

## ABSTRACT

Title of Dissertation: THE WORK LIFE AND CAREER DEVELOPMENT OF YOUNG WORKING WOMEN WHO ARE BREAST CANCER SURVIVORS: A QUALITATIVE STUDY

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Breast cancer survivors represent the largest proportion of cancer survivors, and the rate of young breast cancer survivors who are diagnosed before the age of 40 is increasing. Cancer survivorship has begun to address many aspects of survivors' quality of life, yet the role of work and career issues have been understudied. To explore the work lives and career development of young breast cancer survivors, this study consisted of qualitative interviews with 13 young women who were diagnosed with breast cancer before the age of 40. Participants also completed the Quality of Life-Cancer Survivors (QOL-CS) Breast Cancer Version (Ferrell, Dow, & Grant, 1995). The qualitative data was analyzed using Consensual Qualitative Research Methodology (Hill et al., 2005; Hill, Thompson, & Williams, 1997). The 11 domains that emerged from the data were: (1) discovery of breast cancer and the navigation of treatment; (2) career development: influences and sacrifices; (3) cancer-related work challenges; (4) coping with cancer-related work challenges; (5) re-appraisal of career development after cancer; (6) components of career and life satisfaction after cancer; (7) impact of breast cancer on life outside of work; (8) lessons learned from breast cancer; (9) thoughts about the future; (10) advice for other survivors; and (11) participants' feelings about participating.

Overarching themes of re-appraisal and meaning-making appeared across the domains. The experience of breast cancer before the age of 40 intensified most participants' need for purpose in life. Many sought work that provided a sense of meaning, yet their need for financial security and insurance prevented some of them from having the freedom to make that sense of meaning the primary focus of their career or from redirecting their career paths to one that better expressed their re-appraised life meaning. Findings are integrated with literature on women's career development, Career Construction Theory (Savickas, 2002, 2005), and Social Cognitive Career Theory (Lent, Brown, & Hackett, 1994, 2000, 2002) and implications for research and practice are discussed.

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A QUALITATIVE STUDY

By

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## **CHAPTER ONE**

### **Introduction**

There are over 2.5 million breast cancer survivors in the United States, and breast cancer survivors represent the largest proportion of cancer survivors (Dizon, 2009).

Breast cancer is about 100 times more common among women than among men (American Cancer Society, 2010), with breast cancer newly diagnosed in 1,910 men and in 192, 370 women in 2009 (Jemal et al., 2009; Jemal, Siegel, Xu, & Ward, 2010).

Women have a little less than a 1 in 8 (12%) chance of developing breast cancer at some time in their lives and have about a 1 in 35 (3%) chance of dying from breast cancer.

Due to earlier detection, new screening technologies, advanced therapies that combine multiple modalities (e.g., surgery, radiation, chemotherapy, hormonal therapy), and increased supportive care, the quality of life of cancer survivors has improved dramatically in recent years and more breast cancer patients are being cured or reaching long-term remission (American Cancer Society, 2010; Braun, Hasson-Ohayon, Perry, Kaufman, & Uziely, 2005). More specifically, women under the age of 45 have an 81% 5 year survival rate whereas women aged 65 and older have an 86% 5 year survival rate (American Cancer Society, 2009). Local recurrence rates have been reported as approximately 10% 15 years post-treatment for women diagnosed at the age of 40 or younger (Turaka et al., 2009), with the recurrence rate largely dependent on the type of treatment. In short, many forms of cancer, including breast cancer, have transitioned from being an acute, deadly illness to a chronic health issue that must be managed over the course of life (Rowland, 2008).

The National Coalition for Cancer Survivorship was founded in 1986 by representatives of 20 organizations, and aimed to reform perceptions of cancer victims to cancer survivors. Ten years later, in 1996, the National Cancer Institute created the Office of Cancer Survivorship to develop a greater awareness of the needs of cancer survivors and their loved ones during diagnosis, treatment, and remission (Rowland, 2008). Initially, cancer survivorship research focused on curing cancer and on planning, delivering, and monitoring the effects of cancer treatment. More recently, cancer survivorship research has begun to focus on the cancer survivor as a person, including the multiple facets of survivors' quality of life (QOL; e.g., physical, emotional, and mental health; Rowland, 2008). Topics such as cancer survivors' cancer-related fatigue, positive affect, life satisfaction, and spirituality have been explored. Yet cancer survivorship research has been slow to recognize the role of work and career issues in breast cancer survivors' quality of life, and interventions directed at re-employment and return-to-work after treatment have lagged behind other QOL interventions (Hoving, Broekhuizen, & Frings-Dresen, 2009).

The work lives and career development of women with breast cancer is important for a multitude of reasons. Most of the over 200,000 women diagnosed with breast cancer in the United States every year are employed (Hasset, O'Malley, & Keating, 2009). Breast cancer is the most prevalent female cancer in Western countries (Johnsson et al., 2007; Johnsson et al., 2009) and diagnosed women are usually under the age of 65 (Johnsson et al., 2009). Within the United States, there are over 250,000 women who were diagnosed with breast cancer when under the age of 40 (Rosenberg & Levy-Schwartz, 2003). For women ages 15-39 years, breast cancer accounts for 26% of all

cancer in females and for women ages 35-39 years, breast cancer accounts for 39% of all cancer in females (Altekruse et al., 2007).

Women's development up to the age of 40 years represents a period of life in which women begin to individuate, build their own networks of social support, start their career paths, and develop new friendships and romantic relationships (Boyd & Bee, 2008). These important decisions about their identities, careers, and relationships can have significant implications for the rest of their life path (Boyd & Bee, 2008). Thus, the experience of breast cancer for women during such an important developmental period in life can impede young women's ability to adapt to critical life events (Shaha & Bauer-Wu, 2009). In short, these young survivors often are forced to confront the potential transitory nature of life at the same life stage in which they are supposed to be beginning their careers (Shaha & Bauer-Wu, 2009).

Career issues take on special importance for breast cancer survivors because they serve as an indicator of quality of life, including both physical and mental health (Maunsell et al, 2004). Returning to work after cancer treatment can represent a return to normalcy and health after illness, a sign that women are in control of their lives rather than their illness dictating their life course, and a symbol of goals and hope for a future that they might have taken for granted before their illness (Clark & Landis, 1989; Ferrell et al., 1997; Kennedy et al., 2007; Maunsell et al., 2004; Mellette, 1985; Tiedtke et al., 2010). One's career and/or work often is an important component of one's self-concept, serving as a source of personal accomplishments and social recognition (Clark & Landis, 1989; Feldman, 1989; Ferrell et al., 1997). Work can also serve as a connection to a social support network, and social support repeatedly has been identified as a key to

recovery and coping after breast cancer (Ashing-Giwa et al., 2004). On a more concrete level, work is a source of income and medical benefits (Fantoni et al., 2010; Ferrell et al., 1997; Tiedtke, de Rijk, de Casterle, Christiaens, & Doncool, 2010), both of which are integral to receiving timely and responsive medical treatment for breast cancer.

To date, research on work issues for breast cancer survivors has focused largely on determining the rates at which these women return to work and what serves as the best predictors (e.g., treatment options) of who returns to work. This body of literature can help patients and physicians consider the effects of cancer treatment on employment when deciding between treatment alternatives (Bradley, Oberst, & Schenk, 2006). Others have begun to investigate the effects of breast cancer once women return to work, such as the long-term effects of fatigue, cognitive problems, and restricted mobility on work performance as well as earning loss and potential discrimination (e.g., Tiedtke et al., 2010). Several of these studies have found that women report that work becomes less important to them after their cancer experience (e.g., Fantoni et al., 2010). Braun, Hasson-Ohayon, Perry, Kaufman, and Uziely (2005) suggest that the experience of cancer makes other life domains, such as work or social domains, less important and the family domain more important. Schover, Rybicki, Martin, and Bringelsen (1999) hypothesize that coping with cancer might help survivors develop a new perspective on life that incorporates a deeper appreciation for each moment, and more research is needed on how that new life perspective might apply to career decisions, possibly increasing or decreasing work engagement and commitment. Although studies have begun the important task of exploring the work experiences of breast cancer survivors, many gaps still remain.

The median age of the sample in most of breast cancer survivorship studies on work is the mid 50s or early 60s (e.g., sample median age of 48.3 in Fantoni et al, 2010; median age of 51 in Hasset, O'Malley, & Keating, 2009; mean age of 61 in Stewart et al., 2001). Little is known about the unique career and work experiences of breast cancer survivors under the age of 40. Additionally, work rather than career has primarily been investigated. Work refers to the day-to-day activities that one conducts to achieve income whereas career refers to the cumulative work-related activities over the lifespan, including working towards long-term goals and fulfilling lifelong ambitions (Hall, 2002). More information is needed not just about whether these women plan to return to work each day, but also about whether their cancer experiences have affected the way they conceptualize their long-term career plans and goals. What does having breast cancer do to their career choices on a concrete as well as on a more abstract level? Moreover, the current body of breast cancer survivorship research has yet to address the intersection of gender, age, and health; more research is needed to understand how being young, a woman, and a breast cancer survivor collectively as well as individually have an impact on career development. The field of counseling psychology has a long-standing commitment to studying career development and multicultural issues, and therefore counseling psychologists can offer a unique perspective on conceptualizing young breast cancer survivors' career issues. Further, counseling psychologists' dedication to social justice is complementary with the need for the career issues of cancer survivors to be acknowledged within work spaces as well as within public policy.

Because the career development of young breast cancer survivors is a new area of inquiry, a qualitative approach would be useful for capturing participants' perspectives.

Qualitative research methods provide a rich and deep representation of the experiences of participants and of the meaning that participants ascribe to their experiences. Further, qualitative research is useful for identifying new constructs that may have been overlooked in pre-existing quantitative studies (e.g., studies on breast cancer and work) and that can contribute to theory-building for explaining a phenomenon. Information garnered from a qualitative study of this topic could extend breast cancer survivorship research by using these women's experiences as the foundation for understanding how to help women navigate both their cancer experience as well as make well-informed career decisions. Consensual qualitative research, specifically, offers a chance to give voice to young breast cancer survivors using a rigorous methodology.

## CHAPTER TWO

### Review of the Literature

This review of the literature first will present information on young breast cancer survivors, including diagnosis, treatment options, prognosis, and quality of life issues. Women only will be the focus. Cancer will be presented as a chronic health issue, rather than as an acute illness, and information on how chronic illnesses affect life roles in general with a specific focus on career development will be offered. Next, women's career development will be described generally and then with a specific focus on young women's career development. Finally, information on the employment of breast cancer survivors will be examined, including studies on who returns to work and the effects of breast cancer on work. This literature review then will present a description of consensual qualitative research and a rationale for why this research approach best fits the state of existing research on this topic and the study's research questions.

#### **Breast Cancer**

**Defining “young” breast cancer survivors.** Approximately 250,000 breast cancer survivors under the age of 40 currently are living in the United States (Rosenberg & Levy-Schwartz, 2003), and 10,000 young women are projected to be diagnosed with breast cancer within the next year (American Cancer Society, 2009). Although breast cancer researchers have varied in their definition of a “young” breast cancer survivor, this study will use the criteria set forth by the Young Survival Coalition (YSC) and the Tiger Lily Foundation. The YSC is a national non-profit organization begun in 1998 by three breast cancer survivors “dedicated to the concerns and issues that are unique to young women and breast cancer” (Young Survival Coalition, 2010). The Tiger Lily Foundation

is a local breast cancer support, education and advocacy organization for women diagnosed at the ages of 15 to 40 years. Both the YSC and the Tiger Lily Foundation define young women as aged 40 years or younger. Moreover, when presenting its annual cancer statistics, the American Cancer Society groups its age brackets using a 19 year time period, such that the ages of 20-39 are grouped together. Thus, using the age cut-off of 40 matches the age groupings used by the American Cancer Society. Premenopausal status has also been used to determine if a woman is a “young” survivor. In 2003 and 2006, more than 97% of women giving birth were under the age of 40 (Hamilton, Martin, & Sutton, 2004; Osterman, Martin, & Menacker, 2009), and thus the age of 40 has also been linked with the majority of women’s childbearing years. Therefore, using the cut off of age 40 and younger matches women’s fertility status and mirrors the criteria used by other researchers (e.g., Aebi & Castiglione-Gertsch, 2003) and cancer organizations.

**Diagnosis, treatment, and prognosis of young breast cancer survivors.** The American Cancer Society (2010) recommends that women in their 20s and 30s have a clinical breast exam (CBE) during their regular health exam by a health professional at least every three years. Thus, for young breast cancer survivors, they often discover a lump in their breasts on their own, typically during a breast self-examination (Rosenberg & Levy-Schwartz, 2003), rather than the lump being discovered by a medical professional. If a lump is found, women usually undergo a mammogram, an x-ray of the breast. Doctors look for calcifications (i.e., tiny mineral deposits within the breast tissue) and masses (e.g., cysts, tumors) when conducting the mammogram, and possibly follow-up with additional imaging tests or a biopsy. During a biopsy, doctors test for

malignancy, usually surgically removing tissue, staining it, and examining it microscopically.

A biopsy represents the only method for determining if cancer is present. Most breast cancer is invasive (infiltrating) carcinoma (i.e., cancer cells have grown beyond the layer of cells where they began) rather than carcinoma in situ/non-invasive/pre-invasive (i.e., cancer cells are confined to the layer of cells in which it began and therefore is confined to the ducts or lobules). Invasive ductal carcinoma, the most common type of breast cancer representing 80% of invasive breast cancer, begins in a milk passage of the breast, moves through the wall of the duct, and begins to grow in the fatty tissue of the breast. It may spread or metastasize to other body parts through the bloodstream and lymphatic system. Invasive lobular carcinoma begins in the lobules, which are the milk-producing glands. Invasive lobular carcinoma also has the potential to metastasize to other body parts.

The pathologist assigns a grade to the breast cancer based on how similar the biopsy sample is to normal breast tissue, with the lower grade number indicating a slower-growing cancer that has a lower likelihood of spreading and a higher grade number indicating a faster-growing cancer that has a higher likelihood of spreading. The tumor grade is used in predicting a woman's prognosis and in determining the need for adjuvant treatment after surgery. The biopsy will also test for estrogen (ER positive) and progesterone (PR positive) receptors, and women with hormone receptor-positive cancers typically have a better prognosis and are more responsive to hormone therapy than women with cancers without these receptors. Prognosis and treatment also depends on the stage of the breast cancer. Staging refers to the extent of the cancer in the body, and

it depends on whether the cancer is invasive, the tumor size, the involvement of lymph nodes, and whether cancer has been located in other parts of the body.

Depending upon the characteristics of the breast cancer, a woman will determine her treatment options, possibly after speaking with a surgeon, a plastic surgeon, a medical oncologist, and a radiation oncologist. A woman might also meet with a fertility specialist. Treatment options are surgery, including lumpectomy (i.e., surgical removal of a tumor within the breast, a type of breast conserving therapy); mastectomy (i.e., surgical removal of the breast); axillary lymph node dissection (i.e., removal of lymph nodes to see if cancer has spread); breast reconstruction; radiation therapy; chemotherapy; hormone therapy, or the use of drugs to suppress ovarian functions that feed the breast cancer (e.g., Tamoxifen, Femera); and targeted therapy, or the use of drugs that target changes in specific genes. Treatment typically can span from one day to 18 months. For instance, surgery most often requires hospitalization with a 1-3 week recovery time. After surgery, women sometimes experience lymphedema, the swelling of a body part and usually swelling of the arm from which lymph nodes are removed. Chemotherapy side effects can involve nausea, vomiting, hair loss, sleep problems, cognitive difficulties, and anemia and risk for other illnesses due to lowered red and white blood cell counts. Radiation side effects can entail fatigue and skin burns. Some women may require a combination or all of the described treatments, potentially interrupting their daily functioning significantly for an extended period of time.

A multitude of studies have found that breast cancer survivors diagnosed before the age of 40 face a worse prognosis than older women diagnosed with breast cancer. Aspects of this poorer prognosis include a higher risk for cancer recurrence and death,

especially if their tumors are hormone receptor negative (Aebi et al., 2000; Han et al., 2004). Young breast cancer survivors have also been found to have more aggressive tumors and to be at greater risk for local recurrence and death after breast-conservation therapy (Gajdos, Tartter, Bleiweiss, Bodian, & Brower, 2000).

**Quality of life of young breast cancer survivors.** Although young breast cancer survivors represent more than a quarter of a million women in the United States and 12.4% of breast cancer survivors are diagnosed under the age of 45 years (Altekruse et al., 2007), less than 1% of breast cancer studies examine this population (American Cancer Society, 2006). Based on the research that does exist currently, it is recognized that young breast cancer survivors, compared to their older counterparts, are more likely to express concerns about fertility loss and early menopause as a result of treatment, the safety of pregnancy after treatment, the financial impact of cancer on their nascent careers, and higher mortality rates (Avis, Crawford, & Manuel, 2004; Dunn & Steginga, 2000; Thewes, Butow, Girgis, & Pendlebury, 2004).

Conflicting findings have been reported on whether young breast cancer survivors report a quality of life similar to cancer-free women of the same age. For instance, Ganz et al. (1998) offered support for the hypothesis that after one to ten years post-diagnosis, young breast cancer survivors report a quality of life similar to a healthy control group whereas Vacek, Winstead-Fry, Secker-Walker, Hooper, and Plante (2003) report a greater reduction in the quality of life of young breast cancer survivors that lingers many years post-treatment.

Quality of life studies have relied heavily on self-reports without incorporating measures of social desirability. It is unknown as to how surviving post-treatment might

influence women's responses about their quality of life. Perhaps some might feel pressure to give the socially desirable response that they have grown emotionally and their life satisfaction and life meaning have improved as a result of their cancer experience.

Others might be consumed with anxiety about recurrence or body image post-treatment, which could lead to lower scores on a self-report of quality of life. Further, even having a lower quality of life for a few years is significant and can have a critical impact on life roles and goals; the duration of lower quality of life should not overshadow the consequences of experiencing a health event that affects quality of life negatively.

Recognizing the complexity of answering the question of whether young breast cancer survivors have lower rates of quality of life than their healthy counterparts, researchers are beginning to identify specific risk factors for lower levels of quality of life, including chemotherapy or hormonal therapy (Casso, Buist, & Taplin, 2004; Ganz et al., 2002), cancer recurrence (Bloom, Stewart, Chang, & Banks, 2004), pre-treatment psychiatric history (Morasso et al., 2001), and perceived lack of social support (Sammarco, 2001).

The physical, psychological, cognitive, and social domains of quality of life have been explored. In terms of the physical domain, short-term and long-term side effects have been reported as pain, difficulty performing physical tasks, lymphedema and limited motion of the arm, nausea, vomiting, and fatigue. Certain treatments also pose specific risks. For example, chemotherapy is associated with increased cardiac complications and the use of aromatase inhibitors is a risk for bone loss and increased fractures (Dizon, 2009; Perez, 2007). Many of these treatment effects never receive medical attention. For instance, cancer pain affects between 33-52% of non-metastatic breast cancer survivors (Dow, Ferrell, Leigh, Ly, & Gulasekaram, 1996) yet often goes untreated (Cleeland et

al., 1994). Young women also have reported hot flashes, weight gain, body image dissatisfaction, and vaginal dryness (Avis et al., 2004). Women aged 40-49 who underwent a mastectomy reported greater physical impairments than women who underwent a lumpectomy, including pain, swelling, and numbness (Casso et al., 2004). In a bibliographic review of quality of life studies with breast cancer survivors, Montazeri (2008) found that pain, fatigue, arm morbidity and postmenopausal symptoms were reported most frequently by breast cancer survivors. Weight gain is another common complaint, especially among women who complete chemotherapy treatment. Saquib et al. (2006) found that only 10% of breast cancer survivors returned to their pre-diagnosis weight, and weight gain was associated with chemotherapy treatment. Casso et al. (2004) suggest that the presence of cancer-related symptoms (e.g., fatigue, pain, weight gain) continue years after diagnosis and hold the potential to impact significantly survivors' day-to-day well-being.

Although studies on quality-of-life issues, such as those on physical health, are important for understanding the well-being of breast cancer survivors, most of this body of research is plagued by several limitations. The bulk of these studies uses predominantly White samples with relatively high levels of education, who have access to comprehensive health care, and reflect an absence of geographic diversity (e.g., Casso et al., 2004). Further, the majority of quality-of-life studies rely on participants' self-reports, thereby suffering from mono-method bias. The participants' perspectives on their quality-of-life are undoubtedly important, but perhaps provide only one part of the complete picture. Research on survivors' cognitive functioning represents one area that

is beginning to incorporate objective measures as well as self-reports on a quality of life issue.

Young breast cancer patients have reported greater decreases in cognitive functioning than their older counterparts (Arndt et al., 2004), especially among women receiving chemotherapy treatment. It is difficult to determine how the interplay among emotional distress, treatment side effects, and direct effects of cancer affect cognitive functioning. Yet, chemotherapy has been consistently linked to difficulties in attention, learning, processing speed (Wefel, Lenzi, Theriault, Davis, & Meyers, 2004), verbal working memory and visual memory (Bender et al., 2006). Anti-estrogen medication also has been connected to problems with verbal memory and delayed processing speed (Jenkins, Shilling, Fallowfield, Howell, & Hutton, 2003). More research is needed to understand fully the impact of breast cancer and its treatment on women's cognitive functioning. Most of the current research has relied on women's self-reports of cognitive declines after chemotherapy, which limits the conclusions that can be drawn. Self-reports have been shown to correlate with subjective measures of distress rather than with objective measures of cognitive functioning (Reid-Arndt, 2006). A 2003 meta-analysis (Anderson-Hanley, Sherman, Riggs, Agocha, & Compas) of cognitive declines among breast cancer survivors found that the greatest effects were from verbal memory and executive functioning. Thus, specific cognitive tests such as the WAIS Digit Span and the WAIS Digit Symbol are now being used as objective measures of pre- and post-chemotherapy cognitive functioning (Reid-Arndt, 2006). But until more research has been conducted using objective measures of cognitive functioning post-chemotherapy,

any conclusions that can be made based on the current research are restricted (Reid-Arndt, 2006).

Research on psychological functioning of breast cancer survivors also is beginning to integrate results from studies going beyond the use of self-report measures (e.g., structured clinical interviews). In relation to psychological functioning, prevalence rates of depression and anxiety in breast cancer survivors are typically around 20% (Dausch et al., 2004; Ell et al., 2005; Wenzel et al., 1999), and reported depression rates have ranged from 1.5-46% (Massie, 2004). Using a structured clinical interview, Burgess, Love, Cornelius, Graham, Richards, and Ramirez (2005) found a nearly 50% rate of depression, anxiety or both during the 1<sup>st</sup> year after the breast cancer diagnosis that reduced to 25% in the 2<sup>nd</sup> through 4<sup>th</sup> year post-diagnosis. By the 5<sup>th</sup> year after diagnosis, the rates of depression, anxiety, or both had reduced even further to 15% (Burgess et al., 2005). Of those who had a cancer recurrence, 45% experienced depression, anxiety, or both within three months of the recurrence. Burgess et al. (2005) conclude that the prevalence of depression, anxiety, or both is around twice that of the general female population for breast cancer survivors during the first year after diagnosis, but that so long as they remain in remission, the prevalence decreases to levels comparable to the general female population after that first year. Thus, it is likely that symptoms of anxiety and depression will abate several years after diagnosis when the cancer does not reoccur (Bloom et al., 2004; King, Kenny, Shiell, Hall, & Boyages, 2000).

Spiegel and Giese-Davis (2003) note the difficulty in examining the prevalence of depression in cancer patients due to some symptoms of cancer and treatment side-effects resembling the symptoms of depression, such as pain and fatigue. Moreover, the sample

in the study conducted by Burgess et al. (2005) was early stage breast cancer survivors aged 60 years and younger (median age was 48.7 years,  $SD=7.8$  years). Research on the unique aspects of young breast cancer survivors' psychological functioning is needed.

Although lacking information about the unique experiences of young breast cancer survivors, the current body of research on psychological functioning of survivors indicates that the risk factors for depression and anxiety relate to premorbid patient variables rather than to disease or treatment variables (Burgess et al., 2005; Fallowfield, 1986; Harrison & Maguire, 1994; Pinder, Ramirez, Richards, & Gregory, 1994). More specifically, these risk factors are similar to those found in the general female population—history of psychological problems, younger age, having children at home, non-cancer related life stressors, and lack of social support. During but not after treatment, chemotherapy may increase the risk for psychological difficulties (Hughson, Cooper, McArdle, & Smith, 1986). Effective communication between the survivors and their medical treatment team, especially with their surgeon, seems to protect women against depression, anxiety, or both (Fallowfield, 1986; Fallowfield, Hall, Maguire, Baum, & A'Hern; 1994; Harrison & Maguire, 1994). In contrast, treatment variables such as prognosis, type of surgery (Kiebert, de Haes, & Van de Velde, 1991; Lee et al., 1992), adjuvant radiation, and detection of breast cancer through screening rather than through self-discovery (Burgess, Ramirez, Richards, & Potts, 2003) fail to predict risks for depression, anxiety, or both. The majority of these studies on risk factors for depression and anxiety were conducted over ten years ago, and thus more recent research in this area is needed.

Across a multitude of studies examining breast cancer survivors' psychological functioning, quality of social support repeatedly predicts higher levels of quality of life (e.g., Ganz et al., 2002), yet multiple studies have described how younger breast cancer survivors experience increased disruption in their social relationships and sexual functioning (Matthews, Baker, Hann, Denniston, & Smith, 2002; Mor, Malin, & Allen, 1994). Most of this research has focused on how experiencing breast cancer affects families. Families can serve as a key source of support for cancer survivors (Ell, 1996), and breast cancer survivors describe their husbands or partners as their most important source of support (Maunsell, Brisson, & Deschenes, 1995). However, experiencing cancer can also strain family relationships. The effect that cancer can have on women's psychological well-being can spill over to their partners (Kayser, Feldman, Borstelmann, & Daniels, 2010). Partners have reported fears of losing their wives/partners; fears of recurrence; problems with sexual intimacy; and feeling helpless, unprepared, or inadequate to help their wives/partners emotionally cope with their illness (Given & Given, 1992; Lethborg, Kissane, & Burns, 2003; Northouse & Peters-Golden, 1993; Walker, 1997). Husbands also have described sleep disturbances, disordered eating, and increased levels of anxiety and depression (Maguire, 1981; Wellisch, Jamison, & Pasnau, 1979). Younger husbands and partners described significantly greater difficulties managing domestic roles and dealing with concurrent life stressors (Northouse, 1994).

Northouse (1994) outlines particular vulnerabilities that young breast cancer survivors have for interpersonal and family concerns. She notes that young survivors may face the demands of the illness while also coping simultaneously with the demands of day-to-day care of young children and developing careers. Due to the greater family

demands experienced more often by younger women than older women, the cancer experiences of younger women can result in higher levels of family distress (Northouse, 1994). Further, when asked to describe their greatest concern about their breast cancer diagnosis, younger women reported that their families and children were their greatest concern whereas older women reported that survival was their greatest concern (Northouse, 1989). Younger survivors spoke of fears of not living long enough to see their children grow up and of not being able to have children in the future (Northouse, 1989).

Despite the strain that breast cancer can place on marital and family relationships, research consistently has demonstrated that couples experiencing breast cancer are no more likely to divorce than the normal population (Northouse, 1994). In fact, marital adjustment has been reported to improve in many couples over time (Lichtman, Taylor, & Wood, 1987; Northouse, 1994). However, an estimated one third to one fourth of couples report experiencing sexual problems after breast cancer (Maguire, 1981; Wellisch et al., 1979). Krychman (2006) found that up to 90% of women treated for breast cancer described some type of sexual dysfunction. Women have reported a lack of sexual desire, arousal disorders, anorgasmia, and dyspareunia; which have been attributed to such causes as changes in hormone levels, anxiety, vaginal dryness, prior trauma, vaginal stenosis, surgical scars, and concurrent illnesses such as hypertension (Dizon, 2009). In short, the social component of quality of life issues of breast cancer survivors is important to consider and can have a long-lasting impact on their well-being.

In addition to negative quality of life issues associated with breast cancer, researchers have investigated the positive effects (Mols, Vingerhoets, Coebergh, & van

de Poll-Franse, 2009). Some breast cancer survivors have reported a higher level of life satisfaction than the general female population (Kessler, 2002) and levels of well-being similar to those reported by age-matched healthy control groups of women (Cordova et al., 2001). According to Mols et al. (2009), breast cancer survivors describing higher levels of life satisfaction also stated they had higher levels of posttraumatic growth, specifically in the domains of relationships with others, personal growth, and appreciation for life. Finding benefit also has been reported in breast cancer survivors after treatment as well as 5-8 years post-treatment (Lechner et al., 2006; Schroevers, Ranchor, & Sanderman, 2004). Other studies have replicated these findings and added spiritual change as another area of growth (Cordova et al., 2001; Petrie, Buick, Weinman, & Booth, 1999). Petrie et al. (1999) found that the majority of breast cancer survivors described improved close relationships after treatment completion, demonstrating that experiencing breast cancer holds the potential to enhance (and not only strain) interpersonal relationships. But again, issues with social desirability and an over-reliance on self-reports limit any definitive conclusions that can be drawn on the positive effects of experiencing breast cancer.

In summary, quality of life research on breast cancer survivors indicates that women struggle with physical problems long after treatment ends whereas the psychological and social consequences of experiencing breast cancer are less clear. To complement the research findings on quality of life issues for breast cancer survivors, I present research on cancer survivorship and chronic illness in general.

### **Cancer as a Chronic Illness**

As a result of improved survival rates for those diagnosed with cancer, the illness has become curable for some and has transformed into a chronic illness for many (Rowland, 2008). Rowland (2008, p. 361) notes that “as advances made in cancer control diffuse across the country, combined with declines in mortality from heart disease and the aging of the nation, the number of individuals living through and beyond cancer will continue to rise.” Women under the age of 45 have an 81% 5 year survival rate whereas women aged 65 and older have an 86% 5 year survival rate (American Cancer Society, 2009). Local recurrence rates have been reported as approximately 10% 15 years post-treatment for women diagnosed at the age of 40 or younger (Turaka et al., 2009), with the recurrence rate largely dependent on the type of treatment. Across all breast cancer survivors in the United States from 2003-2007, approximately 0.0% died under age 20; 0.9% between 20 and 34; 6.0% between 35 and 44; 15.0% between 45 and 54; 20.8% between 55 and 64; 19.7% between 65 and 74; 22.6% between 75 and 84; and 15.1% 85+ years of age; over 78% of women who died from breast cancer from 2003-2007 were older than 55 years of age (Altekruse et al., 2007). In summary, although young women with breast cancer continue to face a worse prognosis than their older counterparts, it is anticipated that as cancer treatment continues to improve an increasing number of young breast cancer survivors will also live through and beyond their cancer experience.

In a qualitative study of the concerns and needs of Australian breast cancer survivors who had recently completed treatment, Oxlad, Wade, Hallsworth, and Koczwara (2008) found that the women viewed their cancer experience as a chronic illness. One participant stated “I’m living with a chronic illness, not that I’m dying with cancer . . . So, if you know that you’re living with something, that can be managed, then it

helps, it has helped me to manage others, who come along, and um, you know, a lot of people out there in society still see breast cancer as, a death, and that's very unhelpful" (Oxlad et al, 2008, p. 163). Polinsky (1994) notes that although cancer begins as a crisis situation involving diagnosis and treatment, it transforms into a chronic illness comprised of lifelong follow-up medical care and of changes in psychological, social, and vocational functioning.

Yet cancer research is only beginning to address the chronicity of the cancer experience. Many survivors describe the black hole of information and support that they experience after completing treatment and are on their own to navigate the management of their illness. By recognizing the chronic nature of managing breast cancer, medical and psychosocial researchers can begin to identify ways to support survivors throughout their lifetime, not only during the treatment phase.

The field of cancer survivorship has blossomed in recent years in response to the chronic nature of cancer. The National Coalition for Cancer Survivorship (NCCS) has begun using the term "cancer survivor" to describe anyone who has received a cancer diagnosis from the point of diagnosis onward, regardless of whether the individual eventually dies from cancer or from another reason (Rowland, 2008). The NCCS intended for the usage of the term "cancer survivor" to help cancer treatment teams to begin to recognize and incorporate the future hopes, plans, and dreams of cancer patients into their treatment decisions; quality of life issues were deemed paramount from the very beginning of cancer treatment. Rowland (2008) outlines the goals of cancer survivorship research as identifying, examining, and preventing when possible adverse cancer-related and treatment-related outcomes (e.g., lymphedema, sexual dysfunction,

poor quality of life), creating a knowledge base regarding optimal post-treatment care, and providing information on how to enhance health and quality of life post-treatment. Because the work lives of young breast cancer survivors affect their treatment-related outcomes (e.g., whether insurance covers certain treatment options, access to psychotherapy or complementary alternative medicine), their post-treatment care (e.g., networks of social support that help them transition from active treatment to recovery), and their quality of life post-treatment (e.g., work satisfaction during their recovery), it deserves greater attention in the cancer survivorship research literature.

### **Career Effects of Chronic Illness**

Before examining the effects of chronic illness on career development, both terms need to be defined clearly. Chronic illnesses are defined as those lasting more than one year, limiting a person's functioning, and necessitating ongoing medical care (Beatty & Joffe, 2006). They have an unpredictable trajectory, vary from day to day, never go away (i.e., people with chronic illness must deal with the stress of knowing that they could become sick at any time), and often are invisible or ambiguous (Beatty & Joffe, 2006). Based on these characteristics and an approximate breast cancer recurrence rate of 10% 15 years post-treatment for women diagnosed at the age of 40 or younger (Turaka et al., 2009), post-treatment breast cancer can be considered a type of chronic illness. Career refers to the cumulative work-related activities that accumulate over the lifespan, involving working towards lifelong goals and ambitions (Hall, 2002), whereas work refers to an activity at one point in time, usually conducted to earn money. Career development is defined as the psychological, behavioral, and contextual forces that influence one's career across the lifespan, and includes career patterns, career decision-

making styles, and the expression of values and life roles (Niles & Harris-Bowlsbey, 2005).

Chronic illnesses are costly on multiple levels, and can affect career development significantly. Ninety-million people in the United States have a chronic illness, with 25 million of them disabled as a result (Walker, 2010). The most common chronic illnesses are cancer, hypertension, mental illness, pulmonary diseases, heart conditions, stroke, and diabetes (Walker, 2010). Sometimes, chronic illnesses are invisible (e.g., chronic fatigue syndrome, multiple sclerosis), which can pose further complications to career development (e.g., attempting to justify the need for employment accommodations; Vickers, 2001). The indirect cost of chronic illness in the U.S. is an estimated \$234 billion U.S. dollars per year, including such costs as lost productivity and non-reimbursable home care, and this cost soars up to \$1.1 trillion per year when factoring in caregivers' lost productivity (De Vol & Bedroussian, 2007).

Although the cost of chronic illness on career development cannot be assigned a numerical figure, it includes such things as negative effects on abilities and motivation, premature foreclosure on career decisions, and experiences of work discrimination or underemployment. Careers incorporate individuals' identities, yet these identities are forced to shift when individuals experience a chronic illness (Beatty & Joffe, 2006). At minimum, a chronic illness requires individuals to no longer take their health for granted. The shift in individual identity caused by illness can result in a reevaluation of short-term and long-term life goals. Career success may become more or less important to individuals as they reassess their lives. For instance, individuals living with HIV had reported that their chronic illness led them to adopt a new perspective on the role of

career in their lives, reevaluate what they view as important (Bettinger, 1999), and redefine what makes work meaningful (Gant, 2000).

Walker (2010) describes the central role that work plays in individuals' lives, both cross-culturally and historically. As a result of the amount of time spent and the relationships that develop at individuals' site of employment, work can become an integral part in the identity of employed adults (Walker, 2010). It can offer a source of life meaning and purpose for many individuals (Barrio & Shoffner, 2005). Further, paid employment receives privileged status over other forms of work (e.g., volunteering, housework) within society (Grint, 2005), which also contributes to the importance of work and career in individuals' lives. In addition to changes in income and daily routine, changes in identity due to leaving work because of illness can have a gigantic impact on individuals' lives (Walker, 2010) and result in feelings of uselessness and in loss of self-esteem (Gee, Pearce, & Jackson, 2003). Walker (2010) describes the inherent uncertainty in managing a chronic illness and the inability to plan for it. As a result, only time can predict whether individuals' decisions about how to manage both employment and their chronic illness were correct (Walker, 2010).

Illness interacts with career development by changing individuals' abilities, motivations, and priorities. One possibility is that individuals' level of commitment to work becomes apparent. Individuals might attempt to increase the time they spend in work activities that they find fulfilling and decrease the amount of time they spend in activities that they do not enjoy. Rather than focusing on the future, they may gain greater awareness of the value of living in the present (Hoffman, 1996). They might also reconsider how they define career success, with some focusing more on developing their

own internal measures of success and others focusing on others' measures of success as a means of compensating for their failing health (Beatty & Joffe, 2006).

Beatty and Joffe (2006) note that the life stage at which illness occurs can influence the impact it has on career development. For those in Super's exploration stage (ages 14-25), individuals can consider the effects of their illness when making career plans, and thus utilize appropriate career training and establish realistic career goals. But experiencing an illness at such an early stage of career development also can lead individuals to prematurely foreclose on certain career paths. If illness occurs later in career development, after basic vocational training has occurred, it can become more difficult to incorporate it into career paths. Switching to another career trajectory may be restricted by earlier career choices and training.

In both early and mid-career development, concerns about discrimination, underemployment, and access to medical insurance come to the forefront (Beatty & Joffe, 2006). Whether to disclose their illness to their employers, fellow workers, or customers can be a major concern. Individuals attempt to balance their right to privacy with their duty to notify their work office (Bishop & Allen, 2001; Tröster, 1997). How the work place responds to disclosure can have a major effect on individuals' career path, ranging from leading them to seek accommodations that will allow them to stay successfully in their current position or leading them to leave paid employment (Tröster, 1997). Some individuals with chronic illness refuse or are not offered promotions because of their illness. Others might experience "job lock," in which their job mobility is limited because a job change would mean losing their health insurance. Collectively, these experiences can result in under-employment in which individuals with chronic illness

remain in unsatisfying jobs and have restricted opportunities for career development (Beatty & Joffe, 2006). For some individuals with chronic illness, the “disincentives” for working outweigh the benefits, such as when they forego their careers in order to qualify for disability benefits (Barrio & Shoffner, 2005). In other words, their identity as someone with a chronic illness supersedes their career identity, and they leave the workforce with whether to ever re-enter the job market as an ongoing dilemma.

Issues of work-reentry have been explored in persons living with HIV/AIDS (PLWHA), as well as in many other areas of chronic illness research. Trujillo (2010) applies Social Cognitive Career Theory (SCCT; Lent, Brown, & Hackett, 1994, 2000, 2002) and Constructionist Theory to conceptualize PLWHA’s career decision-making processes regarding work re-entry. Based on Bandura’s Social Cognitive Theory, SCCT explains how individuals develop their career interests, engage in career decision making, and evaluate their level of performance. SCCT outlines how self-efficacy beliefs (i.e., people’s assessment of their capabilities to execute certain behaviors to obtain desired outcomes; Bandura, 1986) and outcome expectations (i.e., people’s beliefs about the consequences of behaviors) influence individuals’ interest development; with interests, self-efficacy, and outcome expectations influencing choice goals and all four factors then influencing choice actions. According to SCCT, environmental supports and barriers also influence self-efficacy, choice goals, and choice actions. Barriers are categorized as financial, instructional, social and familial, or gender or race discrimination. The four classes of supports include social support and encouragement, instrumental assistance, access to role models and mentors, and financial resources (Lent, Brown, & Hackett, 2002).

Constructivist theory as applied to career counseling posits that multiple realities exist, with each individual using his or her construction of reality to create meaning and develop his or her “life story.” In turn, an individual’s life story influences career choices and development (Peavy, 1996; Savickas, 2002, 2005, 2011). Career Construction Theory (Savickas, 2002, 2005), a career theory that integrates developmental theory, social constructivism, and narrative counseling, identifies the three themes of vocational personality (i.e., individuals’ career-related abilities, needs, values, and interests), career adaptability, and life themes. Vocational personality signifies the content or the “what” of career construction, career adaptability represents the “how,” and life themes symbolize the “why” (Savickas, 2002).

More specifically, career adaptability relates to attitudes, competencies, and behaviors that individuals utilize to adapt to work, and is comprised of the following five dimensions: concern, control, curiosity, confidence, and commitment. Concern captures a consideration of how individuals can begin to plan for the future, while control describes the belief that individuals can use self-regulation and influence the construction of their career. Curiosity represents interest and openness to exploring individuals’ possible selves and how they fit with the world of work whereas confidence describes the belief that individuals can overcome challenges and obstacles. Finally, commitment embodies the notion that career construction is lifelong and not tied to a particular job, therefore career indecision is reformulated as a chance to consider new career possibilities.

As the “why” of vocational behavior, life stories express individuals’ unique process of making meaning of their vocational personality and adaptability, and consider

the contextual components of time, place, and life roles. In other words, career stories “tell how the self of yesterday became the self of today and will become the self of tomorrow” (Savickas, 2005, p. 58). Life designing interventions, drawn from theories of self-construction (Guichard, 2005) and career construction (Savickas, 2005), have been identified as a method for using life stories to help individuals identify all of their life roles and examine the centrality of each role within their lives. The more central a life role, the more likely that life role will contribute to an individuals’ overall sense of meaning, and therefore mold their expectations for their life roles in the future (Savickas et al., 2009). In summary, in a constructivist approach, career counselors work to understanding the meaning that work holds for each individual as exemplified in his or her life story (Trujillo, 2010), and how “individuals construct their careers by imposing meaning on their vocational behavior and occupational experiences” (Savickas, 2005, p. 43).

Trujillo (2010) argues that SCCT (Lent, Brown, & Hackett, 1994, 2000, 2002) and Constructivist Theory (Peavy, 1996) can be integrated to explore PLWHA’s perceptions of motivations and barriers in their career planning. Career counselors working with PLWHA can address influential factors for career development such as their past work experiences, role models for having a career while living with HIV/AIDS, how others view their illness and career aspirations, and any perceived structural barriers for re-entering the work force (e.g., Medicare or Medicaid). These various factors affects PLWHA’s learning experiences, which in turn affects PLWHA’s self-efficacy beliefs and outcome expectations about work re-entry (Trujillo, 2010). Individuals must believe that they have the abilities needed to secure work and request work accommodations (i.e.,

self-efficacy) and that they will succeed in finding work as a result of their efforts (i.e., outcome expectations; Roessler, Kirk, & Brown, 1997).

Although research on the career effects of chronic illness is useful for conceptualizing breast cancer survivors' career and work issues, knowledge on unique aspects of women's career development also is important. To better understand how chronic illness may effect women's specific work and career experiences, I will present information on women's career development in general. I will then describe the research findings that have focused specifically on how breast cancer factors interact with work and career variables. Research from social cognitive career theory (Lent, Brown, & Hackett, 1994, 2000, 2002) and developmental career theory will be supplied.

### **Women's Career Development**

As of 2000 in the United States, 75% of women ages 25 to 44 were employed (U.S. Department of Labor, Bureau of Labor Statistics, 2003) and the most common family work structure is the dual-earner structure (Betz, 2005). Thus, work and career issues can be expected to affect most women at some point in their lives. Traditional models of career development captured only men's career experiences (Betz & Fitzgerald, 1987; Osipow & Fitzgerald, 1996). O'Neil and Bilimoria (2005) present three factors differentiating women's career development from men's: (1) disparate effects of family responsibilities on women's and men's careers (Hochschild, 1989); (2) the emphasis on relationships stemming from women's psychological development that may have an impact on women's career development (Fletcher, 1996; Kram, 1996); and (3) women's comparative lack of representation in high-level organizational positions can restrict their career progress (Ely, 1995; Kanter, 1997).

Although women currently have more career options available to them than ever before, they continue to plan their careers in consideration of how they will balance their careers with their family and home life (Fitzgerald, Fassinger, & Betz, 1995). At present, most women continue to serve as the primary caregiver to children (O'Neil & Bilimoria, 2005). Surrey (1991, p. 52) claims that "for women, the primary experience of the self is relational, that is, the self is organized and developed in the context of important relationships." In contrast, many men do not make career compromises out of consideration for how their career aspirations might impact their families (Betz, 2006).

Further, women are underrepresented in scientific and mathematics-related careers and in high-level positions in the fields of education, business, government, and the military (Betz, 2006). Women earn 72.7% of what men earn when employed full-time (Betz, 2006). In short, O'Neil and Bilimoria (2005) argue for the need to account for relational and contextual factors when conceptualizing women's career development.

Social cognitive career theory (SCCT; Lent, Brown, & Hackett, 1994, 2000, 2002) has garnered much empirical support for capturing career development in general and women's career development in particular. In research applying the tenets of SCCT to women's career development, Hackett and Betz (1981) and Lindley (2006) found that low self-efficacy expectations for male-dominated careers restricted women's openness to considering those career options. Additionally, Betz (2006) presents the following as barriers to women's career choices: math anxiety and avoidance, low career-related self-efficacy expectations, stereotypes about occupations best suited for men and women, women's underutilization of their abilities restricting their vocational interests, and barriers within the educational system. Supports and important personality factors

contributing to women's career development have also been identified. For instance, parental support and availability have been indicated as important predictors of the career achievement and aspirations of Mexican American, African American, Native American, and White women (Fisher & Padmawidjaja, 1999; Flores & O'Brien, 2002; Pearson & Bieschke, 2001; Juntunen et al., 2001). Mother's employment outside of the home and mothers' nontraditional gender-role beliefs also have been linked to their daughters' broadening of their vocational interests, as have having mentors and female role models (Betz, 2006). In terms of personality factors, an internal locus of control, high self-esteem, independence, a sense of self-sufficiency, and a feminist orientation are important for women's career achievements (Betz & Fitzgerald, 1987; Farmer, 1997; Fassinger, 1990; O'Brien & Fassinger, 1993). Barriers and supports can influence women's self-efficacy (Betz, 2006), and in turn, self-efficacy can influence outcome expectations, interests, and choice behaviors (Lent et al., 2001, 2003).

In order to understand how self-efficacy beliefs and outcome expectations as well as barriers and supports affect women over the lifespan, a developmental approach is useful. Developmentally based stage models assume that individuals progress through a series of stages, with each stage involving specific developmental tasks. For instance, Super's (1953) life-span model presents the five stages of growth, exploration, establishment, maintenance, and disengagement. He hypothesized that individuals' commitment to work roles, priorities, and goals would shift depending upon their life-stage. Thus, each stage could involve its own specific supports and barriers as well as relevant self-efficacy beliefs and outcome expectations.

Another useful developmental theory is emerging adulthood, which has recently been identified as a distinct stage that overlaps Super's (1953) life span stages of exploration and establishment. Typically occurring in the late teens through the early twenties, emerging adulthood is a period during which individuals in postindustrial countries have the greatest freedom to explore a wide range of possible life directions in love, work, and world views (Arnett, 2000, 2004). Arnett (2004, 2007) identifies five distinct features of emerging adulthood: (1) age of identity explorations, (2) the age of instability, (3) the self-focused age, (4) the age of feeling in-between, and (5) the age of possibilities. The possibilities resulting from the postponement of major life decisions has been connected to improved well-being during this developmental period as individuals enjoy freedom from obligations and move toward self-sufficiency (Arnett, 2000, 2007). Yet emerging adulthood can also be characterized by anxiety as individuals navigate identity exploration (Arnett, 2007).

Within the context of work, Arnett (2000) explains that during emerging adulthood, individuals generally are not constrained by adult responsibilities and enduring societal roles (e.g., marriage or parenthood), and therefore can experiment and explore a wide range of jobs without being overly concerned with how their job choices in the present moment may have an impact for their lifelong career development. They may be more likely to travel abroad or pursue educational opportunities, while postponing commitments such as being financially independent, owning property, or raising children. Emerging adulthood can represent a period of identity exploration that allows individuals to begin to identify what type of work fits with their strengths, values,

and life goals by gaining a wide range of life experiences that are not tied to long-lasting commitments (Arnett, 2000).

Konstam and Lehmann (2011) have called for career development theories to account for the unique career needs of emerging adults, noting the complexity of identity exploration in the context of ever-changing work environments (e.g., globalization, normative multiple job changes over the course of a career). In addition to capturing the complexity of the current work environment, such career theories would need to account for personality or circumstantial factors that could affect possibilities for career exploration. For instance, social support, optimism, adaptability, and resilience have been identified as important factors in emerging adults successfully transitioning from college to career (Murphy, Blustein, Bohlig, & Platt, 2010). Yet not all individuals in their late teens through their early twenties have freedom from role obligations (Arnett, 2000) and therefore may not have full volition over their career choices (Osgood, Foster, Flanagan, & Ruth, 2005). Further, little is known about the impact of factors such as illness or gender on the career needs specific to emerging adults.

To specifically explore how women's careers develop over the lifespan beyond the time frame of emerging adulthood, O'Neil and Bilimoria (2005) conducted a qualitative study that devoted particular attention to the influence of societal, organizational, and relational contexts. They presented a three-phase model to represent women's experiences: the idealistic achievement phase (phase 1); the pragmatic endurance phase (phase 2); and the reinventive contribution phase (phase 3). Phase 1 was characterized by women having an internal career locus, believing that they alone were responsible for their career success, but that internal locus became increasing

externally focused as women proceeded through the other two phases. Women in this first stage of career development were the most optimistic about their career possibilities. Women in phase 1 reported that economic factors influenced their career choices at a greater level than women in phase 3. Phase 1 women also reported that their parents had a significant influence on their career and life choices, with that influence decreasing as women aged. Phase 1 and 3 women were less likely than phase 2 women to report that their spouses influenced their career choices, yet phase 1 women gave the greatest level of attention to how children might affect their future careers. When asked what having a career meant to them, women from all three phases most often responded that the meaning of career was “making a difference, being of service, impacting others” (O’Neil & Bilimoria, 2005, p. 179).

Because young breast cancer survivors will fall into career phases 1 and 2, these two phases will be described briefly. O’Neil and Bilimoria (2005) summarized phase 1 of career development as the “idealistic, achievement” phase of women aged 25-35 in which they make their career choices as a means of achieving career satisfaction and accomplishment. They are highly motivated and view their careers as a path to personal fulfillment and life satisfaction. In short, “they know what they want and are determined to make it happen” (O’Neil & Bilimoria, 2005, p. 182). By the time women reach the second phase of their career development, the “pragmatic, endurance” phase of ages 36-45, they are now focused on what is necessary to get things done. They are juggling multiple responsibilities and the relational context has become more salient, with them possibly doubting whether work is their primary priority and with them beginning to ascribe increasing importance to other dimensions of their life (e.g., home, community).

They dedicate their energies to these other dimensions, rather than to work alone, to achieve a sense of fulfillment and meaning.

The three phases outlined by O'Neil and Bilimoria (2005) need replication by additional qualitative as well as quantitative research to ensure their reliability and validity. The authors acknowledge that their results could be limited to the particular socio-historical context in which the data was collected. Moreover, the sample was comprised of professional women (55% had a Master's degree) and was 80% White. The contextual influences of minority women or non-professional working women may not have been captured fully in this study, and it remains to be seen as to whether the three career phases apply to all socioeconomic classes, races, ethnicities, and health statuses of all women. Despite these limitations, O'Neil and Bilimoria (2005) provide a beginning framework for conceptualizing the stages of women's career development.

Although research has been conducted on the effects of chronic illness on career and women's career development, the breast cancer research literature has primarily examined how breast cancer affects women's work. This body of literature has explored who returns to work and the effects of breast cancer on work performance, engagement, and earning potential. Little research has addressed how breast cancer affects young women's career development, such as how they envision their long-term career goals after experiencing breast cancer at a young age. Therefore, the research on breast cancer and work will be reviewed next because it reveals the remaining gaps to be addressed by this study's research questions.

### **Who Returns to Work**

The majority of women receive their breast cancer diagnosis when of working age, and a wide range of studies have been conducted to determine their length of absence from work, predictors of work retention, and factors unexpectedly not associated with return-to-work. Most of this research has categorized work as “employed” versus “not employed,” rather than attending to other (potentially mediating) factors such as workplace accommodations. Collectively, these studies reveal that breast cancer survivors appear to resume their working lives, on average, by two to three-years post-treatment if they remain cancer-free.

For instance, according to Johnson et al. (2009), ten months after curative primary surgery with or without systemic adjuvant therapy, slightly more than half of women returned to work whereas 41% were on sick-leave either part-time or full-time. In a study of breast cancer survivors in the United States, Hasset, O’Malley, and Keating (2009) found that of the 79% of the sample who was working either full or part-time at the time of diagnosis, 93% of women were still working 12 months later. No employment information (e.g., whether they eventually joined the workforce) was given for the women who were not working at the time of diagnosis. Tracking over 2,000 breast cancer survivors living in the Netherlands for a two year period, Roelen et al. (2009) found that the mean duration of sickness absence due to breast cancer was 349 days (+/- 5 days) with 37% of absences lasting longer than one year and 12% of absences lasting longer than 2 years, especially in women ages 25-34 years. Yet the majority of breast cancer survivors returned to work. Fantoni et al.’s (2010) study conducted in France calculated a median sick leave of 10.8 months after a breast cancer diagnosis, with 54.3% of women returning to work by 12 months after starting treatment and 82.1% of women

returning to work 3 years after starting treatment. In a study conducted in Quebec of breast cancer survivors aged 18-59 years working full-time at diagnosis, Drolet et al. (2005) reported that 85% of breast cancer survivors missed more than 4 weeks or more of work during the first year of being disease-free compared to 18% of a cancer-free control group of women similarly aged but that by the third year of being disease-free, breast cancer survivors were not more absent than the control group. In short, most women return to work within a few years post-treatment. For those who do make employment changes post-treatment, Hasset, O'Malley, and Keating (2009) found that the most common was from full-time to early retiree (67%), from full-time to unknown status (12%), from full-time to COBRA (9%; uninsured status), from full-time to retiree (6%), and from full-time to long-term disability (5%).

These studies on when breast cancer survivors return to work are useful for determining a possible range of the length of work absence and suggest that by approximately two years post-treatment, breast cancer survivors who have remained cancer-free have returned to their pre-treatment levels of work. Yet the disparate ways of assessing work status (e.g., full-time, part time) across these studies make it difficult to make cross-study comparisons. Further, these studies have been conducted in many different countries, with each country's sick-leave and medical policies potentially affecting the time working women take off due to cancer. A more useful approach may be to explore the predictors of work absence and retention.

The duration of work absence after breast cancer has been linked to a variety of factors, including type of treatment, impaired mobility, fatigue, union membership, whether self-employed, work support, race, physical demands of the job, and co-

morbidities. Consistently, chemotherapy has been linked to a longer absence from work (Balak et al., 2008; Fantoni et al., 2010; Johnsson et al., 2009; Mujahid et al., 2010), including going on long-term disability, stopping work, or retiring (Hasset, O'Malley, & Keating, 2009). Several studies also have reported this link for multimodal treatment (Balak et al., 2008; Drolet et al., 2005). Fatigue, often related to treatment, represents a side effect of breast cancer connected to both a delayed return to work and a long-term effect on work performance once women have resumed employment (Balak et al., 2008). In contrast, radiation therapy does not appear to influence employment status (Hasset et al., 2009).

The lack of emotional and instrumental support in the work organization has been deemed an important predictor of limited and delayed return to work (Mujahid et al., 2010), and indicates the importance of environmental factors, such as having a sense of belonging to the work environment (Fantoni et al., 2010) and having a flexible work schedule (Mujahid et al., 2010), for breast cancer survivors' career development and work life. Further, unmarried women in France have been found to return to work more quickly than married women (Fantoni et al., 2010), perhaps another indicator of the importance of social support offered by the work environment in breast cancer survivors' return to work. Fantoni et al. (2010) also has suggested that in addition to finances, satisfaction at work serves as a key motivator for returning to work; and thus, those with a stressful, exhausting job comprised of repetitive tasks would be less willing to return to work. This hypothesis was supported by Hasset, O'Malley, and Keating's (2009) findings that women with a physically demanding job and less accommodating work management were more likely to have disrupted employment.

Racial and ethnic minorities have been shown to be at risk for lower rates of return to work than Whites. Mujahid et al. (2010) reported that African American women were three times more likely and Latinas were 3.4 times more likely to stop working compared to White women post-treatment. Ethnic and racial differences in return to work are not surprising given the racial and ethnic differences also present in the diagnosis, treatment, and outcomes of breast cancer. More specifically, the American Cancer Society (2009) reports the highest breast cancer mortality rates for Black women, followed by White, Hispanic, American Indian, and Asian/Pacific Islander women whereas the highest breast cancer incidence rates are for White women, followed by Black, Asian/Pacific Islander, Hispanic, and American Indian women. Some have pointed to confounding factors in the racial and ethnic differences for mortality, such as socioeconomic status and comorbid conditions (i.e., hypertension, diabetes, heart disease; Bach et al., 2002). Although researchers are beginning to attend to racial and ethnic differences in breast cancer, this line of study is in a nascent stage and ethnic minorities need to be better represented in breast cancer research before conclusions can be drawn (e.g., Jones & Chilton, 2002).

Conflicting results have been found as to whether age and educational level predict work retention and return to work. Along with an income of less than \$20,000, Drolet et al., (2005) found that older age in breast cancer survivors more than quadrupled the likelihood of not working three years post-treatment. Others have also reported that older age (Hasset, O'Malley, & Keating, 2009) and lower educational level delayed return to work (Fantoni et al., 2010). Yet age, educational level, and matrimonial status were not associated with return to work in a Swedish study of 270 breast cancer survivors

(Johnsson et al., 2007). When these women were asked directly to list reasons for not returning to work, they most frequently answered that the work environment and/or nature of the work prevented them from working to the same extent as pre-treatment. They indicated physical exhaustion and physical deterioration as the second most common response.

In conclusion, demographic variables such as age, education, and race/ethnicity appear to represent complex predictors of returning to work that most likely need to be considered in conjunction with variables related to sources of support. Social support has been deemed an important area of study for breast cancer survivors, and the importance of support from the work environment as well as from the medical treatment team is only recently being explored and warrants further attention (Gudbergsson, Fossa, & Dahl, 2008; Johnsson et al., 2007).

### **Effects of Breast Cancer on Work**

In a 2010 review of the literature on experiences and concerns about returning to work for breast cancer survivors, Tiedtke et al. (2010) found that women expressed worry about disclosing their cancer diagnosis to their employers and relatives. Some women described feeling supported once they disclosed their cancer status at work, and that they were satisfied with their co-workers' support (Maunsell et al., 1999). Others felt their disclosure resulted in unsatisfactory responses by co-workers and supervisors, and described their co-workers hurtful remarks, awkward silences, embarrassing or intrusive questions (Maunsell et al., 1999). Others stated that they were pressured to leave their jobs after disclosing, and their employers failed to protect the confidentiality of their health information (Tiedtke et al., 2010; Maunsell et al., 1999).

During treatment, their decision of whether to work was affected by anxiety about their physical appearance, their ability to work, and potential job loss. They worried that their co-workers stared at their bodies, especially for women who had had a mastectomy (Maunsell et al., 1999; Tiedtke et al., 2010). In a qualitative study, one breast cancer survivor relayed how she was quick to tell her co-workers that she had kept her breast (Maunsell et al., 1999). Another worried about how co-workers would interpret her hair loss (Maunsell et al., 1999). Some described insecurities over their competence post-treatment, resulting in them working even harder in an attempt to not disappoint their employers and colleagues. They also expressed concern over the extra workload created by their medical absences (Tiedtke et al., 2010). Most noted the financial burden of breast cancer, with Latina women especially experiencing financial difficulties and major job disruptions as a result of breast cancer and its treatment (Ashing-Giwa et al., 2004). In a qualitative study with African American, Asian, Latina, and White breast cancer survivors, few of the Latina women maintained their employment at the same level during treatment and nearly half of the 26 Latinas either changed or lost their jobs due to work problems caused by their treatment (Ashing-Giwa et al., 2004). Some prematurely ended cancer treatment to avoid job termination (Ashing-Giwa et al., 2004). In short, breast cancer can be a major disruption to women's work performance and longevity.

There are many other factors affecting breast cancer survivors' work performance and longevity. Once treatment had ended, most women expressed the desire to resume their "normal" life but some struggled with interfering levels of concentration difficulties, arm immobility, and fatigue (Hansen, Feuerstein, Calvio, & Olsen, 2008; Maunsell et al., 1999; Tiedtke et al., 2010). Chemotherapy has been credited with inducing cognitive

changes, including slight changes in memory, concentration, and the ability to organize information (Munir et al., 2010). Breast cancer survivors' awareness of cognitive changes as a result of chemotherapy, the effects on their confidence and work ability, and the medical information provided explaining these changes can affect women's decision of whether to return to work and their work ability (Munir et al., 2010). Further, physical limitations as a result of cancer treatment, such as limited arm mobility, can restrict breast cancer survivors' work tasks or demand that they adjust their employment situation (Maunsell et al., 1999).

In a study comparing cancer survivors who made work changes concerning their employer, occupation, work tasks, unemployment, and pensions due to their cancer, Gudbergsson, Fossa, and Dahl (2008) reported that those who made work changes had significantly poorer physical and mental health work ability, experienced more comorbidity, reported more neuroticism and lower levels of quality of life, and worked fewer hours per week compared to the majority of cancer survivors who did not make work changes. Some women described supportive and accommodating work environments whereas others felt they were the victims of discrimination (Tiedtke et al., 2010). Those who reported experiencing a supportive and accommodating work environment were more likely to return to work (Tiedtke et al., 2010). Others felt that once they began to "look well," work support and accommodations decreased (Tiedtke et al., 2010). Although breast cancer survivors recognized that the recovery process could take years rather than months, co-workers and employers were often less understanding (Maunsell et al., 1999). In a population-based study of over 600 breast cancer survivors, Maunsell et al. (2004) found little evidence for work discrimination against cancer

survivors and that most of the women who no longer worked after treatment claimed that the decision to do so was their own. Of those who were unemployed three years post-treatment, the largest percentage attributed their unemployment to health-related reasons (47% of disease-free survivors, 53% of survivors with new cancer events) or to being laid off or quitting their jobs because they were too difficult or unsatisfying (47% of disease-free survivors, 40% of survivors with new cancer events; Maunsell et al., 2004). Personal non-health-related reasons were cited by 5% of disease-free survivors and 1% of survivors with new cancers (Maunsell et al., 2004).

Many women conveyed that their cancer experience had led them to re-evaluate the importance of work in their lives (Maunsell et al., 2004), with most reporting that they now valued work less (Tiedtke et al., 2010). They described how their motivation and priorities have been changed by their cancer experience, and that they had developed new life goals (Tiedtke et al., 2010). Others have described how the fear of cancer recurrence has prevented them from seeking out new jobs or promotions (Maunsell et al., 1999). Maunsell et al. (1999) concluded that it remains unclear as to whether breast cancer survivors' changed attitudes toward work result from their cancer experience, becoming older, or unsatisfying work environments.

Although breast cancer has been found to negatively affect employment generally, mixed findings have been reported for its impact on survivors' earning potential. Bradley, Bednarek, & Neumark, (2002) pointed to a heterogeneous labor market to explain how their sample of breast cancer survivors who worked had higher levels of hours worked, wages, and earnings compared to women in a control group. In contrast, Lauzier et al. (2008) demonstrated breast cancer survivors lost between 19-27%

of their projected usual annual wages. A higher percentage of lost wages was connected to a lower level of education, lower levels of social support, receiving chemotherapy, self-employment, short tenure in the position, and part-time work (Lauzier et al., 2008).

Although research on who returns to work after breast cancer treatment and how the experience of breast cancer affects women's working lives represents the first steps in exploring the career development of breast cancer survivors, many gaps in this line of research remain. Questions remain as to how experiencing cancer influences the way women conceptualize their career goals over their lifespan, what supports and barriers exist as they manage both their career and illness, and how they make decisions about their career paths. Moreover, there is a dearth of research on the work experiences of young survivors. Qualitative research methods are useful when investigating new topic areas, such as the career development of young breast cancer survivors. Additionally, Niesz, Koch, and Rumrill (2008, p. 113) assert that qualitative research can serve "not only as a tool for collecting and interpreting empirical data, but also as a strategy for empowering people with disabilities to take control of their lives and to implement social change." Therefore, qualitative research in general will be described in addition to the philosophical assumptions and key components of the consensual qualitative research method.

### **Consensual Qualitative Research**

**Qualitative research.** Qualitative research intends to describe, rather than manipulate, phenomena (Bogdan & Biklen, 1992). It represents a method to "discover" and evolve hypotheses, constructs, and relationships between topics directly from the process of data collection and analysis rather than from the researchers' preconceived

ideas. Therefore, qualitative research relies on inductive analyses of data from natural settings (Bogdan & Biklen, 1992). Through exploratory methods, such as in-depth interviews, researchers attempt to capture the lived experiences of the population of study as in-depth as possible (Morrow, 2007; Polkinghorne, 2005). The qualitative research paradigm aims to utilize a thorough study of the experiences of a small group to convey the complexity of human experience (Henwood & Pidgeon, 1992). Thus, it demands that research participants describe the meaning that they ascribe to various experiences, and the researcher attempts to facilitate the process of reflection through thoughtful questions and appropriate probes for further exploration.

Qualitative research methods are indicated when the phenomena of study are difficult to represent using a quantitative paradigm and when the research topic is relatively unexplored (Hill, Thompson, & Williams, 1997). Qualitative research methods include consensual qualitative research (CQR; Hill et al., 2005; Hill, Thompson, & Williams, 1997), grounded theory (Fassinger, 2005; Glaser & Strauss, 1967), phenomenology (Wertz, 2005), ethnography, and participatory action research (Kidd & Kral, 2005). For the current study, CQR (Hill et al., 1997) was the most approach appropriate qualitative research method given the intent to explore breast cancer survivors' career development because it represents a rigorous approach to giving voice to women's cancer experiences. CQR is a qualitative method that is clearly presented such that its steps can be replicated easily and systematically. Furthermore, it relies on the process of consensus and thus utilizes multiple perspectives to increase accuracy in approximating the "truth" of participants' experiences and to decrease the possibility of individual researcher bias. Individual qualitative researchers analyzing data

independently might overlook important aspects of the data. In contrast, having several individuals reviewing the data allows for the team of researchers to draw from a multitude of viewpoints and experiences to better attempt to capture the complexity of qualitative data. I will first present CQR's underlying philosophical theory before briefly describing its four main steps.

**Philosophical basis.** In his description of qualitative research, Ponterotto (2005) presents the research paradigms of positivism, postpositivism, constructivism, and critical-ideological. Positivism aims to explain, predict, and control behavior, often involving a priori hypotheses and quantitative methodology (Ponterotto, 2005). It assumes that knowledge can be obtained in an objective manner and that the ultimate laws of nature exist and can be captured through systematic research methodology. Likewise, postpositivism holds that an objective reality exists but postpositivists assert that the objective reality can only be captured imperfectly due to inherent flaws in human intellect. According to postpositivism, the "true" reality exists but is slightly out of grasp. In contrast, the constructivist position is that rather than a single reality, there are multiple realities that exist with each reality relative to the individual. Thus, the researcher and participant must interact and reflect on the possible meanings of experience to co-construct a deeper meaning. Finally, critical ideological approaches hold that the researcher's values are integral to the research task, purpose, and method (Ponterotto, 2005) and that the subjectivity of research must be acknowledged openly and used to overturn the status-quo. Critical ideologists view research as a form of social or cultural criticism (Ponterotto, 2005). Hill et al. (2005) characterize CQR as primarily constructivist with some postpositivist components. To better illustrate the constructivist

and postpositivist elements of CQR, I will present CQR's philosophical assumptions regarding ontology (i.e., views on the nature of reality and being), epistemology (i.e., how knowledge is gained and the relationship between the researcher and participant), axiology (i.e., the position of the researcher's values within the research endeavor), and the rhetorical structure (i.e., the language used to present the research).

CQR holds a constructivist approach to ontology (i.e., views on the nature of reality and being; Hill et al., 2005). This method acknowledges the possibility of multiple, socially constructed realities and that individuals construct their own reality. It aims to identify commonalities of experience among research participants (Hill et al., 2005).

In terms of epistemology (i.e., how knowledge is gained and the relationship between the researcher and participant), CQR takes a predominantly constructivist stance with some components of postpositivism (Hill et al., 2005). The researcher and participant mutually influence one another (constructivist; Hill et al., 2005). The participant shares his or her experience of the phenomena, thereby influencing the breadth and depth of data collected. The researcher influences the participant's story through the use of specific questions and probes that direct the participant to describe and expand upon the participant's reality. Hill et al. (2005) describe the researcher as a "trustworthy reporter trying to uncover what the participant truly believes" (p. 197). However, CQR researchers refrain from interacting with participants in an intensely relational way that involves co-construction of reality. Instead, CQR researchers utilize a standard interview protocol across participants, allowing for individualized probes as

appropriate. The researchers intend to cover a uniform set of topics during each interview (postpositivist; Hill et al., 2005).

In relation to axiology (i.e., the position of the researcher's values within the research endeavor), CQR rests in the middle between constructivism and postpositivism. The CQR method accounts for the inevitability of researcher bias and instructs researchers to disclose and document these biases (constructivist) to prevent against their interference with the results (postpositivist). The goal is to control for researchers' bias to be able to reflect participants' experiences accurately, and the use of standardized interview protocols attempts to achieve this goal (postpositivist). However, CQR acknowledges the difficulty in controlling for all biases, and thus recognizes the need for researchers to describe how their biases may have affected the analysis and results (constructivist).

The rhetorical structure (i.e., the language used to present the research) in CQR adopts a postpositivist approach in that results are written in the third person. Researchers attempt to remain as true to the participants' words and experiences as possible without researchers making their own interpretations. The summaries of the findings aspire to be objective and to represent themes across participants that generalize, on some level, to the population (Hill et al., 2005).

**Key components and steps of CQR.** The consensual aspect of CQR is one of its key components. The consensual-decision making process stems from the assumption that because human experience is complex, a more accurate version of the "truth" can be obtained through the accumulation and consensus of multiple perspectives (Hill et al., 1997). Each researcher's bias hopefully becomes cancelled out as more perspectives are

incorporated. Thus, CQR necessitates the use of three to five people to analyze the data with one to two auditors to review and offer feedback on the data analyses as appropriate. The coding team members review the data independently before coming together to share their thoughts and opinions of how to best capture the participants' meaning. Biases and expectations are discussed openly before and during data analysis, and different viewpoints are deliberated upon until mutual agreement is achieved. Team members continually return to the raw data to refine the results and ensure accuracy (Hill et al., 1997). CQR encourages team members to utilize their clinical intuition to foster a deeper understanding of the data rather than constraining individual differences of opinion and minimizing the ambiguities of human experience (Hill et al., 1997). Other key components of CQR include using open-ended questions to allow participants to elaborate on their experiences as much as possible, using words rather than numbers to describe phenomena, intensely examining a small number of cases, and placing the participants' description of specific details within the context of their whole experience (Hill et al., 1997).

The basic steps of CQR include the interview process, determining domains, developing core ideas through consensus, and engaging in cross-analysis. Semi-structured interviews are conducted with between 8-15 participants and interview questions are drawn from the research literature and feedback from the target population. The second step is developing domains (i.e., topic areas) using a consensual decision-making process through review of multiple interview transcripts. The domain list is revised continuously as needed. Core ideas then are created by summarizing the essence of participants' statements for all data within each domain for each individual interview.

Finally, cross-analysis entails constructing categories that represent consistent findings in core ideas within domains across all cases (Hill et al., 1997). The frequency of the category is labeled general, typical, variant, or rare. Each of these steps is elaborated upon further in the Method section.

## **CHAPTER THREE**

### **Statement of the Problem**

Although young breast cancer survivors represent more than a quarter of a million women in the United States and they have a worse prognosis than older breast cancer survivors, less than 1% of breast cancer studies examine this population (American Cancer Society, 2006). Career has been indicated as an important component of breast cancer survivors' quality of life (Ferrell, Grant, Funk, Otis-Green, & Garcia, 1997; Ferrell, Hassey-Dow, & Grant, 1995), and the career decisions made before the age of 40 have a long-lasting impact on individuals' lives and career trajectories. Yet little is known about the career development of breast cancer survivors. To increase our understanding of the effects of experiencing breast cancer at a young age on women's career development, I addressed the following research questions:

#### **Research Question 1: What Challenges Does Breast Cancer Pose to Young Women's Career Development and Work Lives?**

Women face underrepresentation in scientific and mathematics-related careers and in high-level positions, earn 72.7% of what men earn (Betz, 2006), and continue to be the primary care-giver to children in most families (O'Neil & Bilimoria, 2005), all of which influence their career development. Betz (2006) identifies math anxiety and avoidance, low career-related self-efficacy beliefs, occupational stereotypes, underutilization of abilities, and elements of the educational system as barriers to women's career development. Further, women with breast cancer have reported concerns such as cognitive declines post-treatment (Munir et al., 2010) and limited physical mobility that restrict their work performance as well as concerns about experiencing

discrimination or limited opportunities if they disclose their health status at work (Maunsell et al., 1999). Yet the bulk of this research has been conducted on women older than 40 years old, and little is known about how breast cancer affects the early stages of women's career development. More research is needed to determine whether findings on work and older breast cancer survivors also apply to younger breast cancer survivors, and more research is needed on how challenges from women's career development intersect with challenges stemming from the cancer experience.

**Research Question 2: How Do Young Breast Cancer Survivors Cope with Career and Work-Reported Challenges?**

Factors such as parental support and availability, mother's employment and non-traditional gender beliefs, and certain personality characteristics (e.g., internal locus of control, high self-esteem, independence) have been identified as supports for women's career development (Betz, 2006). In the breast cancer research literature, having a supportive and accommodating work environment (Mujahid et al., 2010; Tiedtke et al., 2010), a sense of belonging to the work environment, and work satisfaction (Fantoni et al., 2010) have been indicated as contributing factors to women's return to work post-treatment. But again, the breast cancer research literature has failed to focus on the unique coping strategies used by young women as they attempt to manage both their health issues and their career development. Do the same factors that help women succeed in their career help them as they navigate their cancer experience?

**Research Question 3: What Contextual Factors Have Influenced Young Breast Cancer Survivors' Career Development?**

O'Neil and Bilimoria (2005) note the importance of contextual influences on women's career development, with special attention given to organizational, relational, and societal factors. Individuals with chronic illness have described worries about "job lock" and under-employment resulting from organizational and societal responses to their health status. More information is needed on what contextual influences are relevant for women attempting to begin their career paths while also facing a life-threatening and unpredictable health condition.

**Research Question 4: To What Extent Has Experiencing Breast Cancer Affected the Abilities, Priorities, and Meaning of Work for Young Survivors?**

**Research Question 5: What Role Does Work Have in Young Breast Cancer Survivors' Identities Post-Treatment Compared to Their Other Life Roles?**

Research on breast cancer survivors of all ages (Tiedtke et al., 2010) and on individuals with chronic illness (Beatty & Joffe, 2006) reveals many women re-evaluate the role of their careers in their lives after their cancer experience or illness, often reporting that they now value their work less (Tiedtke et al., 2010). But it is unknown as to whether the value that breast cancer survivors place on work results from their perceptions of their abilities, how their cancer experience affects the way they view their lives, or their sense of purpose and meaning post-treatment. O'Neil and Bilimoria (2005) presented stages of women's career development in which careers received less attention as women aged and began to divert their energy to other facets of life (e.g., family) that they found meaningful. Does the experience of breast cancer at a young age speed up a career development process that would have occurred regardless, as implied by O'Neil and Bilimoria (2005)?

## **Research Question 6: In Summary, How Has Cancer Most Affected the Lives of Young Breast Cancer Survivors?**

Breast cancer research is comprised of quality of life studies on survivors' physical, psychological, cognitive, and social functioning, with recent studies beginning to elucidate the unique quality-of-life issues for young breast cancer survivors. To further replicate these findings, this study will ask young breast cancer survivors to reflect on how their lives have been most affected by their illness after being encouraged openly to explore its impact on their career development.

In the present study, I addressed these questions by asking participants about influences on their career development, including their breast cancer experience, feelings and beliefs about being able to succeed in their careers, and what would help them to reach their potential; challenges they have faced; coping strategies that they have utilized; and the importance of career in their lives now and when they imagine their lives 10 years from now.

## CHAPTER FOUR

### Method

#### Design

The design of the current study was a qualitative field study. Semi-structured interviews were conducted to obtain an understanding of how experiencing breast cancer at a young age affects women's career development. The qualitative data was analyzed utilizing consensual qualitative research (CQR; Hill et al., 1997; 2005).

#### Participants

**Interviewees.** Interviewees of this study were 13 young women who were under the age of 40 and working full-time when receiving a medical diagnosis of breast cancer. To be eligible, participants were required to have completed at least one post-treatment scan with no cancer recurrence found. Initially, half of the participants to be recruited were those who had continued to work full-time post-treatment and half of participants to be recruited were those who no longer work full-time post-treatment. However, all of the potential participants who responded to the recruitment efforts identified themselves as continuing to work full-time. Therefore, the participants in the current study continued to be work identified post-treatment.

**Judges.** The primary research team was comprised of a 34 year-old, female White advanced doctoral student in Counseling Psychology, a 27 year-old, female White fourth-year doctoral student in Counseling Psychology, a 25 year-old, female, White third-year doctoral student in Family Science, a 20 year-old, female, White undergraduate student studying sociology, and a 21 year-old, female, White undergraduate student studying biology. All members of the primary research team were students at a large,

mid-Atlantic state university. It was required that primary research team members had an interest in women's health issues and/or women's career development. All judges were asked to complete background reading on the CQR method (Hill et al., 1997; 2005). These stipulations were necessary to ensure that the primary research team members had a basic understanding of the CQR method.

In recognition of the power imbalance inherent in a research team made up of doctoral students and undergraduate students, the primary investigator followed the guidelines provided by Hill et al. (1997) to attempt to balance power as much as possible, such as through rotating speaking turns to help all team members feel heard. Further, efforts were made to ensure that research team members were dedicated to the study and thoroughly engaged as well as respected each other's perspectives, created space for variant perspectives on the data, navigated differences effectively, and attended to group dynamics. Before coding began, all judges were asked to discuss their biases and expectations regarding the study's potential results in effort to "bracket" them.

**Auditors.** CQR identifies the importance of auditors to review and provide feedback on the judges' coding process. Two external auditors reviewed the coding and cross analysis of the primary research team. One auditor was a 62 year-old, White, heterosexual female faculty member who also served as the primary investigator's dissertation advisor. The other auditor was a 28 year-old, White, homosexual male graduate of a Ph.D. program in counseling psychology who had prior experience using the CQR method.

## **Measures**

**Demographic questionnaire.** Participants completed a demographic questionnaire asking for their current age, age at diagnosis, race, occupation, educational background, cancer treatments received, last date of treatment, current treatment stage, work status at the time of diagnosis, employer at time of diagnosis, current employer, and number of hours they currently work.

**Quality of Life-Cancer Survivors (QOL-CS) Breast Cancer Version** (Ferrell, Dow, & Grant, 1995). The QOL-CS was developed to assess cancer survivors' functioning in the four domains of physical well-being, psychological well-being, social well-being, and spiritual well-being, and was then adapted for use with breast cancer survivors. Participants read each question and rate their level of agreement using a 10-point scale with polar opposite word anchors at either end of the scale (e.g., 0=extremely poor, 10=excellent), with 10 representing the "best" outcome and 0 representing the "worst" outcome. Several items are reverse scored. Scores are averaged to form subscale and total scores. Example items include "To what extent are the following a problem for you: Fatigue" (0=no problem, 10=severe problem; physical well-being scale, reverse scored); "How satisfying is your life?" (0=not at all, 10=completely; psychological well-being scale); "How much isolation do you feel is caused by your illness?" (0=none, 10=a great deal; social well-being scale, reverse scored); "To what degree has your illness and treatment interfered with your employment?" (0=no problem, 10=severe problem; social well-being scale, reverse scored); and "How much has your spiritual life changed as a result of your cancer diagnosis?" (0=less, 10=more important; spiritual well-being scale).

Ferrell et al. (1995) reported the overall QOL-CS test re-test reliability as .89, with subscale scores of  $r = .88$  for physical well-being,  $r = .88$  for psychological well-being,  $r = .81$  for social well-being, and  $r = .90$  for spiritual well-being over a two-week time period. In terms of internal reliability, analysis of Cronbach alpha's revealed an overall  $r = .93$  with subscale alphas ranging from  $r = .71$  for spiritual well-being,  $r = .77$  for physical well-being,  $r = .81$  for social well-being, and  $r = .89$  for psychological well-being (Ferrell et al., 1995). In scores for the current study, the overall Cronbach alpha's for the total score was  $r = .84$ , with the spiritual well-being Cronbach alpha's as  $r = .82$ , the physical well-being Cronbach alpha's as  $r = .43$ , with the social well-being Cronbach alpha's as  $r = .76$ , and with the psychological well-being Cronbach alpha's as  $r = .78$ .

Ferrell et al. (1995) have provided evidence for the validity of self-report scores on the QOL-CS using multiple methods. To establish content validity, Ferrell et al. (1995) utilized a panel of quality-of-life researchers, oncology nurses, and focus groups of breast cancer survivors (Ferrell et al., 1997) to review the measure's content. To establish predictive validity, Ferrell et al. (1995) implemented factor analysis and multiple regression to assess the factors most predictive of quality-of-life in cancer survivors. Evidence for concurrent validity has been provided by moderate to strong correlations found between the QOL-CS and the Functional Assessment of Cancer Therapy (FACT-G, now known as the FACIT) with subscale correlations ranging from .44 (for the social well-being subscales on the two measures) to .74 (for the physical well-being subscales of the two measures). Although Ferrell et al. (1995, 1997) has offered some support for the construct validity of the QOL-CS through the use of factor analysis, focus groups, convergence between overlapping content between the FACT-G

and QOL-CS, no evidence of discriminant validity has been described thus far. In conclusion, more research is needed to firmly establish the construct validity of the QOL-CS scores. However, the purpose for using this measure (i.e., not to run statistical analyses) supersedes any of its psychometric limitations.

The QOL-CS Breast Cancer Version was included to help place the career issues discussed in the semi-structured interview within the context of other components of overall quality-of-life. Moreover, it was used to prime the participants to begin to reflect on how their cancer experience has affected their physical, psychological, social, and spiritual well-being. The measure's inclusion of both positive and negative effects as well as a question about career-related issues hopefully helped participants begin to give thought to how their cancer experience had affected their lives and specifically their careers.

**Semi-structured interview.** Participants were asked to complete two audiotaped, semi-structured interviews (interview questions can be found in Appendix D). In the first interview, participants were asked to describe their experiences with breast cancer, how breast cancer had most affected their lives, and its impact on their career development. Other questions asked them to reflect on their work history, how others have influenced their career development, and how they defined career and life satisfaction. They were also asked how they decided to continue working after their diagnosis, what challenges breast cancer has posed to their work life, and what coping strategies they have used for those challenges. Additionally, they were asked how their experiences with breast cancer had affected their feelings and beliefs about their ability to succeed in their careers, what would help them reach their career potential and achieve career satisfaction, and how their career aspirations and path might have been different if they had never experienced

breast cancer. The first interview was approximately 60-90 minutes and took place over the phone. The second audiotaped interview was conducted over the phone and lasted approximately 30-60 minutes. It included any clarification questions that arose after reviewing the first interview as well as prompted the participants to describe their life 10 years from now and the role that career would play in their lives and what advice they had for other young breast cancer survivors. Finally, they were asked to reflect on additional thoughts or feelings regarding the questions asked during the first interview and on what it was like to participate in the interview. They were given the option to receive a written transcript of the interview, and were thanked for their participation. Upon the project's completion, participants also will be sent a copy of the final manuscript.

The interview protocol was developed in multiple stages. In the first stage, an initial set of interview questions was developed by the primary investigator based on theoretical and empirical research on cancer survivorship issues, young breast cancer survivors, and women's career development. The primary investigator also posted an announcement on the online bulletin board of the Young Survivors' Coalition, an organization dedicated to quality of life issues of young breast cancer survivors. The announcement described the investigator's intent to conduct a study on how the experience of breast cancer affects young women's career development and asked for topic ideas for interview questions. Bulletin board respondents described their need for flexible work arrangements, how insurance issues affect which jobs they will consider and how much time they take off from work for treatment, and the need for their supervisors to understand that the cancer experience does not end the last day of

treatment and that survivors experience many long-term effects from their cancer treatment. After this information was incorporated into the interview questions, the dissertation advisor for this study then reviewed this set of questions, providing feedback and formulating additional questions. Next, two breast cancer survivors under the age of 40 reviewed the questions to offer further feedback, ensuring their relevance and potential to elicit meaningful responses. They mainly offered feedback on how to shorten and combine questions, and questions were revised as recommended. The primary investigator then met with the author of the CQR method to receive further suggestions for interview question revisions.

As advised by Hill and colleagues (Hill et al., 1997; 2005), the primary investigator conducted two pilot interviews, one with a 55 year-old breast cancer survivor who was 50 years old at the time of diagnosis (an aunt of the investigator) and with a 33 year old woman who was diagnosed with diabetes at the age of 15 (a good friend of the investigator). These women were selected for the pilot interview because they did not qualify for the study. Further, the interview with the 55 year-old breast cancer survivor allowed for practice with interview questions relevant to breast cancer and the interview with the 33 year-old allowed for practice with interview questions related to coping with career development and a chronic illness diagnosed at a young age. The pilot interviews helped to ensure the interview flow and to practice using probes. In response to feedback from the pilot interviewees, the interview protocol was modified.

The interview protocol was revised again after the dissertation proposal meeting and additional pilot interviews conducted with the primary investigator's advisor who had previously conducted psychotherapy with young breast cancer survivors and who

used these clinical experiences to respond to the interview questions as if she was a young breast cancer survivor. The revisions included asking specific questions about the challenges that breast cancer posed to women's careers, and what coping strategies they utilized. These changes were made so that the interview questions more readily matched the study's research questions and were more firmly grounded in Social Cognitive Career Theory (SCCT; Lent, Brown, & Hackett, 1994, 2000, 2002).

## **Procedures**

**Participant recruitment.** Participants were recruited using posted solicitations that encouraged people to forward the study announcement to others who might qualify (i.e., partial snowball sampling). The moderator for the DC Metro branch of the Young Survivors Coalition posted an announcement for the study on its listserv and webpage. The study description was also posted on the national Young Survivors Coalition online bulletin board in the section on Treatment and in the section on General Issues. An announcement for the study was sent also to the Tiger Lily Foundation ([www.tigerlilyfoundation.org](http://www.tigerlilyfoundation.org)) and the Be Bright Pink ([www.bebrightpink.org](http://www.bebrightpink.org)) organizations. The Tiger Lily Foundation is a breast cancer support, education and advocacy organization for women diagnosed at the ages of 15 to 40 years. The Be Bright Pink Organization is national non-profit organization that provides education and support to young women who are at high risk for breast and ovarian cancer. Potential participants were given the option of contacting the primary investigator directly, or sending their contact information to the listserv moderator who then forwarded that information to the primary investigator. It was not possible to calculate how many potential participants

reviewed the study announcement on the various web pages or received the email announcement about the survey through the YSC listserv.

All participants contacted the primary investigator directly. The primary investigator then sent potential participants an initial email inviting them to take part in the study. The initial email included a brief description of the study purpose, the structure of the study (i.e., an initial interview lasting approximately 60-90 minutes and a follow-up interview lasting approximately 30-60 minutes), the risks and benefits of participation, eligibility requirements for participation, and a copy of the interview protocol. The primary investigator sent participants the web link to the demographic questionnaire and the quality-of-life measure that was completed online before confirming participants' eligibility and scheduling the interview dates. Seventeen potential participants contacted the primary investigator, and thirteen qualified for the study and completed the two interviews. Two of the seventeen had not yet completed treatment and therefore did not qualify for the study. Two of the seventeen never responded to the primary investigator's email with the web link to the demographic questionnaire and quality-of-life measure.

**Interviews.** After identifying eligible participants, the primary investigator sent the initial email message with an attached copy of the interview protocol. Once the interview had been scheduled, participants were sent an email asking them to complete the demographic questionnaire and the Quality of Life-Cancer Survivors (QOL-CS) Breast Cancer Version survey online. Please see Appendix A for a copy of this email message and Appendix C for a copy of the QOL-CS Breast Cancer version survey. Participants indicated their informed consent by completing the demographic form and

the QOL-CS Breast Cancer Version survey. Once consent had been given, participants contacted the primary investigator to schedule the interview. The interviews were conducted by phone and tape recorded by the primary investigator. At the beginning of each interview, the participants were reminded of the purpose of the study and that the interview would be taped and transcribed. The follow-up interview was scheduled at the end of the first interview. Before the second interview, the primary investigator reviewed the audiotape of the first interview to note any areas requiring clarification. Participants received a copy of the interview transcript via email for their review and to amend any of their responses as they deemed necessary. None of the participants indicated that any changes needed to be made to the interview transcripts. The primary investigator, as the only person who conducted interviews, recorded her impressions of the interview process and interviewee as recommended by Hill et al. (1997).

**CQR process.** When the interviews were completed, research assistants and the primary investigator transcribed them. Research assistants included three of the judges, as well as three additional undergraduate research assistants seeking research experience at a large, Mid-Atlantic research university. The research assistants were recruited from the Family Science department and were required to show an interest in breast cancer or women's career development. The primary investigator then checked all transcriptions for accuracy. All identifying information was removed, including interviewee names and place of occupation, to protect confidentiality. Each interview was given a code number to be used for the rest of the CQR process.

***Training judges.*** Judges were assigned readings on CQR by Hill et al. (1997; 2005) to become knowledgeable about the CQR method. Several initial meetings were

held to help judges get to know one another and to discuss the CQR method, including any questions they had about the process.

*Bracketing biases/expectations.* Biases are personal views that may prevent researchers from responding objectively to data (Hill et al., 1997). Biases are important to consider because the composition of the coding team can influence the conclusions drawn from the data, and two differently composed coding teams can code the same data into different domains, categories, and subcategories (Ladany et al., in press). An awareness of biases may help lessen their impact. To explore potential biases before coding began, all judges discussed their own experiences (either directly or indirectly) with chronic health issues, their beliefs about women's career development and the role of career in women's lives, and any reactions to the topic of breast cancer. Judges also explored their expectations of what challenges they would anticipate that young breast cancer survivors might face, and how survivors might cope with these challenges. Finally, judges addressed their expectations of how survivors might view their careers after experiencing breast cancer.

Only one of the judges had a cancer survivor in her immediate family, and it was her father who is now doing well. This same judge's paternal grandmother survived breast cancer when the judge was a teenager, and this judge herself had a breast cancer scare approximately a year ago after finding a lump. Although her follow-up medical treatment revealed the lump was not breast cancer, the judge had asked herself a lot of "what ifs" and given thought to how experiencing breast cancer at such a young age might affect her life. The other four judges did not have direct experience with breast cancer, although they had distant family members or family friends who had successfully

undergone treatment for cancer. Another judge's mother had many issues with chronic pain, and the judge recognized how such a chronic health issue affected her mother's functioning in many life domains, including work. Throughout the course of coding, judges were prompted to process any personal reactions they had to the data based on the judges' personal experiences.

When bracketing biases regarding women's career development, four of the five judges noted that they personally sought careers that allowed them to express their passions and core identity. One judge acknowledged that she was in a privileged place to be able to seek work that is meaningful rather than to take a job that pays the bills, and recognized the role that factors such as socioeconomic status or generational status may have on women's career development. Three judges described concerns about finding work-life balance in their future careers after stating that they hope to become mothers eventually. All five judges spoke of the importance of relationships in their lives, and the need to find a way to engage in work that honors that importance placed on relationships. One judge described feeling much pressure regarding how central work "should" be in women's lives, and the societal expectation that women should be able to be successful in their careers while also having an idyllic family life. In summary, none of the judges spoke of career development in isolation from other life domains, such as relationships or family; parents, partners, and the desire to become mothers affected the way all of the judges conceptualized career development.

In regards to the impact of breast cancer on women's careers, all judges anticipated that the logistics of managing treatment and work demands would be a significant challenge. One judge questioned how young breast cancer survivors would be

able to maintain their regular work load during and immediately after treatment as a result of side effects such as “chemo brain,” and how employers might perceive the survivors as being less capable of completing their work. One judge wondered if participants would be valued less at work once co-workers knew of the participants’ breast cancer. Three judges anticipated the interpersonal aspects of work during and after treatment to be a challenge, including how to handle disclosure. One judge suggested that participants might struggle to avoid their co-workers’ pity, and that it could be difficult deciding how much to tell co-workers about young survivors’ cancer treatment and prognosis.

To cope with these challenges, all judges anticipated that participants would seek support from family, friends, psychotherapists, and possibly also co-workers and their oncologist. Yet one judge also anticipated that young survivors might have difficulty seeking support given the lack of services specific to young survivors. One judge mentioned spirituality as an expected coping mechanism. Two judges expected that some young survivors would not cope well, and might isolate and avoid talking about breast cancer with others. Another judge anticipated that young survivors might cope by minimizing the importance of work and their careers, and instead focusing their energy on relationships and improving their physical health. This anticipated shift in priorities was also mentioned by two judges as the expected biggest impact that breast cancer would have on young women’s careers. The other three judges expected young survivors to redirect their energy post-treatment to whatever areas of their lives felt most meaningful, whether that area was career or family. One judge anticipated that young survivors would actively seek job changes that would allow them to more easily express

their life passions rather than stay in jobs that only pay the bills. In sum, all judges anticipated that young breast cancer survivors' career development would change as a result of their cancer experience, most likely in the direction of pursuing more meaning in their lives either through or outside of their work lives. To address the potential for the judges' biases to influence the coding process, team members were asked to provide evidence within the words of the participants to support their views on how to code the data. Further, two auditors, who were not part of the coding teams and coded the data independently, served to balance any biases held by the coding team members. All data and codings were examined by at least 5 individuals, two of whom independently reviewed the coding process.

*Addressing power differentials among judges.* Before coding began as well as throughout the data analysis, the primary investigator made attempts to create a safe atmosphere in which all research team members felt their opinions and contributions were valued. Members were encouraged to share their perspectives in discussion, with emphasis on the importance of fostering multiple viewpoints to increase the possibility of best capturing the participants' experiences. Achieving consensus through discussion is a core feature of CQR, and the primary investigator made every effort to correct power imbalances as they occurred.

*Developing domains.* Domains, or topic areas, were created based on responses from the open-ended interview questions as the first step in the CQR process. Clusters of information about similar topics from the first few interviews were used to start the domain list, and the domains were revised continually as new participant responses were coded. Initially, the research team coded the domains of the first few interviews together.

Then the research team members coded the domains for the rest of the interviews independently, with team members coming together to discuss their codings and to reach consensus for each interview.

*Constructing core ideas.* The second step of CQR, constructing core ideas, involves summarizing the content of each domain for a specific case. Independently, each research team member read the raw data comprising a domain and summarized the data into a core idea to best capture the essence of each interviewee response. Core ideas remain as close to the explicit meaning of the data as possible, without much interpretation of what might have been implied by the data (Hill et al., 1997). After individually constructing the core ideas, team members collaboratively discussed them until they reached consensus. The primary investigator created a consensus version of core ideas for each participant to include domain titles, core ideas, and the raw data for each domain. Domains continued to be revised to best capture the actual data as the core ideas were constructed. An attempt was made to minimize double and triple-coding.

*Auditing of domains and core ideas.* Auditors' first task was to review the consensus version to ensure that the raw data were in correct domains, that the data in each domain were reflected accurately in the core ideas, and that the core ideas stayed close to the raw data. Auditors provided feedback regarding the titles of the domains and regarding additions to the core ideas to more accurately reflect the data. More specifically, the consensus version was sent to the first auditor to edit and provide feedback to the research team. Next, the research team decided whether to accept or reject the audits from the first auditor, and then sent the updated consensus version to the second auditor for review. Once the second auditor returned his edits, the research team

again made decisions about the necessary revisions. The auditors rotated in being the first to review the domains and core ideas. The revision process between the auditors and research team continued until a mutually satisfying consensus had been achieved. Then, the final consensus version was created.

*Cross-analysis.* In cross-analysis, the research team reviewed the data in each domain to note similarities across participants. To achieve this, the primary investigator created new documents that list the core ideas for each participant within each domain. Based on these documents, team members constructed categories independently to represent the core ideas within each domain across cases. They then met to make collective decisions on categories until consensus was reached. All data was placed into a category, and when indicated a core idea could be placed into more than one category. Attention was given to the wording of the categories to ensure it reflected the data. As needed, the wording of domains and the locations of core ideas within domains was revisited.

*Auditing of cross-analysis.* Auditors then reviewed the cross-analysis results, with specific focus on whether the wording of the categories best represented the data and whether categories could be reorganized (e.g., collapsed, further divided). The research team then decided whether to accept or reject the auditors' suggestions and sent the revised cross-analysis to the auditors. This cycle of revisions continued until consensus had been achieved and no more changes were necessary. As a result of this process, the initial all-encompassing domain about the impact of cancer on career development was broken up into several smaller, more specific domains. Much of the medical background

information was grouped into more broad categories to allow for a greater focus on the career-related significance of the data.

*Reporting the data.* After completing cross-analysis, team members labeled each category in each domain to demonstrate the extent to which it represented the sample of participants. The labels “general,” “typical,” “variant,” and “rare” were used. Hill et al. (2005) recommend that “general” be used to include all or all but one of the cases (i.e., 12 or 13 cases), “typical” be used to include more than half of the cases up to all but one of the cases (i.e., 7-12 cases), and “variant” be used to include at least three cases up to the cutoff for “typical,” (i.e., 3-6 cases). Findings representing only one or two cases were placed in a separate miscellaneous category and are not reported.

## CHAPTER FIVE

### Results

The 11 domains that emerged from the data were: (1) discovery of breast cancer and the navigation of treatment; (2) career development: influences and sacrifices; (3) cancer-related work challenges; (4) coping with cancer-related work challenges; (5) re-appraisal of career development after cancer; (6) components of career and life satisfaction after cancer; (7) impact of breast cancer on life outside of work; (8) lessons learned from breast cancer; (9) thoughts about the future; (10) advice for other survivors; and (11) participants' feelings about participating. Table 1 presents the frequencies and illustrative quotations for each category and subcategory of the 11 domains (located in Appendix E). A more detailed description of participants' background information and each of the domains is provided below.

Demographic information, results from the quantitative measure, and the first domain offer background information on the participants. This information will be presented before describing each domain within the context of the research questions. More specifically, domain 3 on cancer-related work challenges is described in relation to the research question: What challenges does breast cancer pose to young women's career development? The second research question of how young breast cancer survivors cope with these career-related challenges is answered by domain 4 on coping with cancer-related work challenges. Domain 2 on career development is described in response to the third research: What contextual factors have influenced young breast cancer survivors' career development? Domains 5 (i.e., re-appraisal of career development after cancer) and 6 (i.e., components of career and life satisfaction after cancer) then are

presented in relation to research questions 4 and 5: To what extent has experiencing breast cancer affected the abilities, priorities, and meaning of work for young survivors? What role does work have in young breast cancer survivors' identities post-treatment compared to their other life roles? The final research question regarding how cancer has most affected the lives of young breast cancer survivors is answered through a description of domains 7 and 8, respectively, on the impact of breast cancer on life outside of work and lessons learned from breast cancer. Domains 9, 10, and 11 are described as additional results. Finally, the background and description of the career development of two young breast cancer survivors is presented as prototypical cases.

### **Background Data**

Background information on participants' race, marital status, education, occupation, age at the time of diagnosis, current age, and medical history will be described briefly before presenting the results of the quality of life quantitative measure. The quantitative information will provide a sense of the participants' general level of functioning at the time of the interview, as well as indicate any issues within the specific realms of physical, psychological, social or spiritual well-being. Finally, domain 1 will be presented to provide greater context for participants' experiences with breast cancer.

**Demographic information.** Table 2 in Appendix F presents the participants' demographic information. Of the 13 participants, nine identified as White, two identified as African American, one identified as Latina, and one identified as biracial Indian and White. Six reported college as their highest level of education and seven reported that they had attended graduate level training. Ten reported being in a committed relationship and three identified their relationship status as single. Nine participants reported no

children in their household currently, and four reported having children ranging in age from 8 months to 7 ½ years old. In terms of annual household income, two participants reported income less than \$30,000; two reported income between \$30,000-59,999; two reported income between \$60,000-99,999; four reported income between \$100,000-149,999, and three reported income greater than \$150,000. Participants reported a wide range of job industries and titles. Three participants held administrative-related positions, one was self-employed in real estate, two worked in media, one worked in information technology, three were attorneys, and three worked in medicine or research.

At the time of first breast cancer diagnosis, participants ranged in age from 21 years old to 38 years old, with the average age at diagnosis 30 years ( $SD = 5.0$ ) and median age of 27 years. One participant was initially diagnosed with breast cancer at the age of 25 years and then experienced a recurrence at the age of 33 years. At the time of the first interview for this study, participants ranged in age from 24 years to 43 years, with the average age of 34 years ( $SD = 5.9$  years) and the median age of 35 years at the time of the interview. The length of time between when the participants were diagnosed with breast cancer and when they conducted the first interview was 3.54 years (42.5 months), with 3 years as the median length of time between diagnosis and the interview date. Four participants were diagnosed with ductal carcinoma in situ (DCIS), and therefore were automatically in stage 0 breast cancer (i.e., the earliest stage possible). The remaining nine participants were diagnosed with invasive ductal carcinoma. Two of those nine were diagnosed with stage 1 breast cancer, five were diagnosed with stage 2 breast cancer, and two were diagnosed with stage 3 breast cancer. In terms of treatment, six participants had a lumpectomy and three had a partial mastectomy. Five participants

had a bilateral mastectomy and five participants stated that they had reconstruction surgery. Ten participants underwent chemotherapy, six participants underwent radiation, eight participants underwent hormone therapy, and two participants had their ovaries removed (i.e., oophorectomy).

During treatment, only two participants reported taking unpaid medical leave, with one of those two later receiving state disability benefits. One participant was a full-time student during treatment. Nine participants reported paying for their medical treatment through their health insurance plus some out of pocket costs. Four participants reported that their health insurance covered all medical costs.

**Breast cancer survivors' quality of life at the time of the interviews.** The Quality of Life-Cancer Survivors (QOL-CS) Breast Cancer Version (Ferrell, Dow, & Grant, 1995) was used to assess participants' current level of functioning in the domains of physical, psychological, social, and spiritual well-being so as to provide a greater context for interpreting the interview data. Additionally, the measure's questions were intended to prime the participants to begin to reflect on how their cancer experience has had an impact on multiple dimensions of their lives. In scores for the current study, the overall Cronbach alpha's for the total score was  $r = .84$ , with the spiritual well-being Cronbach alpha's as  $r = .82$ , the physical well-being Cronbach alpha's as  $r = .43$ , with the social well-being Cronbach alpha's as  $r = .76$ , and with the psychological well-being Cronbach alpha's as  $r = .78$ . Item analysis revealed that no single item was responsible for the low Cronbach alpha's values for scores on the physical well-being subscale.

The purpose for utilizing the QOL-CS Breast Cancer Version (Ferrell, Dow, & Grant, 1995) was not to run statistical analyses given the small sample in the current

study. However, the participants' average scores are reported, as well as scores reported in other studies of cancer survivors' quality of life, to provide a sense of how to interpret the results of the quantitative measure. The measure is scored on a scale of 0 to 10, with higher scores indicating higher levels of quality of life. In the current study, participants reported the following average scores (*M*) for each of the (QOL-CS) Breast Cancer Version (Ferrell, Dow, & Grant, 1995) subscales: 5.1 (*SD* = 1.5) for Physical Well-Being, 5.4 for Psychological Well-Being (*SD* = 1.4), 4.5 for Social Well-Being (*SD* = 1.8), 5.7 for Spiritual Well-Being (*SD* = 2.3), and 5.2 (*SD* = 1.2) for Total QOL-CS. Scores for the QOL-CS as reported by Ferrell et al. (1995) and the scores for the current study are presented in Appendix G: Table 3. This table also presents the results of t-tests indicating significant differences between the scores on physical well-being ( $t = 5.46, p < .0001$ ) and social well-being ( $t = 4.50, p < .0001$ ) from the current study and those reported by Ferrell et al. (1995) and Dow et al. (1996). An elaboration upon Table 3 is found in the discussion.

**Discovery of breast cancer and navigation of treatment.** Participants described their process of discovering they had breast cancer, and how they navigated the treatment process. Participants variably had prior knowledge about cancer as a result of their medical background or family history of cancer. For instance, one participant explained:

I knew I had the breast cancer gene way before then because I have a very strong history of breast cancer in my family. So when I was 21, I got tested with my aunts and my mom for the breast cancer gene. I knew I had the gene but I had a plan for, I was going to get a mastectomy and oophorectomy when I was 40. And

I talked to all my doctors about that and everything was fine. Then I found a lump, so it was stressful waiting for it. But I guess I didn't really think that I would have cancer that young (P5).

Generally, the survivors discovered their breast cancer themselves. Variantly, participants stated that their medical treatment for their self-discovery of breast cancer was delayed due to lack of insurance or other financial barriers. Moreover, participants variantly described external stressors in their family or work lives that co-occurred with receiving the breast cancer diagnosis, such as the death of loved ones, the birth of a baby in their family, moving for a new job, or planning their wedding. For example, one participant stated:

I lived with my sister and brother-in-law and they had just had a baby. They had a baby a week before I went in for my mastectomy. . . My grandfather actually also passed away the weekend after I had my biopsy and so it was a lot of changes (P2).

Generally, participants characterized their initial reaction to their diagnosis as being one of shock, disbelief, or anger. For example, one participant stated "I guess I was just angry that I had done everything right health wise, workwise and I like to consider myself a good person and I like to think good things should happen to good people" (P4). Another participant reacted with shock, stating, "I mostly just sat there and said, I kept saying, 'But I'm 27. I don't know how this is possible'" (P10). Variantly, participants stated that they reacted to their initial diagnosis with being afraid and overwhelmed or sad. A variant group of the participants spoke of developing an emergent reaction to their diagnosis that was characterized by problem-solving, with one

participant explaining, “Then I just got in survival mode where I was like we have a problem; we need to fix it immediately” (P4). In general, participants spoke of the various ways that they made treatment decisions, including following the advice of their medical team, researching treatment options on the Internet, contacting other breast cancer survivors, and consulting with family members. In sum, the current study’s sample consists of highly educated and motivated young women in their twenties, thirties, and early forties from varying racial backgrounds, socioeconomic statuses, and occupational fields who expressed surprise at receiving a cancer diagnosis at such a young age but were active in pursuing the best course of medical treatment available. Next, the various domains will be described in relation to the research questions.

### **Research Question 1: What Challenges Does Breast Cancer Pose to Young Women’s Career Development and Work Lives?**

One domain emerged from the data that captured the work-related challenges experienced by young breast cancer survivors. These challenges fell into four major categories: (1) decision of whether to continue working; (2) managing potential consequences of disclosure; (3) cancer symptoms and side effects that had an impact on work; and (4) managing work load and work schedule during treatment.

**Decision of whether to continue working.** Generally, participants spoke of how they decided whether to continue working once they received their breast cancer diagnosis. Nearly all (general) stated that not working was not an option due to financial or insurance needs. One participant explained, “One big thing about continuing working was my health insurance. It really wasn’t an option for me to not work and not have insurance. So I had to maintain some sort of full time status to maintain the insurance”

(P11). Typically, participants portrayed their decision to continue working as being supported by others, including their partner or family (variant) or medical professionals or other young breast cancer survivors (variant).

**Managing potential consequences of disclosure.** Generally, participants discussed their thoughts about disclosing their breast cancer status at work and how others might respond. Often, participants disclosed to their employee and co-workers to whom they felt closest. The size of their employer appeared to have an impact on how widely they disclosed their survivorship, usually feeling as if they had no choice but to disclose to everyone when working in a small company and being more reserved with disclosure when working in a large company (e.g., more than 50 employees). Typically, they did not perceive any direct discrimination at work, such as being denied a promotion because of their breast cancer history. Participants typically spoke of wanting to be seen as more than a breast cancer survivor at work after disclosure, not wanting to be viewed as less capable at work or treated differently as a result of their breast cancer survivorship. It was variant that participants expressed worry about their current or future job opportunities as a result of disclosure. Some participants described concern that their survivorship status would result in less work hours, thereby jeopardizing their insurance benefits, whereas other participants described concerns that smaller companies would never hire them because small companies could not afford the expense of providing medical insurance to breast cancer survivors. At the opposite end of the spectrum in anticipating the results of disclosure, participants variantly described positive consequences resulting from disclosure of their breast cancer status at work, such as being consulted for cancer-related issues at work or being able to disclose their

survivorship as a way of connecting with others at work. For instance, one participant who was completing medical residency at the time of her cancer treatment, stated that:

When I would diagnose people with a little bit of cancer that wasn't going to kill them, "cancer-lite," we said we would take care of it and they will have a normal life expectancy. . . They were looking at me with cross-eyed. I would tell them I was diagnosed with breast cancer, [and] I am doing fine. You are going to do fine. . . Because before I was diagnosed, I couldn't say that kind of thing to people if you haven't been there. Like, "Who are you to tell me how to feel?" Well, I can tell you how to feel now, because I know how it felt. I think people appreciated it (P4).

**Cancer symptoms and side effects that had an impact on work.** In general, participants spoke of a wide range of side effects that had an impact on their work lives. In addition to describing physical side effects that generally affected their work, participants also typically specified fatigue and sleep as a common issue. One participant captured the extent of the fatigue with the statement that "The fatigue was the worst. . . it's like your whole body's tired. I just remember having to wash dishes and I'd have to prop myself up with my elbow on the counter because I couldn't stand up. You're just exhausted" (P8). They variantly described pain and physical discomfort or mobility issues or numbness that distracted them and made it difficult to focus on work.

Additionally, participants typically described emotional side effects that disrupted work productivity. It was variant that participants spoke of negative emotional effects on their mood, such as depression or anxiety, that caused work problems. Variantly,

participants discussed feelings of self-consciousness at work as an interference with their work lives. A participant described this as,

“During treatment it was just ridiculously hard to sit in meetings, talk to people and concentrate when all I would be thinking is oh my God is my wig on straight or are my scars showing. . . I was very self-conscious about how I looked because after my tissue expanders failed, I had one breast half way filled and the other one wasn’t, so I was lopsided and I had to worry about that constantly and how to figure out what I was wearing and that was the biggest thing for me. Because I worked with 100 people. I just didn’t want to walk around looking like cancer girl all the time” (P5).

Cognitive side effects also were typically mentioned, including memory and concentration problems as typical issues and trouble communicating as variant issues. Finally, interpersonal side effects were generally described. Such side effects typically took form as survivorship issues resulting in difficulty connecting with co-workers or their employer.

Survivors discussed whether their work environment made accommodations for the participants’ cancer-related side effects when assessing participants’ work performance, with participants typically reporting that their work environment did not expect less of them despite cancer-related side effects. In an extreme case, one participant who was a medical resident described being hospitalized for treatment-related complications. Yet, she stated that:

My boss, three days later was asking me about my patients. I was like, ‘Buddy, I was in the hospital. I don’t know the answers to these questions.’ I thought that

was a little ridiculous. They were giving me a hard time for not knowing about the patients in the hospital. They did not cut me any slack (P4).

In contrast, other participants variantly stated that their work environment forgave cancer-related side effects for performance assessments, with their work acknowledging that they were sick and lowering their expectations of the participants as a result.

**Managing work load and work schedule during treatment.** Participants generally described how well they managed both work and cancer treatment, typically expressing negative feelings about managing work and typically stating that they wished they could have taken more time off from work during treatment. They also variantly stated that they were overwhelmed when juggling work and treatment, and variantly expressed feelings of guilt when they took time off from work for treatment. They reported varying degrees of difficulty with managing their work load and work schedule during treatment. Participants variantly described it as never being a struggle while other participants variantly described it as consistently a struggle. It was variant that another subset of participants expressed that they struggled with managing both work and treatment at times but not consistently.

### **Research Question 2: How Do Young Breast Cancer Survivors Cope with Career and Work-Reported Challenges?**

One domain from the current study addressed this research question, with three categories emerging regarding strategies for coping and one category capturing the difficulty that participants experienced in coping with work-related challenges.

**Work-related social support regarding breast cancer.** The first category of coping strategies for cancer-related work challenges was work-related social support

around breast cancer. Participants generally discussed various forms of work-related social support. More specifically, participants in general described the social support received from their colleagues and employer, with participants typically describing only positive interactions with these sources of work-related support around issues related to breast cancer or participants variantly describing both positive and negative interactions. Within their work environments, participants also typically described their interactions with their work's human resources department or general management. Typically, these interactions were portrayed as only positive but variantly they were portrayed as only negative. Participants generally described social support from outside of their work environment as being important to coping with cancer-related work challenges. One participant described this support as:

When I was stressed about work, stressed about this, I talked about it with my family and boyfriend and they were very supportive of, "yeah, you need to keep working, you have to, you don't have a choice, just do what you can and you got to just take it one day at a time and get through it (P11).

This support variantly took the form of the participants' partner, family, friends, or other young survivors.

**Working as a way of coping.** Another coping strategy typically described by participants was working despite the challenges cancer posed to work. It was typical for participants to discuss work as a coping strategy that provided a sense of normalcy or distraction. One participant explained, "What would I do if I don't work? It was a way to keep myself busy because I was looking at it as if I don't keep myself busy and go to work and continue to try to live normally, I'm just going to sit at home and feel sorry for

myself. I think that was sort of how I used it; it was to maintain some sort of normalcy in my life” (P10). Further, participants variantly described working as a way of feeling more in control, not wanting to allow cancer to “steal” work from them after already taking so much from their lives. Finally, participants variantly expressed that it was important to them to continue to work as a way of maintaining their work identity.

**Behavioral strategies.** Additionally, participants variantly spoke of adopting behavioral strategies to cope with cancer-related challenges to work. When describing her experiences with “chemo brain,” one participant explained:

So I have learned to cope with it better. I write everything down. Every meeting is in Outlook. I make sure to call myself at work constantly to remind myself of things, leaving myself voice messages or sending myself e-mails . . .(P1).

Other survivors’ echoed the use of these strategies.

**Experienced difficulties in coping.** Although participants generally described helpful coping strategies for cancer-related work challenges, they also typically stated that they experienced difficulties in coping. It was variant that participants specified that these difficulties were due to their life stage at which they were diagnosed with breast cancer. More specifically, their young age at the time of diagnosis implied that they had not been working at their jobs for very long and thus may not have built the type of community within their work environment that could offer them the support they needed, or perhaps they struggled to put their health before their careers because they were not yet established in their careers. One participant expressed this as:

I mean everything is different based on age but with work definitely. It has something to do with life stages too, whether or not you have kids or are married.

But I was just starting out in my career and other people who I talked to were able to take leave of absences, or like my mom who had been at her job for maybe 18 years when she got diagnosed, so obviously her work was super supportive of her and they banded together. I think my work environment with being so large was a big hindrance just because no one would really band together. But I talked to other women who are older and have worked with these people for a while and just got a huge amount of support at work. . . I think if my career had been more established I would have been more okay with first of all talking about it and making an effort of taking care of myself over a career (P5).

Others variably attributed their difficulties in coping to prolonged side effects or medical complications that made it nearly impossible to continue working. Another variant subcategory of difficulties in coping attributed those difficulties to the intense intellectual demands of their work, implying that if they were in less intellectually demanding lines of work that they would not have struggled as much with the impact of breast cancer on their career.

### **Research Question 3: What Contextual Factors Have Influenced Young Breast Cancer Survivors' Career Development?**

**Career development: Influences and sacrifices.** Data that emerged in the current study related to this research question was captured in the domain on career development: influences and sacrifices. This domain was focused on the influences of parents, mentors, and partners on participants' career development and the extent to which participants described the personal sacrifices that they had made to try to succeed in their career paths (irrespective of breast cancer). More specifically, participants

reported strong work ethics and their educational backgrounds suggested that they were high achieving, and they typically attributed their work ethics to their parents. One participant stated that “I would say the reason why I was ambitious and hard-working is because of my parents. My dad has always had a job and he always worked very hard and worked overtime and my mom always had a job. . . working hard and getting rewarded for it that was just something that was a part of the community and my parents and that was very important” (P5). Variantly, participants attributed their field of work to their parents. In contrast, mentors’ influence was typically portrayed as relating to the building of career-related self-efficacy. Typically, the influence of partners was characterized as supportive for participants’ career choices, and partners influenced participants in the sense that participants needed to consider financial needs as a dual-income family when making career choices.

In addition to describing the influences of others on their career development, participants variantly expressed that they felt they had made personal sacrifices (irrespective of breast cancer) due to the high demands of their career. For instance, participants stated that they had postponed having children or delayed travel plans because of the intense time commitments required by their work. One participant specified:

But essentially I was actually sacrificing a lot in your 20s to have a successful career in helping people and then just get this thrown in your face. Giving up in your 20s not having kids because you are working 70-80 hours a week and then having a diagnosis like this and wondering are you going to be able to have a family, are you going be alive to have a family (P4).

In summary, participants most commonly reported that their parents influenced their career development and specifically their adoption of a strong work ethic, and that their work ethic led them to postpone or sacrifice certain personal goals so that they could devote themselves to their careers.

**Research Question 4: To What Extent Has Experiencing Breast Cancer Affected the Abilities, Priorities, and Meaning of Work for Young Survivors?**

**Research Question 5: What Role Does Work Have in Young Breast Cancer Survivors' Identities Post-Treatment Compared to Their Other Life Roles?**

Domains on participants' appraisal of their career development after cancer and of components of career and life satisfaction after cancer best answer these two research questions. Within the domain on re-appraisal of career development after cancer, 11 categories arose that relate to the abilities, priorities, and meaning of work for young survivors. The domain on the components of career and life satisfaction after cancer indirectly answers the research question about breast cancer survivors' identities post-treatment and what life roles bring them satisfaction.

**Re-appraisal of career development after cancer.** The ways in which young breast cancer survivors appraise their career development after cancer varies, with no general categories arising from the data. In regards to the meaning ascribed to work after cancer, participants most typically expressed an increased desire to have more work/life balance after cancer. It also was typical for survivors to describe an increased desire to be passionate or enjoy their work more after cancer. One participant stated:

. . . cancer kind of made me have a change of heart . . . I am tired of being broke. You know, cancer is expensive. . . And life's too short. I want to travel. I'm not

going to sit here and work at a job I don't like because I feel like it's for society. I've suffered enough; I want to have fun. I want to make money and travel and wear nice clothes so I went out and got my real estate license and now I'm starting out in real estate (P8).

For some, that desire to be more passionate about their work led to an increased desire to wed breast cancer advocacy and their career (variant result).

Participants typically expressed that their breast cancer experience slowed down, blocked, or forced a change in their career path, often at a time in their career that was a critical stage of learning. Further, participants variantly expressed feeling stuck in their job because they needed health insurance. One participant expressed, "I was tied to my job now because I needed to have insurance benefits. So I felt it essentially took away all my choices" (P12). Further, it was variant that after cancer, participants redefined the purpose of working as a method to access insurance and money.

Related to the priority given to work after cancer, it was typical for participants to state that their career ambitions and the priority that they placed on their career decreased after cancer for a multitude of reasons, including redirecting their energy to other life domains and to simply no longer caring about work after cancer. Variantly, participants stated that their cancer experienced increased or re-set their career ambition in a positive direction. One participant elaborated that "If anything, I think being a survivor pushes me to want to succeed more and kind of go above and beyond because I don't want it to become an excuse for not succeeding" (P2).

In terms of their appraisal of their work-related abilities after cancer, participants variantly described changes in their self-efficacy at work (either increasing or

decreasing). For example, one participant stated that “What it [cancer] has done is empowered me more than anything. If I can beat cancer, which I did, then there is nothing I can’t beat. And, if I can maintain a positive perspective through this, I can maintain a positive perspective through work, uncertainties about decisions I have to make, managing, I can do it” (P1). Others found themselves questioning their abilities after cancer, with one participant who was a medical doctor planning to return to work after taking disability leave stating:

I don’t know how I’m going to do in the work environment, and how I’m going to be able to get back there, that I can actually take care of patients. I have no clue how it’s going to go. That’s really terrifying. Not being able to know if I’m going to be able to remember the right stuff, because people’s lives are in your hands. There was a certain, I don’t even know the right word, I was just able to rely on myself, but I knew that I was capable of doing certain things in my sleep which I can’t do now. I don’t know if I can do them now (P6).

In addition, it was variant that participants expressed that their cancer experience amplified the challenging demands of an already intense career or educational training program. Participants who chose career paths requiring extensive training described the difficulty of getting cancer in the midst of their intense training demands whereas it would have been easier to manage cancer if they were further along in their training or more established in their careers. For example, one participant expressed that, “The problem is that residency is six years and I was diagnosed towards the end of the fifth year. And that is a problem because you can’t get a job. You need to have a residency behind you and become board certified in order to work. I was also angry that I had

chosen a really long residency because if I had chosen an ER doctor or a pediatrician, that is only three years. I would have been long done and an attendee somewhere and being diagnosed as an attendee would have been so much easier” (P4).

**Components of career and life satisfaction after cancer.** The meaning of work and the role of work in young breast cancer survivors’ identities post-treatment most closely related to data on components of career and life satisfaction after cancer.

Participants generally discussed components of their career satisfaction, which typically consisted of the expression of their identity, passion, or life meaning; typically offered financial stability; or typically provided positive relationships or enjoyment. Variantly, participants discussed career satisfaction as stemming from career choices that provided for balance with other life roles outside of their work lives. Participants also generally spoke of components of their life satisfaction after cancer, with relationships as the most generally discussed component. In general, relationships with family or partner were considered a key component of life satisfaction. When asked about the components of her life satisfaction, one participant replied:

My family and friends of course, which are the boring answers but my family and friends. I live out in the country and I have a big garden with a bunch of animals which I love to play with and I think those things make me happy. I don’t know that that gives my life meaning. I think what gives my life meaning is family and friends (P5).

Further, being a mother was typically described and friendships were variantly described. Typically, participants mentioned career as part of their life satisfaction, with a variant group of participants discussing the tension of a satisfied life as having it “all,” a

successful career and a successful life outside of work. Other components of life satisfaction were typically described as volunteering in advocacy or helping others and variably discussed as forms of self-care (e.g., hobbies, exercise).

### **Research Question 6: In Summary, How Has Cancer Most Affected the Lives of Young Breast Cancer Survivors?**

When asked how cancer most affected their lives, participants offered multiple ways in which breast cancer affected them in terms of work and non-work related challenges, coping strategies that they began to utilize for work and non-work related challenges, how they viewed themselves and their relationships, and philosophical lessons that it taught them. Because data related to the impact of cancer on work has already been presented, only non-work related effects of cancer will be explored in response to this research question. Therefore, this data was grouped with domain 7 on the impact of breast cancer on life outside of work and domain 8 on lessons learned from breast cancer; and these two domains best answer the research question of how cancer has most affected the lives of young breast cancer survivors. Within domain 7, the effects were divided into categories on breast cancer-related challenges, implementing coping strategies for breast cancer-related challenges, re-appraisal of themselves after breast cancer, and re-appraisal of their relationships after breast cancer. Within domain 8, the lessons learned from breast cancer are categorized according to whether they relate to changes in personal views or positive changes in behavior.

**Impact of breast cancer on life outside of work: Breast cancer-related challenges.** In general, participants discussed a wide range of ways in which breast cancer created challenges in their lives. These challenges were more broad than those

having a direct impact on work, and generally included both fatigue, pain, and other physical challenges as well as symptoms of anxiety, depression, or emotional exhaustion. One participant characterized her chemotherapy-induced depression in the following way:

About a month after I started chemo I had a day where I just woke up where I just felt anxious about everything. I was worried about everyone and I got so worked up that I couldn't get out of bed. I didn't see the point of getting out of bed. I felt so nothing. It was just awful and I couldn't shake myself out of it. That went on for the morning and I made myself get up, my mom made me get up and get ready, I kind of felt a little bit better. The next day, the same thing happened. I couldn't get out of bed. I didn't see the point. I went to take a shower and had these thoughts of, "What is the point of living? What is the point of life?" I couldn't make myself stop feeling that way, but I also knew that that wasn't me and it really upset me because I couldn't control it. I knew it was the chemicals talking but I couldn't do anything about it (P11).

Typically, young survivors discussed issues with memory, concentration, or communication as having an impact on their life outside of work. It was also typical that young survivors described challenges to family planning, including the need to seek infertility treatment as a result of their cancer experience. One participant explained that:

Because I had cancer, I haven't been able to have kids for the past two years and now I am dealing with the ramifications of having cancer and having fertility problems. I think that is something that is unique to young women who are career minded and get cancer (P4).

Further, participants variantly mentioned financial worries and the need for insurance increasing as a result of their breast cancer history.

**Coping strategies for breast cancer-related challenges.** Participants generally described coping strategies for breast cancer-related challenges that went beyond the scope of work-related challenges. These strategies fell into eight subcategories. In general, participants spoke of the importance of social support. Generally, they mentioned positive aspects of social support and instrumental support and emotional support as general methods for coping. Within emotional support, participants variantly spoke of connecting with other young survivors. For example, one participant explained, “I think that’s it’s really, really powerful to talk to other people who have gone through it and who actually know what you’ve experienced, especially in regards to age because it’s so different depending where you are in your life” (P5). They also variantly described how people from their social support system, such as their children, gave them a purpose for living during their cancer treatment.

In regards to utilizing social support as a way of coping with cancer-related challenges, it was variant that participants portrayed negative aspects of social support. More specifically, they variantly expressed difficulty in finding same-age survivors. One participant explained that “going to support groups in person is not an option when you are my age because every person who I’ve talked to that I’ve met now through my online community has had the same experience. You go and this 70 year old woman would look at you like, “What are you doing here? Are you a nurse?” And you start talking and they don’t have the same issues as you. And it’s just, there’s no connection there whatsoever. I went to one and I never went back” (P5).

Another coping strategy that was typically described was using their positive perspective as something that they could control. For instance, a participant stated “I think that so much of it is perspective and I don’t want to say all of it, but so much of how you will deal with cancer or how you will deal with any type of trial is perspective. That is the only thing you have control over, how you see it and how you manage it” (P1). Variantly, participants specified that they believed that positive thinking played a critical role in their recovery, with one participant claiming that “I believe we manifest what our minds say, our bodies do. . .” (P1).

Having a choice in whether to disclose their breast cancer status was another coping strategy that variantly helped them by providing feelings of empowerment. Other coping strategies that were mentioned variantly included alternative treatment modalities (e.g., yoga, exercise, nutrition) or psychotherapy. Simply avoiding or blocking out thoughts about their breast cancer experience was also described variantly.

Further coping strategies variantly portrayed included involvement in breast cancer advocacy and helping other survivors as well as more generally hearing about other people’s struggles and realizing that they are not alone. One participant explained that “throughout my whole chemo, at the beginning of this whole thing I made this decision that I wasn’t going to let this take anything from me. I wanted to get something out of it, something positive to come from it. I wanted to help other people or do something with this whole experience” (P11).

**Re-appraisal of self after breast cancer.** In addition to specifying non-worked related challenges posed by breast cancer and the strategies that they utilized to cope with those non-worked related challenges, young survivors also generally spoke of how breast

cancer led them to reappraise themselves. These re-appraisals fell into four subcategories, each variably expressed. The first subcategory was that breast cancer revealed their strengths and showed what type of person they are. According to one participant, “cancer allowed me to really know that I am who I think I am. I thought I was a very upbeat and optimistic person and now I know that. When you are really tested, you figure out who you are” (P1). The second subcategory of re-appraisal of the self was that they found ways to incorporate breast cancer into their identity but were not defined by their breast cancer. The third subcategory of re-appraisal was that breast cancer created an identity crisis that had yet to be resolved. This was expressed by one participant as:

It’s just hard to get my life back together [after cancer]. I mean, you have an identity crisis. Like, who am I now? I don’t know. . . And it’s a little crazy, it’s like a tornado of, you know, what just happened? I’m so tired and stuff, I don’t know.

Finally, the fourth subcategory was that they felt their body had betrayed them by getting cancer at such a young age.

**Re-appraisal of relationships after breast cancer.** The final category within the non-work related impact of breast cancer on their lives is a general re-appraisal of relationships after breast cancer. Typically, young survivors expressed that their breast cancer experience enhanced their relationships. This enhancement took the form of prompting the participants to become more aware of and adopt healthier interpersonal boundaries, or through connecting with other young breast cancer survivors. Variantly, participants described ways in which their breast cancer experience placed a strain on

their relationships, such as by resulting in social isolation and withdrawal or increasing their concerns about disclosing their survivorship in romantic relationships. One participant expressed her concerns about establishing romantic relationships after cancer as:

I can't imagine dating without boobs. I mean, I have fake ones but they don't look real. And I don't know how that would work. How would you meet someone new and then just spring that on them? It's bad enough when people your age don't get it. How would a potential significant other get it? (P11)

**Lessons learned from breast cancer.** The ways in which their breast cancer experience affected their lives on a more abstract, philosophical level is captured in domain 8: lessons learned from breast cancer. These lessons were divided into categories on changes in personal views, which appeared generally in the data, and positive changes in behavior, which appeared typically in the data. Within the category on changes in personal views, three subcategories arose. The first subcategory was a general description of realizing that they could not control what unfolds in life, and that death is always a possibility. The second subcategory was a general discussion of feeling the need to be more open to others and to new life experiences. Variantly, the third subcategory of changes in personal views was the realization that life is hard, and participants described becoming more cynical as a result. The participant who experienced a breast cancer recurrence and struggled to find a support system to help her cope best captured this cynicism when she explained:

I had this screw everything attitude. I hate everything and everybody. Life sucks, and people suck. I had this very down attitude towards it . . . I think as you go

through life you become hardened and narly. You're not this happy go lucky kind of person that can do anything. You know what I mean? Like that's how I started out, and now I'm just this jaded, cynical, untrustworthy person. I mean I'm trustworthy but I don't trust other people because I haven't had positive experiences with that (P12).

Participants typically mentioned positive changes in behavior. It was typical that participants stated that they took action to have more balance in their work-home life after cancer. This typically took the form of placing more emphasis on family and relationships or variantly took form as placing more emphasis on leisure. Moreover, it was variant that participants described becoming a health-care self-advocate after their cancer experience. As expressed by one participant, “[after cancer] I'm a lot more, I'm very research oriented. I think it's extremely important to know everything, all of your options, the options for doctors, different treatments” (P5).

### **Additional Findings**

In addition to interview questions crafted specifically to address the study's research questions, participants also were asked about their thoughts about the future, what career advice they had for other young survivors, and what it was like to participate in the study. The first question was utilized to gain insight into whether the participants felt they would continue to make changes in their lives regarding the role of work and other life roles, or if the impact of breast cancer was limited to the time of diagnosis and the immediate post-treatment phase. Given that there is little research on young breast cancer survivors, it was important to consider whether the impact of cancer on young women's career development represented a finite, acute change or a more long-lasting,

ever evolving impact. Further, when conducting the pilot interviews with young breast cancer survivors, the young survivors repeatedly expressed difficulty finding information on their work-related choices and wanting advice from other young survivors. The chance to help newly diagnosed breast cancer survivors to receive advice from those on the other side of their breast cancer experience represents a potentially unique contribution of the current study. Finally, participants' reflections on participating in the study offer feedback on the extent to which the interviews easily allowed them to express their thoughts about the topic of the impact of breast cancer on their careers and work lives.

**Thoughts about the future.** In regards to the domain on thoughts about the future, participants generally described thinking about the possibility of a cancer recurrence. Typically, they were always aware of the possibility of recurrence. Some attributed this awareness of the possibility of recurrence to them having the BRCA gene, whereas others attributed it to a general sense of knowing that death was always a possibility after confronting cancer at such a young age. Typically, participants expressed worry or anger when thinking about recurrence. When discussing with her doctor her chances for a breast cancer recurrence, one participant stated, "I'm wrestling the possibility OMG, my son is going to watch me die, that's heart wrenching" (P7).

In regards to their specific thoughts about their future careers as breast cancer survivors, they typically expressed that career flexibility would be more important in the future.

Participants expressed varied thoughts regarding the importance of and their advancement in future careers. More specifically, it was variant that participants

anticipated that their career importance would be similar to what it is currently, and it was variant that participants would anticipate that they will have advanced in their careers in the future. For example, one participant stated that in ten years, she anticipated that:

I see myself continuing to move up. I think with that moving up, it will allow me to have more flexibility. I don't see moving up meaning I have more work hours. I think just the opposite; being able to have a bigger staff of people that I can rely on and delegate to and that would allow me more flexibility (P1).

Finally, participants generally described their thoughts about what their future non-work related roles might be. Typically, participants anticipated that their family, partner, or children would be more primary, with the timeline for shifting the focus from their careers to their family life sped up. For instance, one participant explained that she would likely decide against pursuing a fellowship within her field "because I don't have a normal life expectancy. I am going to be dead in twenty years. I am not going to waste 2 years probably living apart from my spouse, working really hard, taking away from family and fun time to work on a fellowship" (P4). Other non-work related roles participants expressed that would be important to them in the future were community involvement or advocacy (variant result) and leisure (variant result).

**Advice for other survivors.** The advice to other young survivors offered by the participants in the current study fell into four categories: (1) do what you think is best, (2) seek support within or outside work, (3) do not let cancer define you, but use it as an opportunity to re-evaluate your life and to follow your passions, and (4) stay positive and believe in yourself. One participant captured these categories by stating:

I would tell other survivors to just believe in yourself because, at least from my experience, I spent so much time during that year and a half of active treatment being told exactly what to do and being told, this is the process for making you healthy, this is the way we're going to make you better, this is way you're going to succeed, because success is measured in whether or not you survive. And so I think when I was finally done with treatment, I struggled a little bit with figuring out what to do now that I make the decisions and I think a career, at least in my case because I was just starting out in my career, I think it took a lot of just believing that I was making the right decisions and that everything would work out. And I think I would recommend a new survivor get a good therapist, but not be afraid to admit that it's hard. And then, just be happy, do something that you love, because at least for me, my cancer experience taught me that I don't have time to do something I don't want to do and I think there's all this pressure, especially on young men and women to get a job and make a lot of money. And I think post-chemo, all of the money in the world could not have prevented me from getting cancer. And so, I think that was a good change, too, in that I now place more value on what makes me happy, versus what is societally expected of me (P2).

It was typical that participants advised other survivors to do what they think is best, noting that each situation is unique and that there is no perfect formula that works for all young breast cancer survivors. Additionally, it was typical that participants advised other survivors to seek support within or outside work. Participants emphasized that there were people who wanted to help and that young survivors could benefit from utilizing that

support. Variantly, participants advised other young survivors to not let cancer define you, but to use it as an opportunity to re-evaluate your life and to follow your passions. Finally, participants variantly advised others to stay positive and believe in yourself.

**Participants' reflections on participating in the study.** When asked what it was like to participate in the current study, it was typical to get the response that participants felt it had been a good experience. None of the participants expressed overtly negative feelings about the interview process, although one described the interviews as “not discursive.” It was typical that the interview resulted in new insights for the participants. One participant stated that:

. . . it wasn't until I talked to you that I realized that it wasn't necessarily my mom [that caused my anger]. My mom was a little bit of it but I think the majority of it was the fact that I had to have insurance and that I was tied to the job for it, and that limits you. And that was where most of my anger was coming from. So not only did it [breast cancer] take away my, my controlling my body so to speak, nobody controls their body completely but not only did it seem like I lost control of my body, but I lost control of where I could guide my career, and I think that's where a lot of the anger came from (P12).

Further, it was variant that the participants found the interview process therapeutic or cathartic. One participant explained that:

I think it's forced me to think about some things that I hadn't really thought about and kind of maybe be a bit more honest about how much cancer really affects my life because now that I'm healthy, I constantly want to be like, I'm fine, I don't need to talk about it, I don't need to do anything! Whereas I think the interview

process has been very therapeutic to actually be able to talk about it and talk about a correlation between being a survivor and my work. So, I think it's been good (P2).

Participants variantly reported that they thought participating in the study was important to spread awareness of survivorship issues. Specifically, one participant expressed the hope that the results of this study could contribute to the body of literature that oncologists consult when recommending whether young breast cancer survivors should continue working. Finally, the interviewer offered relevant cancer-related information during some of the interviews (e.g., information on cancer-related fertility planning organizations) for which some of the participants variantly expressed gratitude.

### **Prototypical Cases**

Cases will be summarized to present two prototypical cases to provide greater context for the domains, categories, and subcategories and to better understand the various types of impact that cancer can have on the career development of young breast cancer survivors. The first prototypical case (identified as "Participant A") represents commonalities among survivors that experienced the more common course of treatment, side effects, and impact of cancer on work and career. This case represents the experiences of the majority of participants (10 participants). The second case (identified as "Participant B") captures the commonalities among the three survivors who experienced multiple medical complications stemming from advanced stage cancer, long-lasting side effects, a breast cancer recurrence, and co-morbid health issues. The majority of young breast cancer survivors in the current study appear to be more similar to the first prototypical case that will be presented. Although it is rare for young breast

cancer survivors to experience the number of complications portrayed in the second prototypical case, it is important to be aware of the possibility for such an extreme impact of cancer on young women's careers to have a greater sense of the full spectrum of functioning of young survivors. Both prototypical cases will be described along the dimensions captured in the 11 domains, as well as with greater detail about the life circumstances of these two types of young breast cancer survivors.

### **Participant A: The “Typical” Young Breast Cancer Survivor and the “Typical” Impact of Cancer on Career and Work Lives**

Participant A was around 29 years old and working full-time in a professional office position when she was diagnosed with infiltrating ductal carcinoma. At that time, she was married without children, and has she is now planning to try to have children. . It had been three to four years on average since her diagnosis at the time that she completed the interviews.

In terms of her career development, Participant A grew up in a family that highly valued education and hard work with both parents obtaining post-secondary degrees and Participant A exhibiting high academic achievement in her own post-secondary education. Participant A described how her parents taught her that if you worked hard, no one could take away your education. Participant A internalized this work ethic, and described herself as a “learned overachiever” and “workaholic” who planned to work hard while she was young with the goal of relaxing later in life.

Participant A identified several mentors during her career development, including one boss in particular who saw her potential and helped her move into a position within their company that would allow her to use her strengths. Before her cancer experience,

Participant A assumed that her career would play a primary role in her life and she was committed fully to achieving her career goals. She was ambitious and often encountered much work-related stress, working long hours, taking on extra projects, and attempting to establish herself within her field.

Participant A discovered her breast cancer through a self-examination. She immediately consulted her gynecologist, who recommended that she follow up with a surgeon for a biopsy. She was repeatedly told by medical providers that the lump she had discovered was probably nothing, and thus she was shocked when she learned that the biopsy indicated breast cancer. She stated that she felt like breast cancer could not be happening to her because she was too young to be dealing with cancer, and she struggled to find breast cancer treatment information that was specific to young survivors. She had not known anyone to get breast cancer at such a young age, and all of the other breast cancer survivors she encountered were much older and at different stages of life. She trusted her medical team's advice for what treatment-related decisions to make, and had surgery, chemotherapy, radiation, and hormone therapy (i.e., Tamoxifen). She had always wanted children, and the impact of treatment on her fertility was a major concern.

Participant A immediately informed her place of work of her diagnosis, and her employer and colleagues offered her emotional and instrumental support. She was allowed to adjust her schedule as she needed to accommodate treatment, and she reports scheduling her chemotherapy treatment to minimize the amount of time she took away from work. She never considered not working, and stated that work provided her a sense of normalcy and helped her feel more in control of her life. She also acknowledged that she may have continued working during treatment because her pride kept her from

admitting she was in pain and she did not want others to view her differently, and especially did not want their pity. Her work colleagues and bosses viewed her as strong and determined because she continued to work during treatment, and their perceptions of her were encouraging and motivating to not let cancer take over her life.

Participant A stated that in a “naïve and gullible place,” she would say that breast cancer had not posed any challenges to her work life. She reports not experiencing overt discrimination due to her status as a breast cancer survivor. But she placed primary importance on health insurance coverage when making work-related decisions. She sometimes felt she could not leave her current company because she was afraid she would be denied health care at other companies. More specifically, she felt she could no longer consider freelance work or employment at small or private companies that may not be able to afford her health care coverage. Participant A was initially hesitant to be open about being a breast cancer survivor once her treatment ended and the visible signs of her survivorship had disappeared. She questioned whether people might weigh the fact that she is a breast cancer survivor when considering whether to hire her because they might not want to have to pay any future medical expenses she may cost a company. But generally, Participant A did not believe she had experienced any discrimination as a result of her status as a breast cancer survivor.

Another aspect of survivorship that Participant A did not explicitly describe as a challenge that cancer posed to her work life but could be interpreted as such was “chemo fog” and “memory problems.” Participant A described these side effects in a matter of fact manner, and stated that she simply coped by taking lots of notes. Additionally, Participant A spoke of losing her hair. She relayed that she was very self-conscious

about losing her hair, and decided to preemptively shave her head and wear a wig to work. She found that her workplace was very supportive, and colleagues expressed “open curiosity” about her hair change. Her co-workers complimented her on how her wig matched her skin complexion, and Participant A gave her wig the nickname of “Sherri” to offer levity to the situation. For example, her co-workers would joke about how Participant A and “Sherri” were leaving for the day.

Overall, Participant A felt that she could not have asked for more supportive colleagues, employers, and friends, all of whom were key in her coping with breast cancer and the challenges it posed to work. They sent her flowers, supported her in breast cancer fundraising events, mailed her encouraging cards, prayed for her, and her boss paid for massage gift certificates when she traveled for work. Participant A stated that “this experience taught me the depth of people’s souls and the size of their hearts.” However, she felt that workplace support decreased once her cancer treatment had ended. She described how she felt that others expected her to return to “normal” after she was done with her treatment, and they were not always sensitive to the ongoing side effects she had to manage, such as memory difficulties.

Participant A expressed that the greatest impact that her breast cancer experience had on her life was it changed her perspective on work. She was constantly searching for work-life balance, which she believed was a change prompted by cancer. If it were not for breast cancer, Participant A believes she would have continued to look for most of her life meaning and fulfillment in her work rather than in her children. She would still be more of a workaholic, and would be more competitive at work, having more difficulty letting go of any negative spillover from work into her home life. She would have

chosen different jobs because she would have been more concerned about advancing her career than finding work-life balance. She would have continued to “over-obsess” about work, and now believes she has a calmer presence at work. Participant A spoke of focusing on her family, friends, and her breast cancer advocacy to help her stay focused on balancing work and life.

With this greater focus on work-life balance also came questioning of what impact her work has had on the world. Participant A described looking at the time she spends with her family and friends, and being able to see its direct impact on their lives. But then she reflects on her work and questions what she has really achieved. She seeks work that adds value to her life so that she does not feel like she is wasting her time on it. Participant A expressed feeling an intense pressure to make each moment in life after cancer meaningful and to ensure she is not taking any experience for granted. Accordingly, she describes herself as being more selective and intentional with how she spends her time and energy. In some ways, she now considers work a means to an end in the sense that work provides financial stability and opportunities to give her experiences that she will never forget, such as to travel for breast cancer advocacy. She summarizes this perspective shift as breast cancer taking who she really is and amplifying it. She states that she has always been a very grateful, optimistic, and passionate person. She recognizes that now she is more selective about the things she is optimistic and passionate about, and more selective in how she spends her time. More specifically, she has redirected her passion toward her work to things that she finds more meaningful, such as spending time with her family and friends as well as breast cancer advocacy.

When Participant A thinks about her future, she experiences mixed emotions. She feels that breast cancer has empowered her to conquer any fears or challenges she faces in the future. She believes that if she could get through chemotherapy, she can make it through anything. She would love to wed her passion for advocacy with a paid position in the future if possible. But she also expressed fear about the future, and concern that her life expectancy has been shortened as a result of the chemotherapy and radiation she underwent. In short, Participant A considers every day a gift that she does not take for granted.

**Participant B: The “Atypical” Young Breast Cancer Survivor and the “Atypical” Impact of Cancer on Career and Work Lives**

Participant B represents a White, 40-year-old woman who worked in a professional position that required extensive training. She was 33 years old at the time of diagnosis. Of the three participants who comprise the persona of Participant B, one participant was single, one was married with no children, and one was married with two young children. Her career path had been linear, and had required an extensive amount of time and energy when she first finished school in order to progress in her career path. She had sacrificed much of her personal life throughout her twenties and early thirties for the sake of her career. Due to continued medical complications, Participant B was more likely to utilize opportunities for private or public disability to obtain financial support during her medical difficulties. However, her disability insurance was time-limited and she was forced to return to work for financial reasons and to have health insurance. Participant B expressed doubt regarding her work self-efficacy and whether she was able to function at the same level at work that she did before she had breast cancer, and

specifically expressed concerns about cognitive limitations as a result of treatment side effects. She struggled to manage the intense cognitive and time demands of her job..

Participant B described having a linearly ascending career path. Her parents heavily identified with their careers, and from her parents, Participant B absorbed the work ethic that she should help others with her work and that her own needs should be secondary to helping others. Her parents also instilled in her the need to constantly improve in a life of service, so that even if you have achieved something, you can still be better. She spoke of how with her career path, you are always considering and planning for your next step. She felt that once she had finally achieved a certain level of work success, she would be able to slow down in her work and place greater emphasis on her personal life, but she was diagnosed with breast cancer just as the demands of her work were beginning to decrease and plateau at a lower level of intensity..

Participant B found a lump in her breast herself, and had multiple other medical complications that arose as a breast cancer survivor. She underwent extensive testing for other forms of cancer, and struggled with debilitating fatigue. She had long-lasting medical complications and ongoing treatment, including multiple surgeries and repeated hospital stays. She would begin to recover and attempt to return to work, and then experience another medical complication. She has experienced intense and chronic side effects from cancer treatment, including nausea, vomiting, depression, pain, fibromyalgia, radiation-induced brachial plexopathy, and memory and concentration issues.

Initially, Participant B was hesitant to tell anyone at her work place about her breast cancer diagnosis, and she delayed in disclosing this information until it was no

longer possible to avoid doing so. She viewed her disclosure at work was a matter of necessity, although she characterized her work environment as supportive and warm. Participant A was very matter of fact in her reaction to the diagnosis and in how she conveyed the information to others. Participant B's boss told her to take as much time as she needed for treatment, and she tried to overlook Participant B's treatment-related limitations as much as possible as time went on. Co-workers generally were supportive.

Initially, Participant B could function well enough to complete her required job activities, but felt she was unable to be competitive at the level she had been pre-cancer. People would advise her to use her cancer experience as a chance to reevaluate her life and redirect her energy to only those things she found meaningful. But Participant B felt she was not ready to hear that advice at that point in time because she was simply trying to hang on while experiencing such a difficult treatment process. Eventually, Participant P was no longer able to complete her job responsibilities, and characterized herself as cognitively 30% of what she was before cancer. She considered it a "slow fail." Participant B described her difficulties with word finding, remembering job procedures, and attempting to manage her workload while experiencing long-term medical complications and multiple reconstructive surgeries. Participant B felt that having spent her entire life making so many sacrifices for a career that she really loved made it even more devastating to lose it all due to cancer. She felt shame, disgust, and guilt over the way her work performance has suffered, and, and believes that cancer has ruined her life.

To cope, Participant B has relied heavily on her family, who has consistently reflected that she is more than her work. But she expressed concern that she was "too much" for her family to "deal with" because of her many medical and long-standing

complications. She also sought support in other cancer survivors. Yet Participant B struggled with comparing her level of functioning with that of the other cancer survivors, and often judged herself harshly as a result. Other coping strategies have included exercise programs organized by cancer survivorship groups, walking, rowing, and psychotherapy.

Reflecting back, Participant B wishes she had taken more time off upon receiving her diagnosis. She stated that the “smart” thing would have been to go on disability as soon as she received her diagnosis. She thinks she would have been able to cope better with all the medical complications that she faced if she had not been working at the time. Moreover, she believes it would have been better to have left work when she was clearly sick, everyone around her recognizing her as being sick, and then returned to work when she was well. Instead, she feels that people no longer viewed cancer as the problem, and began to view Participant B as the problem. She felt she had failed to meet people’s expectations repeatedly, and their patience for her ran out. She stated that people have a three-month attention span for breast cancer. But at the time of her treatment, Participant P described herself as very work identified and did not want cancer to take work from her.

Participant B described intense, negative feelings toward herself as a result of having difficulty working due to cancer. She expressed resentment at cancer for taking away her freedom to pursue the career she had initially wanted because she felt her career choices were limited and she had to place priority on access to insurance and medical care. Participant B described feeling pressure to be the eternally optimistic breast cancer survivor, and criticized herself for not being that. She described difficulty connecting

with others because they did not want to deal with her negativity, and she felt her struggles were invalidated as a result and created interpersonal difficulties. She expressed concern about the negative impact that breast cancer has had on her ability to establish strong relationships.

Participant B considered herself a “fuck up” for being among the few that faced a long-term struggle after breast cancer. She stated that she felt as if her old, capable self was dead, and that she was having to recreate a new person who was limited in her communication skills, memory, ability to multi-task, and awareness of her surroundings while being constantly distracted by pain. Participant B described continuing to move towards acceptance that work did not define her and that she could live her life and do things for others that was not work-related.

Participant B observed that getting breast cancer at such a young age, when it is an unexpected part of life, made it especially difficult. She noted that before cancer, she thought she had a career path laid out for her and to have that path blocked has been overwhelming. She felt that cancer has stolen her sense of time and her freedom to make her life what she had wanted it to be, and she fears looking too far into the future because of her high risk for recurrence.

### **Summary of Prototypical Cases**

The two prototypical cases were provided as examples of the “typical” and “atypical” trajectory of breast cancer for young working women. The first prototypical case was characterized by breast cancer treatment as a chronic illness that had to be managed but did not significantly interfere with work activities, and the effects of her survivorship on how she conceptualizes her career development have been long-lasting.

This case involved the receipt of much support and accommodation from the work environment, but was not without challenges, including the financial necessity to continue working. The participant has struggled to feel in control of her career path due to her cancer as well as due to her need for insurance.. She actively sought meaning in her cancer experience, and utilized a new perspective on the meaning of work and a new focus on her roles outside of work as a way of coping with the challenges that breast cancer had presented.

In contrast, the second case was characterized by chronic treatment issues and side effects that significantly interfered with her ability to function at work and made it nearly impossible for the participant to feel she was in control of her body or her work situation. The second case represented a loss of an important aspect of life meaning given that Participant B believed work had been stolen by the cancer. Although the second case involved some satisfying relationships outside of work, those relationships did not automatically take on more importance and did not fill the gap left by no longer working, and Participant B also lost the social support her workplace had provided. Further, Participant B felt her ongoing medical issues placed a strain on her relationships and she worried about their interference in her ability to feel connected to others. The second case was about surviving the day to day physical and emotional aftereffects of breast cancer, feelings of demoralization and lower work self-efficacy, and a sense of lost control. These two cases demonstrate the range of impact that breast cancer can have on the work lives of highly educated, work-identified young women.

## **CHAPTER SIX**

### **Discussion**

The purpose of this study was to explore the impact of breast cancer on young women's career development. Interviews with 13 young women who were diagnosed with breast cancer before the age of 40 while working full-time were completed to investigate this topic. Using consensual qualitative research (CQR), 11 domains emerged from the data: (1) discovery of breast cancer and the navigation of treatment; (2) career development: influences and sacrifices; (3) cancer-related work challenges; (4) coping with cancer-related work challenges; (5) re-appraisal of career development after cancer; (6) components of career and life satisfaction after cancer; (7) impact of breast cancer on life outside of work; (8) lessons learned from breast cancer; (9) thoughts about the future; (10) advice for others survivors; and (11) participants' feelings about participating. Following the methodology outlined by Hill et al. (1997, 2005), categories were generated to capture common themes across participants within each domain. The term "general" is applied when categories were represented in 12 or 13 cases, "typical" is applied when categories were represented in seven to 11 cases, and "variant" is applied when categories were represented in three to six cases. The results did not include categories that applied to only one or two cases.

The findings from the current study are discussed in the following way. First, I discuss background data on the participants; including demographic information, medical history, quality of life as measured quantitatively, and domain 1 on the discovery of breast cancer and the navigation of treatment. This background information provides a sense of who comprised the sample so that conclusions based on the data remain in this

context. The participants represented a subset of the population of young breast cancer survivors (e.g., highly educated). Next, the overarching themes of re-appraising career, themselves, and their relationships is presented before discussing the specific domains found in the study. Given the breadth of information about the experiences of young breast cancer survivors represented in the current study, it is helpful to highlight this overarching theme that appears in both the Impact of Cancer on Career domain and in the Impact of Cancer on Life Outside of Work domain. This specific theme represents perhaps the most compelling aspect of these young survivors' narrative as they describe the impact of their breast cancer on their career development, work lives, self-concept, and relationships. The shape and form of their attempts at re-appraising their work, selves, and relationships signify one way in which the impact of breast cancer on young survivors differs from the impact on their older counterparts.

After presenting the general themes of re-appraising career, self, and relationships, the specific research questions are discussed. These research questions were: (1) What challenges does breast cancer pose to young women's career development? (2) How do young breast cancer survivors cope with these career-related challenges? (3) What contextual factors have influenced young breast cancer survivors' career development? (4) To what extent has experiencing breast cancer affected the abilities, priorities, and meaning of work for young survivors? (5) What role does work have in young breast cancer survivors' identities post-treatment compared to their other life roles? and (6) In summary, how has cancer most affected the lives of young breast cancer survivors? Then, additional findings on young survivors' thoughts about the future, their advice for other survivors, and their reflections on participating in the study

are discussed. Finally, I conclude with a discussion of limitations and implications for practice and future research.

## **Background Data**

**Background information.** Participants' background information is presented in Appendix F: Table 2. In terms of demographic background, participants in the current study were from a variety of racial backgrounds. Although the majority of participants identified as White (n = 9, 69.2%), two identified as African American (15.4%), one identified as Latina (7.7%), and one identified as biracial Indian and White (7.7%). African American women are more likely to be diagnosed with breast cancer than White women before the age of 45 whereas White women are most likely to be diagnosed with breast cancer above the age of 45, followed by African American, Hispanic, and Asian women (Howlader, 2009). In the current sample, White survivors are over-represented. Moreover, participants in the current sample are highly educated and the majority reported an affluent socioeconomic background. A range of occupations were reported, but the current sample's occupations were skewed towards those requiring intensive education and preparation, and were professional positions. Although multiple attempts were made to obtain the demographic background data of registered users for the Young Survivors Coalition online bulletin board, from which the current participants were recruited, this demographic information was not available. Only demographic information on general breast cancer survivors could be located.

In terms of relationship status, ten of the participants reported being married or partnered and three reported being single. Relationship status has been identified as an important predictor of survival outcomes across cancer types (Fossa et al., 2011; Pinquart

& Duberstein, 2010), with women who have never been married 22% more likely to die from cancer than married women (Kravdal & Syse, 2011). Kravdal and Syse (2011) suggested that the “marriage advantage” for cancer survivors could relate to married individuals having better general health when diagnosed with cancer due to either protective effects of a marriage relationship or healthier individuals being more likely to marry than unhealthy individuals. Additionally, they hypothesize that relationship status may influence the quality and type of cancer treatment received, with married individuals faring better (Kravdal & Syse, 2011). However, in their study of male and female Norwegian cancer survivors, individuals were diagnosed between the ages of 30 and 89 years of age and most of the conclusions were drawn about elderly cancer survivors (Kravdal & Syse, 2011). It remains unknown as to how relationship status may have an impact on survival rates or quality of life indicators for young cancer survivors. In the current study, the three single participants ranged in age from 24 years old to 39 years old, with the youngest single participant reporting one of the highest levels of well-being and the oldest single participant reporting one of the lowest levels of well-being. Perhaps relationship status can serve as a buffer against the negative impact of breast cancer on young survivors’ well-being, but other factors; such as diagnosis type, access to and quality of other forms of social support, and age; may moderate the relationship between relationship status and well-being. Moreover, young survivors who feel as if being diagnosed with breast cancer at a young age has interfered with their ability to establish a long-term romantic relationship may experience lower levels of well-being than older, single survivors who attribute their status as single women to personal choice or non-health related factors.

The medical diagnoses reported by participants generally were what would be anticipated among young breast cancer survivors, with the majority reporting the most common type of breast cancer (i.e., invasive ductal carcinoma). Further, this sample reported typical treatment options, ranging from a lumpectomy to oophorectomies (i.e., surgical removal of one or both of the ovaries). Although the decision to have their ovaries removed was a difficult one for participants and may appear to be an extreme treatment option, it is not uncommon among young breast cancer survivors, especially those who are at risk for BRCA gene mutations.

**Breast cancer survivors' quality of life.** The quality of life reported by participants on the Quality of Life-Cancer Survivors (QOL-CS) Breast Cancer Version (Ferrell, Dow, & Grant, 1995) is presented in Appendix G: Table 3 and was markedly low. For instance, Table 3 presents the scores published in cancer studies by Dow, Ferrell, Leigh, Ly, and Gulasekaram (1996) and Dow et al. (1995) compared to the scores in the current study. Although the small number of participants in the current study raises issues about the reliability of the scores reported in the current sample because they may not be representative of young women with breast cancer, it appears that findings from the current study support the generalization that young survivors experience lower levels of quality of life than older survivors, especially in their physical and social well-being (Avis et al., 2004; Dunn & Steginga, 2000; Thewes et al., 2004). Specifically, these physical side effects, as measured by the QOL-CS, included fatigue, appetite changes, aches or pain, sleep changes, weight gain, and menopausal symptoms (Ferrell, Dow, & Grant, 1995). The social side effects included negative impacts of cancer on family and

personal relationships, sexuality, employment, activities at home, finances, and feelings of isolation and insufficient social support (Ferrell, Dow, & Grant, 1995).

The low reliability of the scores comprising the Physical Well-Being subscale of the QOL-CS in the current study complicate the interpretations of the participants' low scores on this particular subscale. The reliability of scores for the current study is lower than the reliability coefficient of .88 reported by Ferrell et al. (1995). No single item on this subscale was responsible for the low reliability, and it is likely related to the current study's small sample size and varying diagnoses.

Although it is impossible to compare the quality of life with same-aged healthy controls to the current sample given the design of the current study, the findings that physical and social side effects were ongoing issues for participants who were on average over 3 years post-treatment is of importance. Specifically, this supports the findings of Vacek et al. (2003) and others (Casso et al., 2004; Cleeland et al., 1994 ) that a reduction in quality of life may last years beyond the scope of medical treatment for young survivors. Survivorship issues continue long after treatment ends, although breast cancer survivors often feel the recognition of their needs stops with treatment (Oxlad et al., 2008). Aftercare is critical to the quality of life of survivors as they manage their cancer as a chronic, rather than an acute, illness (Hoffman, Lent, & Raque-Bogdan, in press; Rowland, 2008).

**Discovery of breast cancer and navigation of treatment.** Given their young age at the time of diagnosis, it was expected that the participants would report that their breast cancer was self-discovered as has been suggested by prior research (Rosenberg & Levy-Schwartz, 2003). Interestingly, one participant noted that her partner first drew

attention to her abnormal breast tissue, raising the possibility that being in an intimate relationship may serve as a protective factor in recognizing disease symptoms. Women under the age of 40 are not undergoing regular mammograms. Although gynecologists or other medical providers may recommend self-examinations for breast cancer, young women typically do not have breast cancer in the forefront of their minds as a significant health risk for that stage of their lives.

It was not surprising that participants variably ( $N = 5$ ) described having prior knowledge about cancer due to their family history. Across all ages of survivors, approximately 15% of women diagnosed with breast cancer have a family member who also has been diagnosed, and having a first degree relative (i.e., mother, sister, daughter) with breast cancer doubles a woman's breast cancer risk (American Cancer Society, 2009). In the current study, nearly half of young survivors reported having a family member who had also been diagnosed with breast cancer, which is expected given the stronger family history of cancer among young survivors. Three participants in the current reported having a gene mutation. Having the BRCA gene creates up to an 80% risk for developing breast cancer during a woman's lifetime and increases the likelihood of being diagnosed before menopause. Additionally, gene mutations are linked to an increased risk for ovarian cancer (American Cancer Society, 2009, 2010). The overrepresentation of young survivors with gene mutations in the current sample helps explain the aggressive treatment options pursued by some of the participants (e.g., removal of one or both of the ovaries) and perhaps also explains their lower levels of physical well-being when compared to other breast cancer survivors (see Appendix G: Table 3).

Participants' variant reference to external stressors within their family or work environments occurring at the same time as their breast cancer diagnosis reflects that those participants' stage of life (i.e., emerging adulthood) can be a time of transition. Arnett (2004) characterized this time of life as the age of instability, which held true for a minority of the participants. Perhaps it would have been a typical or general finding that participants experienced external stressors and life transitions, such as changing jobs or relationship status, if they had been in their early 20s at the time of diagnosis. But because participants on average received their breast cancer diagnosis at the age of 30 years, only a variant group described transient life experiences that fall into the parameters of the emerging adulthood theory.

The process of discovering breast cancer was the first time that the theme of access to health insurance arose. This was a theme that re-appeared at multiple points in the trajectory of participants' lives, with significant implications at each time point. Because all of the participants were working full-time when receiving their diagnosis and all were highly educated with significant financial resources, it could have been assumed that they easily accessed and navigated the health care system. Yet even among this somewhat "elite" group of young women, the health care system in the United States posed a significant barrier to receiving medical treatment for a life-threatening illness.

General reactions to the breast cancer diagnosis characterized by shock, disbelief or anger are expected given the untimely life event and have been reported in multiple studies (Greer, Morris, & Pettingale, 1979; Kornblith, 1998; Reddick, Nanda, Campbell, Ryman, & Gaston-Johansson, 2005). The emergent reaction to the diagnosis as jumping into problem-solving or survival mode and the active methods participants utilized to

make treatment decisions suggests that they were a highly motivated group of survivors. In making treatment decisions, they utilized all the resources available to them and took steps to ensure that they received excellent medical care. Given their demographic background, these participants likely accessed a high level of care after overcoming initial barriers to receiving health care.

In summary, the background data on the participants in the current study suggest that they represent a high functioning, highly educated, motivated group of young women who adopted active, problem-solving coping strategies. With over half of the participants reporting graduate level educational training, this sample expressed great commitment to their careers, were high achieving, and exhibited strong work ethics. Not all young breast cancer survivors will fit this mold, and may not be similarly committed to their career development.

**Overarching theme of re-appraisal and meaning-making.**

Although the impact of breast cancer on the career and lives of Participants? A and B differed, both participants described attempts at feeling in control of their lives and engaging in a process of re-appraising their careers, self, and relationships after their cancer experience. For most participants, the re-appraisal process occurred both within the domain of the impact of cancer on career and within the domain of impact of cancer on life outside of work. More specifically, participants attempted to understand their cancer experiences and find meaning within them. Because this meaning-making process was a type of re-appraisal strategy pervasive both within their work lives and in their lives outside of work, it will be highlighted briefly as an overarching theme to help frame the findings of the current study.

After experiencing such a major “off-time” life event (Schlossberg, 1981) as breast cancer before the age of 40 and feeling as if they cannot control what unfolds in life, including what happens to their bodies, these survivors looked to other ways to exert their need for control, including trying to make sense of their experiences. According to Park (2010), meaning-making represents a type of appraisal process in which individuals attempt to reconcile the discrepancy between their over-arching cognitive framework (i.e., global meaning-making system) for interpreting life experiences and their appraisal of an immediate stressor, such as breast cancer (Park, Edmondson, Fenster, & Blank, 2008). Meaning-making can take the form of acceptance or positive reappraisal (e.g., benefit finding) of a life experience, assimilating an experience into one’s self-concept or identity (i.e., re-appraisal of self after cancer), or implementing positive changes in one’s relationships (i.e., re-appraisal of relationships after cancer), behaviors (i.e., positive changes in behavior), or other areas of life (Park, 2010). Baumeister and Vohs (2002) explain how individuals use meaning in an attempt to impose a sense of stability on ever-changing, often unpredictable, life events. Specifically, after experiencing a negative life event involving suffering, individuals may cope by reappraising the sources of meaning in their lives or by giving meaning to the negative life event. Experiencing breast cancer at a young age represents one such unpredictable, negative life event that prompted many participants to examine what gave their life meaning and young survivors have reported a greater search for meaning in the cancer experience than older survivors (Schroevers, Ranchor, & Sanderman, 2004).

Baumeister (1991) outlines four needs that contribute to a sense of meaningfulness in individuals’ lives: (1) need for purpose, (2) need for values, (3) need

for a sense of efficacy, and (4) a need for a basis for self-worth. Before breast cancer, most of the participants had been looking to their careers to provide some of these components of meaning. But breast cancer made them re-appraise the meaning that their careers provided in their lives, with many realizing that work was not fulfilling all four components satisfactorily. The more the participants concluded that work did not provide a sense of purpose and efficacy, fuel their sense of self-worth, and allow them to express their values, the more the participants de-emphasized work after breast cancer and the more they began to look for more meaning outside of their work. Only one participant spoke of wanting to find greater meaning within her work thereby making her work more meaningful, whereas the rest of the participants described looking outside of work for meaning in their lives.

Generally, participants attributed greater meaning to their relationships after breast cancer, and they typically reported greater emphasis on their relationships and on finding a work-life balance. This shift in meaning beyond only the scope of their work lives to also include relationships outside of work expanded the number and types of sources of meaning, thereby placing less pressure on work alone to satisfy all four sources of meaning (Baumeister & Vohs, 2002). For instance, work may have met their need for efficacy and self-worth but not their needs for purpose and value, and therefore their relationships could help fill in those gaps. Several participants described the sacrifices that they had made for their careers, and that they were no longer willing to make those sacrifices after experiencing cancer. Likewise, maybe they were more accepting of the gaps in meaning in their lives before cancer as they devoted most of their

energy to advancing their careers, but they were no longer willing to accept those gaps after cancer.

The theme of control within the meaning-making process also was apparent when participants described what they had learned from their cancer experience. They actively searched for the significance (Park & Folkman, 1997) of getting breast cancer at a young age, with most describing how breast cancer inspired them to re-examine their lives and how they were spending their time, and to learn or change something about themselves to improve their overall well-being. The silver lining to experiencing breast cancer at such a young age was that it made them more appreciative for the aspects of their lives that were going well (e.g., relationships, work) and it reminded them of the need to change the aspects of their lives that were not contributing to their overall well-being (e.g., unhealthy relationships). For example, participants described how after cancer they worried less about what others thought of them and did what they wanted to make themselves happy because there was no point in “sweating the small stuff.” Breast cancer helped them reevaluate what was the “small” stuff and the “big” stuff in their lives, and they typically acted accordingly by placing greater emphasis on life outside of work. In short, this process of reappraising their lives after cancer and engaging in meaning-making represents an attempt at exerting control over the significance of cancer in their lives, and for many of the participants a shift from finding meaning in work to searching for meaning in other life domains.

Although the theme of re-appraisal was present across domains in the current study, participants encountered substantial obstacles to acting on their new-founded re-appraisals of their careers, themselves, and their relationships. Specifically, as

participants were re-evaluating the meaning of their work and careers, they were tied to their work because of their need for insurance and money. All of the participants stated that not working after their breast cancer diagnosis was not an option due to financial or insurance needs. These women were diagnosed with breast cancer at a life stage where they had no choice but to continue working regardless of the level of meaning their work provided them. Unlike the typical breast cancer survivor who is diagnosed at a median age of 61 years old (Howlader et al., 2009), when she is likely to either be close to retirement or have a romantic partner to help cover the finances, young survivors are at a life stage in which they have many years of work ahead of them before they will have built any financial security (with or without a romantic partner) or before they will have access to long-lasting government aide that may allow them to stop working when diagnosed. Thus, young breast cancer survivors could control the meaning-making process, but they could not always control their opportunity to make changes in their work lives based on the outcome of that meaning-making process. Even if work did not provide them with meaning, some participants reported feeling stuck in their jobs out of financial or insurance necessity.

Further, the meaning-making process was complicated by their social isolation from peers, co-workers, and others who could not empathize with their survivorship experiences. Compared to their reported scores for physical, psychological, and spiritual well-being, participants reported the lowest scores for their social well-being on the QOL-CS, with nine of the participants averaging a score lower than five (on a scale scored from 0 to 10, with 10 representing the highest level of functioning). They indicated the negative impact that breast cancer has had on their family and personal

relationships, sexuality, employment, and finances as well as how it has led to feelings of isolation and insufficient support. Part of their isolation may have stemmed from the unlikelihood that their peers were engaging in the same type of meaning making prompted by the breast cancer diagnosis at that young stage of life. Moreover, they found other cancer survivors difficult to relate to because of their age difference. In short, participants faced many hurdles in their attempts to feel in act on their re-appraisals of their careers, selves, and relationships as breast cancer survivors.

**Research Question 1: What Challenges Does Breast Cancer Pose to Young Women's Career Development and Work Lives?**

**Domain 3: Cancer-related work challenges.** The domain on work-related challenges experienced by young breast cancer survivors contained four major categories: (1) making the decision of whether to continue working; (2) potential consequences of disclosure; (3) cancer symptoms and side effects that had an impact on work; and (4) managing work load and work schedule during treatment. Each of these categories will be expanded upon below.

**Decision of whether to continue working.** Among the 13 participants in the current study, one had not yet returned to work two years post-treatment due to ongoing, complex medical complications, and one had taken one-month disability at the time of treatment before returning to her full-time work. But these two participants reported the longest absences from work, and nearly all (general) stated that not working was not an option, largely due to financial or insurance needs. Additionally, participants noted the extensive training that they had completed for their occupations, and they did not want that training to go to waste. These results on who returns to work were slightly higher

than anticipated based on prior research. In other studies on the work return rates for breast cancer survivors, the highest return rate reported was 93% for women who had been working at the time of diagnosis (Hasset et al., 2009). Such a rate is similar to that found in the current study. But the bulk of prior research reported a return rate closer to 60% (e.g., Drolet et al., 2005; Fantoni et al., 2010). Moreover, Hasset et al. (2009) found that the most common employment change post-treatment was from full-time to early retiree, which was not an option for the current sample.

Additionally, for the current sample; previously studied factors related to returning to work such as type of treatment, self-employment, work support, race, or physical demands of the job (e.g., Bradley & Bednarek, 2002; Hewitt, Breen, & Devesa, 1999); did not appear to relate to work status. These factors were overridden by participants' financial or insurance needs, and therefore the participants stated that they had no choice but to return to work. They never considered not working. Regardless of the factors that predict return to work in older breast cancer survivors (e.g., support or lack thereof in their work environment, type of treatment, demands of the job), the financial and insurance needs at this life stage, when under the age of 40 at the time of diagnosis, superseded any other considerations when deciding whether to continue working and they had no control over whether to return to work because of their financial needs.

Typically, participants portrayed their decision to continue working as being supported by others, including their partner or family (variant) or medical professionals or other young breast cancer survivors (variant). They described the lack of information about attempting to manage work responsibilities during treatment, and the need for more

research in this area. Without any concrete research or suggestions regarding the management of work that medical professionals or family and friends could draw from, and with other young survivors instructing them to do what they think is best (see discussion on career advice for other young breast cancer survivors), the participants concluded that they had no decision but to continue working and believed they had no choice but to find a way to navigate both treatment and work.

As is described below, participants spoke of how they used work to help them cope with cancer and to provide normalcy and a sense of control during an uncertain time in their lives, yet they also wished they could have taken more time off during treatment. In addition to the financial need for continued work, participants may have perceived that they had no option but to continue working out of need to maintain a sense of control over their work while feeling out of control of their bodies, yet the reality was that their cancer experience made working difficult.

**Managing potential consequences of disclosure.** Tröster (1997) states that how the work place responds to disclosure regarding illness can have a major effect on individuals' career path, ranging from leading them to seek accommodations that will allow them to stay successfully in their current position or leading them to leave paid employment. In the current study, participants typically did not perceive any formal discrimination at work. They stated that they did not perceive any overt ways that they were treated differently than other employees. Likewise, Maunsell et al.'s 2004 population-based study of over 600 breast cancer survivors discovered no evidence for work discrimination, and survivors who were unemployed claimed the decision to leave

work was their own. Thus, formal discrimination in the work place does not appear to effect the majority of breast cancer survivors, regardless of their age.

Although participants in the current study did not perceive any formal discrimination at work, they generally described concerns about less formal but significant negative results from disclosure and how to handle disclosure was a major challenge. For instance, they typically spoke of wanting to be seen as more than a breast cancer survivor at work after disclosure, not wanting to be viewed as less capable at work or treated differently as a result of their breast cancer survivorship. This fits with prior research on survivors' concern that disclosure resulted in hurtful remarks by co-workers, awkward silences, embarrassing or intrusive questions (Maunsell et al., 1999).

Disclosing at work creates a certain vulnerability in breast cancer survivors, opening them up to negative perceptions by others that they cannot control.

Further, participants variantly expressed worry about their current or future job opportunities as a result of disclosure, including the loss of work hours or advancement opportunities, jeopardized insurance benefits, or difficulty in future hiring at companies not willing or able to shoulder survivors' medical expenses. Although none of the participants in the current study reported that they lost their jobs as a direct result of being a breast cancer survivor, prior research has found a precedent for such an occurrence. Further, one participant expressed concern that she would not be able to return to her job because she was no longer able to perform at the intellectual level that it demanded, and she was unsure of what her job status would be once her disability insurance ended. Ashing-Giwa et al. (2004) found that among 26 Latina breast cancer survivors in a qualitative study, nearly half either changed or lost their jobs as a result of work problems

stemming from their treatment and some halted their cancer treatment to avoid losing their jobs. The current sample may have been protected from this possibility as a result of their job types (e.g., none of their jobs required physical labor, all were in full-time employment) or their awareness of or willingness to fight for their legal rights. Only one participant in the current study expressed concern over gradually being edged out of her industry through decreased work hours over time, with a resulting drop in insurance coverage. Another participant acknowledged that her openness about being a breast cancer survivor, such as through blogging and advocacy work, may result in decreased job opportunities in the future because companies may not want to hire someone who may require expensive medical insurance coverage. But participants did not report experiencing any job loss as a result of disclosure.

The fears around how disclosure of survivorship might influence their access to insurance were the most pervasive, with participants repeatedly speaking of how their need for insurance influenced their work-related decisions. Stewart et al. (2001) found that over 20% of long-term breast cancer survivors in Canada reported insurance problems resulting from disclosure, with some afraid to change jobs as a result. These potential worries could result in “job lock,” in which job mobility and freedom to pursue job opportunities are restricted (Beatty & Joffe, 2006). Further, concerns about disclosure indicate that participants also may be at risk for underemployment, as they may decide to stay in unsatisfying jobs or have restricted career opportunities as a result of their breast cancer survivorship status. Participants provided examples of job opportunities that they had been unable to pursue because they would not have included

health insurance or were in locations where they could not receive adequate medical treatment if they had had a recurrence.

Although disclosure largely was discussed as a stressor stemming from breast cancer, participants variably spoke of the positive consequences resulting from disclosure of their breast cancer status at work. One participant revealed that her boss had approached her to ask her to sit in on an important cancer-related policy meeting because the boss valued her input on the topic as a survivor. The participant was viewed as the “expert” on the topic, and her experience as a survivor offered a unique perspective that was highly regarded. The participant spoke enthusiastically about this work-opportunity stemming from her survivorship status, and she described how she was beginning to recognize that her cancer experience could empower her within her work place, rather than be a liability that she had to manage. Although no prior research on this topic could be located, the potential for positive consequences from disclosure within the work place likely relates to such factors as the type of work (e.g., health-related agencies or non-profit status) or employers’ or colleagues’ level of awareness of survivorship issues or the level of contact with cancer survivors (e.g., family members who are cancer survivors).

In summary, participants expressed concerns about their self-efficacy managing disclosure (i.e., their assessment of their capability to communicate disclosure effectively) and their outcome expectations regarding disclosure (i.e., their beliefs about the consequences of disclosure). Although the participants were not asked to leave their work as a result of their survivorship disclosure, they expressed worries about being seen only as a survivor and losing out on current or future job opportunities as a result.

Managing disclosure represented a major challenge, but also had the potential to result in positive consequences, and the topic warrants additional research to help guide young survivors in how to navigate this survivorship issue. Because the effects of disclosure were not always transparent and not always under participants' control, it appears especially important to identify potential predictors of a work environment's positive or negative response to breast cancer disclosure to improve survivors' self-efficacy and outcome expectations regarding disclosure at work.

**Cancer symptoms and side effects that had an impact on work.** The category of cancer symptoms and side effects that had an impact on work were divided into the subcategories of physical, emotional, cognitive, and interpersonal side effects. The physical and cognitive side effects will be discussed first before addressing the emotional and interpersonal side effects.

Participants generally spoke of physical side effects and typically spoke of cognitive side effects that interfered with their work. More specifically, they described fatigue, sleep issues, pain, physical discomfort, numbness, mobility issues, memory and concentration problems, and difficulties communicating; all of which had a negative impact on their performance at work on average three years after treatment had ended. In prior research (Bender et al., 2006; Munir et al., 2010; Tiedtke et al., 2010; Wefel et al., 2004) as well as the current study, chemotherapy in particular has been linked to lingering physical and cognitive side effects. For instance, chemotherapy has been connected to problems in attention, learning, processing speed (Wefel et al., 2004), verbal working memory and visual memory (Bender et al., 2006), with younger survivors describing a greater cognitive impact than older survivors (Arndt et al., 2004). In both

the qualitative interview and the quantitative quality of life measure, participants in the current study echoed many of the complaints regarding physical and cognitive side effects that have been represented elsewhere in the survivorship literature (Anderson-Hanley, Riggs, Agocha, & Compas, 2003; Arndt et al., 2004; Bender et al., 2006; Casso et al., 2004; Cleeland et al., 1994; Dow, Ferrell, Leigh, Ly, & Gulasekaram, 1996; Wefel et al., 2004).

Some debate has occurred over the measurement of treatment-related side effects, especially when measuring cognitive side effects. Survivors' self-report of cognitive issues are usually greater than what is found when conducting objective measures of cognitive functioning. Calvio, Peugeot, Bruns, Todd, and Feuerstein (2010) have suggested that performance-based cognitive measures and patient-reported cognitive measures assess two different aspects of work functioning, and found that patient-reported cognitive limitations was related to work output whereas performance-based measures were not. Further, the importance of patient-reports of their cognitive functioning is supported by the finding that survivors' perceptions of their functioning has an impact on their decision of whether to return to work (Munir et al., 2010) and their work self-efficacy and outcome expectations for returning to work.

Perceptions of physical or cognitive side effects may lead survivors to restrict their work activities, forcing them to find alternative ways to complete their work tasks, as has been indicated in prior research (Maunsell et al., 1999). Drawing from the current study, one participant who was a surgeon and experienced numbness after cancer treatment had to ask others in the surgery room to complete certain tasks that she no longer had the capability to do herself. She was advanced enough in her training that it

was not uncommon for surgeons of her training level to ask those below them to carry out those tasks, and therefore her colleagues were not aware of how her physical side effects from cancer were interfering with her work activities. Regardless of the desire to return to “normal” work lives after treatment, the perceptions of physical and cognitive side effects may interfere with survivors’ abilities to do so and force them to find alternative ways of fulfilling their work duties. Such physical and cognitive side effects may threaten the sense of efficacy that work previously provided in their lives, thereby also threatening the sense of meaning that work provides in their lives (Baumeister & Vohs, 2002).

Participants typically described emotional side effects, including a variant representation of negative emotional effects on their mood that made it difficult to function at work. The prevalence rates of depression and anxiety in breast cancer survivors have been reported at 20% (Dausch et al., 2004; Ell et al., 2005; Wenzel et al., 1999), with a large range from 1.5-46% (Massie, 2004). This rate has been found to drop to 15% five years post-diagnosis, closer to the prevalence rate for the general female population, so long as there was not a cancer recurrence (Bloom et al., 2004; Burgess et al., 2005). These prevalence rates appear to mirror the prevalence of self-reports of symptoms of anxiety and depression found in the current study, yet may provide an incomplete picture. Factors such as age, social support (Helgeson, Synder, & Seltman, 2004), side effects (Traeger et al., 2009), cancer recurrence, personality factors such as optimism, and perceived control have been highlighted as important predictors of psychological functioning after cancer. Moreover, little is known about how these emotional side effects interfere with survivors’ work lives, and whether there are specific

risk factors for emotional side effects that have the greatest ramifications for survivors' work. In the current study, those who reported the most significant emotional side effects of breast cancer on their work lives post-treatment described already feeling burnt out at work when they received their diagnosis (i.e., pre-treatment), as well as extreme physical side effects during treatment. Perhaps pre-diagnosis negative work lives (e.g., burn out) interacts with specific physical side effects (e.g., fatigue) during treatment to make survivors more susceptible to emotional side effects that disrupt work productivity.

In addition to negative effects on their mood, participants variably described feeling more self-conscious about their appearance at work, thereby affecting their ability to focus on their work. Fears about how their co-workers perceived their hair loss, scars, and breasts after surgery plagued the survivors in the current study in a similar manner to what has been reported previously (Maunsell et al., 1999; Tiedtke et al., 2010). Survivors struggled to find work-appropriate attire to dress their new bodies, and were afraid of drawing attention to the changes in their appearance after cancer treatment. Baumeister and Vohs (2002) acknowledge the ways in which work may contribute to a sense of self-worth, thereby contributing to a sense of meaningfulness in life. Yet participants' interpersonal concerns and their resulting impact on their self-image at the work place could threaten the contribution that their work provides to their sense of self-worth.

Further, participants in the current study generally described interpersonal side effects from treatment that interfered with work. Typically, these side effects resulted in difficulties connecting with co-workers or their employer. One participant spoke of her discomfort when her co-workers repeatedly commented on her weight loss, and one co-worker who was unaware that the participant was a survivor joked derogatorily about

skinny women looking like “cancer girls.” This participant, as a result, struggled to make small talk with her co-workers and socially withdrew at work. Another person spoke of having trouble relating to co-workers her same age who seemed pre-occupied with their weekend plans or other matters the participant considered superficial. This participant described missing out on work-related networking opportunities as she also socially withdrew at work due to her difficulties relating to her co-workers. Prior research on survivors’ work-related interpersonal relationships has focused on whether they felt supported by co-workers (e.g., Maunsell et al., 1999) and has indicated that work can serve as a connection to a social support network that can play an integral role in recovery and coping after breast cancer (Ashing-Giwa et al., 2004). But no research could be located that more closely examines how interpersonal dynamics at the work place, such as the ability to emotionally connect with co-workers, changed after diagnosis. Several studies have addressed how young survivors often report social disruption in their relationships and social functioning (Matthews et al., 2002; Mor, Malin, & Allen, 1994) and how some survivors experience “survivor loneliness” (Rosedale, 2009), but most of this research focuses on family relationships or friendships. Given how much time employed individuals spend with their co-workers, an important area of future survivorship research may be the impact of cancer on the quality of interpersonal relationships within the work environment and the extent to which survivor loneliness interferes with work roles. In the same manner that the breast cancer social support literature addresses both perceived quality as well as quantity of relationships (e.g., Turner-Cobb, Sephton, Koopman, Blake-Mortimer, & Spiegel, 2000), research on

work place response to cancer survivors could also explore quality as well as quantity of work social support.

An additional interpersonal side effect within the work place involved whether the work environment accounted for the impact of cancer when assessing participants' work performance. Typically, participants reported that their work did not "cut them any slack" while variably participants stated that their work forgave cancer-related side effects when assessing performance. Participants reported mixed feelings about their work's assessment of them, with some expressing frustration if work expected less of them post-diagnosis. One participant exclaimed to her boss that she had her breasts removed, not her brain, and that she did not want to be treated gingerly. Participants wanted to be seen as more than their cancer diagnosis. Yet participants reported significant side effects, some of which made it impossible to perform at their pre-diagnosis work level. Anecdotally, one might conclude that young breast cancer survivors ideally would like for their employers to be open to finding a way to help them continue to succeed in their work, while also validating the obstacles that the survivors may face in trying to do so. As participant 13 explained, "What I wished I had had was the ability to say to my boss, 'I really want to continue to produce work for you. I just have to do less. Help me figure out what I can do that is still going to be productive for you but will take less of me because I can't give you that much.'" This type of open dialogue may help young survivors remain productive and engaged at work despite their cancer-related side effects.

**Managing work load and work schedule during treatment.** The final category within the domain on work-related challenges experienced by young breast cancer survivors was managing their work load and work schedule during treatment. Generally, participants spoke of their attempts to manage both work and treatment, with no consistent findings regarding how difficult it was to do so. Many factors appear to affect how young survivors manage work during treatment, including their ease in adjusting their work hours to accommodate their treatment schedule and how easily their co-workers could help share their work responsibilities. Even for those few reporting a responsive work environment, finding a way to incorporate treatment represented a substantial disruption to their normal work lives and participants typically described negative feelings about their attempts to manage work. Most wished they could have taken more time off from work during treatment, with some participants describing how overwhelmed they felt at the time while also feeling guilty being away from work for treatment. They felt pulled between the need to take care of themselves and the possibility they would lose out on work opportunities or be treated differently than their co-workers. Tiedtke et al. (2010) reported that breast cancer survivors might attempt to work even harder to try to not disappoint their employers and colleagues, or they might worry that their absence creates extra work for others. Participants in the current study echoed those concerns, as might be expected given their strong work ethic and dedication to their careers.

In summary, young breast cancer survivors reported many of the same work-related challenges as older breast cancer survivors related to the negative impact of physical and cognitive side effects on their work. Yet younger survivors also indicated

the significance of emotional and interpersonal challenges in work as a result of their cancer experience. The interpersonal challenges in particular may be especially critical to the work lives of young survivors because receiving a breast cancer diagnosis at such a young age may create interpersonal difficulties between survivors and their co-workers that could have negative work ramifications. Additionally, young survivors may experience difficulty connecting interpersonally with their colleagues as well as with their peers outside of work, whereas older survivors may only experience difficulty connecting interpersonally with their colleagues. The life stage of young survivors may exacerbate their difficulty in interpersonal relationships.

Further, because younger survivors usually do not have the option to leave the work force at the time of their diagnosis, the issues of managing the disclosure process and their work load while in treatment take on special importance for this population of breast cancer survivors. Their lack of control over whether to continue working after their diagnosis intensifies their need to manage the challenges that cancer can pose to their work and careers and the extent to which those challenges threaten the sense of efficacy and self-worth that work provides for their life meaning. In the next section, the results on how young survivors cope with their career-related challenges will be discussed.

## **Research Question 2: How Do Young Breast Cancer Survivors Cope with Career and Work-Reported Challenges?**

**Domain 4: Coping with cancer-related work challenges.** This domain consisted of three categories describing coping strategies (i.e., social support, working as

a way of coping, behavioral strategies) and one category representing difficulties in coping with work-related challenges.

**Work-related social support regarding breast cancer.** Participants generally described work-related social support regarding breast cancer as a key coping strategy, with such support generally coming from their colleagues and employer as well as from sources outside of work. Typically, they also spoke of receiving support from human resources and work management. Social support repeatedly has been indicated as an important component of breast cancer survivors' quality of life (e.g., Ashing-Giwa et al., 2004; Sammarco, 2001; Smith et al., 2011) and specifically as a positive predictor of their work-related quality of life and their return to work (Mujahid et al., 2010; Nachreiner, Dagher, McGovern, Baker, Alexander, & Gerberich, 2007). In the current study, social support came from multiple sources (e.g., colleagues, other young survivors, human resources) and also varied in its quality, with some participants reporting both positive and negative interactions at the work place. Perhaps most significantly, none of the participants reported mixed positive and negative interactions with human resources and management and instead, participants typically reported only positive interactions or variably reported only negative interactions with these work departments. These negative interactions related to insurance issues and the need for time off for treatment. Instrumental work support and an accommodating work management has been identified as a critical predictor of which breast cancer survivors return to work (Hasset et al., 2009; Mujahid et al., 2010; Spelten, Sprangers, & Verbeek, 2002). The current study implies that for those survivors who have no choice but to return to work, an unsupportive management is a significant source of stress affecting work productivity and satisfaction.

**Working as a way of coping with cancer.** A second coping strategy typically presented by participants was to work. Working during cancer helped provide a sense of normalcy or distraction and to feel more in control, which replicates previous research finding that a sense of control is crucial after receiving a breast cancer diagnosis (Clark & Landis, 1989; Ferrell et al., 1997; Kennedy, Haslam, Munir, & Pryce, 2007; Maunsell et al., 2004; Mellette, 1985; Tiedtke et al., 2010). Moreover, participants variantly stated that maintaining their work identity was a way of coping with cancer because it symbolized that cancer was not taking over their lives. As suggested by Walker (2010), participants expressed that their work identity was central in their lives even as they began to incorporate their survivorship status into their identity. They did not want to let cancer prevent their careers from remaining an important part of their self-concept (Feldman, 1989) and they continued to use their careers as a way of defining their identity post-diagnosis (Spelten, Sprangers, & Verbeek, 2002).

**Behavioral strategies.** The final category of coping strategies was specific behavioral techniques utilized to compensate for side effects stemming from cancer and treatment. Variantly, participants stated that they took additional notes, left themselves voicemails, or sent themselves emails to prevent them from forgetting work-related tasks. These strategies were aimed mainly at responding to the cognitive side effects with which they struggled, such as “chemo brain,” and are similar to those reported by others implementing a cognitive-behavioral approach to treating chemotherapy-related cognitive changes (e.g., Ferguson et al., 2007).

**Experienced difficulties in coping.** Spontaneously, participants typically described difficulties in coping when questioned about how they had dealt with cancer-

related work challenges. The reasons behind these coping difficulties varied, including life stage at the time of diagnosis , prolonged side effects or medical complications, and intense intellectual work demands that required high levels of concentration and working memory. Some of these factors related to their young age. For instance, some participants were at the early stages of their career paths during which they were expected to prove their commitment to their fields by working long hours, and any decreases in their work productivity could hold long-term consequences for their career trajectory. In contrast, older breast cancer survivors may have already established themselves in their fields of work and may be beyond the phase of their work lives during which their level of work productivity is expected to be the highest in order to advance professionally. This appears to be especially true for young cancer survivors pursuing advanced degrees (e.g., MD or Ph.D.) or high-powered professional positions (e.g., attorneys). Further, the decreased amount of time that young survivors had to establish strong networks of social support, compared to older survivors who may have been at their work places longer, only exacerbated their difficulties in handling the intense demands of the early stages of their career development. Not only did they face intense work demands as early stage professionals, but they also lacked the social resources that may have helped them cope better with those work demands.

In summary, findings from the current study replicate prior research on the importance of a supportive and accommodating work environment (Mujahid et al., 2010; Tiedtke et al., 2010) and social support from family (Betz, 2006) in young breast cancer survivors' ability to cope with cancer-related work challenges. Additionally, this population appears to place special importance on continuing to work as a coping

strategy, perhaps because of the unique role that their career plays in their self-concept at this stage in their life. Several of the participants were not partnered or did not have children, and as a result, they reported that their work role was especially salient to their identities. They looked to their career to serve as an important source of their life meaning, including their need for purpose, values, self-efficacy, and self-worth (Baumeister & Vohs, 2002). Yet their life stage also posed unique challenges to coping, including challenges resulting from their nascent career paths. Further, for the highly educated sample in this study, the intense intellectual demands posed by their work complicated their attempts to cope.

### **Research Question 3: What Contextual Factors Have Influenced Young Breast Cancer Survivors' Career Development?**

**Domain 2: Career development: Influences and sacrifices.** This research question was created drawing from research applying Social Cognitive Career Theory (Lent, Brown, & Hackett, 1994, 2000, 2002) to women's career development, and it is best answered by the domain Career Development: Influences and Sacrifices. This domain includes the categories of parental influence, influence of mentors and partners, and personal sacrifices due to high demands of career. It was expected that young survivors would discuss such contextual influences as career related self-efficacy and outcome expectations, gender stereotypes about occupations, or barriers within the educational system (Betz, 2006; Lindley, 2006). Based on prior research, career barriers (e.g., math anxiety and avoidance, stereotypes about occupations best suited for women) and supports (e.g., mothers' non-traditional gender-role beliefs, mentors) were hypothesized to influence women's self-efficacy (Betz, 2006), which in turn influenced

outcome expectations, interests, and choice behaviors (Lent et al., 2001, 2003).

However, terms such as self-efficacy and outcome expectations are not commonly used in the vernacular, and instead, participants discussed more generally how their parents, mentors, and partners influenced their careers and the extent to which they felt they had made personal sacrifices due to the high demands of their careers. Participants did not explicitly describe institutional or environmental supports and barriers related to their career development. Therefore, a summary of the findings for this research question will present previous research on the SCCT to integrate participants' discussion of their career development with a theoretical framework. Other contextual factors related to career development, such as organizational and societal responses to their health status as young breast cancer survivors, are better represented in responses to research questions 1, 4, and 5 on career-related challenges posed by cancer and the ways in which breast cancer has affected young survivors' life roles and abilities, priority, and meaning given to work.

**Parental influence.** Not surprisingly based on prior research (O'Neil & Bilimoria, 2005), participants generally spoke of their parents' influence as the principle contextual factor affecting their career development. In their review of literature on the influences of the family on career development, Whiston and Keller (2004) summarize these complex and sometimes indirect relationships. As one of the most powerful relational experiences, interactions with family members can influence children's career development, maturity, occupational exploration, vocational identity, career decidedness, and occupational choice at varying levels of intensity across the life span (Whiston & Keller, 2004). Based on the findings from the current study and prior research, it appears

that the role of parents in their daughters' career development cannot be over-emphasized.

Participants typically described their parents' influence on their work values or ethics. Brown (1996) suggested that individuals' values most significantly influence career development and choice through their impact on individuals' priorities, daily activities, and general lifestyle choices. Participants reported that their parents exhibited a strong work ethic, and raised them to be responsible, conscientious, and committed employees. Further, their parents reportedly extolled the value of self-sufficiency, with work representing the path to independence.

Most likely, the strong work ethic that participants absorbed from their parents contributed to their sense of not having a choice but to continue working once they received their breast cancer diagnosis, as well as to their negative feelings about managing their work load during treatment. Their strong work ethic may have created a greater internal conflict regarding how to handle work as a breast cancer survivor than might have been experienced by survivors with a weaker work ethic. Perhaps subconsciously, the participants were concerned that leaving work during or after cancer treatment would go against the work values that their parents taught them, and thereby result in their families' disappointment.

Participants variantly described their parents' influence on their chosen field of work. Parental influence on occupational choice appears to be the strongest during childhood and to attenuate with age (Whiston & Keller, 2004). For instance, children have expressed less gender stereotypical vocational interests when their mothers are engaged in nontraditional careers (Barak, Feldman, & Noy, 1991; Whiston & Keller,

2004) and adolescent females have reported an indirect effect rather than a direct effect of their relationship with their mother on their career choice (O'Brien & Fassinger, 1993). Others have found that the attitudes of male family members, especially fathers, become more critical to daughters' pursuit of nontraditional career paths as they age (Hackett, Esposito, & O'Halloran, 1989).

Findings from the current study fit within the parameters of prior research. It was only a variant, rather than a general, finding that participants described their parents' influence on their chosen occupation. For those participants who elucidated upon this influence, the majority described their fathers' high achieving career paths as a model for their own. Several participants characterized their mothers' careers as being secondary to their fathers' career aspirations, with their mothers serving as the primary caregiver for the children. These participants described their internalization of the importance of having a mother available to her children, even if that resulted in decreased career aspirations, and they expressed internal conflict over how to achieve their idealized version of work-life balance based upon their own familial experiences. Perhaps having a mother who stayed at home with her children may have contributed to young survivors being more open to leave their careers to become mothers themselves. Yet other participants spoke of wanting to make career choices that were not the same ones that their mothers made. One participant described her mothers' lack of work engagement, and how this participant viewed her mothers' career choices as an "anti-model" of how not to shape one's career path and occupational choice. In short, the chosen field of work of the fathers inspired some of the participants' occupational choices; in contrast, their mothers' field of work resulted in negative feelings for some, either regarding conflict

over work-life balance or the desire to avoid making the same career-related mistakes made by their mothers.

**Influence of mentors and partners.** Mentors and partners typically influenced the participants' career development, with mentors specifically affecting career-related self-efficacy and partners offering career support. These findings are not surprising given prior research suggesting that for female adolescents additional relationships beyond the family structure hold special importance for career development (Whiston & Keller, 2004). For example, for females, relationships with peers and teachers as well as with family predicted perceived occupational opportunities whereas for males, only family relationships served as a significant predictor (Wall, Covell, & MacIntyre, 1999). Once in the work force, mentors have been linked to increased financial compensation, faster promotions, and increased career mobility (Allen, Eby, Poteet, Lentz, & Lima, 2004; Dreher & Cox, 1996; Hezlett & Gibson, 2005). In the current study, participants described how their mentors during their college years as well as within the workforce helped them develop confidence in their skills and believe that they could reach the highest levels of success within their fields. Collectively, past and current research indicates the critical role that mentors have in helping women advance in their career development.

Additionally, the role of partners in women's career development typically was discussed. Participants described how their partners supported their career choices, and how the participants considered their partners when making career decisions. Participants variably spoke of financial considerations as a member of a dual-income family, such as their partners' earned income and job security, when making career

choices. As expressed by Shafer (2011), research that does not account for the influence of women's partners on their decisions regarding their labor-force participation can draw biased conclusions. In short, relational factors, especially parental influence, are critical when examining women's career development.

In summary, participants largely discussed parental, mentor, and romantic relationships when asked about influences on their career development, with these relationships representing a key element of the way participants constructed the narrative of their career paths. Trujillo (2010) has suggested that SCCT (Lent, Brown, & Hackett, 1994, 2000) and Constructivist Career Theory (Peavy, 1996) can be integrated to investigate the career development of persons living with HIV/AIDS, and the findings of the current study indicate the relevance of these career theories for young breast cancer survivors also. As outlined in SCCT (Lent, Brown, & Hackett, 1994), participants' health status represented a person input variable and their parents, mentors, and romantic partners represented contextual variables that affected the survivors' learning experiences, thereby affecting their self-efficacy and outcome expectations within their specific career paths.

Participants surprisingly gave little attention to environmental barriers, such as gender discrimination. Career Construction Theory (Savickas, 2005) acknowledges how out of multiple potential realities, every individual creates a construction of reality that provides meaning for a life story, thereby influencing career choices and the meaning of work. Therefore, although participants potentially could have experienced contextual career barriers (e.g., gender discrimination), they constructed the story of their career development to focus instead on aspects of their careers that they felt they could control

more directly, such as their work values and work ethic. This group of young survivors appeared to want to feel they could control their career paths, and perhaps they did not discuss more environmental barriers because those were circumstances that they could not control. These survivors described how their parents modeled diligence, independence, and hard-work, and their parents may have instilled in them the belief that their success at work was within their control and that attributing struggles to external factors were empty excuses. In many ways, it appears that young survivors repeated many of themes from their parents' work ethics not only into their own work ethic, but also in the way they constructed their career narratives.

**Personal sacrifices due to high demands of career.** Without prompting, participants spontaneously described the personal sacrifices that they had made due to the high demands of their careers. This was a variant, but significant, finding as it relates to the meaning assigned to their careers once participants received their diagnosis. After feeling as if they had already made many sacrifices for their career, such as postponing having children or spending time at work rather than with family and friends, participants were less willing to continue making such sacrifices post-diagnosis. This finding likely is typical of highly educated, career driven young breast cancer survivors who feel they have some agency or control over their career paths. It will be elaborated upon further in response to research questions 4 and 5. Originally, these two research questions were grouped together but they have been separated within the discussion to allow for a clearer interpretation of the results.

**Research Question 4: To What Extent Has Experiencing Breast Cancer Affected the Abilities, Priorities, and Meaning of Work for Young Survivors?**

**Domain 5: Re-appraisal of career development after cancer.** All participants described the ways in which their views of their careers; including their perceptions of their abilities, priorities, and the meaning of work; were affected by their breast cancer diagnosis and treatment, but no general categories captured these appraisals. The wide range of categories within this domain are found in Table 1. The re-appraisal of young survivors' careers was a somewhat individualized and personal process, likely relating to factors such as relationship status, whether they had children, and their level of support within and outside of the work place.

Further, as Beatty and Joffe (2006) noted, the participants' life stage at the time of diagnosis had a significant impact on how their survivorship has affected their career development. Participants were past the exploration stage of career development (Super, 1953) and had already completed or achieved the later stages of vocational training, and therefore incorporating their illness into their career path was difficult. Only one participant switched career trajectories completely after receiving her diagnosis, with the rest of the participants limited in their ability to make major career changes due to financial or insurance needs or the extensive time they had already dedicated to their career training. Some of the participants fell into the emerging adulthood developmental stage in terms of their age, and therefore would have been expected to have greater freedom to explore a wide range of jobs without adult responsibilities than they would at any other stage of their lives (Arnett, 2000; 2007). Yet their status as breast cancer survivors limited their career identity exploration as they were tied to jobs that provided adequate access to health care. As stated previously, their appraisal process led them to redefine the meaning that they found in their careers but the realities of their survivorship

status (e.g., need for insurance, not able to consider early retirement) complicated their attempts to act on these new appraisals of their career development.

More specifically, participants re-appraised their careers after cancer by typically expressing the desire to have more work-life balance after cancer and decreasing the priority they gave to their careers. O'Neil and Bilimoria (2005) outlined a three-phase model of women's career development, with the first phase capturing the life stage of women between the ages of 25 and 35 and the second stage representing the ages of 36 to 45. The first phase begins with an idealistic outlook in which women are focused on their ideals and career achievement, but this transforms into a pragmatic, endurance phase in which work is given less priority, relationships become more salient, and life dimensions outside of work provide a greater sense of fulfillment and meaning. The findings of the current study suggest that experiencing breast cancer at a young age accelerates the phases of women's career development such that their career experiences more likely align with those of older women rather than their peers. What remains unclear are the long-lasting effects of fast-forwarding through the idealistic, achievement phase. Rather than simply moving women further along a linear career trajectory at a faster pace than originally thought, perhaps this acceleration process alters their career trajectory completely, leading them to skip past opportunities for advancement that are not accessible at later stages in their careers. For instance, participants typically stated that their breast cancer experience slowed down, blocked, or forced a change in their career paths, often at a time in their careers that was a critical stage of learning. Fast-forwarding through the achievement phase of career development may have caused them

to lose out on learning opportunities that completely altered their career trajectory, as opposed to simply speeding that process along.

In addition to accelerating through the career development phases outlined by O'Neil and Bilimoria (2005), some women expressed how their cancer amplified the challenging demands of an already intense career or educational training program. Others reported that they had no choice but to miss out on learning opportunities at work due to the nature of their medical treatment, which was especially difficult given the nature of their professional positions. For instance, one participant who was a lawyer described missing the opportunity to observe other lawyers at depositions and trials before being expected to be able to carry out those duties on her own, and feeling compromised at work as a result. She noted that work opportunities beget further opportunities, and has since recognized the negative snowball effect that missing work during treatment has had on her career opportunities. Those lost chances for career growth may have accelerated participants even faster into the "pragmatic, endurance" phase of their careers as they realized that their chances for career accomplishments had decreased due to lost work opportunities, and thus they may have placed greater emphasis on relationships or other life roles outside of work that were more in their control as a cancer survivor than their career success. For a variant group, this took the extreme form of redefining the purpose of working as a method to access insurance and money and another variant group described feeling stuck in their job because of their need for health insurance. Their pragmatic need for health coverage overshadowed any idealism or achievement orientation that they might have originally held toward their careers, and for many, this resulted in a shift in focus from their careers to their relationships.

More generally, many have argued that women give greater consideration to relational factors, such as their family and home life, when planning their careers compared to men (Betz, 2006; Fitzgerald et al., 1995; Surrey, 1991), regardless of whether they have experienced a chronic illness. Across stages of career development, O'Neil and Bilimoria (2005) reported that women interpreted the meaning of their career as "making a difference, being of service, impacting others" (p. 179). Perhaps this gender-related emphasis on relationships and serving others with their career intersected with participants' identities as cancer survivors to put a self-imposed glass ceiling on their careers, or at the very least to decrease their career ambitions and the priority they placed on work. It is likely that young female breast cancer survivors re-appraised the meaning and importance of their careers, including the importance of work-life balance, differently than male cancer survivors would. Perhaps male young survivors would be more likely to have increased career ambition after cancer as they became more focused on using their careers as their life legacy. However, gender identity rather than biological sex may offer a more nuanced explanation of these differences.

Participants' variant description of wanting to wed breast cancer advocacy and their careers seemed to represent their way of integrating the high value they place on relationships with their careers, and perhaps could have been their version of using their careers as their life legacy. But most typically, participants reported a greater emphasis on work-life balance. In short, the importance of relationships generally increased for participants regardless of how they felt about their careers.

Not all participants reported that their career ambition decreased after cancer, and variantly some stated that cancer increased or re-set their ambition in a positive direction.

It was typical that participants described the desire to be more passionate about their work or enjoy it more; thereby implying that they continued to value the role that work has in their life. Moreover, both increases and decreases in work self-efficacy after cancer were variant findings, with no distinct patterns in either direction. For some, cancer led them to question their abilities and lowered their self-esteem, as has been reported in other research (e.g., Gee, Pearce, & Jackson, 2003); but for others, their survivorship invigorated a sense of empowerment that made them feel as if there was nothing they could not overcome, including within their careers. It is possible that personality factors or the barriers and supports outlined in SCCT influenced which participants experienced increased work self-efficacy after cancer. More specifically, it is likely that dispositional variables such as optimism (e.g., Carver et al., 2005; Henselmans et al., 2010); financial, instructional, social and familial, or gender and race related barriers; and social support, instrumental assistance, access to role models and mentors, and financial resources (Lent, Brown, & Hackett, 2002) contributed to which survivors expressed discouragement and which expressed empowerment within their careers after treatment. This topic warrants further exploration to improve the survivorship career interventions as well as aftercare efforts to help improve the work-well-being of cancer survivors post-treatment.

**Research Question 5: What Role Does Work Have in Young Breast Cancer Survivors' Identities Post-Treatment Compared to Their Other Life Roles?**

**Domain 6: Components of career and life satisfaction after cancer.** As implied by the domain on career re-appraisal after cancer, participants generally spoke of desiring a balance between the role of work and other areas of their life. This is

represented by the two categories within domain 6, one on the components of career satisfaction and one on the components of life satisfaction. When asked directly about the life roles that were most important to them, participants described generally their family and partner relationships, typically their roles as mothers, variantly their roles as friends, typically their work roles, typically their volunteer roles, and variantly their self-care activities such as hobbies. These findings fit with the participants' description of the impact of breast cancer on their lives in the other domains and have been more fully elaborated upon elsewhere in this discussion chapter.

Within the description of the role that their career plays in their lives, participants typically explained that their career is a part of their life satisfaction. But to achieve career satisfaction, they typically stated that they looked for a career that allowed them to express their identities, passions, or life meaning; offered financial stability; and provided positive relationships or enjoyment. A variant group explicitly stated that they could only be satisfied in careers that provided balance with other life roles.

The desire for their careers to express their identities, passions, or life meaning is not surprising given many others have reported that samples of college students typically express the desire to find meaning in their careers (Duffy & Sedlacek, 2010; Hill et al., 2012). Among high achieving and highly educated populations; especially those who have dedicated years of education, including post-secondary and graduate level education, to pursuing their careers; it might be assumed that finding meaning in their careers would be a key component of career satisfaction. For instance, research on the construct of calling, or feeling as if individuals are called to a specific type of work by a force outside of themselves (e.g., God) and desiring to use their work to help others, has

found that having a sense of calling is positively related to educational level among college students (Duffy & Sedlacek, 2010) as well as among working professionals (Davidson & Caddell, 1994). Further, Duffy, Dik, and Steger (2011) reported that having a sense of calling was moderately correlated with job satisfaction, with career commitment mediating this relationship. Therefore, feeling satisfied with one's work may depend on the extent to which individuals are committed to expressing their sense of calling within their work lives. In short, the current study demonstrated that young breast cancer survivors also continue to seek meaning in their work after their illness and that a sense of meaning in work is associated with higher educational levels and job satisfaction.

Another anticipated finding was that the young survivors in the current study typically sought positive relationships or enjoyment as a part of their career satisfaction. As has been found in individuals living with HIV (Hoffman, 1996), the experience of a chronic illness can prompt individuals to try to increase the time that they spend engaged in enjoyable work activities and to place a greater emphasis on living in the present moment. Many of the participants spoke of having already made personal sacrifices in their lives for their career development, such as missing out on friends' wedding celebrations and postponing having children because of the extensive educational demands of their careers. The cancer experience represented another type of "personal sacrifice," with some participants stating that they felt that because they had breast cancer at such a young age, no one else they knew would have to go through that. As a result of these sacrifices, participants expressed an increased desire to enjoy their life in the present, including in their work lives, rather than continuing to postpone their

engagement in what brings them happiness as they pursue their life-long goals. Their life span had been altered, and they were no longer willing to wait for pleasure in their careers.

Although not as obvious as the other elements of career satisfaction, the young breast cancer survivors' attention to the financial stability of their careers as a critical element of their career satisfaction is logical given the significant financial impact of breast cancer and their need to feel in control of their lives. They knew firsthand the cost of a major illness, and as a result were unwilling to feel secure in a career that may have expressed their identities and provided enjoyment without providing them with the finances that they needed to take care of their health. It would have been interesting to have been able to determine whether financial stability would have held such a prominent role in their career satisfaction before their cancer experience. Is the desire for financial stability part of the "pragmatic, endurance" phase of career development outlined by O'Neil and Bilimoria (2005) that is not usually expressed by women until they reach their mid to late 30s? Further, among the gender differences commonly reported in occupational values is that men prefer jobs that provide higher salaries whereas women have been reported to place greater emphasis on using their work to help others (Abu-Saad & Isralowitz, 1997; Eccles, 1994; Konrad, Ritchie, Lieb, & Corrigan, 2000). More recent research has shifted the focus from gender categories to focusing on reasons for gender differences, such as individuals' self-perceptions of masculinity and femininity (Weisgram, Dinella, & Fulcher, 2011). Perhaps this change in emphasis on financial security provided by a career may have made the young breast cancer survivors more

similar to their male peers in valuing financial security and independence within their work choices, or represented an adoption of more masculine self-perceptions.

It was unexpected that participants would explicitly identify the need for their careers to provide balance with other life roles as a critical component of their career satisfaction. Given that many of the participants had sought high-powered careers that typically involve long-work hours that do not easily translate into a work-life balance, the desire for work-life balance was unlikely to have been a major factor in deciding upon a career path. In other words, if they had always valued work-life balance they most likely would not have entered their chosen career path. It seems that work-life balance became an important part of their career satisfaction only after experiencing breast cancer, rather than from the beginning stages of their career development.

The desire to have a successful career as well as work life also was represented in the variant finding that when evaluating their life satisfaction, participants felt pressured to have it “all,” success in both their careers and in their lives outside of work. One participant attributed this pressure to feelings of survivors’ guilt. Having lost several of her peers to breast cancer, the participant felt that she needed to make every moment of her life count, both within and outside of her work. This resulted in much internal conflict as the participant struggled with indecision over whether to leave an unsatisfying career to be a stay-at-home wife, or to remain in the job for which she had undergone extensive educational training. This desire to have it “all” represented another area of the participants’ career development where their gender and life stage appeared to be most salient. More specifically, this subcategory raised the question of to what extent would male cancer survivors or older breast cancer survivors feel the same pressure to be

successful in both their careers and lives outside of work. Women without medical conditions have been found to a strong desire to “have it all,” (Hoffnung, 2004), and it remains unclear as to how health status may interact with gender or self-perceived masculinity/femininity and age to affect the role that career plays in life satisfaction. No research could be located on gender differences in components of life satisfaction after cancer. Would male cancer survivors generally place greater emphasis on work success without as much attention given to their success outside of work? Would older breast cancer survivors’ already feel that they have achieved success outside of work, or at least have a better sense of what the possibilities for their lives outside of work already were, and therefore feel less pressure than young breast cancer survivors to carve out the perfect life path both within and outside work?

In summary, the findings from the current study echo prior research integrating SCCT (Lent, Brown, & Hackett, 1994, 2000, 2002) and Career Construction Theory (Peavy, 1996; Savickas, 2002, 2005; Trujillo, 2010). The framework of SCCT (Lent, Brown, & Hackett, 1994) captures the importance of person inputs, including gender and health status, as well as distal contextual factors (e.g., parental support, mentors) on learning experiences and the development of self-efficacy and outcome expectations. In turn, self-efficacy and outcome expectations then influence career interests, goals, actions, and performance, with proximal contextual barriers and supports potentially interacting with each of these components of career development. More specifically, participants described how their mentors played an integral role in developing self-efficacy for their academic and work domains when embarking on their career paths. Later, they spoke of their self-efficacy about managing their workload during treatment,

and their expected outcomes regarding their productivity and effectiveness at work when returning. They discussed their self-efficacy and outcome expectations for managing disclosure of their survivorship status as they continue along their career paths. Further, they portrayed the environmental supports and barriers that they faced as a cancer survivor that had an impact on their choice goals, actions, and work performance. For instance, participants describing an accommodating work environment post-treatment were more likely to remain engaged at work, continue to include their careers as an important part of their life satisfaction and life goals, and take actions that demonstrated an ongoing commitment to performing well at their jobs.

To this application of SCCT (Lent, Brown, & Hackett, 1994, 2000, 2002) to young breast cancer survivors' career development, Career Construction Theory (Savickas, 2005) adds an explanation of how survivors' career interests have been affected by their health status. As has been suggested by prior research (Beatty & Joffe, 2006; Tiedtke et al., 2010), young survivors re-evaluate the role of their careers in their lives after experiencing breast cancer and typically decreased their career ambitions and the priority placed on their careers. Because it was more common for participants to report decreased priority placed on their careers than it was for them to report decreased self-efficacy at work, changes in their career development appeared to be linked more often to the way they viewed their lives and their sense of life meaning and purpose post-treatment rather than due to a decreased sense of self-efficacy at work. Further, their increased emphasis on work-life balance and relationships seems to represent an acceleration of the career development stages outlined by O'Neil and Bilimoria (2005) in which women transition from the "idealistic, achievement" phase to the "pragmatic,

endurance” phase. The meaning of their careers that young survivors construct within their life story post-treatment, and how that meaning fits with the other life domains that provide a sense of meaning (e.g., relationships), appears to greatly influence the salience of their career. Young survivors may feel efficacious in their careers after treatment, and may expect to succeed in their work lives. But the meaning they find in their work appears to be critical to whether they are interested in moving forward in their career paths. In short, an integration of SCCT (Lent et al., 1994) and Career Construction Theory (Savickas, 2005) captures the cognitive-person variables (i.e., self-efficacy, outcome expectations, personal goals), contextual supports and barriers (e.g., supportive work environment, mentors), and process of meaning-making represented in young survivors’ narrative of their career development after cancer.

**Research Question 6: In Summary, How Has Cancer Most Affected the Lives of Young Breast Cancer Survivors?**

**Domain 7: Impact of breast cancer on life outside of work and Domain 8: Lessons learned from breast cancer.** Participants’ responses related to this research question were grouped into two domains. The first domain, entitled “Impact of Breast Cancer on Life Outside of Work,” embodies non-work related breast cancer challenges, coping strategies for those challenges, and the re-appraisal process of survivors and their relationships as a result of their cancer experience. The second domain that also addresses the most significant non-work related impact of breast cancer on young survivors’ lives is presented as “Lessons Learned,” and is comprised of a more abstract, conceptual discussion of survivors’ post-cancer worldview.

When asked how breast cancer has most affected their lives, participants failed to identify one specific aspect of their well-being that was most affected by their survivorship, and instead described a multitude of ways that cancer has had an impact on their lives. They spoke of breast-cancer related challenges in the specific areas of physical functioning, emotional well-being, cognitive functioning, fertility/family planning, and finances, with these findings replicating previous research (e.g., Harrington, Hansen, Moskowitz, Todd, & Feuerstein, 2010). Because physical, emotional, and cognitive side effects have already been discussed in response to research question 1, only the challenges posed by breast cancer to family planning and finances will be discussed in response to research question 6 before elaborating upon findings related to coping strategies, reappraisal of self and relationships, and lessons learned from experiencing breast cancer.

**Breast cancer related challenges.** In addition to physical, emotional, and cognitive cancer-related side effects, young breast cancer survivors typically described challenges related to family planning, including the need to seek infertility treatment as a result of their cancer experience. The fertility problems that breast cancer treatment can create for young survivors has been recognized (e.g., Dunn & Steginga, 2000; Northouse, 1989; Thewes, Butow, Girgis, & Pendlebury, 2004), yet the fertility issues of young survivors appears to be exacerbated when they are pursuing highly demanding careers. Participants described having postponed their plans to begin a family until they completed their advanced degrees or reached a certain level of career success. Therefore, perhaps high achieving young breast cancer survivors are more likely to have increased fertility issues than younger survivors who may not have placed as high an importance on

their careers, and may have been more likely to have had children before receiving their breast cancer diagnosis. The intersection of young breast cancer survivorship with the high priority placed on career development may have amplified fertility-related concerns for this subset of young survivors as they were less likely to have already begun building their families at the time of diagnosis. Their careers, as well as their cancer treatment, had impeded their decision of when or if to start a family.

Additionally, the increasing need for insurance and the burden of financial worries re-appeared in response to how breast cancer has most affected the lives of young survivors (Beatty & Joffe, 2006; Stewart et al., 2001). Participants never explicitly stated that their incomes had decreased as a result of their cancer, but Lauzier et al.'s (2008) finding that breast cancer survivors lost between 19-27% of their projected usual annual wages suggests that lost wages was another potential negative spill-over effect as a survivor. Young breast cancer survivors may be at greater risk than older survivors due to their shorter tenure in their positions (Lauzier et al., 2008), although the educational levels of the current sample may have served as a protective factor. In short, insurance and financial issues seem to be on the forefront of young breast cancer survivors' mind.

**Coping strategies for breast cancer related challenges.** Breast cancer also had an impact on young survivors' lives in that it demanded that they find ways to cope with stressors, such as financial worries. As would be expected based on prior research, survivors utilized emotional and instrumental social support (Ell, 1996; Ganz et al., 2002). Participants described how their family members gave them a reason to live (Ell, 1996; Northouse, 1989). Additionally, participants reported that it was helpful to connect with other young survivors as well as others who have struggled to help them feel less

alone. Yet variantly, participants described the difficulties they had in finding same-age survivors, with the life stage at which they were diagnosed with breast cancer playing a critical role in whether they could relate to others. Participants variantly spoke of becoming involved in breast cancer advocacy and helping other survivors as a way of coping with their own cancer experience, as well as attempting to increase the network of young survivors. This emphasis on the need for connection with same-age survivors represents an important issue in survivorship care, both during and after treatment.

Psychotherapy and alternative treatment modalities such as exercise or yoga were reported variantly as additional coping strategies, with participants describing a greater awareness of the negative effects of stress on their health after experiencing cancer and wanting to improve their responses to stress. These coping strategies represent an active form of coping that involve approaching a stressor, which is viewed as more adaptive than emotionally avoiding stressors (Austenfeld & Stanton, 2004) and is linked to less distress for breast cancer survivors (Stanton et al., 2000). Yet participants also variantly described coping with cancer by avoiding thoughts about it or blocking out memories of their cancer experience, which has been connected to negative psychological outcomes (Schroevers, Kraaji, & Garnefski, 2011). In the interview process, these participants struggled to acknowledge and understand the impact that breast cancer has had on their lives, and were hesitant at times to express negative emotions about their cancer experience. But the extent of the negative impact on all participants' quality of life was captured in the quantitative measure, even when some participants attempted to avoid extensive discussion of it during the interviews. The attempts by some of participants to

avoid thoughts about the impact of breast cancer on their lives again hint at the high need for control within this group of survivors.

The need for control also is represented in survivors' coping strategies of having a choice in disclosure and controlling their perspective, as well as in their re-appraisals of themselves and their relationships after breast cancer. For instance, by controlling whether they disclosed their status as survivors, participants controlled whether they would approach or avoid the implications of their survivorship. If they did not want to risk the effect that their survivorship identity may have on how others' view them, they would decide against disclosing post-treatment. Having a choice in disclosure was empowering, and helped them feel like cancer no longer dictated all aspects of their lives. Further, their recognition that their perspective was something that they could control as a survivor, even when they felt they had no control over their body, was empowering. It provided something on which they could focus their energies, specifically with a variant group of participants focusing on the critical role that positive thinking could play in their recovery.

**Re-appraisal of self after breast cancer.** In addition to using their perspective as a coping strategy, participants generally described how they re-appraised themselves and their relationships after cancer. For a variant group, breast cancer revealed their strengths and showed them what type of person they truly are; their experience as a survivor exposed who they were at their core (e.g., optimist or pessimist), and exemplified those dimensions of their personalities. Another variant group positively re-appraised their identity after cancer by incorporating their survivorship into the way that they think of themselves but did not let themselves be defined by it. Such a re-appraisal

of the self again represents an attempt to remain in control of how breast cancer affects their lives; it may be a part of their lives, but it is not their whole lives. In contrast, two variant groups of participants experienced a re-appraisal process that negatively affected their well-being. These participants described how breast cancer created an identity crisis that has yet to be resolved, while others felt their body had betrayed them by getting cancer at such a young age. Prototypical case B embodied both of these negative re-appraisal processes of one's identity and one's body, with the case demonstrating the negative impact on well-being caused by changes in a survivor's identity due to the necessity to leave work due to illness (Walker, 2010) and the resulting feelings of uselessness and lowered self-esteem (Gee, Pearce, & Jackson, 2003).

Participants who reported positive self-appraisals after cancer (i.e., strengths revealed, identity not defined by survivorship) also reported higher levels of psychological well-being on the quantitative quality-of-life measure compared to participants who reported the latter two categories of more negative self-appraisals (i.e., identity crisis, betrayal by their body). The latter group of participants seems more unresolved in their survivorship identity than the former group, and the differences between the two groups did not appear to be linked to treatment type, severity of side effects, or levels of perceived social support.

**Re-appraisal of relationships after breast cancer.** Participants generally described how their experiences with cancer led them to reevaluate their relationships, with them typically reporting that their breast cancer experience enhanced their relationships and variantly reporting that their breast cancer experience strained their relationships. Some of the ways in which participants believed their relationships were

enhanced involved them setting healthier interpersonal boundaries, such that they no longer wasted energy on negative interactions with people who were not going to change and they spoke out more for their own needs within their relationships. They also described the fulfilling and enriching connections that they had made through national networks of young breast cancer survivors, and how their lives had been improved as a result of these friendships. Not only did young survivors find their pre-cancer relationships more rewarding (Braun et al., 2005), but they also developed new relationships that involved deep, empathetic connections.

A variant ( $N = 6$ ) group of participants that represented nearly half the sample described how breast cancer had strained their relationships, leading them to socially isolate and withdraw and increased their concerns about how to disclose their survivorship status in romantic relationships. They seem to have experienced what Rosedale (2009) has termed “survivor loneliness,” which can result from feeling that others do not fully understand how cancer has changed their lives; from feeling pressured to act as the heroic, “ideal,” strong breast cancer survivor; or from realizing how fragile their connections with others can be and feeling that their support system was not as reliable as they had hoped (Rosedale, 2009). Further, if women have not established romantic partnerships at the time of diagnosis, they may experience further interpersonal strain as they navigate when and how to disclose their survivorship. One participant asked on which date (e.g., the first or the fourth?) is it appropriate to reveal to a potential dating partner that one has had breast reconstruction.

Somewhat surprisingly, there was little overlap between those who reported appraising themselves negatively and those who appraised their relationships after cancer

negatively. In other words, viewing oneself negative and viewing one's relationships negatively after cancer do not always appear to be connected. Additional research is needed to parse out the predictors for positive self and other-appraisals after cancer

**Lessons learned.** In addition to describing the concrete physical, emotional, cognitive, fertility-related, and financial impact of breast cancer as well as how it affected the way they think about themselves and their relationships, participants also spoke of how cancer has most affected their worldview. They described lessons learned from breast cancer that resulted in changes in their personal views and positive changes in their behavior. Generally, participants spoke of how breast cancer affected their lives by teaching them that they could not control what unfolds in life, and that death is always a possibility. These women, who had been successful in their education and in their careers thus far, had done what was expected of them by their families and teachers; they had made responsible life choices; and they were contributing members of society. Yet they were not protected from experiencing an unexpected, life-threatening event such as breast cancer. Despite all their efforts to control what happened to them in life and to reach positive outcomes, they were powerless over whether cancer grew in their bodies and when they might face death. Although most individuals face such existential realities at some point in life (Tillrich, 1952; Yalom, 1975), these young women were left no choice in when they had to confront these realities, and this represented one way in which their cancer experience most affected them.

As a result of this existential experience, participants generally reported a need to be more open to others and to new life experiences. They recognized that they could no longer assume that they would have the opportunity to experience certain life events in

the future, and as a result became more present-oriented. They worried less about what others thought of them, and pursued the things that made them happy. They re-evaluated what in life was worth being upset about, and decided they would no longer “sweat the small stuff.” Such changes in their personal views were not unexpected, and have been suggested by others within the literature on benefit-finding and post-traumatic growth (Lechner et al., 2006; Mols, Vingerhoest, Coebergh, & van de Poll-Franse, 2009; Schover, Rybicki, Martin, & Bringelsen, 1999).

However, somewhat surprisingly, it was variant that participants realized through their survivorship that life is hard, and became more cynical in their worldview. Such a realization may be connected to the life stage at which they were diagnosed. Perhaps if they had been diagnosed at an older age when it might have been more expected to have to face one’s mortality, they would not have felt as cynical. Such cynicism may contribute to the lower levels of well-being reported for young survivors compared to older breast cancer survivors (Avis et al., 2004; Dunn & Steginga, 2000; Thewes et al., 2004). In the current study, a select few participants implied that life had been unfair to them when they experienced cancer at such a young age, especially for those who experienced serious side effects and medical complications. Having such serious medical issues at a young age had not been part of their life script, and they were forced to re-write their life story in a way that was not expected.

In addition to changes in their personal views, participants typically reported positive changes in behavior after cancer. Most commonly, these changes involved placing greater emphasis on family and relationships. Such a behavioral change is consistent with the findings of Pinqart, Nixdorf-Haenchen, and Silbereisen (2005) that

cancer survivors place a greater focus on relationships compared to material objects or achievement than their healthy peers. The increased importance given to relationships after cancer is a finding that appeared in multiple domains in this study, and was discussed in the context of work as well as outside of work. Less commonly, participants described how they placed greater emphasis on leisure activities and became a health-care self-advocate as a result of their survivorship. Both of these behavioral changes relate to taking better care of themselves and giving increased attention to their needs. Moreover, the need to be their own advocate within the health care system also relates to the issues that participants described with insurance and ensuring that they are active in their medical treatment, controlling as much of their health-related outcomes as they possibly could.

**Summary of how breast cancer most affected survivors' lives.** Although participants responded to the question of how breast cancer most affected their lives in diverse and far-reaching ways, an underlying motif was the effort to make meaning of their survivorship. As they made meaning of their experience, participants assessed their level of control over their life events. Perceptions of control in breast cancer survivors have been linked to greater psychological and physical functioning so long as survivors did not experience long-term side effects or cancer recurrence; for those who experienced medical complications, perceived control was connected to increased psychological distress and worse physical functioning (Tomich & Helgeson, 2006). The current study replicated the findings of Tomich and Helgeson (2006), as those participants who reported cancer recurrence or long-term side effects expressed greater distress when they attempted to exert control over their bodies only to find they that could not. Their

attempts at control resulted in them either blaming themselves for their medical issues or feeling as if there was no order in the world, and the more they struggled for a sense of control over their bodies, the more distressed they became. In summary, although participants described a multitude of ways in which breast cancer most affected their lives, their attempts to make meaning and appraise the sense of control they had over their lives were salient effects of survivorship.

### **Additional Findings**

In addition to answering the six research questions, data from the current study also provided information on how participants' thought about their future, the advice they would give to other young survivors, and their reflections on their participation in the study. Each of these additional findings will be discussed in greater detail below.

### **Thoughts About the Future**

Participants generally gave thought to the possibility of a cancer recurrence, typically describing their awareness of that possibility as always present and typically expressing feelings of worry or anger when thinking about that possibility. Given that young breast cancer survivors are more likely to have the BRCA gene and more likely to experience a recurrence (Aebi et al., 2000; Gajdos et al., 2000; Han et al., 2004), it was expected that they would have heightened awareness of their risk for recurrence. Further, this was a sample of women who were highly active in their treatment decision-making and were well-informed about their prognosis, so they could have been more likely to be fully informed about their recurrence risk than the average breast cancer survivor. Moreover, their feelings of worry or anger also mirror what has been described in other

studies on reactions to the recurrence risk in cancer survivors (Brothers & Andersen, 2009; Falkson, 2002).

Although participants expressed that their risk for a recurrence was always on their minds, none of the participants described difficulty in their functioning as a result. They reported that they were able to cope adequately with their thoughts and feelings about a recurrence, although one participant continued to struggle to cope with her long-lasting treatment side effects. This finding is not surprising given that this was a group of high achieving, highly active women who were continuing to work post-treatment and that perceived control appeared to be important to them. Perhaps the survivors who most struggle with thoughts of recurrence are less likely to return to work after treatment due to lower levels of psychological well-being that interfere with their ability to function. Additionally, participants described how they had become more present-focused as a result of their cancer experience, and thus they adopted a “take it as it comes” attitude toward each medical check-up that may have helped them cope with their thoughts about recurrence.

Participants typically described their thoughts about their future career as a breast cancer survivor, typically expressing that career flexibility will become even more important in the future. The desire for increased flexibility in their work lives fits with the increased importance on work-life balance described elsewhere. Rather than continuing to put work before other life domains, participants emphasized that they want to find ways to make work be one part of their lives rather than their entire lives. For instance, when discussing their thoughts about their future non-work related roles, participants typically stated that their family, partners or children would be more primary,

variantly stated that their community involvement and/or advocacy would be more important, and variantly stated that leisure activities would be more important. Involvement in these other life roles, as well as their work roles, appeared to be essential for their overall well-being.

Although participants expressed a desire for increased work-related flexibility and increased involvement in non-work related roles, they did not necessarily de-value work. They variantly stated that the importance that they place on their career will be similar to what it is now, and another variant group described how they will have advanced in their career. For some, their work identity continues to be important to them in the present, and they anticipate that their careers will also be central to their identities in the future. Participants largely planned to continue working in the future, and those who stated that breast cancer re-set or increased their career ambitions expressed that they plan to advance in their careers in the future. As might be expected, the way in which they conceptualized the impact that cancer had on their career development in the present moment matched how they thought about their future careers. Thus, the impact of breast cancer on their career development was not a finite, acute change and instead, has more of a long-lasting, ever evolving impact.

### **Career Advice for Other Young Breast Cancer Survivors**

Cancer survivors have pointed to the lack of aftercare and to difficulties in making work-related decisions (Oxlad et al., 2008; Rowland, 2008). Often, their medical team fails to address work-related effects of their cancer treatment, and survivors are sometimes unsure of where to obtain the information they need to make informed work-related decisions. In addition to noting the importance of connecting with other survivors

regarding their experiences with their diagnosis and treatment options, they also noted the importance of connecting with other survivors over their work-related decisions.

Although all survivors in the current study agreed on the importance of receiving career advice from other survivors and implied that other young survivors should be kind to themselves about taking time off from work, no general themes arose in the career advice that participants offered to other young breast cancer survivors. Most typically, they stated that each survivor needs to do what she thinks is best given the unique circumstances that each woman faces. Typically, they recommended seeking support either within or outside of work, noting the critical role that receiving support and encouragement from others played in their own recovery. They expressed positive, uplifting sentiments to other young survivors, ranging from stay positive and believe in yourself to do not let cancer define you but use it as an opportunity to re-evaluate your life and to follow your passions. The emphasis that participants placed on using their perspective as a coping mechanism was apparent in their career advice, and they encouraged other young survivors to use their own perceptions and meaning-making of their cancer experience to empower them and to help them feel more in control of their lives and their future.

### **Reflections on Participation in the Study**

Participants typically felt that their involvement in the current study was a good experience and resulted in new insights. They described how they made new connections between how their survivorship had influenced their work, and variably felt that such realizations were therapeutic or cathartic. Several participants stated that they had not given much thought to their work in relation to their breast cancer experience, and

therefore they found it helpful to have a space in which to process some of these thoughts. Their acknowledgement that they had not given extensive thought to the impact of cancer on their careers exemplifies the lack of attention given to work and career-related issues in cancer survivorship interventions and literature (Hoving et al., 2009). In many ways, the dialogue on the career-related impact of breast cancer is only beginning for the participants as well as for the cancer community more generally.

In addition to the ways in which the study helped them personally, participants variably expressed the desire to help other survivors with the current study. They viewed their participation as a way of spreading awareness of survivorship issues, which they considered important and something they wanted to contribute to the community of young breast cancer survivors. Thus, those who participated in the study may have been young survivors who placed a greater emphasis on breast cancer advocacy or using their cancer experience to help others than the general population of breast cancer survivors.

### **Limitations**

Limitations of the current study will now be discussed. As is found in qualitative studies generally (Polkinghorne, 2005), the current study's use of self-report of subjective experiences represents a limitation. The findings captured participants' perceptions of how their cancer experience had affected their careers, and no information was gathered to corroborate the participants' perceptions (e.g., employers' perceptions of how breast cancer had affected the participants' careers). The accuracy of the information captured in the interviews is limited to the participants' perceptions, and as was revealed when comparing the participants' quantitative and qualitative interviews, the way in which a question about their quality of life was presented may have affected their response. The

interview questions' focus on career-related issues appeared to influence participants to emphasize the impact of cancer on their work and careers; sometimes at the neglect of elaborating fully on the negative impact cancer has had on their physical, spiritual, and social well-being. For instance, participants' social relationships may have been affected more significantly than was represented in the data. Because the purpose of this study was to explore the impact of cancer on work lives and career development, the extent to which relationships were affected may not be represented fully. Further, a participant's failure to describe an experience in the qualitative interview does not mean that such an experience did not occur. The quantitative measure was intended to give brief but more comprehensive attention to specific realms of participants' quality of life, all of which could not be addressed in a time-limited interview.

Additionally, the potential issue of social desirability is also a general limitation of qualitative research and may have been especially salient for survivors who feel pressured to represent the "ideal" breast cancer survivor. In fact, several participants described the pressure they felt to live up to others' expectations of them to have grown from their cancer experience, to be eternally optimistic, and to not complain about their struggles. The extent to which participants minimized the negative effects of their survivorship may have resulted in the omission of experiences that they did not want to acknowledge to themselves or to others. The quantitative measure may not have involved the same limitations related to social desirability, and provided the participants with a more anonymous space in which to more thoroughly indicate the negative aftereffects of cancer.

Another limitation of the current study related to sampling. Participants were predominantly White, highly educated in professional positions, and all but one remained actively employed post-diagnosis. The sample had some racial diversity, but White young women were overrepresented compared to the population of young breast cancer survivors (American Cancer Society, 2009), limiting the generalizability of the results. Further, other studies with older survivors have reported that the rate at which breast cancer survivors return to work is closer to 60% (e.g., Stewart et al., 2001). Perhaps those who remain in work after diagnosis have unique experiences that do not generalize to all young breast cancer survivors, and are healthier than survivors who do not return to work post-treatment. It is likely that those who participated in this study represent the subset of young survivors who are highly motivated, active in their self-care and in the breast cancer community, have strong work ethics, and are in professional careers.

Additionally, the results of this study containing significant variability in the categories related to ways in which survivors re-appraised their career development after cancer and strategies used for coping with breast cancer-related challenges. This variability indicates the wide range in the potential impact of breast cancer on survivors' work lives and lives more generally, with this variability perhaps related to ongoing side effects post-treatment and type of cancer diagnosis. Further, the composition of the coding teams in the current study may have contributed to the significant variability in the categories. When outlining each coding team members' biases, the coding team noted a wide range of expected results that may have had an influence on the way the data was categorized. Future quantitative studies will be important for illuminating

factors contributing to the diversity of breast cancer survivors' experiences and to replicate the findings of the current study (Ladany et al., in press)..

### **Summary of Key Findings**

In the current study, participants described the significant impact that breast cancer had on their work lives and career development. They spoke of their meaning-making process after receiving their diagnosis, and the difficulties they encountered as they attempted to balance their desire for meaningful work with their need for financial security and health insurance. Insurance played an integral role in their career decision making process, at the time of diagnosis as well as long after their treatment ended. Their concerns about their insurance coverage raised issues about how to best manage disclosure of their cancer survivorship within the work place, and handling disclosure was a commonly reported challenge. Interpersonal issues complicated the disclosure process, as well as made them susceptible to various forms of “survivor loneliness,” especially within their work environments. Additionally, social isolation and difficulty connecting with older breast cancer survivors who seemed to have different concerns and difficulty connecting with healthy peers in their work place complicated their efforts to make meaning of their cancer experience.

Collectively, these work place challenges as a young survivor appeared to have accelerated their process of transitioning from the “idealistic, achievement” phase of women’s career development to the “pragmatic, endurance” phase (O’Neil & Bilimoria, 2005), thereby redirecting some of the meaning that they found in their career pre-diagnosis to their relationships outside of work. They could not control their physical health completely, and they could not always control the consequences of their

survivorship disclosure within their work environments. They described greater importance placed on work-life balance after cancer, and they likely felt more control over their quality of life outside of work. Thus, for some young survivors, the attention given to work could be described as the “pragmatics” and was something they had to “endure” in order to have financial and health care resources while cultivating non work-related domains of life meaning. The implications of this acceleration into the pragmatic endurance phase for women’s career trajectories, earning potential, job satisfaction, work engagement, and well-being remains unknown.

### **Implications for Practice**

Despite the limited attention given to cancer survivors’ career development when discussing their quality of life (Hoving et al., 2009), this study suggests that career issues are especially salient for the well-being of young breast cancer survivors. However, because the current study did not assess any career-related clinical interventions for young women with breast cancer, the clinical implications of the current study’s findings are speculative and must be explored with caution. This section on implications for practice may serve to suggest future directions for which clinical interventions could be examined empirically. More specifically, given the findings in the current study related to young breast cancer survivors’ need for a sense of control and meaning after cancer and the obstacles that they face in acting on the re-appraisals of their work and other life roles due to their financial and insurance needs, practitioners working with this population may find it useful to address both their meaning-making process as well as their concrete work challenges as survivors. When working with young survivors, career counselors can help them explore sources of meaning, identify supports and barriers to

finding meaning in and outside of work, and explore how to remain engaged in work regardless of the level of meaning work provides.

Practitioners can draw from constructivist approaches to career interventions to help young survivors begin to examine the meaning of their cancer experience for their work lives and career development (Peavy, 1996; Savickas, 2002; Trujillo, 2010), and their sources of purpose, values, sense of efficacy, and basis for self-worth (Baumeister & Vohs, 2002). Applying a career and self-construction approach, Savickas et al. (2009) outline six steps of a life designing intervention model that career counselors can implement. The first step involves identifying the career issue and its main context to be addressed in counseling while establishing a strong working alliance. Counselors prompt clients to narrate their stories, while working together to reflect on the themes, meaning, and core as well as peripheral roles embodied in their life stories. Secondly, counselor and clients explore clients' identities and how their experiences, expectations, actions, interactions, relationships with others, and future expectations mold their stories. In the third step, counselors and clients attempt to unveil the implicit messages embodied in the clients' stories to make those messages more explicit and objective, thereby revising the stories. This step also consists of exploring the clients' "silenced stories," or the life stories that clients did not pursue for external or internal reasons (e.g., career choices that were circumscribed). After the step of story revision, counselors and clients work together in the fourth step to place the problems in a new perspective, beginning a process of synthesizing their old and new life roles and identities. The fifth step helps client identify ways to actualize their newly integrated roles and identities, such as engaging in new experiences that allow them to express their new roles and identities.

This fifth step of planful action also involves assessment of current or potential barriers and practice of the narration of the new life story to family, friends, and other important audiences, thereby helping clients clarify and consolidate their life stories. Finally, counselors and clients engage in short- and long-term follow up to assure the effectiveness of the career consultation (Savickas et al., 2009). Collectively, these steps can be utilized to help career clients share their stories and reflect upon them as a method for meaning making, developing new goals and intentions, and enacting exploratory behaviors (Savickas et al., 2009).

For young breast cancer survivors, the first steps of a life designing intervention could be to establish a strong working alliance as survivors narrate their survivorship stories, with a specific focus on how their identity as a survivor has interacted with their vocational identity. The life stories likely would present themes related to meaning-making; coping with physical, psychological, and social cancer-related challenges; social support and the need to connect with others who could empathize with their unique experiences as young survivors; the desire for work-life balance; and how their career role relates to their life roles as partners, mothers, daughters, siblings, and friends. In the second step of the intervention, career counselors could help young survivors address how their cancer experience has affected their life stories, which would hopefully result in a new found awareness of the impact that cancer has had on their careers as part of the third step. Further, within the third step, they could explore ways in which they feel their cancer experience has forced them to foreclose, perhaps earlier than they would have liked, on certain career aspirations. The goal of the fourth step would be to integrate their survivorship identity with their pre-cancer identities that continue to be most salient and

provide a sense of life meaning. Finally, the fifth step would focus on identifying ways in which survivors could actualize their newly integrated identities and salient life roles; such as through increased advocacy for other young survivors, pursuing paid or unpaid work opportunities that provide them with the greatest sense of purpose, or pursuing work arrangements to allow for more time spent with family and friends. Ongoing follow-up with career counselors could help survivors continue to revise their life story as more time passes since diagnosis and survivors face different issues at each stage of survivorship.

In constructivist career interventions with young breast cancer survivors aimed at life designing and meaning-making, a specific consideration in survivors' construction of new life stories is the role of agency and personal control. These interventions can help young breast cancer survivors identify sources of empowerment so that they feel more in control of their bodies and their lives more generally so long as the survivors remain healthy. Perceived control has been linked to less psychological distress for cancer survivors unless they experienced medical complications or a cancer recurrence (Tomich & Helgeson, 2006). Therefore practitioners working with survivors who face complicated medical prognoses will want to assess the extent to which fighting for a sense of control may actually increase survivors' distress and be counterproductive. These survivors will need to find alternate coping mechanisms that account for their difficulties in controlling their physical well-being, perhaps such as mindfulness-based techniques, and such techniques may play an especially important role in survivors' life stories post-treatment.

Practitioners may draw from Social Cognitive Career Theory (Lent, Brown, & Hackett, 1994) to help young survivors explore the barriers and supports to their process of making meaning of their cancer experience within the context of their career development and to their process of managing their survivorship within their work environments. More specifically, young survivors have described the difficulty in determining how to incorporate their identity as a cancer survivor with their other important life roles. Additionally, they have indicated the importance of social support and relationships and access to financial security and insurance for their life and career satisfaction. These elements of their well-being warrant particular attention from career counselors.

Moreover, survivors have emphasized the importance of managing their survivorship disclosure within their work environments post-treatment, and this represents a nascent area of survivorship research that deserves further exploration. Perhaps practitioners can draw from research on how individuals manage other “invisible identities” (e.g., sexual identity, other chronic diseases such as HIV) as a model for how to assess for safety and implications of survivorship disclosure at work. In short, young survivors have expressed the desire to have greater guidance in navigating work-related decisions post-treatment, and career counselors can play a key role in their aftercare by helping them identify strategies for managing disclosure.

### **Implications for Research**

As a relatively new area of study, the career development of young cancer survivors holds much promise for future research endeavors. Based on the findings of the current study, perhaps the most critical research questions revolve around determining

which survivors are at the greatest risk for decreased work productivity and career satisfaction post-treatment. By moving beyond research that predicts who is most likely to return to work after cancer, future research can begin to address the supports and barriers for coping and how to optimize coping at work post-treatment. For instance, it is likely that physical, cognitive, emotional, and interpersonal side effects overlap and future research could address their independent and/or additive effects on work productivity. An example of this is the similar symptom presentation for depression and physical fatigue. Yet recently, it has been found that fatigue and depression have independent associations with cognitive limitations for breast cancer survivors (Todd, Feuerstein, & Feuerstein, 2011). It is important to acknowledge the independent role that the various types of side effects may have on young survivors' functioning at work, while also capturing their complexity. Further, prior studies have linked prolonged side effects, medical complications, and the physical demands of a job to the duration of work absence after breast cancer (Balak et al., 2008; Hasset et al., 2009). Older age and educational level have been presented as inconsistent predictors of delayed return to work (Drolet et al., 2005; Johnsson et al., 2007). But little research has examined the effects of younger age and intellectual work demands on coping with cancer-related work challenges, and the current study suggests that these factors warrant further attention and may be a unique aspect of young survivorship. Given the variability in the experiences of young survivors, it is important to recruit survivors whose stories are not yet captured in the current body of research (e.g., young women who have more complicated medical histories).

Additionally, the challenges of managing disclosure of breast cancer survivorship represent another area ripe for future research. Because young survivors often do not have the possibility of leaving the work force when receiving their diagnosis out of need for money or insurance, they will need to identify ways to successfully navigate the disclosure process in their current jobs as well as in their future employment. More research is needed on internal as well as external perceptions of young breast cancer survivorship. For instance, future research could explore what helps survivors view their disclosure experiences as an expression of their empowerment, rather than as a liability that must be managed, and what factors predict positive or negative consequences from disclosure of survivorship at work.

Future research also could explore predictors of who remains engaged in work and reports meaningful careers after cancer. The majority of participants in the current study sought greater meaning outside of work after their diagnosis, rather than searching for greater meaning within their current work, and they may not have sought much meaning outside of work before their diagnosis; receiving the breast cancer diagnosis at a young age appears to have prompted the search for meaning. As the purpose for work shifted to providing access to financial security or health insurance, young survivors described experiences such as job lock or underemployment. The findings of the current study suggest that future research could examine factors such as gender, pre-diagnosis burn out, work engagement, workplace support, personality dimensions such as internal locus of control or optimism, or other internal or environmental variables that predict which survivors are most likely to remain engaged and find meaning in their work and careers post-treatment. Further, future research could address whether young survivors

had not previously given much attention to finding meaning outside of their work before their diagnosis, perhaps because they felt they needed to sacrifice meaning in non-work-related life domains in order to pursue their careers. Collectively, prior research and the current study have begun to illuminate whether and why young breast cancer survivors re-evaluate the meaning of their work after cancer, and future research could build upon these findings to begin to address which survivors are most at risk for losing a sense of meaning in their work and careers after cancer.

The women represented in this study were working after treatment, except for one, and therefore those survivors' whose cancer or its treatment interferes to such a degree that they are unable to return to work were not fully represented. Future studies could expand the sample of young breast cancer survivors to include those who are not doing well physically three or more years post-treatment to more fully capture the potential implications of breast cancer for a wider range of survivors. Such a study could also incorporate efforts to reach women with lower levels of education and a wider range of the nature of work than is captured in the current study. Given the limitations of generalizability based on the current study, its findings can be used to indicate potential mediators and moderators to be explored with larger samples of young survivors.

Finally, based on the importance of connecting with others survivors and the extent to which young survivors have reported survivor loneliness (Rosedale, 2009) and isolation, aftercare efforts should be centered around improving survivors' social well-being. Interpersonal challenges held significance for survivors' meaning making process because of difficulties emotionally connecting with their peers and older survivors, as well as for their navigation of the disclosure process. Future research can investigate the

most effective ways of improving survivors' social well-being, perhaps by utilizing technology to help overcome geographic distance between young survivors. For instance, perhaps researchers could assess the effectiveness of a clinical intervention matching newly diagnosed survivors with professional mentors who have also navigated a chronic illness and work.

In summary, this study uniquely contributes to the field of cancer survivorship through its exploration of the meaning of work and career for young cancer survivors. It contributes to the understanding of why the meaning ascribed to career may decrease as work-life balance and relationships outside of work take on increased importance. The experience of breast cancer before the age of 40 appears to intensify young survivors' need for purpose in life and their desire to engage in activities that express their values and provide a sense of efficacy and self-worth (Baumeister & Vohs, 2002). They may seek work that provides a sense of meaning, yet their need for financial security and insurance can prevent them from having the freedom to make that sense of meaning the primary focus of their career or from redirecting their career paths to one that better expresses their re-appraised life meaning. Further, they may feel that they have lost control over their career success and work choices, have difficulty connecting interpersonally within and outside of work, and experience side effects that interfere with their work self-efficacy and capabilities. To cope with these myriad challenges, young survivors utilize a wide range of coping strategies, including adopting a positive and optimistic perspective. They acknowledge that the perspective they apply to their cancer experience is the only thing, in many ways, that is under their control and they want their cancer narrative to be one characterized by resilience, perseverance, and hope.

## Appendix A: Recruitment Emails

Snowball Sampling Message Posted on the Young Survival Coalition Website and sent in an email to the Tiger Lily Foundation and Be Bright Pink

### **Subject: Need for Participants for a study of the Impact of Breast Cancer on Young Women's Career Development**

I am writing to ask for your help in recruiting participants for my dissertation on the impact of breast cancer on young women's career development. You can help me greatly in two different ways: with your own participation in my study and/or by asking others whom you think might be interested in participating in this study to contact me.

**What is the subject of this study?** My dissertation study is a qualitative exploration of how being diagnosed with breast cancer before the age of 40 affects women's careers. I became interested in this topic after talking with two of my aunts about their breast cancer experiences and realizing how little is known about how breast cancer affects the lives of young women. As a young woman pursuing a demanding career, I am aware of many of the challenges that women face in their work lives. After talking with my aunts and thinking about my own work life, I want to know more about how young breast cancer survivors navigate their careers after experiencing a potentially life-changing illness.

To investigate this topic, I will be asking participants to complete a demographic questionnaire and a survey about their quality of life. Additionally, I will be conducting two telephone interviews, arranged at times of mutual convenience, approximately one week apart. The first interview is expected to take approximately 60-90 minutes and the second interview is expected to take approximately 30-60 minutes. I will use the attached interview questions as well as any additional questions that are prompted by participants' responses during the interviews. I will be taping the interviews and transcribing them for analysis, and will follow ethical guidelines when using the data. In anything written, all identities will be concealed to maintain confidentiality. If you decide to take part in this study, you have the right to refuse to answer any question(s) during the interview and/or withdraw from participation at any time. You will also be given a chance to review your transcribed interview to ensure its accuracy.

**Who is eligible for my study?** I am looking for participants who are women diagnosed with breast cancer under the age of 40 and were working full-time when diagnosed. I am hoping to speak with women who continue to work full-time after their treatment as well as women who no longer work full-time. Additionally, eligible participants need to have received at least one clear medical scan since their breast cancer treatment ended.

Unfortunately, I cannot offer any monetary compensation for participating in this study, but I hope that the interviews will provide you with a good opportunity to reflect

on your career development as a breast cancer survivor. There is a slight risk to participating in that sharing your experiences could be emotionally difficult or uncomfortable at moments, but please be assured that my intention is to learn more about what might help young breast cancer survivors thrive in their careers.

If you decide to take part in the study, you have the right to withdraw from participation at any time. If you have questions about your rights as a research subject or wish to report a research-related injury, please contact: Institutional Review Board Office, University of Maryland, College Park, Maryland, 10742; (email) [irb@deans.umd.edu](mailto:irb@deans.umd.edu); (telephone) 301-405-0678.

Regardless of whether you personally choose to participate, I am hoping that you might be willing to help me in the recruitment process by asking others whom you think might be interested in participating in the study to contact me.

Thank you very much for your help! If you have any questions or concerns, please feel free to contact me. I can be reached at [tiraque@umd.edu](mailto:tiraque@umd.edu) or 301-314-9206. I look forward to hearing from you.

Take good care,  
Trisha Raque-Bogdan

## **Initial Recruitment Email**

### **Subject: Study of the Impact of Breast Cancer on Young Women's Career Development**

Dear \_\_\_\_\_,

Have you ever wondered how experiencing breast cancer has most affected your life? More specifically, how has it affected your career path? What challenges has it posed to your career development, and how have you coped with those challenges? Would you be willing to share with me your thoughts on these questions?

My name is Trisha Raque-Bogdan, and I am a 4<sup>th</sup> year doctoral student in the counseling psychology program at the University of Maryland, College Park. I thank you for your interest in participating in a qualitative study on young breast cancer survivors' career paths.

The study would involve completing a demographic questionnaire, a survey about your quality-of-life, and two telephone interviews arranged at times of mutual convenience, approximately one week apart. The first interview is expected to take approximately 60-90 minutes and the second interview is expected to take approximately 30-60 minutes. I will use the attached interview questions as well as ask about things that come up in the interviews. I will also be taping the interviews and transcribing them for analysis, but the tape will be erased after transcription. Your name and any other identifying information will be removed from the transcript, and your name will never be connected with your transcript. Only members of the research team will have access to the interview tapes, which will be stored in a locked, secure location and will be destroyed upon completion of the study. In anything written, all identities will be concealed and changed as needed to maintain confidentiality. If you decide to take part in the study, you have the right to refuse to answer any question(s) asked of you and/or withdraw from participation at any time.

Who I am looking for? I would love have you participate if you are a woman diagnosed with breast cancer before the age of 40 and you were working full-time when diagnosed. I am hoping to speak with women who continue to work full-time after their treatment as well as women who no longer work full-time. You also will have needed to have received at least one clear medical scan since your breast cancer treatment ended.

What would you get out of participating? Unfortunately, I cannot offer any monetary compensation for participating in this study, but I hope that the interviews will provide you with a good opportunity to reflect on your career development as a breast cancer survivor. There is a slight risk to participating in that sharing your experiences could be emotionally difficult or uncomfortable at moments, but please be assured that

my intention is to learn more about what might help young breast cancer survivors thrive in their careers.

Conducting a qualitative study requires that the interviewees trust the interviewers/researchers to do a credible and reliable job with the interviews and data analysis. Without trust, the interviewees might not open up or delve as deeply into the topic as they otherwise could. Therefore, it might be helpful to have some information about the researchers. As stated previously, I am a fourth year doctoral student in counseling psychology at the University of Maryland. I became interested in this topic after talking with two of my aunts about their breast cancer experiences and realizing how little is known about how breast cancer affects the lives of young women. As a young woman pursuing a demanding career, I am aware of many of the challenges that women face in their work lives. After talking with my aunts and thinking about my own work life, I want to know more about how young breast cancer survivors navigate their careers after experiencing a potentially life-changing illness. My dissertation advisor, Dr. Mary Ann Hoffman, has researched extensively in the areas of health conditions and quality of life and has experience conducting qualitative research.

I would be honored if you would agree to participate in this study. I think we could learn a lot from you about your career development as a young breast cancer survivor and I hope the interview process would be meaningful for you as well. Please reply to this message to notify me of whether you would like to proceed with participating.

We also want to note that by agreeing to participate in this interview, we are assuming that you are over 18 years of age and have provided your informed consent. Scheduling the interview will imply informed consent on your part. If you have questions about your rights as a research subject or wish to report a research-related injury, please contact: Institutional Review Board Office, University of Maryland, College Park, Maryland, 20742; (e-mail) [irb@deans.umd.edu](mailto:irb@deans.umd.edu); (telephone) 301-405-0678.

Sincerely,  
Trisha Raque-Bogdan, M.S., M.A.  
Doctoral Student  
301-314-9206  
[ttraque@umd.edu](mailto:ttraque@umd.edu)

Mary Ann Hoffman,, Ph.D.  
Professor  
301- 405-2865  
[hoffmannm@umd.edu](mailto:hoffmannm@umd.edu)

**Follow-Up Recruitment Email: No Reply**

**Subject: Study of the Impact of Breast Cancer on Young Women's Career Development**

Dear \_\_\_\_\_,

Approximately one week ago, I contacted you about participating in my doctoral dissertation, a qualitative study on the career development of young breast cancer survivors. As I have not yet heard back from you about your interest in participating, I would like to again invite you to participate.

Recall that the study would involve completing a demographic questionnaire, a survey about your quality-of-life, and two telephone interviews arranged at times of mutual convenience, approximately one week apart. The first interview is expected to take 60-90 minutes and the second interview is expected to take approximately 30-60 minutes. I will use the attached interview questions as well as ask additional questions about things that come up in the interviews. I will also be taping the interviews and transcribing them for analysis, but the tape will be erased after transcription. Your name and any other identifying information will be removed from the transcript, and your name will never be connected with your transcript. Only members of the research team will have access to the interview tapes, which will be stored in a locked, secure location and will be destroyed upon completion of the study. In anything written, all identities will be concealed and changed as needed to maintain confidentiality. If you decide to take part in the study, you have the right to refuse to answer any question(s) asked of you and/or withdraw from participation at any time.

I hope that the interviews will provide you with a good opportunity to reflect on your career development as a breast cancer survivor. There is a slight risk to participating in that sharing your experiences could be emotionally difficult or uncomfortable at moments, but please be assured that my intention is to learn more about what might help young breast cancer survivors thrive in their careers. Note that scheduling the interview will imply informed consent on your part.

Please write me back at your earliest convenience in order to let me know whether you are interested in participating.

Thank you very much for your consideration! If you have any questions or concerns, I can be reached at [tiraque@umd.edu](mailto:tiraque@umd.edu) or (301) 314-9206. I look forward to hearing from you.

Take good care,  
Trisha Raque-Bogdan

## Appendix B: Demographic Questionnaire

Please complete this questionnaire along with the Quality of Life-Cancer Survivors (QOL-CS) Breast Cancer Version survey prior to our scheduled interview.

Gender: \_\_\_\_\_

Current Age: \_\_\_\_\_

Age at Diagnosis: \_\_\_\_\_

Race/ethnicity: \_\_\_\_\_

Medical Breast Cancer Diagnosis: \_\_\_\_\_

Highest grade of education completed (place an X next to your answers):

- \_\_\_\_\_ Grade school
- \_\_\_\_\_ High school
- \_\_\_\_\_ College
- \_\_\_\_\_ Graduate school
- \_\_\_\_\_ Other

Relationship status (e.g., single, partnered, married, divorced, widowed, etc.):

\_\_\_\_\_

Breast Cancer Treatments Received:

\_\_\_\_\_

Breast Cancer Treatments Currently Receiving:

\_\_\_\_\_

Date of 1<sup>st</sup> medical scan since treatment ended: \_\_\_\_\_

Results of 1<sup>st</sup> medical scan since treatment ended: \_\_\_\_\_

Work status at the time of diagnosis (e.g, full-time, part-time, medical leave):

\_\_\_\_\_

Current employer: \_\_\_\_\_

Job title: \_\_\_\_\_

What is your employment status?

Not employed \_\_\_\_\_ Employed part-time \_\_\_\_\_ (# of hours per week) \_\_\_\_\_

Employed full-time \_\_\_\_\_ Student \_\_\_\_\_

How are paying/did you pay for your cancer treatment:

- My health insurance covers all cost
  - My partner's health insurance covers all cost
  - My health insurance plus out-of-pocket payment
  - My partner's health insurance plus out-of-pocket payment
  - No insurance, all out-of-pocket
  - Other, please specify:
- 

What is your annual household income (before taxes)?

- Less than 30,000
- 30,000-59,999,
- 60,000-99,999
- 100,000-149,999
- 150,000 or higher

Are there any children or adolescents currently in your home on a full-time basis?

\_\_\_\_\_

If yes, please indicate their relationship to you and their age:

<u>Relationship</u>	<u>Age</u>
example: stepson	5 years old
_____	_____
_____	_____
_____	_____

**Appendix C: Quality of Life-Cancer Survivors (QOL-CS) Breast Cancer Version  
survey**

**Directions:** We are interested in knowing how your experience of having cancer affects your Quality of Life. Please answer all of the following questions based on your life **at this time**.

Please circle (or underline) the number from 0 - 10 that best describe your experiences:

***Physical Well-Being***

To what extent are the following a problem for you:

**1. Fatigue**

no problem   0   1   2   3   4   5   6   7   8   9   10   severe problem

**2. Appetite changes**

no problem   0   1   2   3   4   5   6   7   8   9   10   severe problem

**3. Aches or pain**

no problem   0   1   2   3   4   5   6   7   8   9   10   severe problem

**4. Sleep changes**

no problem   0   1   2   3   4   5   6   7   8   9   10   severe problem

**5. Weight gain**

no problem   0   1   2   3   4   5   6   7   8   9   10   severe problem

**6. Vaginal dryness/menopausal symptoms**

no problem   0   1   2   3   4   5   6   7   8   9   10   severe problem

**7. Menstrual changes or fertility**

no problem   0   1   2   3   4   5   6   7   8   9   10   severe problem

**8. Rate your overall physical health**

extremely poor   0   1   2   3   4   5   6   7   8   9   10   excellent

***Psychological Well Being Items***

9. How difficult is it for you to **cope** today as a result of your disease?

not at all difficult   0   1   2   3   4   5   6   7   8   9   10   very difficult

10. How difficult is it for you to **cope** today as a result of your treatment?

not at all difficult   0   1   2   3   4   5   6   7   8   9   10   very difficult

11. How good is your **quality of life**?  
extremely poor 0 1 2 3 4 5 6 7 8 9 10 excellent

12. How much **happiness** do you feel?  
none at all 0 1 2 3 4 5 6 7 8 9 10 a great deal

13. Do you feel like you are **in control** of situations in your life?  
not at all 0 1 2 3 4 5 6 7 8 9 10 completely

14. How **satisfying** is your life?  
not at all 0 1 2 3 4 5 6 7 8 9 10 completely

15. How is your present ability to **concentrate or to remember** things?  
extremely poor 0 1 2 3 4 5 6 7 8 9 10 excellent

16. How **useful** do you feel?  
not at all 0 1 2 3 4 5 6 7 8 9 10 extremely

17. Has your illness or treatment caused changes in your **appearance**?  
not at all 0 1 2 3 4 5 6 7 8 9 10 extremely

18. Has your illness or treatment caused changes in your **self concept** (the way you see yourself)?  
not at all 0 1 2 3 4 5 6 7 8 9 10 extremely

**How distressing were the following aspects of your illness and treatment?**

19. **Initial diagnosis**  
not at all distressing 0 1 2 3 4 5 6 7 8 9 10 very distressing

20. **Cancer chemotherapy**  
not at all distressing 0 1 2 3 4 5 6 7 8 9 10 very distressing

21. **Cancer radiation**  
not at all distressing 0 1 2 3 4 5 6 7 8 9 10 very distressing

22. **Cancer surgery**  
not at all distressing 0 1 2 3 4 5 6 7 8 9 10 very distressing

23. **Completion of treatment**  
not at all distressing 0 1 2 3 4 5 6 7 8 9 10 very distressing

24. How much **anxiety** do you have?  
none at all 0 1 2 3 4 5 6 7 8 9 10 a great deal

25. How much **depression** do you have?  
none at all 0 1 2 3 4 5 6 7 8 9 10 a great deal

**To what extent are you fearful of:**

26. **Future diagnostic tests**  
no fear 0 1 2 3 4 5 6 7 8 9 10 extreme fear

27. **A second cancer**  
no fear 0 1 2 3 4 5 6 7 8 9 10 extreme fear

28. **Recurrence of cancer**  
no fear 0 1 2 3 4 5 6 7 8 9 10 extreme fear

29. **Spreading (metastasis) of your cancer**  
no fear 0 1 2 3 4 5 6 7 8 9 10 extreme fear

30. To what degree do you feel your life is back to **normal**?  
none at all 0 1 2 3 4 5 6 7 8 9 10 a great deal

***Social Concerns***

31. How distressing has your illness been for your **family**?  
not at all 0 1 2 3 4 5 6 7 8 9 10 a great deal

32. Is the amount of **support** you receive from others sufficient to meet your needs?  
not at all 0 1 2 3 4 5 6 7 8 9 10 a great deal

33. Is your continuing health care interfering with your **personal relationships**?  
not at all 0 1 2 3 4 5 6 7 8 9 10 a great deal

34. Is your **sexuality** impacted by your illness?  
not at all 0 1 2 3 4 5 6 7 8 9 10 a great deal

35. To what degree has your illness and treatment interfered with your **employment**?  
no problem 0 1 2 3 4 5 6 7 8 9 10 severe problem

36. To what degree has your illness and treatment interfered with your **activities at home**?  
no problem 0 1 2 3 4 5 6 7 8 9 10 severe problem

37. How much **isolation** do you feel is caused by your illness?  
none 0 1 2 3 4 5 6 7 8 9 10 a great deal

38. How much **concern** do you have for your daughter(s) or other close female relatives regarding breast cancer?  
none 0 1 2 3 4 5 6 7 8 9 10 a great deal

39. How much **financial burden** have you incurred as a result of your illness and treatment?  
none 0 1 2 3 4 5 6 7 8 9 10 a great deal

*Spiritual Well Being*

40. How important to you is your participation in **religious activities** such as praying, going to church or temple?  
not at all important 0 1 2 3 4 5 6 7 8 9 10 very important

41. How important to you are other **spiritual activities** such as meditation or praying?  
not at all important 0 1 2 3 4 5 6 7 8 9 10 very important

42. How much has your **spiritual life changed** as a result of cancer diagnosis?  
less important 0 1 2 3 4 5 6 7 8 9 10 more important

43. How much **uncertainty** do you feel about your future?  
not at all uncertain 0 1 2 3 4 5 6 7 8 9 10 very uncertain

44. To what extent has your illness made **positive changes** in your life?  
none at all 0 1 2 3 4 5 6 7 8 9 10 a great deal

45. Do you sense a **purpose/mission** for your life or a reason for being alive?  
none at all 0 1 2 3 4 5 6 7 8 9 10 a great deal

46. How **hopeful** do you feel?  
not at all 0 1 2 3 4 5 6 7 8 9 10 very hopeful

Ferrell, Grant, Hassey-Dow, 1995

## Appendix D: Interview Protocol

Introduction: Thank you for agreeing to participate in this qualitative study exploring young breast cancer survivors' career development. I wanted to remind you that I will be taping this interview, and that the interviews will be transcribed for data analysis. Your name and any other identifying information will be removed from the transcripts, and no portions of the interview transcripts that contain identifying information will be reported verbatim. Only members of the research team will have access to the tapes of this interview, which will be stored in a locked, secure location and will be destroyed upon completion of the study. Your participation in this study is completely voluntary as you have the right to refuse to answer any question(s) asked of you and/or withdraw from this study completely at any time. I will maintain strict guidelines related to the safeguarding of research material as defined by the American Psychological Association. Do you have any questions?

Do you feel comfortable and ready to begin the interview now? Hopefully, you've had a chance to review the interview protocols and are familiar with the questions that I will be asking you today. You know that I am going to be asking you a number of questions about your career and your experiences as a young breast cancer survivor. I realize that discussion about these topics might elicit an emotional reaction and that we will be discussing a potentially sensitive topic. I will make every effort to minimize any emotional discomfort you might experience and can provide you with information from the American Psychological Association about how to locate a mental health professional in your area (i.e., Psychologist Locator <http://locator.apa.org/>) if you would like. I want to let you know that I respect and appreciate your willingness to share your experiences, so please be as honest and open as possible. Please say whatever comes to your mind in response to the questions.

### Interview Questions

First interview.

1. We are going to focus mainly on your work life, but first, can you tell me about your experience with breast cancer?

Probes:

- (a) When were you first diagnosed?
- (b) What was your reaction to the diagnosis?
- (c) What treatment have you already received, and what is your long-term treatment plan?
- (d) How has breast cancer most affected your life?

2. Could you tell me a little about your work history, beginning with the job you had when you were diagnosed up to your current work status?

Probes:

- (a) What is/was your most recent job title?

- (b) What work roles and responsibilities have you had (e.g., administrative, managerial), and what percentage of time do you typically spend on each?
- (c) What was the career path that brought you to your position at the time of diagnosis (e.g., educational background)?
- (d) How did you decide whether to continue working after your diagnosis (e.g., who did you talk to when making this decision, what information did you use to decide whether to return to work)?
- (e) How has your diagnosis affected your work status/work life?

3. What challenges does/has breast cancer pose(d) to your work life?

Probes:

- (a) How have your work activities been affected (e.g., limited mobility)?
- (b) How supportive has your work environment (e.g., co-workers, employer) been?
- (c) Have you experienced or worried about any discrimination at work as a result of your breast cancer?

4. How have you coped with these workplace challenges?

Probes:

- (a) What or who has been your main source of support as you managed your work/work-related decisions as a breast cancer survivor (e.g., spirituality, friends, spouse, exercise)?
- (b) What personal/internal factors (e.g., personality, attitudes, values, past experiences) have helped you cope with these challenges?

5. How have others; such as family, friends, teachers, employers, and so on; influenced your work life?

Probes:

- (a) Who has supported you in your work life before as well as after you were diagnosed with cancer?
- (b) Have you had any mentors? If so, who served as your mentors?
- (c) How have others influenced the way you think about your work life?
- (d) What messages from others have you received about whether you should return to work?

6. How have your experiences with breast cancer influenced your feelings and beliefs about being able to succeed in your work life? This might include the treatment you received, side effects, and other related experiences with your doctors, family, friends, co-workers, boss.

Probes:

- (a) What is your personal definition of a successful work life?
- (b) What do you think would need to change, if anything, for you to feel successful in your work life?
- (c) Has cancer affected how successful or effective you feel in your work?

7. If you had never experienced breast cancer, would your career aspirations/career path be different?

Probes:

(a) At what point in your career path, would you have made different decisions?

(b) How would your expectations of your work life be different if you had never experienced breast cancer?

I would like to thank you for your time today. I will call you back next week at \_\_\_\_ on \_\_\_\_ as a follow-up to today's interview. I will ask you a few additional questions and if you think there are any important aspects of your career experiences as a young breast cancer survivor that we have not yet addressed. Also, you will be given a chance to expand upon or amend any comments you made today.

Many thanks again, and I will talk with you next week.

Second interview.

I want to thank you again for your participation in this study, and for the responses that you provided during our last discussion. Some of the main themes that we discussed were [provide a brief summary of main issues addressed in the first interview]. Today, I want to check in with you to see if you had any further thoughts on what we talked about last time as well as ask you some broader, more philosophical questions about the way you think about your work life as a young breast cancer survivor. I also want to check in with you to see how it was to participate in this study and if there is any other piece you think is important for us to cover. Just a reminder that the interview is being tape recorded and will be transcribed for analysis, but that all identifying information will be removed from the transcript, and no portions of the interview transcripts that contain identifying information will be reported verbatim. You may choose to withdraw from the study at any time. Do you have any questions?

1. So last time we spoke, some of the themes that seemed to come up were [provide a more detailed summary of main issues addressed in the first issue]. Is that how you still feel about your work life as a young breast cancer survivor?

Probes:

(a) [Ask for elaboration on anything that remains unclear.]

2. What new thoughts or feelings about this topic have you had since our last interview?

3. What career advice would you give other young breast cancer survivors?

4. When you think about your life in broad terms given your experience as a young breast cancer survivor, how important is your work life?

Probes:

- (a) How important is your work life to your overall life satisfaction and life meaning now?
- (b) What are other sources of your life satisfaction or life meaning now?
- (c) How does your work life relate to your other roles in life (e.g., daughter, wife, mother, friend, sister, volunteer)?
- (d) How has this changed, if at all, since being diagnosed with breast cancer?

5. As a young breast cancer survivor, how would you describe what you would want your life to be like 10 years from now?

Probes:

- (a) How important do you anticipate that your work life will be to you then?
- (b) What do you anticipate will be your sources of life satisfaction or life meaning then?
- (c) What life roles (e.g., employee, wife, mother, volunteer) do you think will be most important to you then?
- (d) How does experiencing breast cancer affect the way you think about your future?

6. Is there anything else you feel is important in relation to your career and breast cancer experience that we have not discussed?

7. What has it been like to participate in this study?

8. May I email you transcripts of your interviews so that you can correct any inaccuracies?

a. If yes: Which email address should I use? \_\_\_\_\_

Thank you, again, for your participation in this study. We appreciate your willingness to share, and we hope that this study will contribute to a deeper understanding of the career development of young breast cancer survivors, and what might help them thrive in their work lives.

**Appendix E: Table 1: List of Domains, Categories, Sub-Categories, Frequencies, and Illustrative Quotations for All Data**

<b>Dom., Cat., &amp; Sub-Cat.</b>	<b>Freq.</b>	<b>Illustrative Quotation</b>
<i>Discovery of Breast Cancer and Navigation of Treatment</i>		
1. Previous knowledge about cancer due to medical background or family history	Var.	I have a very strong history of breast cancer in my family. When I was 21, I got tested with my aunts and mom for the breast cancer gene. I knew I had the gene but I had a plan. I was going to get a mastectomy and oophorectomy when I was 40. I talked to all my doctors about that and everything was fine. Then I found a lump, so it was stressful waiting for it. But I guess I didn't really think that I would have cancer that young. (case 5)
2. Self-discovery of breast cancer	Gen.	
A. Medical treatment delayed due to lack of insurance or financial barriers	Var.	I found the lump myself but I didn't have very good insurance. So I waited a little bit before I went to the doctor. My other insurance was kicking in at my work in July. So I waited until July 1 and then I went to the doctor to get diagnosed and had a mammogram and everything by July 6 <sup>th</sup> . (case 5)
B. External stressors in family or work life at time of diagnosis	Var.	I lived with my sister and brother-in-law and they had just had a baby. They had a baby a week before I went in for my mastectomy. My grandfather actually also passed away the weekend after I had my biopsy and so it was just a lot of changes. (case 2)
3. Initial reaction	Gen.	
A. Shock, disbelief or anger	Gen.	I mostly just sat there and said, I kept saying, "But I'm 27. I don't know how this is possible." (case 10)
B. Afraid and overwhelmed	Var.	All I thought was, "Cancer. I am going to die." (case 9)
C. Sadness	Var.	I just remember crying and my sister crying . . . (case 2)
4. Emergent problem-solving reaction	Var.	Then I just got in survival mode where I was like we have a problem; we need to fix it immediately. (case 4)
5. Treatment decision-making	Gen.	I am a scientist, so I went on the Internet and I went and bought some books and I read quite a lot about it. I talked to the oncologist. (case 9)

*Career Development: Influences and Sacrifices*

1. Parental influence	Gen.	
A. On work value/ethics	Typ.	I would say the reason why I was ambitious and hard-working is because of my parents. My dad has always had a job and he always worked very hard and worked overtime and my mom always had a job. Working hard and getting rewarded for it, that was just something that was a part of the community and my parents, and that was very important. (case 5)
B. On field of work	Var.	My dad was a politician from [state], and so I grew up being very politically aware and politically active. And so I studied political science in college. (case 2)
2. Influence of mentors on building career-related self-efficacy	Typ.	I think actually I probably lacked confidence in a pretty big way. I know I did in grad school, and that first advisor of mine really helped me realize I could do a PhD if I wanted to, I was 100% fully capable of doing it and if I chose not to do it, it was because I didn't want to, not because I couldn't. I think my previous boss, the one who gave me the job that I currently have, was the same thing...he was the one who built up my confidence that I could do my job and speak up about how I am doing it. I think they were really... important in building confidence in me. (case 9)
3. Partner supported their career choice	Typ.	My husband and I have been together since I was in high school and he's been fully supportive of my education and has adjusted his career in order to make my career primary. It's not just me, it's like my career has been part of our life together. (case 6)
4. Felt they had made personal sacrifices due to high demands of career (e.g., postponed having a family)	Var.	But essentially I was actually sacrificing a lot in your 20s to have a successful career in helping people and then just get this [breast cancer] thrown in your face. Giving up in your 20s not having kids because you are working 70-80 hours a week and then having a diagnosis like this and wondering are you going to be able to have a family, are you going to be alive to have a family. (case 4)

*Impact of Cancer on Career: Cancer-Related Work Challenges*

1. Decision of whether to continue working	Gen.	
A. Not working was not an option due to financial or insurance needs	Gen.	One big thing about continuing working was my health insurance. It really wasn't an option for me not to work and not have insurance. I had to maintain some sort of full time status to maintain the insurance. (case 11)
B. Decision to continue working was supported by others	Typ.	

1) partner/family	Var.	My husband was very, whatever I wanted to do, that is what he supported. (case 1)
2) medical professionals or other young breast cancer survivors	Var.	With my job, so I asked my oncologist, “Am I going to be able to work?” He said you can. . . he told me I could work as much as I felt like I could. I said I’d do as much as I can and then when I feel tired I’ll say I won’t do anymore. . . I read on the YSC [Young Survivors Coalition] website, I read about other people’s experiences but that was pretty much it. (case 9)
2. Managing potential consequences of disclosure	Gen.	
A. Did not perceive any formal discrimination at work	Typ.	I don’t feel that I was discriminated against. (case 5)
B. Wanted to be seen as more than a breast cancer survivor after disclosure	Typ.	When I first came back, I think for about a month, I was getting the line from my boss, “When you’re ready, we’ll talk about that.” This sort of condescending, “Well, when you’re ready we’ll talk about that. How’s your health?” So I said to my boss one day, it wasn’t in front of anybody, “I get the feeling that you all are babying me. I had my boob cut off. I didn’t have the front of my brain cut off, I didn’t get a lobotomy. I’m not an idiot. I appreciate that you’re concerned, I understand that, but I feel like you’re treating me different now.” I think he was shocked because I don’t think that was their intention at all. When I brought it up, they were like, well, yeah, we’ll not treat you that way [laughing]. (case 12)
C. Worried about current or future job opportunities as a result of disclosure	Var.	I was very afraid of first of all not meeting my insurance quota of 25 hours or more because they resubmitted availability when they scheduled us to work so they could easily have made me just not work. All they had to do was not schedule me. So that was a big concern of mine. I was worried that I would jeopardize my role in the company and that I wouldn’t be able to come back after treatment and everything and start where I was before. (case 5)
D. Experienced positive consequences from disclosure (e.g., was consulted for breast related issues at work)-	Var.	So when I would diagnose people with a little bit of cancer that wasn’t going to kill them, “cancer-lite,” we said we would take care of it and they will have a normal life expectancy. . . They were looking at me with crossed-eyes. I would tell them I was diagnosed with breast cancer, I am doing fine. You are going to do fine. . . Because before I was diagnosed, I couldn’t say that kind of thing to people if you haven’t been there. Like “Who are you to tell me how to feel?” Well, I can tell you how to feel now, because I know how it felt. I think people appreciated it. (case 4)
3. Cancer symptoms and side effects that had an impact on work	Gen.	
A. Physical side effects that	Gen.	

had an impact on work

1) fatigue/sleep issues	Typ.	The fatigue was the worst. And it's different. . . it's like your whole body's tired. I just remember having to wash dishes and I'd have to prop myself up with my elbow on the counter because I couldn't stand up. You're just exhausted. (case 8)
2) pain/physical Discomfort	Var.	And I'm constantly distracted by pain. The pain is just constantly in my mind. I'm not able to set it aside . . . (case 6)
3) mobility issues/ numbness	Var.	I do have limited mobility. There are certain surgeries that I can't do because I don't have the strength in my left arm because of the lymph nodes and radiation. My right arm is stronger than my left arm and there are certain surgeries that I don't feel comfortable where you have to do things bilaterally. I need somebody to do part of it for me. (case 4)
<b>B. Emotional side effects that disrupted work productivity</b>		
1) negative effects on mood	Var.	The actual anxiety and the physical anxiety is definitely medication related. Throughout chemo my left foot would continuously shake. I could not sit still. The first week after my first chemo treatment I felt like I was going to crawl out of my skin. I was just so antsy. (case 11)
2) more self-conscious about appearance	Var.	During treatment it was just ridiculously hard to sit in at work meetings, talk to people and concentrate when all I would be thinking is, "Oh my God, is my wig on straight or are my scars showing?" I was very self-conscious about how I looked because after my tissue expanders failed, I had one breast half way filled and the other one wasn't so I was lopsided and I had to worry about that constantly and how to figure out what I was wearing and that was the biggest thing for me. Because I worked with 100 people so I just didn't want to walk around looking like cancer girl all the time. (case 5)
<b>C. Cognitive side effects that made work more difficult</b>		
1) memory and concentration problems	Typ.	I'm cognitively not that great anymore. My memory sucks. . . I'm not as aware of my surroundings as I used to be. I certainly can't multi-task. I mean it's one thing at a time really, and it takes me ten times as long to do something as it did before. (case 6)
2) trouble communicating	Var.	. . . word finding issues that are the biggest problems. . . I just feel as though I'm not an effective communicator. (case 10)
<b>D. Interpersonal side effects</b>		
1) survivorship issues resulting in difficulty connecting with co-workers and/or employer	Typ.	I've heard some jokes be made about cancer patients, like saying someone's as skinny as a cancer patient, and I don't think people realize their humor is not funny to everyone. . . There are girls at work who are always complaining about

dieting and being this and being that. He said something like you don't want to be skinny like a cancer patient. (case 7)

2) work environment did not expect less of them despite cancer-related side effects	Typ.	I got every complication, deep vein thrombosis, and then my port fell out, and then I got a bad infection in my arms where the lymph nodes were removed. So I was admitted to that hospital. But my boss, three days later was asking me about my patients. I was like, "Buddy I was in the hospital. I don't know the answers to these questions." I thought that was a little ridiculous. They were giving me a hard time for not knowing about the patients in the hospital. They did not cut me any slack. (case 4)
3) work environment forgave cancer-related side effects when assessing performance	Var.	People knew I was sick. People knew that I was doing this. They weren't expecting a lot from me. (case 11)
4. Managing work load and work schedule during treatment	Gen.	
A. Level of ease	Gen.	
1) was never a struggle	Var.	They [work] allowed me to dance as slow or as fast as I needed to. I never took a day off. I never felt I needed to. (case 1)
2) was a struggle at times	Var.	I was also just concerned; by that point I was very concerned about my professional development and I was concerned that taking two months off would worsen the situation. (case 10)
3) was consistently a struggle	Var.	And so that was my biggest problem, trying to figure out how to do treatment and work . . . (case 5)
B. Negative feelings about managing work	Typ.	
1) wished could have taken more time off	Typ.	. . . if I could change anything it would be that I could take time off. I mean not even a big chunk of time but if I could take longer time every chemo session or worked part time, like maybe 10-15 hours a week, that would have been amazing. (case 5)
2) overwhelmed	Var.	There were days at work where I was so overwhelmed by trying to do something that I would call my mom and be in tears saying, "I can't do this, I can't do this. I am in over my head." I was just overwhelmed by everything, I think. (case 11)
3) felt guilty for taking time off	Var.	You know I felt guilty; everyone is out working in the field and I am not. (case 9)

*Impact of Cancer on Career: Coping with Cancer-Related Work Challenges*

1. Work-related social support regarding breast cancer	Gen.	
A. Colleagues and employer	Gen.	
1) only positive Interactions	Typ.	My boss was amazing. All of my colleagues were amazing. (case 4)
2) some positive and some negative interactions	Var.	My actual employers, I just felt no support from them whatsoever. I felt like they did not care and they, I just didn't feel any support from them at all. (case 5)
B. Human resources/ management	Typ.	
1) only positive interactions	Typ.	So the management team at [company name] was very patient and very understanding. (case 7)
2) only negative interactions	Var.	I had a lot of problems with my insurance and I wasn't approved to get chemo because my insurance company was saying that I wasn't covered. So I kept going to the HR manager and she just would be horrible. She would never be mean but she would just not follow through on anything. So I had a lot of problems with insurance and them denying things for a while because my HR manager was just not doing her job. (case 5)
C. Social support from outside work	Gen.	
1) partner/family	Var.	If I hadn't had a supportive husband then I probably would have had to quit residency. . . he took care of the dog. He did the grocery shopping. He was the house manager, basically just poured love and had a really good attitude, just "we are going to get through this and it's going to be fine." (case 4)
2) friends or other young survivors	Var.	I've definitely have voiced my experience with work and have gotten suggestions and advice and support from people online in different situations so that's been really helpful. I'd have to say that was huge, when I was switching jobs and I was working two jobs and I got a lot of support and advice from all my online community. (case 5)
2. Working as a way of coping with cancer	Typ.	
A. For normalcy/distraction	Typ.	What would I do if I don't work? It was a way to keep myself busy because I was looking at it as if I don't keep myself busy and go to work and continue to try to live normally, I'm just going to sit at home and feel sorry for myself. I think that was sort of how I used it; it was to maintain some sort of normalcy in my life. (case 10)

B. To feel more in control	Var.	. . . [work] would allow me to move on. And kind of reclaim that part, because I felt like cancer had stolen already 6, well, 4 months, 5 months of my life. And so I just wanted to take that back. (case 2)
C. To maintain work identity	Var.	In hindsight I'm very work identified and the reason I wanted to keep working is because I didn't want cancer to have all that. (case 6)
3. Behavioral strategies	Var.	I just write everything down. Every meeting is in Outlook [email management system]. I make sure to call myself at work constantly to remind myself of things, leaving myself voice messages or sending myself e-mails. (case 1)
4. Experienced difficulties in coping	Typ.	
A. Due to life stage	Var.	I mean everything is different based on age but with work definitely. It has something to do with life stages too, whether or not you have kids or are married. But I was just starting out in my career and other people who I talked to were able to take leave of absences, or like my mom who had been at her job for maybe 18 years when she got diagnosed, so obviously her work was super supportive of her and they banded together. I think my work environment with being so large was a big hindrance just because no one would really band together. But I talked to other women who are older and have worked with these people for a while and just got a huge amount of support at work. . . I think if my career had been more established I would have been more okay with first of all talking about it and making an effort of taking care of myself over a career. (case 5)
B. Due to prolonged side effects or medical complications	Var.	When you ask me what breast cancer did to me life, the RIBP [radiation-induced brachial plexopathy] from the breast cancer and all of the menopausal stuff, the Lupron, and then being on the tamoxifen and then the fasablex, all of that stuff, I'm cognitively thirty percent of what I was. . . Everything was just unraveling. So I tried to continue to work for three years, and then, the pain was just unbearable, I developed chemo induced fibromyalgia as well. I couldn't sleep. I was having all of the cognitive stuff related to treatment and related to menopause and the mood stuff that comes with it, and I was a freaking mess. So I left work, and that was brutal, really, really brutal. (case 6)
C. Due to intense intellectual demands of work	Var.	My sense is that if I had a job that required less of me, that was more rote and I was just doing it, I don't think going back would have the same [impact]... (case 13)

*Impact of Cancer on Career: Re-Appraisal of Career Development after Cancer*

1. Increased desire to have more work/life balance	Typ.	There's been a dramatic shift in the role of work life in my life since I was diagnosed in a much more balanced way.
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(case 3)

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2. Increased desire to be passionate or enjoy work more	Typ.	I was reading the other day, no one ever gets cancer and a lot of people switch careers and no one is ever like “Oh, I want to make more money,” but that happened to me. I was like, I am tired of being broke. You know, cancer is expensive. . . And life’s too short. I want to travel. I’m not going to sit here and work at a job I don’t like because I feel like it’s for society. I’ve suffered enough; I want to have fun. I want to make money and travel and wear nice clothes so I went out and got my real estate license and now I’m starting out in real estate. (case 8)
3. Slowed down, blocked, or forced a change in career path	Typ.	So the two months that I missed, it has slowed down my learning in my career at a time that learning is very important. Part of that is time away from work. But much of that is that I have not had the capacity to work as intensely at the level that is necessary. (case 13)
4. Career ambitions and priority placed on career decreased	Typ.	I think that I first of all I would not have gotten derailed because before breast cancer I was doing projects at work and I was doing things to get ahead and I got awards for different stuff I did at work. And then the 6 months to 8 month of treatment I definitely was not doing my best work so I feel like I got a little bit derailed there. I think after that I would have been able to return to work and be ambitious and take the opportunities that were given to me and tried for them because when I want to... I mean, I can put my mind to something. . . I could of made that happen for something more work related and that I just don’t care. So I definitely think if I hadn’t had breast cancer I would probably be higher up in the company and more important at the work I do. (case 5)
5. Increased or re-set career ambition in positive direction	Var.	If anything, I think being a survivor pushes me to want to succeed more and kind of go above and beyond because I don’t want it to become an excuse for not succeeding. (case 2)
6. Increased desire to wed breast cancer advocacy and career	Var.	My passion is in breast cancer, breast cancer advocacy and working with the charities that I work with and if I could get paid for that work I think that I would be a lot more ambitious if I was able to do that. (case 5)
7. Redefined purpose of working method to access insurance and money	Var.	I mean economically my husband and I are in really dire as straights me being out on disability. We’ve lost our house and I can’t continue to be on disability. I need to go back to work and I need to find a way to maximize our economic situation. So it can’t be about, work can’t primarily serve an economic place and that’s something that I wouldn’t even consider seven years ago. That economics would ever be before the good that I could do in the world, or whatever crap. But it has to now. (case 6)
8. Felt stuck in job because needed health insurance	Var.	I was tied to my job now because I needed to have insurance benefits. So I felt it essentially took away all my choices. (case 12)

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9. Amplified the challenging demands of an already intense career/educational training program	Var.	The problem is that residency is six years and I was diagnosed towards the end of the fifth year. And that is a problem because you can't get a job. You need to have a residency behind you and become board certified in order to work. I was also angry that I had chosen a really long residency because if I had chosen an ER doctor or a pediatrician, that is only three years. I would have been long done and an attendee somewhere and being diagnosed as an attendee would have been so much easier. (case 4)
10. Appraisal of self-efficacy at work increased	Var.	What it has done is empowered me more than anything. If I can beat cancer, which I did, then there is nothing I can't beat. And, if I can maintain a positive perspective through this, I can maintain a positive perspective through work, uncertainties about decisions I have to make, managing, I can do it. (case 1)
11. Appraisal of self-efficacy at work decreased	Var.	There was a certain, I don't even know the right word, I was just able to rely on myself, but I knew that I was capable of doing certain things in my sleep which I can't do now. I don't know if I can do it now, and I'm going to have to work at it. . . (case 6)

*Components of Career and Life Satisfaction after Cancer*

1. Components of career satisfaction after cancer	Gen.	
A. Expression of identity, passion, or life meaning	Typ.	. . . work in a career that I feel fulfilled going to each day and something I feel like is making a difference. (case 2)
B. Offers financial stability	Typ.	There is also a monetary component to it. I feel I am being paid a wage where I am comfortable, where my family is comfortable, where I don't have to worry what happens if I don't have a job for a month or a few weeks or take leave . . . (case 1)
C. Provides positive relationships or enjoyment	Typ.	I mean, I spend sixty hours a week there [work]. . . otherwise I would spend 9 hours a day hating life. I think it's really important that you enjoy doing what you do for a career. (case 2)
D. Career choice provides balance with other life roles	Var.	I think now my work life has to complement my role of wife and mother and sister and daughter. (case 1)
2. Components of life satisfaction after cancer	Gen.	
A. Relationships	Gen.	
1) family/partner	Gen.	I would say my satisfaction comes from my husband and what I call my family, which is all pets, but I get a lot of satisfaction from them and my friends and my online community. (case 5)
2) being a mother	Typ.	Being a mom is my focal point. (case 3)

3) friendships	Var.	I think what gives my life meaning is family and friends. (case 9)
B. Career is part of life satisfaction	Typ.	...it [work] is important when I think about my life in its most broad terms. It is not the most important thing, my family is, but it is important, it is part of who I am. I get gratification and satisfaction from it. I think my work is important. It is more than just a means to an end. I think if it were just that, it would be more difficult to continue to work and juggle it all. It is important, but it is not my life. (case 1)
C. Having it “all,” a successful career and a successful life outside of work	Var.	I think the messages I got were in the beginning, you go to school, you go to college, and for girls, you either get married and have kids or that’s it. Then it became this whole thing of you can get married and have kids and have it all. When I started out in my career, I was like I’m going to be one who has it all. I’m going to have kids and have a family and have a great career and all this stuff. (case 12)
D. Volunteering in advocacy or helping others more generally	Typ.	I spend a lot of time on my breast cancer advocacy work to remind me of that life purpose. (case 3)
E. Self-care (e.g., hobbies)	Var.	I do a lot of yoga and that brings me great satisfaction and also helps me be more joyful. . . I like to watch movies. That brings me joy. And to read books . . . (case 8)

*Impact of Breast Cancer on Life Outside of Work*

1. Breast cancer-related challenges	Gen.	
A. Fatigue, pain, and other physical challenges	Gen.	I had fluid issues for 2.5 years. I had some chronic pain issues for about that long as well. (case 12)
B. Symptoms of anxiety, depression, or emotional exhaustion	Gen.	. . . the months that I went through chemo started giving me depression and I was just tired and wasn’t feeling well and wasn’t myself. (case 11)
C. Issues with memory, concentration, or communication	Typ.	My capacity to communicate is diminished. (case 6)
D. Challenges to family planning, including the need to seek infertility treatment	Typ.	Because I had cancer, I haven’t been able to have kids for the past two years and now I am dealing with the ramifications of having cancer and having fertility problems. I think that is something that is unique to young women who are career minded and get cancer. (case 4)
E. Financial worries and need for insurance increased	Var.	I was so physically depleted all the time or going through the stuff I did like being in the hospital, your life gets all messed up. You don’t consolidate your loans, you don’t pay your bills. There are all these aftereffect things, not to mention the health

insurance things, which is an enormous load. We were just always in crisis mode. (case 13)

2. Coping strategies for breast cancer-related challenges	Gen.	
A. Social support	Gen.	
1) positive aspects	Gen.	
a. instrumental	Gen.	Well, I have to say thankfully my mother, I needed her for all the insurance stuff. She went with me to every doctor's appointment and every chemo that I had and she told me to literally just give her all the bills and not to take care of them so that she could see how they were, what they were covering and what they weren't covering. (case 5)
b. emotional	Gen.	
1. connecting with other young survivors	Var.	One area that really became important to me was the support group that I go to for young women with breast cancer that I go to at [city] hospital. . . I was able to throw out what I was feeling at the time and get feedback and hear what other people were going through and it gave you perspective on your issue that other people had other problems. That was a big help for me during the whole thing. Towards the end I was also able to connect to women that were closer to my age because during the first few months they were in their late thirties or late forties, still young but I was 27 so I was really looking for some closer to my age and I finally found them. (case 11)
2. social support system gave them a purpose for living	Var.	When I think back I remember thinking I just have to be alive for my daughter. . . she was a big part of my recovery. She was so sweet and so loving, and being around her made me feel happy and healthy. She was a huge part of my recovery. I had no other choice but to live during treatment. (case 1)
2) negative aspects due to difficulties in finding same age survivors	Var.	Going to support groups in person is not an option when you are my age because every person who I've talked to that I've met now through my online community has had the same experience. You go and this 70 year old woman would look at you like, "What are you doing here? Are you a nurse?" And you start talking and they don't have the same issues as you. And it's just, there's no connection there whatsoever. I went to one and I never went back. (case 5)
B. Positive perspective as something they could control	Typ.	I think that so much of it is perspective and I don't want to say all of it, but so much of how you will deal with cancer or how you will deal with any type of trial is perspective. That is the only thing you have control over, how you see it and how you manage it. (case 1)

C. Having a choice in disclosure empowered them	Var.	My hair grew back really curly. Beforehand it wasn't as super curly. Up until a few months ago I used to tell people yeah, this is my hair after chemo. But now I am realizing I don't have to say that. I just go "Yeah, I have really curly hair." So that was a big breakthrough for me. . . . It meant that I don't have to tell anybody anymore about breast cancer because there are no external signs. (case 4)
D. Alternative treatment modalities (e.g., yoga, exercise)	Var.	And I did a lot of nutritional work. I did an amazing cancer exercise program, which was the one thing that was really, really helpful. (case 13)
E. Psychotherapy	Var.	I actually started to go, started seeing a therapist in March of [YEAR], and then continued all through treatment. (case 2)
F. Avoidance/blocking it out	Var.	I just feel like it was before breast cancer, one part of my life and now it is a different part of my life. But I have also walled off the past two years. So I don't remember a lot or focus on it a lot. I guess that is just the way I am handling the drama after being diagnosed. (case 4)
G. Involvement in breast cancer advocacy and helping other survivors	Var.	Throughout my whole chemo, at the beginning of this whole thing, I made this decision that I wasn't going to let this take anything from me. I wanted to get something out of it, something positive to come from it. I wanted to help other people or do something with this whole experience. (case 11)
H. Hearing others' struggles and realizing they are not alone	Var.	. . . hearing other people's stories, and how much they've also struggled allows me to be more compassionate to myself. (case 6)
3. Re-appraisal of self after breast cancer	Gen.	
A. Breast cancer revealed their strengths and showed what type of person they truly are	Var.	When I think about cancer I think about my mother who is still living, and it allowed me to really know that I am who I think I am. I thought I was a very upbeat and optimistic person and now I know that. When you are really tested, you figure out who you are. (case 1)
B. Incorporated survivorship into their identity but were not defined by it	Var.	When I meet new people, I don't openly share the fact that I'm a survivor. It's definitely not because I'm ashamed of it, but I think that I don't want to have that awkward interaction, where it's like that immediate pity. (case 2)
C. Breast cancer created an identity crisis that has yet to be resolved	Var.	. . . You have an identity crisis. Like, who am I now? I don't know (case 8)
D. Felt their body betrayed them by getting cancer at such a young age	Var.	I felt like this thing, my body basically betrayed me and the bad part got cut off. (case 12)

4. Re-appraisal of relationships after breast cancer	Gen.	
A. Breast cancer experience enhanced their relationships	Typ.	I think my approach to interaction with other people completely changed. You know, prior to being diagnosed, I was quick to anger, and, not that I had an anger problem, I was just heated. And I was kind of feisty and so would get into trouble because I'd say things that I shouldn't and now I do have a little of my fire back, but I also don't have nearly the patience for pettiness. And I just don't hold grudges. I don't waste energy being mad at people because it just isn't worth my time and sometimes it's to a fault, where maybe I don't hold people accountable but I would rather have someone, I guess, walk all over me at this point and be taken advantage, I guess, in the sense of like a friendship, then to waste my time being angry at someone who's not going to change. And so, that's kind of my new mentality. And also, if someone truly wrongs me, I'm not going to spend my time trying to really fix it. So I guess I'm much quicker to break ties with people just because I've learned to be selfish on some level and so I think I'm calmer when I approach relationships and calmer when I approach problems and if there are too many large problems, I really don't get fazed because my true attitude is, it can't be that bad. It'll be fine, it'll work out. (case 2)
B. Breast cancer experience strained their relationships	Var.	I don't think that a lot of people understand. When I say people I'm talking about support people. Like there's very few people that actually ask questions. There could be different reasons why they don't ask, or why they don't want to discuss something. A lot of times people are uncomfortable talking about things like cancer because it's associated with death, disease, and pain and all this other stuff. But it may be helpful if there wasn't so much the stigma that remains about cancer. (case 12)

*Lessons Learned from Breast Cancer*

1. Changes in personal views	Gen.	
A. Realized they could not control what unfolds in life, and death is always a possibility	Gen.	It definitely has caused me to be more cognizant of my own mortality and more cognizant that nothing is certain. Obviously everybody knows that nothing is certain but it just seems that more real. I have a hard time even having conversations that include the sentence "Someday when I have a child" because I'm like I may not be able to have a child. Things like that are always sort of in the forefront. Talking about retirement, I may not live to retire. Obviously you have to plan for it but just don't count on it. Things like that. Definitely just being more aware of that. (case 10)
B. Felt the need to be more open to others and to new life experiences	Gen.	. . . Pretty much try to do everything that comes my way. (case 5)

C. Realized that life is hard, and became more cynical	Var.	I think as you go through life you become hardened and gnarly. You're not this happy go lucky kind of person that can do anything. You know what I mean? Like that's how I started out, and now I'm just this jaded, cynical, untrusting person. (case 12)
<hr/>		
2. Positive changes in behavior	Typ.	
<hr/>		
A. Took actions to have more balance in their work-home life	Typ.	
<hr/>		
1) more emphasis on family/relationships	Typ.	I think it just makes everything a little more critical, because I know now that it could go away anytime. Which is a stupid stereotypical thing to say, but it is true. . . about spending more time with friends and family and realizing things that are important, stuff like that I think. (case 9)
<hr/>		
2) more emphasis on leisure	Var.	I am the person that likes to plan and being involved in things so I am really trying to be more involved like I used to be. I am really becoming involved in young women with breast cancer organizations. In my neighborhood I'm on an activities planning committee. I am planning my high school reunion. My boyfriend and I signed up for ballroom dancing lessons and I signed up for pottery classes. Trying to do things that are fun. (case 11)
<hr/>		
B. Became a health-care self-advocate	Var.	I'm learning about the system and seeing things and knowing that nobody is going to fight for you except for you. Nobody is going to be your advocate except for you. You have to be on top of everything when it comes to your health . . .(case 12)

*Thoughts About the Future*

1.Thoughts about possibility of recurrence	Gen.	
<hr/>		
A. Always aware of possibility of recurrence	Typ.	The possibility of recurrence is huge for me because I have BRCA gene so it's always on my mind constantly. (case 5)
<hr/>		
B. Worries or gets angry when thinks about recurrence	Typ.	I'm wrestling the possibility [of recurrence]. OMG, my son is going to watch me die. That's heart wrenching. (case 7)
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2. Thoughts about future career as a breast cancer survivor	Typ.	
<hr/>		
A. Career flexibility will be more important	Typ.	I see myself continuing to move up. I think with that moving up, it will allow me to have more flexibility. (case 1)
<hr/>		
B. Career importance will be similar to what it is now	Var.	I think that viewing a job or career in 10 years. . . I see it as still being very central. (case 8)
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C. Career will have advanced	Var.	I think I'm ready to move on. . . I think I'm ready for the next challenge. (case 2)

3. Thoughts about future non-work related roles	Gen.	
A. Family, partner or children will be more primary	Typ.	It puts a greater focus on having kids, because I'm a genetic carrier for the BRCA-1 gene mutation, I have to consciously be thinking about when I'm having my ovaries out and preventative care and so I think there's a greater focus on having kids and less of a focus on what I'll be doing career-wise, which is an interesting combination. And I think a huge change from pre-cancer, because before my thought was all, oh, I'll probably have kids when I'm forty and that'll be fine. But now it's like, hmm, probably not. (case 2)
B. Community involvement and/or advocacy will be more important	Var.	I'd just like to be more active in my community. (case 1)
C. Leisure will be more important	Var.	I have this dream that I will retire to Hawaii or Greece or somewhere that's on the water and I could surf all day and that was it. (case 12)

*Advice for Other Survivors*

1. Do what you think is best	Typ.	That it is such a personal and individual situation that you have to do what is best for you . . . (case 1)
2. Seek support within or outside work	Typ.	And you'd be surprised what you can accomplish at work while you're going through cancer if you actually go and talk to somebody about it. (case 5)
3. Do not let cancer define you, but use it as an opportunity to re-evaluate your life and to follow your passions	Var.	Really make your priority your priority. Allow cancer to be your eye opener. Do whatever your priority is. On a practical level, use your resources. Don't be afraid to ask for what you need, to take the time that you need. But also don't view it as a life stopper, because if you view it as that, it will be. (case 1)
4. Stay positive and believe in yourself	Var.	I would tell other survivors to just believe in yourself because, at least, from my experience, I spent so much time during that year and a half of active treatment being told exactly what to do and being told, this is the process for making you healthy, this is the way we're going to make you better, this is the way you're going to succeed, because success is measured in whether or not you survive. And so I think when I was finally done with treatment, I struggled a little bit with figuring out what to do now that I make the decisions and I think a career, at least in my case because I was just starting out in my career, I think it took a lot of just believing that I was making the right decisions and that everything would work out. (case 2)

*Participants' Feelings About Participating*

1. Felt that participating	Typ.	I really enjoyed it, because it's always good to reflect and it
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was a good experience

makes you think about things in different ways and I thought you had really good questions and everything. (case 8)

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A. Resulted in new insights	Typ.	. . . it wasn't until I talked to you that I realized that it wasn't necessarily my mom [that caused my anger]. My mom was a little bit of it but I think the majority of it was the fact that I had to have insurance and that I was tied to the job for it, and that limits you. And that was where most of my anger was coming from. So not only did it take away my, my controlling my body so to speak, nobody controls their body completely but not only did it seem like I lost control of my body but I lost control of where I could guide my career, and I think that's where a lot of the anger came from. (case 12)
B. Felt it was therapeutic/ cathartic	Var.	I think it's forced me to think about some things that I hadn't really thought about and kind of maybe be a bit more honest about how much cancer really affects my life because now that I'm healthy, I constantly want to be like, I'm fine, I don't need to talk about it, I don't need to do anything! Whereas I think the interview process has been very therapeutic to actually be able to talk about it and talk about a correlation between being a survivor and my work. So, I think it's been good. (case 2)
C. Thinks it is important to spread awareness of survivorship issues	Var.	I think it was really important [to participant in the study]. I hope you not only publish a dissertation, but you publish an article in some psychological journal. So when people are doing searches and oncologists are trying to guide their young cancer patients and encourage them to work or not, they can see the results of this study and have literature to support their recommendations. (case 4)
2. Thanked the researcher for providing relevant cancer-related information	Var.	Thank you for the offer. (case 6)

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*Note.* N=13. "General" indicates that this category occurred for 12 or 13 participants. "Typical" indicates that this category occurred for 8 to 11 participants. "Variant" indicates that this category occurred for 3 to 7 participants.

<b>Appendix F: Table 2: Demographic and Medical Background</b>		
<b><i>Race/Ethnicity</i></b>	<b><i>N</i></b>	<b><i>Percentage</i></b>
African American/Black	2	15.4%
Biracial Indian and White	1	7.7%
Latina	1	7.7%
White	9	69.2%
<b><i>Highest Level of Education Completed</i></b>		
<b><i>Highest Level of Education Completed</i></b>	<b><i>N</i></b>	<b><i>Percentage</i></b>
College	6	46.2%
Graduate School	7	53.8%
<b><i>Socioeconomic Status</i></b>		
<b><i>Socioeconomic Status</i></b>	<b><i>N</i></b>	<b><i>Percentage</i></b>
Less than 30,000	2	15.4%
30,000-59,999	2	15.4%
60,000-99,999	2	15.4%
100,000-149,999	4	30.8%
150,000 or higher	3	23.1%
<b><i>Relationship Status</i></b>		
<b><i>Relationship Status</i></b>	<b><i>N</i></b>	<b><i>Percentage</i></b>
Committed Relationship/ Partner	10	76.9%
Single	3	23.1%
<b><i>Children in Household</i></b>		
<b><i>Children in Household</i></b>	<b><i>N</i></b>	<b><i>Percentage</i></b>
Children Present	4	30.8%
No Children	9	69.2%
<b><i>Age at Diagnosis (years)</i></b>		
<b><i>Age at Diagnosis (years)</i></b>	<b><i>N</i></b>	<b><i>Percentage</i></b>
21-25	3	23.8%
26-30	4	30.4%
31-35	5	38.4%
38	1	7.7%

<b><i>Age at Interview (years)</i></b>	<b><i>N</i></b>	<b><i>Percentage</i></b>
24	1	7.7%
26-30	3	23.8%
31-35	3	23.8%
36-40	4	30.4%
41-43	2	15.4%
<b><i>Initial Diagnosis</i></b>		
	<b><i>N</i></b>	<b><i>Percentage</i></b>
Ductal Carcinoma In Situ (DCIS)	4	30.8%
Invasive Ductal Carcinoma	9	69.2%
<b><i>Breast Cancer Treatment*</i></b>		
	<b><i>N</i></b>	<b><i>Percentage</i></b>
Lumpectomy	6	46.2%
Partial Mastectomy	3	23.8%
Bilateral Mastectomy	5	38.4%
Reconstructive Surgery	5	38.4%
Chemotherapy	10	76.9%
Radiation	6	46.2%
Hormone Therapy	8	61.5%
Oophorectomy	2	15.4%
<b><i>Health Insurance Coverage of Breast Cancer Treatment</i></b>		
	<b><i>N</i></b>	<b><i>Percentage</i></b>
Health Insurance Plus Out of Pocket Costs	9	69.2%
Health Insurance Only	4	30.8%

\*Participants could indicate more than one response for this item, and therefore the percentages do not add to 100%.

**Appendix G: Table 3: Scores on the Quality of Life-Cancer Survivors (QOL-CS) Breast Cancer Version (Ferrell, Dow, & Grant, 1995)**

	<b>Current Study</b>	<b>Dow, Ferrell, Leigh, Ly, &amp; Gulasekaram, 1996</b>	<b>Dow, Ferrell, Leigh, Ly, &amp; Gulasekaram, 1995</b>
<b>Sample description</b>	13 female breast cancer survivors	293 female and 1 male breast cancer survivors	687 cancer survivors, 43% of which were breast cancer survivors
<b>Average age at time of study</b>	34 years	50.9 years	49.6 years old
<b>Average time since diagnosis</b>	42.5 months (median 36 months)	68.5 months (median 52 months)	80.4 months (median 58.5 months)
<b>Physical Well-Being</b>	5.1* ( <i>SD</i> = 1.5)	7.75* ( <i>SD</i> = 1.72)	7.78* ( <i>SD</i> = 1.67)
<b>Psychological Well-Being</b>	5.4 ( <i>SD</i> = 1.4)	5.77 for ( <i>SD</i> = 1.59)	5.88 ( <i>SD</i> = 1.56)
<b>Social Well-Being</b>	4.5* ( <i>SD</i> = 1.8)	6.93* ( <i>SD</i> = 1.91)	6.62* ( <i>SD</i> = 1.98)
<b>Spiritual Well-Being</b>	5.7 ( <i>SD</i> = 2.3)	6.56 ( <i>SD</i> = 1.84)	6.59 ( <i>SD</i> = 1.79)
<b>Total</b>	5.2 ( <i>SD</i> = 1.2)	6.51 ( <i>SD</i> = 1.35)	6.51 ( <i>SD</i> = 1.31)

The measure is scored on a scale of 0 to 10, with higher scores indicating higher levels of quality of life.

\*Indicates significant differences at  $p < .0001$ .

## References

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