficult. Providers should be aware of the psychological stress and provide resources to help these women cope. The modified BIS was implemented to help identify those experiencing body image distress. The feasability and acceptability of the providers was assessed as well as the feasability of implementing the modified BIS in the breast cancer and BRCA population. Providers and nursing leaders need to educate women on the proper ways to manage stress and different methods to cope with the situation. Women with a low socioeconomic status and educational level may need to help their partners understand about breast cancer and the impact it has on them mentally. Health literacy may also prevent a patient from understanding the true situation. It is important for providers to take the time to explain and make sure these women fully understand. Patients should also be informed about certain research findings before undergoing a double mastectomy and given other options if available.

Theoretical Framework

Fang, Chiu and Shu (2011) described the Objectification Theory as a framework that explains how women identify themselves as being feminine and how women internalize their feelings and perspective of themselves based on society's norm. This perspective is shaped through cultural and social beliefs. Women can have a harsh perspective on themselves, which can lead to excessive body monitoring. This can cause a woman to critically analyze their body, which can lead to body shaming and increased feelings of anxiety. Objectification Theory discusses how changes that appear throughout the course of a woman's life such as being diagnosed with cancer can contribute to body image changes and mental health concerns. This

applies to the perspective women experience after they undergo a mastectomy.

Objectification Theory was created by Fredrickson and Roberts in 1997 and is a contemporary framework that describes how one perceives their appearance, which can cause an increase in body shame based on how they feel, how they should be viewed or how woman look within the media. Objectification Theory may emerge as women seek to minimize body shame by managing how their bodies appear to others. It was found that women with breast cancer worried about facing critical evaluation from the public after losing their breasts and needed to cope with the stress of losing a part of their physical self. A woman with breasts identifies as being feminine. When a woman is diagnosed with breast cancer and undergoes a mastectomy this perception can be altered. This theory may assist healthcare professionals to understand how women's bodies are objectified after mastectomy and consider how to care for this population more appropriately (Fang, Chiu & Shu, 2011). This theory applies to the project because its is evaluating body image changes in women post mastectomy and how women view themselves and compare themselves to other women in society after having surgery. This theory is focused on how women feel about their body image post-operatively after a mastectomy with reconstruction and if they are satisfied of the results to meet their expectations.

Quality Improvement Model

Arveson (2020) describes the Plan-Do-Check-Act (PDCA) as a problem-solving model that evaluates change through planning, implementing, and gathering results. This model began in the 1920s by Walter Shewart who was an expert in statistics. He created the model of plan, do and see. Edward Deming later on modified the model in the 1950s to: Plan, Do, Check and Act. The purpose of this model was to evaluate how much improvement can be made in a working environment, to limit resistance when implementing change and to evaluate which measures of

change will give the best result. Skhmot (2017) states the three questions used before testing a topic include:

•What is the goal that is trying to be accomplished?

•When should change be implemented and what measure should be used?

•How do we promote change to help with improvement?

Henshall (2017) describes the Plan stage as planning in advance to know what one will ultimately accomplish and improve those outcomes. The Do stage is when we implement the change. In this stage, one will want to analyze what is currently wrong with the product and how it can be improved. The Do stage is gathering data before the change and testing a hypothesis by evaluating how the change was successful or unsuccessful. The Check stage includes whether or not the process improved based on the hypothesis. The last stage, Act is fully implementing the change into the working environment. Deming wanted a continuous feedback loop for businesses so that they could identify and implement change in areas that needed improvement (Henshall, 2017).

Henshall (2017) explains Deming created a diagram to illustrate this continuous process, commonly known as the PDCA cycle for Plan, Do, Check, Act:

- Plan: Create a process that will help to improve outcomes.
- Do: implement the plan and measure its performance
- Check: assess the measurements and report the results.
- Act: decide what is needed to improve the process.

The PDCA model is applied to the DNP student project by planning to implement a body image survey to women within five years post mastectomy. The Do was implementing the body

image survey to this population of women and then checking the results. The Act stage was based on the results obtained and if the women needed education or resources based on how high (15 to 27) their scores were. The education was then tailored to that particular patient. The patient was then reevaluated within three months to see if her their body image scores have changed with the education and resources given to the patient during their GYN appointment.

Project Design

Setting

The setting for this project was a private OBGYN office located in North Florida that is contracted to work with Baptist Medical Center in the surrounding area. They provide a variety of services ranging from aesthetics, contraception, feminine rejuvenation, gynecologic, hormone therapy, in-office procedures, infertility, laboratory, obstetric, outpatient surgical procedures, prescriptions, ultrasound, urinary incontinence, vaccines, and weight loss. Their home office is located at a large private hospital and they have one outpatient satellite office. Both offices offer a variety of aesthetic procedures such as micro needling, injectables, and dermal fillers and gynecological appointments. The office has many post mastectomy patients including patients who recently have had a mastectomy. BRCA testing is performed on many of the patients who have a family history of breast cancer. The OB-GYN practice follows women closely with a history of breast cancer as well as those who have abnormalities noted on their breast exam. The practice also continues to follow the patient for their gyn appointment after they have had a mastectomy. Many of the patients at this North Florida practice are survivors of breast cancer who have undergone a unilateral or bilateral mastectomy. The office providers strive at keeping the patients' cancer free or catching it early by emphasizing regularly scheduled appointments to provide appropriate screening for pap smears, pelvic exams, and breast exams. Furthermore, the

office orders mammography and sends referrals to general surgery in the event of a cancer diagnosis but may see them for follow up.

Population

The direct population impacted by this project was women who have undergone a mastectomy for either breast cancer or prophylactically due to the BRCA mutation. The subjects consisted of adults 18 years and older of all races. The indirect population was the health care providers who consist of nurses, medical assistants, nurse practitioners and medical doctors who are all qualified to screen patients with the modified body image scale. The DNP student spoke with the office NP who estimated that she sees eight to ten patients each month who have had a mastectomy within the past five years (J. Ely personal communication on 10/23/20). The DNP student saw an estimated number of 10 patients who met the criteria for the project. This number was typical of the volume of post mastectomy patients the practice sees each month.

Methods

At the time of the patient's GYN appointments, the patients were evaluated by the nurse practitioner prior to their appointment to see if they had a history of a mastectomy within the past five years and were 18 years of age or older. The participants who met these criteria, were asked to sign consent completed by the DNP student prior to completing the body image survey. Those who scored high (15 to 27) on the body image scale were invited to participate in the project. Body image scores were assessed in women within the past five years after having a mastectomy with or without reconstruction performed and either due to breast cancer or BRCA mutation. The modified body image scale (Appendix A) consisted of assessing only body image. This scale was printed out in a paper format and handed directly to the patients to fill out during their GYN

appointment. The body image scale was completed in a private GYN setting and was returned after their appointment. If the body image scale was unable to be performed in person, the DNP student emailed the survey to the participants or had them complete the survey over the phone. A virtual or phone consent with a witness present was then completed. If the patient scored high between 15 to 27, educational handouts were given and reviewed with the participants that consisted of educational interventions such as: a list of various support groups for women suffering with breast cancer, instructions on how to perform meditation and its benefits, list of some counselors or counseling centers, the benefits of acupuncture, physical therapy, sexual distress recommendations, diet, and exercise. Only the patients who scored high (15 to 27) on the modified BIS were screened again at three months to reevaluate if there was any improvement in their body image scores. Those who scored low (0 to 5) or moderate (5-15) on the body image survey were also able receive information regarding body image distress as well as educational interventions but were not rescreened after three months. The DNP student called the participants after two months to check in how they were doing with the education provided and if they had any questions. The nurse practitioners, medical doctors, nurses, and medical assistants were educated on how to utilize the body image scale and their role in the project.

Recruitment and Population

The first month consisted of recruiting participants at their gyn appointments. The office NP and DNP student identified the patients who met the criteria for the project, which included being 18 years of age or older, of all races, all marital status, and having had a mastectomy within the past five years, regardless of breast reconstruction. The DNP student then screened the patients with the modified BIS who met these criteria. The patients who screened high for body image distress, were invited to participate in the project. The DNP student anticipated to screen

10 per month for the first two months. The DNP student expected that 35% would score high on the modified body image scale, which is a total of seven participants that would participate in the project intervention and receive educational handouts.

Prior to handing out the body image survey, participants were asked to sign consent. The patients who scored high (15 to 27) for body image distress on the modified BIS were asked to participate in the project and be educated one on one by the DNP student during their GYN appointment, virtually or over the phone, on appropriate interventions and recommendations provided within various educational handouts. The DNP student also educated the participants of the American Cancer Society website that provides various interactive tools such as a calorie counter to allow the patient to monitor the number of calories they should be consuming each day.

The DNP student provided recommendations for diet and exercise based on the American Cancer Society. These recommendations provided were listed within a packet of educational handouts. The DNP student also encouraged the patient to participate in physical activity and encouraged them to keep a personal log of their progress. This took place the same day as their GYN appointment. During the patient's GYN appointment, the DNP student asked for the patient's phone number and email address to be able to evaluate how they were doing with the educational interventions and if they had any questions. The DNP student also gave the patient a call at three months and asked them to complete the body image survey over the phone or have them fill out an online survey sent to their personal email.

The patients who scored high (15 to 27) on the modified BIS took the survey again after three months via phone call or completed an online survey to see if their body image scores had improved. The instrument used included: The modified body image scale (Appendix A). The

modified BIS was printed out and implemented face to face with paper and pencil at the patient's GYN appointment. If face to face was not able to be completed the participants were emailed a link to complete the survey online. A packet of educational handouts was given to the patients face to face during their appointment in their exam room. The participants were given a four-digit randomized code to protect their personal health information. The project started around February 15, 2021 and took approximately four months to complete. All of the participants were recruited and completed the body image survey during the first month of implementing the project.

Covid Precautions

During this time, it is appropriate to consider the safety precautions in place to maintain safety with COVID. All employees, participants and the DNP student wore a mask and maintained six feet between individuals to limit exposure. Materials were also wiped down appropriately with cleaning supplies after each use including pencils, clip boards and the area used by the participants. A handwashing station was present to maintain appropriate hand hygiene.

The following table provides a timeline of the DNP project.

Table 1.

DNP Project Timeline

Month 1	Present project on body image to ARNPs, MDs, RNs and MAs and target/recruit 20 women. Implement the body image scale at their gyn appointment or virtually and provide educational handouts on ways to improve body image to the all the patients who completed the body image survey with face-to-face or virtual teaching.

Month 2 / Month 3	Follow up with the patients to see how they are doing with the information they were provided and see if they had any questions that needed to be answered.
Month 4	Implement body image scale again at three-months for those who scored high (15 to 27) on the BIS only by phone call or online survey and see if there is any improvement in body image scores. Analyzed data using SPSS 25. Disseminate findings to stakeholders, instructors, and student colleagues

Stakeholders

The stakeholders identified were the DNP student, primary nurse practitioner, nurses, medical assistants, physicians, office manager, and the patients. The primary NP was consulted about the project idea and agreed there was a need for improvement in the clinic. The DNP student has worked closely with the office for the past five years and has developed rapport with the providers. There is currently no form of measurement in the office to assess body image disturbance in women post mastectomy. The nurse practitioner at the office location gave permission to conduct this project with permission from the office manager (J. Ely, personal communication 10/30/20).

Tools/ Body Image Scale

McDermott, Moloney, Rafter, Keegan, Byrne, Doherty, Cullen, Malone and Mulcahy, (2014) describe the body image scale (BIS) as a ten-item scale that was utilized as a self-reporting measure in cancer patients, both male and female. The scale was studied on approximately 276 participants with cancer. After the scale was modified, it was then tested on

682 patients with breast cancer (McDermott et al. 2014). The scale was utilized in seven different clinical studies. The scale showed high reliability and validity using the Cronbach's alpha of 0.93 and Mann–Whitney test of $P < 0.0001$. The scale also showed sensitivity to change based on the Wilcoxon signed ranks test and consistency of scores from different breast cancer treatment centers. Factor analysis showed a single factor in three out of four analyses, accounting for greater than 50% variance (McDermott et al. 2014). These results support the clinical validity of the BIS as a brief questionnaire for assessing body image changes in patients with cancer and was approved for clinical trials (Hopwood, Fletcher, Lee & Al Ghazal, 2001).

Modified Body Image Scale

The scale being used for this project is a modified version of the body image scale and is scored in four response options: *not at all, a little, quite a bit and very much*. The scale is scored from 0 ("Not at all") to 3 ("Very much") on each question (McDermott et al. 2014). The lowest total scores range from 0 being the lowest to 27 being the highest score. The higher scores indicate the patient is experiencing body image distress. Scores 0 to 5 are low levels of distress, 5 to 15 are moderate levels of distress and 15 to 27 are high levels of distress. The modified body image scale being used is different than the BIS scale because it contains both quantitative and qualitative components and has been validated in patient cohorts (Hopwood et al. 2001). The modified body image scale consists of nine questions and takes approximately five minutes to complete. It is classified as quantitative based on the four-point system (0, 1, 2 and 3) and qualitative because it is data obtained first-hand from the participants regarding their opinions about their body image distress. The modified body image scale was the tool used in the implementation of this project. Permission to use this scale was received through the copywrite clearance center (Appendix B).

Outcomes and Measures

The following were the outcomes measures of the project:

1. To identify patients suffering from body image distress by implementing a validated body image scale in post mastectomy patients to evaluate their potential for body image distress.
2. To provide education and resources to help these same women cope with body image changes.
3. To improve body image score in post mastectomy patients by 25% after three months from pre- to post-survey.

Data Collection and Analysis

Patient demographic data that was collected included age, race, marital status, years since they have had a mastectomy, mastectomy due to cancer diagnosis or BRCA mutation and with or without breast reconstruction to evaluate project outcomes. Body image survey results were collected during month one at the patients' GYN appointment. The DNP student followed up with the women who scored high (15 to 27) for body image distress again at three months to see if their scores had improved with the education and interventions they were provided. The survey was completed a total of two times. All data was entered into an excel spreadsheet and then analyzed using the Statistical Package for Social Sciences (SPSS) version 25. A paired *t*- test was used to compare one month and three-month body image scores. The *t*-test is appropriate because it is used when there are two groups that have a continuous variable for the outcome (Knapp, 2017).

This was a pre post one group design. The primary outcome variable was the score which was the sum of the responses (0,1,2,3) for 9 four-point Likert scale values. There were scores for

each subject prior to the intervention (pre-score) and after the intervention (post-score). To better understand the problem, summary statistics were calculated, and plots were constructed. A profile lot, a scatter plot of post by pre, and a gain versus average value plot (a Bland-Altman type plot) was constructed and interpreted (P. Wludyka, personal communication on 11/16/20).

The primary measure (score) was interval data and by the Central Limit Theorem the scores were approximately normal since they are sums. This was verified by normal qq-plots by pre-score, post-score, and gain. The primary clinical question was answered by using a paired t-test. The null hypothesis was the pre mean equal to the post mean versus the alternative that they are not equal. A 95% confidence interval for gain was constructed and interpreted. A 95% confidence interval for the ratio (post-score/pre-score) was constructed and used to assess the percentage change in score from pre to post (P. Wludyka, personal communication on 11/16/20).

Individual questions pre to post were tested for effect using the Wilcoxon rank sum test or the sign test. The assumptions for the paired t-test for the score data was not met, instead the Wilcoxon rank sum test or the sign test was employed. The role of covariates was investigated by ANCOVA methods with the assistance of a statistician. The primary research question was addressed using ANCOVA methods. That choice was based on the plots (in particular, the Bland-Altman type plot). This approach was appropriate when the change in score from pre to post depends upon the pre-score (P. Wludyka, personal communication on 11/16/20). Covariates were also assessed by partitioning the data. For example, one can compare gain (change from pre to post) for females or males using an independent samples t-test. Similarly, one can partition time since surgery in less than five years to five years and more than five years. ANCOVA approaches are superior but partitioning the data makes for simple explanations (P. Wludyka, personal communication on 11/16/20).

Table 2

Descriptive Statistics

Demographic Data	Level of Measurement	Rational for Inclusion	Descriptive Statistics
Age	Interval	outcomes to target population	Frequency & Percent
Years since they have had a mastectomy	Interval	outcomes to target population	Frequency & Percent
Race	Nominal	outcomes to target population	Frequency & Percent
Marital status	Nominal	outcomes to target population	Frequency & Percent
With or without breast reconstruction	Nominal	outcomes to target population	Frequency & Percent
BRCA mutation or berast cancer diagnosis	Nominal	outcomes to target population	Frequency & Percent

Table 3

Inferential Statistics

Measure	Level of Measurement	Descriptive Statistical Procedures	Inferential Statistical Procedure
Body image score	Interval	Standard deviation & Mean	Paired t-test

Budget

The project budget consisted of a maximum amount of $75 to cover printing body image scale, handouts of educational material and printer ink. For instance, the consent process was expected to take five minutes; the screening was expected to take five minutes; based on a positive score, the educational intervention was expected to take 15 minutes. It was expected to

take the DNP student a total of 25 minutes to screen the patient for body image and provide education during their GYN appointment. The provider took approximately 40 minutes to evaluate and assess the patient during their GYN appointment and discuss the patient's overall plan of care. This was the appropriate amount of time to promote instead of inhibiting the providers care with each patient and to continue the workflow smoothly throughout the day without any loss of income to the practice. The practice allowed the appropriate amount of time between patients for the provider to adequately evaluate and communicate with each patient. The DNP student maximized the NP time by combining the visit with providing the modified body image survey and educational interventions within the patients GYN appointment and prevented the NP from losing any money per patient.

Sample/Ethics

Approval was obtained through Jacksonville University and the JU IRB. A meeting was arranged with the NP to discuss the project and how it can benefit the GYN practice. Once the IRB approved the project, the participants received a detailed explanation and were given the opportunity to ask any questions before signing the consent form. All of the project participants received a copy of the consent for their documentation. This project had minimal risk to the participants. Participants were informed that the body image survey may elicit negative feelings of body image distress and if these feelings increased to contact the appropriate healthcare personnel, call the depression, or suicide hotline or a friend or family member for support. There were safeguards in place to maintain the privacy and confidentiality of their data. All data was kept on the GYN office computer or encrypted HIPAA compliant server. The data was de-identified and stored via a JU OneDrive shared folder for the DNP, chair, and statistician. Consents and any paper documents such as the modified body image scale and code sheet were

stored in a locked cabinet in a locked office at the practice site that is secure. If the documents were scanned, they were then shredded. A randomized four-digit number was assigned to each participant when filling out the modified body image survey to deidentify all data obtained and to allow for matching of the pre and post scores. This was stored in a locked office cabinet that is secure at the GYN office.

Results

A total of nine women were identified as meeting the project inclusion criteria and initially screened for body image distress. Out of the nine women screened, six scored high enough to participate in the project. The results of the body image survey showed improvement in all six patients from one month to three months. When the six patients were rescreened at three months, two of the patient's body image scores stayed at the high level and four of the patients scores decreased to a low score on the body image scale. Overall, all of the women showed improvement in their body image scores.

Patient Demographic Results

A total of nine participants were consented prior to filling out the body image survey. The patient demographic data that was collected consisted of age, race, marital status, years since they had a mastectomy, and if it was with or without breast reconstruction. Out of the nine participants, four of the women had a bilateral mastectomy with reconstruction and two of the women had a bilateral mastectomy without reconstruction. The average amount of time since the women had a mastectomy between < 1 year to a maximum of 5 years. Out of the nine women initially screened, only six out of the nine participants scored high (15-27) on the body image survey to participate in the project. The patient demographics on the body image survey showed that the women who completed the body image survey were all Caucasian, between the ages of

26 to 67 with an average age of 53. Three of the women who completed the body image survey were single, and three of the women were married. About 66.6% (four) of the women had breast reconstruction and 33.3% (two) of the women did not have breast reconstruction pre-test. Posttest results indicated that five (83%) out of six women had reconstruction and one (17%) out of six did not have reconstruction. All of the women had their mastectomies due to a breast cancer diagnosis.

Survey Results

A total of six women took the body image survey twice. The survey results for the pre-test consisted of 33.3% said it affected them a little, 50% said it affected them quite a bit and 16.7% said that is affected them very much regarding the question; have you been feeling self-conscious about your appearance, The women scored 16.7% for a little, 50%quite a bit and 33.3% very much for the question: have you felt less physically attractive because of your disease or treatment. Based on the question do you feel dissatisfied with their appearance when dressed, 16.7% scored a little, 66.7% scored quite a bit and 16.7 % scored very much. 16.7% said they have felt less feminine/masculine because of their disease or treatment. Approximately, 50% of the women answered they feel less feminine/ masculine quite a bit and 33.3% of women answered very much. About 66.7% answered quite a bit and 33.3% answered very much. Approximately, 50% of the women answered that they felt less sexually attractive because of their disease or treatment quite a bit and 50% answered that they have been feeling less sexually attractive because of their disease or treatment very much. About 66.7 % of women answered that they do not avoid people because of the way they feel about their appearance and 33.3% answered quite a bit to avoiding people because of their appearance. About 16.7% answered a

little and 33.3% answered quite a bit. 83.3% of the women answered quite a bit to feeling dissatisfied with their body and 16.7% answered very much.

The post survey test results consisted of 66.7% said it affected them a little and 33.3% said it affected them quite a bit for the question have you been feeling self-conscious about your appearance? The women scored 50% for a little and 50% quite a bit for the question: have you felt less physically attractive because of your disease or treatment? Based on the question do you feel dissatisfied with their appearance when dressed, 66.7% scored a little, 33.3.% scored quite a bit. Approximately, 50% of the women answered they feel less feminine/ masculine a little and 50% said they feel less feminine/ masculine quite a bit. About 16.7% answered that they did not find it difficult at all to look at themselves naked, 16.7% said quite a bite and 66.7% said very much. Approximately, 16.7% of the women answered that they felt less sexually attractive because of their disease or treatment a little and 83.3% % answered that they have been feeling less sexually attractive because of their disease or treatment quite a bit. About 33.3 % of women answered that they do not avoid people at all because of the way they feel about their appearance and 66.7% answered a little to avoiding people because of their appearance. Approximately 83.3% answered a little to has the disease or treatment left your body less whole and 16.7% answered quite a bit. About 33.3% answered a little to feeling dissatisfied with their body and 66.7% answered quite a bit to feeling dissatisfied with their body.

Results Summary

In this project, a total of six of the participants scored high on the body image survey, two of the women stayed high post intervention and four of the women's body scores decreased to a low score on the body image scale which is a p-value = 0.1580 for the paired t-test. Only two of the women's body image scores stayed high but also showed slight improvement. The chart

below shows how initially the pre-test scores were scattered, but all of the scores were on the higher side. The post test scores show how the scores that were high decreased to a low score on the body image scale. The average score on pretest was 18 out of 27 versus the average score on posttest was 13.5 out of 27. The average score of both tests combined was 16 out of 27. There was a decline in all body image scores in all subjects. However, due to the small sample size, there was no statistical significance found. The percent difference between two sets was 19.5%. The following outcomes were met with implementation of this project:

1. **Objective One:** To identify patients suffering from body image distress by administering a body image score survey.
    a. This outcome was met.
2. **Objective Two:** To provide education and resources to these women designed to alleviate body image distress.
    a. This outcome was met.
3. **Objective Three:** To reevaluate body image distress three months after education and improve body image score by 25%.
    a. For the group as a whole, the decline in body image score was 19.5% which did not meet the 25% goal.
    b. Therefore, this overall goal was not met.
    c. However, this outcome was met in one of the six participants of this project.
    d. The remaining five participants saw a decline in their body image scores but the decline did not reach 25% threshold.

Table 4

Modified Body Image Scores

	Pretest scores	**Post test scores**	**Difference (% of change)**
Patient 1	22	17	**18%**
Patient 2	21	10	**41%**
Patient 3	15	11	**16%**
Patient 4	18	14	**15%**
Patient 5	15	13	**8%**
Patient 6	21	16	**19%**

Data Analysis Results

The average score pre is different from the average score post (*p*-value = 0.1580 for the paired t-test). The 95% confidence interval for the average decrease in score (point estimate = 3.5) is -1.92 to 8.92 which includes zero. This project has a small sample size, although the results weakly suggest an effect. The exact binomial version of McNemar's test has a *p*-value of 0.125. There is not sufficient evidence to conclude the proportion of high scores has decreased from Pre to Post because of the small sample size.

Discussion

All nine of the women who participated in the project were very receptive to the information that was given to them through educational handouts. Even the women who did not score high enough on the body image survey verbally expressed how they appreciated the information given to them. The participants verbalized to the DNP student several times that the information was very useful to them and what they were experiencing. All the participants showed improvement in their body image scores from one-month pretest to three months posttest. Two of the women were still classified as scoring high on the body image survey but

decreased a few points from their previous survey results. Many of the women attended counseling and performed the various exercises shown in the handouts on how to improve muscle tightness and weakness. One of the participants was a young 26-year-old women and she was very hesitant about performing the various interventions. She was very depressed and wanted to try counseling but had difficulty finding motivation in her daily life. Recently, within the past three months she underwent bilateral breast reconstruction, and her score went from 21 out of 27 on the body image survey to 10 out of 27.

Limitations

The limitations that were identified during the implementation of this project included a small sample size of nine women who were initially recruited. Out of the nine women who completed the survey only six women (n=6) scored high enough on the body image survey to participate in the project. There was limited number of participants due to COVID-19, which limited the patient's availability to be seen in person and limited the volume of the practice. This contributed to a delay in patient care and the ability for patients to be seen on time. Some of the participants recently had their GYN exam and were contacted virtually by email to complete the survey. The nurse practitioner was part time and was only able to work three days per week for the student to recruit and obtain data from the participants. This limited the number of participants who could be recruited to participate in this project. It may also have been more valuable having post mastectomy women who were fresh post op within the first year instead of having their surgeries farther out. This project was originally designed to be done at a plastic surgery office that deals with frequent breast reconstructions from breast cancer, which would have provided more participants and a better environment suited for this project. Unfortunately,

due to Covid they were unable to accommodate the DNP student. In a Covid free world a plastic surgery office may have been more beneficial than a standard GYN office.

Final Conclusions

Significance of Findings

According to Siegel, Miller, Fuchs and Jemal (2021), it is estimated that there will be approximately 1.9 million new breast cancer diagnosis and 608,570 breast cancer related deaths in the United States in 2021. Being diagnosed with breast cancer has a significant effect on a woman's psychological and physical wellbeing. The effects related to the treatment of breast cancer can cause hair loss, scarring and decreased sexual functioning (Scott, Zalaquett, Exum, Kromrey, Ellerbrock & Paxton, 2021). Scott et al. (2021) states that when a woman loses her breasts, she is also losing her womanhood. It is important identify body image distress early on in a patient's treatment to promote support and to help guide her through this stressful and difficult time. Implementation of a body image scale in all GYN settings can help identify those women suffering from body image distress and allowing provision of emotional and psychological support to improve one's confidence and self-esteem.

Recommendations for Practice

It is important to address the barriers with providers related to those with body image distress. This project also helps to promote an appropriate screening tool for body image distress and evaluation of patients' perceptions of their own body image. This project establishes preliminary data on the implementation of an evidence-based body image screening tool that can be used in any GYN setting. The education and body image scale could also be implemented at other GYN offices. Implementing a body image survey can assist the providers in recognizing body image distress in those with breast cancer and provide reassurance to the patients to help

improve their wellbeing as well as making evidenced based clinical decisions for their care. The body image survey turned out to be a positive intervention and would be recommended for any GYN office.

Dissemination Plan

An abstract will be submitted for publication to the Journal of Women's Issues. This project will be shared by a PowerPoint presentation with students and instructors in the Doctor of Nursing Practice program at Jacksonville University, Florida.

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Appendix A

Modified Body Image Scale

Email_____

Phone number_____

Age_____

Race_____

Are you single or married?_____

How many years has it been since having a mastectomy?_____

With or without breast reconstruction_____

Please answer the following questions about how you feel about your body

	Not at all	A little	Quite a bit	Very much
Have you been feeling self-conscious about your appearance?	☐	☐	☐	☐
Have you felt less physically attractive as a result of your disease or treatment?	☐	☐	☐	☐
Have you been dissatisfied with your appearance when dressed?	☐	☐	☐	☐
Have you been feeling less feminine/masculine as a result of your disease or treatment?	☐	☐	☐	☐
Do you find it difficult to look at yourself naked?	☐	☐	☐	☐
Have you been feeling less sexually attractive as a result of your disease or treatment?	☐	☐	☐	☐
Do you avoid people because of the way you feel about your appearance?	☐	☐	☐	☐
Do you feel the disease or treatment has left your body less whole?	☐	☐	☐	☐
Have you felt dissatisfied with your body?	☐	☐	☐	☐

(McDermott et al. 2014).

Appendix B

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Appendix C

Data Worksheets

Table 5

Patient Demographics

Patient encounter #	Age	Race	Marital status	Years since mastectomy	With or without reconstruction
1	59	white	Married	1	With
2	26	white	single	1	with
3	67	white	married	3	with
4	55	white	married	5	without
5	55	white	single	3 months	with
6	57	white	single	1 year	with

Table 6

Modified Body Image score

Patient encounter #	BIS Y/N	Scored High on BIS Y/N	Intervention provided Y/N
1	yes	Y	Y
2	yes	Y	Y
3	yes	Y	Y
4	yes	Y	Y
5	yes	Y	Y
6	yes	Y	Y

Table 7

BIS Score Data Month 1 pre score

Patient encounter	Baseline BIS score
1	17
2	21
3	15
4	18
5	15

6	21

Table 8

Post score (month 3)

Patient encounter	BIS score
1	11
2	10
3	11
4	14
5	13
6	16