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**Exploring the Relationship between Psychological Resources and
Breast Cancer Survivorship using Path Analysis**

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**Exploring the Relationship between Psychological Resources and
Breast Cancer Survivorship using Path Analysis**

by

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Dedication

This presentation of love is dedicated to the women

I am blessed and honored to call family:

To my daughters **Alex, Candis, Casey, Cate, Cristin, Hannah,** and **Mikki;**

my grand-daughter **Addison;**

my mothers **Georgia** (by birth), as well as

my mother-of-the-heart **Becky (a breast cancer survivor);**

her mother, my grandmother of-the-HEART, **Eilien (a breast cancer survivor)**

my sisters (in-law) **Donna, Kim,** and **Terese;**

and to my nieces

Dana, Hailey, Kim (in graduate nursing school), **Sarah,** and **Tanna.**

This dissertation is completed in remembrance of

Delores “Dolly” (my mother-in-law, a nurse, and friend).

Dolly wore my PhD ring to Heaven.

She was welcomed on the other side by my maternal grandmother

Emma – who lived a life of loving Faith;

and my paternal grandmothers

Frances “Fanny” who lived a life of tenacity and resilience; and

Annie, the grandmother I never met

that gave birth to a good man I call my father-of-the heart.

I beyond **ADORE** all of you.

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Foreword

Susan Scott states in her book titled “Fierce Conversations” that our lives succeed or fail one conversation at a time. She notes that while one conversation is not guaranteed to transform any life, any single conversation can be the **one** that changes everything. This study is a conversation engaging the effects of psychological resources on breast cancer survivorship. It is intended to begin a novel dialog with respect to the prospect of breast cancer prevention. The tone of this study is neither pessimism nor optimism: Pessimism carries the psychic weight that nothing ever changes with the excuse to do nothing; and optimism carries the psychic misnomer that problems take care of themselves.

Exploring the Relationship between Psychological Resources and Breast Cancer Survivorship using Path Analysis

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Psychological resources (intrapersonal, interpersonal and informational) have the ability to influence cancer survivorship. Unknown is how these resources impact the length of survival. A predictive correlational design was used to study the psychological resources of 34 women who were breast cancer survivors and were two years or more post-treatment. Women, invited to participate in an internet based study, completed a 153 item emotional intelligence (EI) questionnaire and a demographic survey. The central hypothesis was that the intrapersonal resource EI would mediate the length of survivorship.

Within the intrapersonal category, age at diagnosis and EI were negatively related ($r = -.288$, $p = .049$) with no other relationships between EI and other psychological resources. There were no differences in the length of survivorship between those who did or did not engage in interpersonal (church attendance and exercise) and informational

resources (healthy lifestyle and vitamin supplements). Age at diagnosis and education accounted for 19% of the variance as a set with age at diagnosis being the larger contributor (34% vs. 29%). Path analysis revealed that only age at diagnosis negatively predicts length of survivorship (S.E. = .221, CR = .094 $\chi^2 = 2.338$, $p = .019$) and EI is a weak potential mediator (S.E. = .023, CR = .013, $\chi^2 = .786$, $p = .074$).

It may be concluded with caution, that intrapersonal resources may predict the length of survivorship with EI serving as a weak mediator and that informational resources (years of education) and length of survivorship are marginally related.

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Chapter 1: Introduction to the Study

INTRODUCTION

Chapter one introduces the study and describes its problem, purpose, and significance. It also discusses the theoretical framework, defines the pertinent terms, variables, specific aims, and related research questions and gives a brief overview of the study design.

PROBLEM STATEMENT

Breast cancer is the most common cause of cancer death among women (522,000 deaths in 2012) and the most frequently diagnosed cancer among women in 140 of 184 countries worldwide. It now represents one in four of all cancers in women (World Health Organization, 2013). An equally “global” phenomenon is that most women diagnosed elect to accept a relatively universal treatment protocol that includes chemotherapy, one or more surgical interventions, and/or radiation. Treatment of this caliber shadows a traditional, linear, scientific approach more concretely described as cause and effect. A tactical approach of this nature leave little leverage to understand how each individual woman is “affected” and essentially denies the reality of the “inward” journey or personal “experience” of being diagnosed with a life-threatening disease (Dingley & Roux, 2014).

The experiential reality of having breast cancer is considered a major life event that is capable of causing psychological morbidity (National Cancer Institute & National Institute of Health, 2012; Von Ah & Kang, 2007) as the impact of a breast cancer

diagnosis disrupts a woman's emotional well-being (Matchim et al., 2011) based on unmet psychological needs that are related to quality of life (Knobf, 2007). These unmet needs have the ability to significantly reduce chance of survival (Watson et al., 1999).

Simonton (1992) considered the father of mind-body medicine, and his wife Stephanie Matthews-Simonton, studied the link between emotions and cancer for over 40 years. The "Simonton method" focuses on interactions between the mind and the body—how beliefs, attitudes, lifestyle choices, spiritual and psychological perspectives can dramatically affect the health, the course of the disease, and the overall well-being of the individual.

The belief that psychology has a role in the initiation and progression of cancer is far from novel as evidenced by the role of negative emotions in cancerneogenesis emerging in medical literature as early as the nineteenth century (Kavetsky et al., 1966). Emotions and emotional competence and their ability to influence cancer survivorship by exploring illness belief is more contemporary (Simonton, 1992, p. 167) with psychological complications of survivorship often going un-addressed, despite accounts of depression and distress among breast cancer patients. This creates a profound need for emotional and social support in this population (Ganz et al., 2013).

Varying survival rates among breast cancer patients diagnosed during different stages of the disease are thought to be due in part to psychological responses (Corwin et al., 2012), age at diagnosis (Von Ah & Kang, 2007), and strength of interpersonal support (Watson et al., 1999). The literature validates the ability of emotional processes, described in this study as psychological resources, to alter the illness perception and

general stress of a breast cancer diagnosis (Fischer et al., 2013) as well as predict decreased mortality in this population (Weihs et al., 2008). There is a paucity of nursing research on how women use these inner resources to cope with breast cancer survival (Lally et al., 2014).

These inner reserves are defined in this study as interpersonal, intrapersonal, and informational psychological resources and each has the ability to influence cancer survivorship (Andrykowski et al., 2008). Unknown is how these psychological resources are interrelated and how they impact length of survivorship. This lack of knowledge poses a problem because without further understanding of how or if resources are related to advancing survivorship it will not be possible to completely understand or support the psychological health of breast cancer survivors.

CONCLUDING COMMENTS

A very eminent oncologist by the name of Pendergast, president of the American Cancer Society in 1959, speaks to the connection between a person's mind and their disease (cancer) in his inaugural address. He is quoted as saying

“... there is some evidence that the course of disease in general is affected by emotional stress. It is my sincere hope that we can widen the quest to include the distinct possibility that within one's mind is a power capable of exerting forces which can either enhance or inhibit the progress of this disease” (Pendergast, 1959, p. 5).

Engaging in nursing research in areas where less is realized about the psychological ramifications of cancer survival is likely to have the greatest impact on the

wellbeing of those diagnosed with cancer (Jarrett et al., 2013) and conceivably change the course of breast cancer (Kanani et al., 2016).

PURPOSE STATEMENT

The purpose of this study was to explore the relationship between interpersonal, intrapersonal, and informational psychological resources and length of breast cancer survivorship to determine which of the resources support or possibly extend survivorship.

CENTRAL HYPOTHESIS

The study's central theme is that the intrapersonal resource (EI) mediates between other psychological resources and the length of survivorship of women with breast cancer.

THEORETICAL FRAMEWORK

Emotional health supports psychological health and is defined in cancer survivors by the presence or absence of distress and the incidence of well-being and psychological evolution (Andrykowski et al., 2008). How cancer survivors emotionally survive cancer lies in the balance between the stress and burden inherent to the experience with the meaningful resources available to cope with the stress and burden (Knobf, 2011).

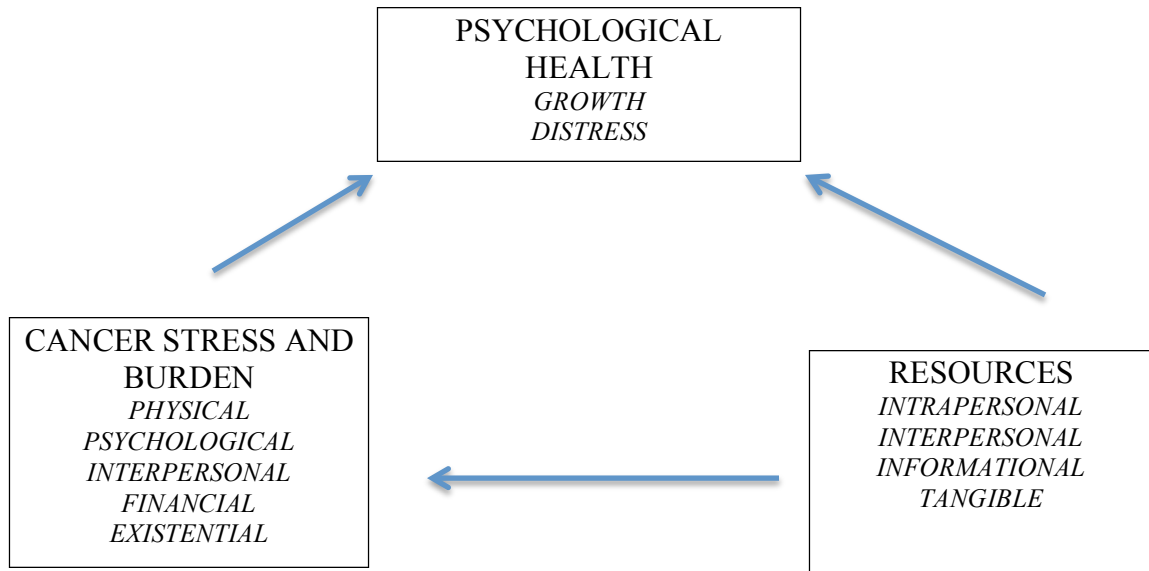
Wyatt et al. (1993) delineated these available resources into a continuum described as physical, psychological, social, spiritual and financial. Contemporary studies group them into more individualized categories organized as intrapersonal, interpersonal, informational, and tangible (Andrykowski et al., 2012). The current study uses a framework described by Andrykowski et al. (2012) that examined selected demographic

factors extant to each participant described as intrapersonal [i.e., emotional intelligence (EI), age at diagnosis], interpersonal [i.e., social support (children, church attendance, and self-perception of spirituality)], and informational resources (i.e., vitamin supplementation, education) for the purpose of discovering how these resources relate to each other and which, if any, of these resources can be linked to increased length of survivorship. The psychological resources of the framework are defined in the following paragraph and a diagram of the model is included in Figure 1.1.

Intrapersonal resources are those that are internal and unique to each survivor. While these resources can be belief based, they mirror a tendency to act and/or think in a specific fashion in order to regulate one's life (Petrides, 2011). Interpersonal resources are those personal social support resources that allow for understand of and adjustment to disease (Helgeson et al., 2004). Informational resources are those resources that allow effective and accurate use of health-related information. Often referred to as (health) literacy in contemporary literature, this resource underscores the fact that having more knowledge may not always facilitate more understanding (McEwan et al., 2014). Tangible resources are those resources that are concrete and typically measured in terms of monetary value. The current study does not use the tangible resource as a psychological resource related to breast cancer survivorship. Research shows that financial tangible resources are linked to initial treatment choices (Rogith et al., 2016) and only marginally consequential in long-term survivorship of the general population (Hsu et.al, 2013). Further, this study does not intend to test the relationship between the major concepts (i.e., Psychological Health, Cancer Stress and Burden, Resources) of this

model, but rather to examine the relationship among the variables (with the exception of tangible resources) that comprise the psychological resources and their impact on length of survivorship.

Figure 1.1. Model for Psychological Health in Cancer Survivors



Factors associated with psychological health in cancer survivors (Andrykowski et al., 2008).

SPECIFIC AIMS AND RESEARCH QUESTIONS

The following specific aims and research questions were addressed in this study.

SPECIFIC AIM 1

Explore the relationship between intrapersonal resources (EI, measured by the TEIQue_{TM} and age at diagnosis), interpersonal resources (number of children), informational resources (level of education), and length of survivorship (two years out of treatment).

Research Question 1.1

What is the relationship between emotional intelligence and length of survivorship?

Research Question 1.2

What is the relationship between emotional intelligence and age at diagnosis?

Research Question 1.3

What is the relationship between emotional intelligence and number of children?

Research Question 1.4

What is the relationship between emotional intelligence and number of years of education?

SPECIFIC AIM 2

Explore the differences in the length of survivorship of women who are breast cancer survivors as it relates to selected interpersonal resources (church attendance, perception of spirituality) and informational resources (vitamin supplementation, exercise, and healthy lifestyle).

Research Question 2.1

Is there a difference in length of survivorship between survivors who attend church and those who do not?

Research Question 2.2

Is there a difference in length of survivorship between survivors who designate themselves as spiritual and those who state they are not?

Research Question 2.3

Is there a difference in length of survivorship between survivors who exercise and those who do not?

Research Question 2.4

Is there a difference in length of survivorship between survivors who consider themselves healthy and those who do not?

Research Question 2.5

Is there a difference in length of survivorship between survivors who take vitamin supplements and those who do not?

SPECIFIC AIM 3

Determine whether intrapersonal (EI and age at diagnosis), informational (level of education), or interpersonal (number of children) factors are predictive of the length of survivorship in breast cancer survivors.

Research Question 3.1

Do EI, age at diagnosis, number of children, and/or the level of education predict length of survivorship?

Research Question 3.2

Are age at diagnosis, length of education, and/or number of children mediated by the relationship between EI and length of survivorship?

SIGNIFICANCE OF THE STUDY

Breast cancer is the leading neoplasm in women worldwide with one in eight women receiving this diagnosis during their lifetime. Even though this disease claims one fourth of all female cancer cases (Fischer et al., 2013), 90% of the predicted 288,000 cases of women are expected to survive (American Cancer Society, 2016) at least five years (DiSipio et al., 2011).

While this survival rate can be comforting, it does not negate the gravity of the disease nor the long-term psychological sequelae (Mallinger et al., 2005; Odle, 2011). Persistent psychological disturbances have the ability to affect transition into survivorship (Williams, 2011) as well as affect overall quality of life (Knobf, 2006).

Major findings suggest survivors continue to experience a variety of physical and psychological difficulties requiring concrete supportive resources in order to deal with the associated emotional distress (Cappiello et al., 2007). Although it is well known that all of these stress categories are interdependent (Vivar & McQueen, 2005) and there are elements within each category that influence the overall impact of the compounded stress of each category (Shadbolt et al., 2002), it is also important to understand the interdependence of the elements within each grouping (Roux & Dingley, 2001).

Some researchers have grouped these resources into four categories: intrapersonal, interpersonal, informational, and tangible (Andrykowski et al., 2008) this study condensed the categories to three: intrapersonal [i.e. emotional intelligence (EI), and age at diagnosis]; interpersonal [i.e., social support (children, church attendance, spirituality)]; and informational resources (i.e., education, vitamin supplementation, exercise, healthy lifestyle).

While it is clear that the presence or absence of certain resources influence cancer stress, it is unclear, (1) how the resources are interrelated and (2) if and how these resources are related to extending the length of survivorship.

This lack of knowledge inhibits our understanding of how a cluster of these resources can influence each other and whether any of these resources can stand alone or work better in combination to affect the length of survivorship. Understanding how these psychological resources work together may help to identify and develop psychological support services necessary to accommodate breast cancer survivors.

OVERVIEW OF DESIGN

A predictive correlational design was used for this study. Data collection was performed through a web-based survey administered to a convenience sample of participants.

DELIMITATIONS

1. The timeline of this study was from December 2013 to May 2014. Start date reflects completion of defending proposal. Stop date reflects what was perceived to be meeting minimum criteria for participation.
2. The study setting was limited to the Internet. This was determined to be most effective in assuring anonymity as well as ease of participation (Markham & Buchanan, 2012).
3. Those surveyed in this study consisted of women surviving breast cancer over the age of 21 and who were out of treatment for at least two years. This age was chosen because at this age absolute risk, (likelihood of developing breast cancer), to relative risk (compares one group to another) is relatively low (BreastCancer.org, 2016). Being out of active treatment for two years precludes the psychological implications of being lost in the transition following diagnosis (Bell et al., 2010).
4. Those surveyed in the study were participants with Internet access able to read and understand the English language. The internet was used to facilitate a convenience sample of survivors in the language of the principal investigator.

ASSUMPTIONS

1. The sample studied was representative of the women surviving breast cancer for at least two years.
2. The self-report responses received from the participants by completing the web-based survey best reflected the available psychological resources innate to each participant.

DEFINITION OF RELEVANT TERMS

For the purposes of this study, the following terms were conceptually and operationally defined:

- Breast Cancer Survivor – This term will conceptually mirror the National Cancer Institute (NCI) definition and refer to anyone who has been diagnosed with breast cancer.
- Long-term survivor – In the context of this study, this term will refer to a breast cancer survivor who has lived more than two years after initial diagnosis and at least two years beyond completion of therapy. This delineation will serve as the operational definition for the term ‘breast cancer survivor’.
- Emotional Intelligence (EI) – Conceptually EI refers to the collective subset of social intelligence involving the capacity to examine one’s own as well as others’ emotions while evaluate appraising them in order to influence one’s thought processes and activity (Mayer et al., 2008). Currently there are two forms of EI used in literature, ability and trait. For the purposes of this study trait EI will be measured. Trait emotional intelligence is formally defined as a constellation of

emotional self-perceptions located at the lower levels of personality hierarchies (Petrides et al., 2007b). In this study the term is explained as emotional self-efficacy (Perez et al., 2005) and will be operationalized by the TEIQueTM.

- Intrapersonal Resources – Those resources internal in nature that reflect natural tendencies to think or respond in certain ways to particular situations. These resources operationalized by age at time of diagnosis and emotional intelligence scores.
- Interpersonal Resources – Those resources that facilitate efforts to cognitively and psychologically process life experiences. These resources are operationalized by number of children, perception of spirituality, and church attendance.
- Informational Resources – Those resources that inform and provide access to understanding information about personal experiences. These resources are operationalized by the level of education, exercise and vitamin supplementation.

ORGANIZATION OF THE STUDY

This study is divided into five chapters. Chapter one includes the introduction, problem statement, purpose, study objectives, specific aims, research questions, a theoretical framework, significance, and definition of relevant terms. Chapter two presents a review of literature, including a brief overview of cancer and breast cancer. Following will be research of interest discussing breast cancer survivorship, and the selected psychological resources and their relationship to breast cancer survivorship. Chapter three offers an overview of the study objectives, the research design, including sample, setting, data collection procedure, and analyses used to address research

questions. A discussion of the instruments used in this study completes the information introduced in chapter three. Chapter four presents the results of the study based on the research questions. Chapter five presents the findings, conclusions, implications for nursing, and recommendations for future research.

Chapter 2: Review of Literature

INTRODUCTION

The diagnosis and treatment of cancer represent a life crisis filled with stress that is complex in nature (Curtis et al., 2013). Survivors confront a wide array of stressors, most of which are psychological in context reflecting their personal perception of having cancer and how they adjust to the disease (Carver et al., 2005). While it is advantageous to appreciate a survivor's risk for psychological sequelae, it is of greater significance to understand what influences psychological responses (Epping-Jordan et al., 1999) as to allow for beneficial psychological outcomes (Thomas-MacLean, 2004).

Recent conceptualizations of the experience of having breast cancer recommend the usefulness of researching psychological adaptation, as it is critical to long term survivorship (Andrykowski et al., 1998). Generally speaking, psychological adjustment to survivorship is a balance between the psychological stress and the psychological resources available that allow survivors to adapt (Andrykowski et al., 2008). Lazarus and Folkman described this phenomenon in 1984 as “disengagement strategies”, where the focus is the perception of the problem and not the problem itself where coping resources and processes can balance the psychological stress of the event (Matthieu & Ivaloff, 2006). This contention is also the underpinning for theoretical framework used in this study. It is therefore pivotal to discovery resources capable of alleviating or moderating any or all of the stress-related cancer-related responses. This will precipitate the development of those psychological interventions in support of survivorship well-being with the end goal being a lengthened time of survivorship.

The stress associated with a cancer diagnosis can be described using a conceptual framework for understanding those resources that promote psychological health. While they are intended to prevent or treat the distress of experiencing breast cancer they are also aimed at the promotion of well-being and psychological growth and operationalized in this study as psychological resources.

This review of literature begins with a discussion about cancer in general and breast cancer in particular. It is followed by an overview of pertinent information and research on breast cancer survivors and breast cancer survivorship. A section on the use of psychological resources concludes the discussion.

CANCER AND BREAST CANCER

Cancer is among the leading causes of death worldwide, as every day 21,918 people die of this disease, second to cardiovascular disease (The Center for Disease Control and Prevention, 2016). In addition, with one in eight of all American women being diagnosed in their lifetime, just under 30% of the women newly diagnosed cancers were diagnosed with cancer of the breast. About 85% of breast cancers occur in women who have *no family history* of breast cancer. These occur due to genetic mutations that happen as a result of the aging process and *life in general* (Breastcancer.org, 2016).

In contemporary culture, breast cancer has become highly visible and well-funded. October is known as “awareness” month, with many hundreds of thousands racing or walking for a cure. Pink ribbons are a ubiquitous part of the cultural landscape with the intent to end the stigma and secrecy previously attached to this chronic disease process (Kaiser, 2008). While the public face of breast cancer suggests that women diagnosed

with this life-threatening disease smoothly accept their new identity as “survivor”, not all accept the mainstream “cheerful” representation. Many reject the heroic public label as, to them, it silences or negates other emotions, such as anger and grief and the possibility of recurrence (Koch et al., 2014). Those who do not fare as well are left feeling like a “failure” in light of their declining emotional or physical state (Kissane et al., 2007). Therefore, it is important that breast cancer is studied to discover the interplay between psychological resources and their impact on survivorship.

THE BREAST CANCER SURVIVOR

According to the National Cancer Institute, breast cancer survivors are members of the largest group of cancer survivors nationwide. Women living in the United States have a 12% lifetime risk for being diagnosed with this disease, with an increase in likelihood as women age (Strayer & Schub, 2012). As these numbers grow, so is the attention toward coordinating post-treatment care planning (Ganz & Hahn, 2008) particularly since breast cancer is the contemporary paradigm for understanding cancer survivorship (Bell, 2014).

Breast cancer remains a medicalized disease that is embraced with fear as well as optimism (Linley et al., 2011). This optimism occurs despite that those diagnosed live under the fear of recurrence or even death (Sarenmalm et al., 2009). Current research suggests 62% of survivors struggle with these two conflicting emotions of fear and optimism (Linley et al., 2011). Recent conceptual experiences of breast cancer suggest the utility of exploring how this population adjusts psychologically (Schmidt &

Andrykowski, 2004) as positive psychological outcomes are linked to worry and fear in the diagnostic cancer pathway (Smith et al., 2012a).

Further evidence indicates that the transition from patient to survivor can be one of increased emotionality, as many experience a pronounced increase in psychological distress after post-treatment and once they are released from the controlled predictable environment of active treatment. That is, research has shown women who received a telephone call twice a week and a face-to-face intervention, had an improved quality of life over those women who received simply a questionnaire (Solonen et al., 2011)

While the majority of women navigating this life-long journey demonstrate a pattern of recovery after treatment (Knobf, 2011), vital emotional concerns (Armstrong et al., 2011) remain despite the likelihood of a favorable prognosis (Rosedale, 2009). Nursing research demonstrates that women continue to have high levels of emotional distress (Arman & Rehnsfeldt, 2003) as they face fears of recurrence and death (Lindholm et al., 2005; Sarenmalm et al., 2009). When the potential for death becomes a reality, cancer is experienced as a threat that touches a person's whole existence (Arman & Rehnsfeldt, 2003) similar to the way surviving a potentially fatal condition results in a profound emotional disruption in the quality of one's life (Manning-Walsh, 2005). This dichotomy of health and illness describes life as a breast cancer survivor (Thomas-MacLean, 2005).

BREAST CANCER SURVIVORSHIP

Increased and improved screening paves the way for early detection. Early detection allows early treatment. Prompt therapy facilitates enhanced cure (Blows et al.,

2012) and inductively results in a larger cancer survivorship population. As a result, cancer survivorship management (Shockney, 2015) as well as survivorship research (Alfano et al., 2014; Rowland, 2008) is gaining attention in health care. Emerging data on the unrelenting effects of cancer treatment, combined with an absence of evidence-based guidelines for follow-up care, document the need for health promotions that focus attention beyond diagnosis and treatment to include those who are also disease free. Researchers recognize a need for evidence based guidelines surrounding the consequences of cancer treatment (National Cancer Institute & National Institute of Health, 2012) and the magnitude of the unmet needs experienced throughout survivorship (Bauer-Wu & Farran, 2005a; Knobf, 2015).

Nursing research shows that the breast cancer survivor often has a difficult time transitioning to survivorship. Holmberg (2013) conducted an ethnographic study on 17 first-time breast cancer patients and determined that while each participant did not feel ill at the time of diagnosis, they assumed that role during their diagnoses and treatment. In time, they all began to trust the medicalization of their disease and as a result felt mostly distress in the form of fear of recurrence once treatment was over (Fang & Lee, 2015). In 2015, there were more than 2.8 million women with a history of breast cancer in the U.S. This included women who were being treated and women who had finished treatment (Breastcancer.org, 2016). While there is a plethora of research in diagnostics and treatment of this disease, there is little evidence supporting the navigation of breast cancer experience out of the acute phase (Curtis et al., 2013; Holmberg, 2013).

One study that directly explores women's experience of survivorship after treatment is Schmidt and Andrykowski (2004). The authors determined that psychological processing in the form of emotional intelligence facilitates and regulates adaptation to breast cancer and allow for better cognitive and emotive processing. They recruited 210 patients through internet-based breast cancer support groups to determine if social and dispositional variables were associated with emotional processing in the adjustment to a breast cancer diagnosis. Findings show that high social constraints (the extent the social environment inhibits expression of thoughts and feelings regarding a traumatic event) and low emotional intelligence were associated with greater distress during breast cancer survivorship.

While openness about breast cancer today has shifted the attitudes as well as reduced the stigma of the diagnosis, it has also introduced a sense of false normalcy following acute treatment (Rosedale, 2009). Cancer survivorship is a dynamic and ever-changing process that continues for the rest of one's life (Blows et al., 2012), where psychological responses in the form of distress pervade the long-term experience of breast cancer survivorship (Sherman et al., 2012) as survivors continue to live with uncertainty often using psychological resources to learn new ways of being and living (Thomas-MacLean, 2005).

Psychological symptoms related to quality-of-life outcomes are illustrated in contemporary literature for women during and after breast cancer treatment. There is a paucity, however, of nursing research addressing the psychological needs of women completing treatment (Knobf, 2015; Koch et al., 2014), where the strength of a survivor's

interpersonal support is crucial to her psychological adjustment throughout survivorship (Caple & Schub, 2013). Developing tailored interventions to support women through and beyond treatment is therefore pivotal to providing psychological support (Gripsrud et al., 2015). In this current study, psychological resources will be described as intrapersonal resources, interpersonal resources, and informational resources.

Intrapersonal resources are those “internal” to each survivor. While they are dispositional to each individual, they suggest a propensity to think as well as act in certain ways. This study identifies intrapersonal resources using an emotional intelligence score and age at which each participant was diagnosed. Interpersonal resources are those supported by an outside source. Here they are operationalized as presence or absence of children, presence or absence of a church affiliation, and self-perception of spirituality. Informational resources are defined as level of education, self-perception of healthy lifestyle, exercise, and use of vitamin supplementation.

INTRAPERSONAL RESOURCES

While research shows that intrapersonal resources linked to optimal psychological health in cancer survivors include self-efficacy, optimism, emotional intelligence (EI) (Andrykowski et al., 2008), and age at diagnosis (Fisher & O’Connor, 2012) for the purposes of this study EI and age at diagnosis will be examined.

Emotional Intelligence (EI)

For nearly a century psychologists have been studying the missing link in human performance that would allow understanding as to why some people do well in life while

others do not, particularly when those who are measured to be more “cognitively intelligent” by standard IQ testing are often among those who do not fare so well in life (Bar-On et al., 2007). This phenomenon puzzled E. L. Thorndike, circa 1920, and prompted him to introduce the term “social intelligence, that to him, referred to an innate ability to understand others as well as act wisely in relationship with them (Petrides, 2011). Based on Thorndike’s definition and his subsequent work in social intelligence he became known as one of the first psychologists to study alternate forms of intelligence (Bar-On et al., 2007).

Howard Gardner (1993) developed the concept multiple intelligences as the ability to identify, label, and discriminate among feelings. He suggested the presence of seven individual intelligences which included intra-personal, the ability to understand other people, and interpersonal, the ability to understand oneself, as to use this understanding to regulate one’s life (Petrides & Furnham, 2007). These core concepts played a concordant role the new psychological combination of abilities known as emotional intelligence (Caruso et al., 2002). As operationalized by the instrument in the current study, EI is a strong predictor of clinical variables, where fewer have psychopathological consequences (Petrides et al., 2007a). For those surviving cancer, psychopathological consequences can be described as the absence of well-being and the potential for depression and anxiety (Andrykowski et al., 2012).

Using psychological resources through the application of EI involves the “abilities to perceive, appraise, and express emotion; to access and/or generate feelings when they facilitate thought; to understand emotion and emotional

knowledge; and to regulate emotions to promote emotional intellectual growth”
(Mayer & Salovey, 1997, p. 10).

This relatively new concern has been the focus of much research activity attributing to the appeal of examining ways people differ in their emotion-related ability (Austin, 2010) in order to predict life success (Bar-On et al., 2007; Warwick & Nettlebeck, 2004), and until now has received little attention in the patient well-being literature (Smith et al., 2012a).

Research in this arena has diverged into two subfields: Ability EI and trait EI. Ability EI centers on a persons’ capacity to execute conceptual reasoning using emotionally laden information (Petrides et al., 2007b). Trait EI suggests a more operation-able construct, where self-perceptions and dispositions function in the management of decision-related emotions (Sevdalis et al., 2007). It refers to the individual differences in the perception, processing, and utilization of emotional information (Mikolajczak & Luminet, 2007). This current study focuses on trait emotional intelligence.

There is substantial, convincing evidence that the mind, particularly an optimistic mindset, affects the health (Seligman, 2011, p. 182) with mental health being the most important predictor of physical health (Linley et al., 2011). While a stressful or traumatic event can lead to the development of severe psychological problems (Knobf, 2011) the same adverse event can also lead to adaptive coping (Denger, et al., 2003) and post-traumatic growth (Joseph et al., 2005) or growth following adversity (Linley et al., 2011). Associated growth following adversity is known as positive emotional expression and is

demonstrated through emotional competence (Goleman, 2000) and regulated by emotional intelligence (Linley et al., 2011).

In a 2011 Internet based study on emotional intelligence and psychological responses to negative life events, Armstrong et al. (2011) determined that persons with higher EI scores reported that fewer stressful events continued to distress them. A cross-sectional analysis via survey was conducted on 56 members discovered in online discussion forums. The authors concluded that emotional self-management is central to psychological resilience following negative live events ($r = -.36, p < .0001$). Even though the majority of these women demonstrate a pattern of recovery after treatment, psychological morbidity is common (Muffly et al., 2016) as up to half experience depression with 30% of those being clinically depressed (Knobf, 2011).

Researchers have found that emotional intelligence scores to be strong predictors of coping with the demands of a stressful life event (Mikolajczak & Luminet, 2007). Andrykowski et al. (2008) determined in a review of contemporary literature, that lower stress levels are a distinguishing characteristic of psychological health in cancer survivors. They conclude that “psychological response to the cancer experience is a function of two classes of variables: the *stress* and the *burden* posed by the cancer experience and the *resources* available to cope with this stress and burden” (Andrykowski et al., 2008, p. 196). This is seen in breast cancer, where a patient’s psychological response to cancer, as measured by quality of life, has been shown to be predictive of disease-free survival (Cotton et al., 1999).

In a longitudinal, population-based cohort study designed to track the physical and psychosocial recovery of women after breast cancer treatment, it was revealed that interventions to improve quality of life also improved quantity of life (DiSipio et al., 2011). While the uses of these interventions are not the focus of this study, literature reveals that quality of life is linked to personality and predictive of emotional and psychological functioning (Hartl et al., 2010).

Emotional Intelligence and Cancer

The notion that psychological factors play a role in the development of cancer is not new. The first suggestion as to the significance of the unusual role of the nervous system and cancer are found in the ancient works of Galen, circa AD129. As reported by Kavetsky et al. (1966), Galen determined that depressed (less emotionally salient) women experience cancer more frequently than optimistic women.

Studies have shown a link between emotional intelligence and psychological resilience to negative life events. EI equips those experiencing a negative life event, such as breast cancer, to be both psychologically and physically resilient (Armstrong et al., 2011). Along the same line, and more specific to trait emotional intelligence, researchers have shown that a low emotional intelligence predicted increased worry and stress. Very little research has examined whether and how positive psychological responses can be developed and fostered in survivors (Andrykowski et al., 2008).

Age at Diagnosis

Of the estimated 292,000 new female breast cancer cases in 2015, less than one percent was diagnosed earlier than their 40th birthday (mortality rate at approximately 9%). Statistically, the highest rate of diagnosis, at 42% (32% mortality rate), is found later in life after the age of 65; with roughly 21% (7% mortality rate) being diagnosed between 40 and 50 years, and the remaining 37% (approximate mortality rate 11%) being between 50 and 64 years of age at diagnosis (American Cancer Society, 2016).

Age at diagnosis influences how women psychologically embrace survivorship. While older women (> 50) experience less emotional distress at diagnosis, they report poorer physical outcome post treatment as well as greater worry over future independence (Knobf, 2011). Additionally, women over 55 have a statistically greater risk of receiving this diagnosis (Strayer & Schub, 2012) substantiating the claim that breast cancer is one experienced later in life (Fisher & O'Connor, 2012). It therefore stands to reason that it is out of natural order to be diagnosed earlier in life. Perhaps this finding prepares younger breast cancer patients for their unique psychological response to this disease (Knobf, 2011).

Using dimensional analysis, determined in a survivor population of 308 participants, that a younger age at diagnosis predicts a higher, dissatisfied level of support needs related to care ($p < 0.05$; Greisser et al., 2011). Younger women, compared to those their own age who have not had breast cancer, report feeling “out of sync with life” (Adams et al., 2010) as the emotional toll of cancer is often experienced amidst career development, as well as dating and possibly early marriage (Elmir et al., 2010). Younger

survivors are also at risk for psychological distress, decreased perceived quality of life (Knobf, 2006) and lower levels of emotional competence (Caple & Schub, 2013).

INTERPERSONAL RESOURCES

Interpersonal resources in the form of social support have been linked to better psychological health in cancer patients as well as survivors (Helgeson et al., 2004). It is widely recognized that social relationships have a protective effect on physical and mental health as well as reducing cancer-associated stress (Smith et al., 2011) and enhancing quality of life. How breast cancer patients psychologically adjust to their disease is influenced by whether or not interpersonal support is present (Caple & Schub, 2013).

In a longitudinal study (three years prior to diagnosis, at diagnosis [baseline], and three years after breast cancer diagnosis [follow-up]) on 412 self-reporting participants, it was determined that social support emerges as a predictor of quality of life ($F = .06, p = <.001$; $F = .03, p < .001$; $F = .66, p = .001$). It was concluded that certain aspects of social support, emotional perception in particular, had a greater influence on quality of life (Leung et al., 2014).

Researchers observed 168 histologically confirmed epithelial ovarian cancer patients from date of intended curative surgery through death, it was determined by Cox regression that greater social attachment was associated with a lower likelihood of death (hazard ratio [HR], 0.87; 95% CI, 0.77 to 0.98; $p = .018$) Median survival time for those with a low social attachment grouped on a median split of 15 was 3.35 years (95% CI, 2.56 to 4.15 years). In contrast with those who remained through study completion, 59%

of patients with high levels of social attachment were alive after 4.70 years. The authors concluded that social attachment offers a survival advantage to women with ovarian cancer (Lutgendorf et al., 2012). In a comparative study examining the relationship between perceived social support and tumor growth between 42 patients with malignant epithelial ovarian cancer and 23 patients with benign ovarian tumors, findings showed that the participants with increased levels of perceived social support presented surgically (biopsy) with lower tumor progressing in response to an elevated immune system ($F=9.08$; $p = .001$) (Lutgendorf et al., 2005).

Social support is considered an important resource. In an Internet study of 210 women it was found that those women experiencing positive support from a social environment reported better psychological adjustment during their breast cancer survivorship trajectory ($p < .001$; Schmidt & Andrykowski, 2004). In contrast, other authors have shown that stress and lack of coping skills outweighed the impact of social support for post-surgical breast cancer patients. They determined that while coping strategies were significant ($p < .001$), they were less powerful predictors of emotional adjustment ($p = -.07$) (Groarke et al., 2013). Additionally, the role of “motherhood” has social implications for those 30% of women diagnosed under the age of 50 as the brunt of their socialization revolves around children and family life (Fisher & O’Connor, 2012).

To determine key areas of social support that enhance psychological adjustment to breast cancer, this study will operationalize interpersonal resources using two constructs: perceived spirituality and/or religious affiliation and motherhood based on presence or absence of children.

Church Affiliation/Spirituality

It is long recognized that stressful life events facilitate personal growth (Folkman & Lazarus, 1988). Logotherapy, developed by Viktor Frankl in response to the traumatic experience of surviving a concentration camp, is the essence of that concept. Logotherapy by definition enables a human being to turn personal suffering into achievement and accomplishment by finding meaning in life. “He who has a Why to live for can bear almost any How” (Frankl, 1992, p. 9). For many cancer survivors the “how” is directly related to a concept or a belief system about or in God or a higher power (Meisenhelder et al., 2013).

Spirituality as an interpersonal resource involves finding meaning in life in the context of being connected to a higher power. The diagnosis of a life-threatening illness initiates the spiritual reflection process of finding meaning in one’s life. This allows many survivors to find the ‘silver lining’ in the form of a greater appreciation for life and an advanced level of spiritual awareness (Bauer-Wu & Farran, 2005b). In the framework of surviving cancer, belief systems and how one cognitively processes the experience (self-transcendence) can determine the level of stress that is experienced (Folkman & Lazarus, 1988).

Research provides insight on the role of religious resources for women surviving breast cancer. In a correlational study on 52 women, most of whom perceived their cancer as severe, it was determined that women who experience a sense of connectedness with God and see Him as benevolent appraise their illness as having a positive impact on their life (Gall, 2000). Results show that a relationship with God and religious coping

behaviors provide valuable resources with which breast cancer survivors could integrate into a general model of adjustment to the cancer experience [$F(4,41) = 12.30, p < .00001$] as well as perhaps their first encounter with mortality (Sherman et al., 2012).

In a multi-disciplinary study including nursing it was determined by contextual analysis that religious concepts have a discriminating role in how women interpret and cope with breast cancer by gaining a deeper understanding of life and death. While the duality of life and death seem to be polar opposite, religion as a specific culture, was the way the eight women in this study were able to reconcile these opposing forces and shape a new trajectory for living well through survivorship (Sadati et al., 2015).

Contemporary research demonstrates that it is the strength of the belief that decides whether religion or spiritual practices are effective, noting that these beliefs have a direct effect on level of distress the individual experiences in response to a stressful life event (Gall & Cornblat, 2002). Accordingly, some women surviving breast cancer credit their healing to their ability to find meaning in their lives by participation in religious/spiritual groups used in the recovery process (Mollica & Nemeth, 2015).

In a descriptive correlational nursing study of 87 women there was a significant relationship between self-transcendence ($r = .59; p < .000$; Thomas et al., 2010). The authors concluded in their implications for nursing practice that

“this study suggests women coping with breast cancer are able to achieve self-transcendence and spiritual well-being, and may be able to move beyond the breast cancer to transcend the disease process” (Thomas et al., 2010, p. 121).

In a longitudinal correlational study to evaluate the relationship between religious/spiritual factors and perceived growth in breast cancer 87 patients were followed from pre-diagnosis to two years post-surgical intervention. It was determined that the use of religious coping, religious focus, and religious direction were related to higher levels of reported personal growth (Gall et al., 2008).

Children

Increased survival rates indicate more women experience the long-term consequences of cancer treatment particularly in relation to women of reproductive age. Those survivors who may not have yet conceived or have not realized their coveted number of children face the issues associated with fertility and motherhood. In a qualitative study of ten women aged 26-45, it was determined that women without children, who are unable to conceive, have a preoccupying distress concerning their lost fertility. This sorrow is particularly acute for single women without children because they experience the loss to a greater extent (Sadati et al., 2015).

In the context of “motherhood”, a diagnosis precipitates a complex post-diagnosis identity, which includes “cancer patient” as well as “cancer survivor.” Maintaining normality and continuing the motherhood role are experienced psychologically and require identity reconstruction (Fisher & O’Connor, 2012). In a 2009 nested case-control study on breast cancer survivors that included 81 younger participants (27 able to conceive post breast cancer and 54 who were not [controls]), Gorman et al. (2010) concluded that compared with the control group, mental health was marginally higher in those able to have children post treatment. They concluded that the case group had lower

levels of stress, better support systems as well as emotional functioning. This current study seeks to understand whether interpersonal resources (spirituality, church attendance, and presence or absence of children) is related to intrapersonal resources (emotional intelligence and age at diagnosis).

INFORMATIONAL

Informational resources are a critical element in the psychological health of a cancer survivor (Andrykowski et al., 2008) and will be operationalized as level of education and health perception described in this study as choice to exercise or take a vitamin supplement.

Level of Education

Researchers suggest that there is a significant relationship between education on the health of the general population (Marmot et al., 1997) as well as individuals surviving cancer (Milne et al., 2015).

Socio-demographic data analysis of 1020 participants involved in clinical trials determined that women surviving breast cancer who had less than a high school education were at a greater risk for death (Herndon et al., 2011). In addition, a lower level of education has been linked to an increased level of needs in daily living and psychological domains. Swedish researchers have shown that newly diagnosed breast cancer patients with a lower level of education had more psychological needs than those with a higher level of education ($p < .05$) (Greisser et al., 2011). In both of these cases, level of education was seen as a factor influencing a patient's psychological response to

this disease. In addition, level of education negatively predicts quality of life in breast cancer survivors (Salonen et al., 2010) as well as increased suffering (Saarnio et al., 2011).

Vitamin Supplementation

Vitamins are essential to body function and are made available either via internal synthesis or well-balanced diet. (Dharmorajan, 2015). Many people continue to supplement their vitamins even though they are considered to be in good health and enjoy a healthy lifestyle. Although it is important to note that less than 25% of the vitamin supplementation use is recommended by a health care provider (Bailey et al., 2013). While supplementation provides little or no benefit in healthy adults (Dharmorajan, 2015), states of chronic disease may merit exploration especially if this simple action can prevent cancer (Li et al., 2012) As an example, contemporary interest exists concerning whether or not vitamins and/or supplements lower breast cancer risk (Cauley et al., 2013).

In a study of 836 female adults (312 in the breast cancer group and 524 in control group) multivitamin use was more prevalent in the control group with the cancer group ($p = .030$) having a 30% reduced odds ratio (OR) of taking Calcium as compared to the control group ($p < .001$). The investigation measured each participants' white blood cells ability to repair (stated as DNA repair capacity or DRC). The BC group had 30% reduced odds of taking multivitamins and calcium as compared to controls for multivitamins, and for calcium. Women with low DRC had 50% lower odds of taking calcium and 30% lower odds of currently taking vitamins for calcium and for vitamins. The researchers

concluded that although this study is a case-control study in which the risk of breast cancer could not be assessed, results suggest that vitamin supplementation could be an independent protective factor for BC. Calcium intake appears to affect DRC in a positive way, because it was associated with a high DRC level, which in turn disassociated with low odds for breast cancer (Vergne et al., 2013).

Moreover, in a randomized seven year post intervention follow up study on 28,862 surviving participants of breast cancer, all cancers findings indicated a lower risk for vertebral fractures and *in situ* breast cancer incidence (Cauley et al., 2013).

Fortunately, vitamins taken in doses recommended as daily allowances do not cause harm. Unfortunately, results for those who take vitamins or supplements to prevent cancer or enhance survivorship are less clear (Li et al., 2012; Watkins et al., 2000).

Literature does, however, document evidence that a well-balanced diet, combined with an exercise program, tailored to each individual, may be more beneficial (Dharmarajan, 2015).

Exercise

Healthy lifestyle practices have been associated with better health outcomes, improved quality of life and, for some cancers, a reduced risk of recurrence and death (Kenfield et al., 2015; Wolin & Colditz, 2013). Furthermore, evidence correlates a reduced disease-specific and all-cause mortality with physical exercise following a cancer diagnosis resulting in a better long-term outcome (Je, 2013).

In an experimental study of 96 breast cancer patients undergoing various clinical treatments, it was determined that survivors in the control group benefited physically

from a prescriptive exercise program ($p < .05$). While results linked the physical benefits to enhanced levels of psychological well-being, it was noted that the key element was that the exercise was “prescribed” and followed (Hsieh et al., 2008).

Researchers have shown that health care professionals who provide lifestyle guidelines to cancer survivors, prescribe exercise only 50% of the time. Thirty-six percent of those responding stated they were unaware of these simple to prescribe guidelines. Interestingly, the providers in this study did not give healthy lifestyle advice because they did not believe it would improve the life of the survivor (Williams et al., 2015).

SUMMARY

There is a small amount of breast cancer literature suggesting that psychological interventions have favorable effects on psychological outcomes and morbidity, physical health and morbidity, and quality of life related to improved long-term care outcomes. To date, however, there is no research addressing psychological resources as they relate to length of survivorship in breast cancer survivors.

Chapter 3: Research Design and Methods

INTRODUCTION

This chapter presents the study objectives including specific aims with corresponding research questions. Research and sampling methods, description of the demographic and standardized instruments, as well as data collection with subsequent statistical procedures are explained in detail. A predictive correlational design was used to address the aims of this study and explore the relationship between psychological resources and breast cancer survivorship.

Objective

The overall objective of this study was to explore the relationship between psychological resources and breast cancer survivorship. The study's central theme is that the intrapersonal resource (EI) mediates between other psychological resources and the length of survivorship of women with breast cancer.

METHODS

Research Design

This study used a predictive correlational design. As such, it uses two or more continuous variables for the same group of participants as to allow two or more of the variables to covary as well as enable one to predict another. In other words, the independent variable will be an attribute rather than an active variable. The intent of the study is to predict length of survivorship using the variables age at diagnosis, level of education, number of children, and EI.

Setting

The setting for this study is the Internet. It engaged a cross-sectional approach using a web-based survey that explored the relationship between psychological resources and breast cancer survivorship. An internet based survey was posted to the web site www.survivorshipandbreastcancer.com; Brenda's Blog (second largest breast cancer blog in the world that reaches in excess of 25,000 survivors in every phase of disease and recovery); PRMA (Second largest breast surgical reconstruction site in North America that reaches a potential population of 2,500 survivors who have had breast and/or reconstruction surgery); Facebook social media site, "Breast Cancer Survivorship," which was included the principal investigator's Facebook page; East Texas Hematology (1200 patients currently in active cancer treatment and recovery in Lufkin, Texas); and the Arthur Temple Sr. Regional Cancer Center (900 patients in the register for having received radiation therapy) in Lufkin, Texas.

Ethics of Internet Research and Debriefing

ETHICS OF INTERNET RESEARCH

Internet research is an economical form of participant enlistment, data collection, follow-up, and evaluation (Williams, 2012). It was reported by the United States Census Bureau that in 2013, 83.8 percent of U.S. households reported computer ownership, with 78.5 percent of all households having a desktop or laptop computer, and 63.6 percent having a handheld computer or smartphone. There are advantages and disadvantages in the use of computers and these will be discussed in the limitations section.

The informed consent for this study not only contained information about the nature of the survey, i.e. public, but it also contained suggestions to further protect privacy. According to the Association of Internet Researchers (AOIR), the greater the acknowledged publicity of the venue, the less the obligation to protect the individuals' privacy as it is minimally compromised (Markham & Buchanan, 2012). Other considerations are timing, medium, and intent of use.

Timing refers to data collection times if research is repeated or collected over multiple time frames or instances. The current study is cross-sectional and data was collected at one point in time. The informed consent was obtained to report data in aggregate forms.

Medium refers to the venue of participation. Each participant will complete a survey available through a public web address. The results were deposited directly in a data pool from the software Qualtrics. Additionally, no participant at any time was contacted. This assures confidentiality as well as anonymity.

No information was traceable to a particular participant and no direct quotes were used. Each participant was defined in the same way making isolation of one particular individual impossible. While this does not lessen the need for informed consent, it makes the intent of the use clear: Data collection for statistical analysis only.

This ethical discourse ends on a final note concerning personal aspects of the target population. During the course of breast cancer, women with this diagnosis are likely to be asked to participate in a number of clinical studies with most women feeling their participation is worthwhile (Burnet et al., 2003) as long as it represents a minimal

disturbance. This study requested 35 minutes of personal time. There were no disruptions to normal life in conducting the study.

These notations are guidelines and represent a series of considerations that underpin this research. While the AOIR committee recognizes English as the predominate language of the world web, they are acutely aware that it is but one of many languages. Diversity is embraced in all forms of research as all cultures are represented in this association.

Debriefing

Debriefing, explaining to subjects the true nature of a research study, is usually carried out when the research involves some experimentation or manipulation of the subjects that may result in some sort of deception. While this population is a passive, virtual audience, a successful open research culture includes transparency and openness using online research (Nosek et al., 2015). The current study complies with these standards, as described below.

Participants had the option to select a "leave the study" button, made available on every study (web) page that allowed participants to leave the study, directing them to a debriefing page. The browser automatically took them to the debriefing page if they elected to close the program prematurely. The debriefing page contained the email address of the PI and space to request specific information.

Debriefing pertained to the instrument used in this research. The information collected in the TEIQue™ instrument is based on facets of lower order personality. It is a personality inventory and as such it cannot be failed. One's perceptions are one's

perceptions. Moreover, it is important to remember that high trait EI scores are not necessarily adaptive and low EI scores are not necessarily maladaptive (Petrides, 2009). A statement was included at the beginning of the survey that indicated there were no right or wrong answers. This information was highlighted and bolded for added emphasis. No debriefings were requested by or offered to participants following exposure to the TEIQue_{TM} instrument.

Inclusion Exclusion Criteria

Included in this study are women with a history of breast cancer who have been out of active treatment for at least two years. Two years was selected as minimal inclusion as research shows that most women have completed the intense phase following treatment and have passed through the re-entry phase to survivorship (Bell et al., 2010). Excluded are men of any age and women less than 21 years of age. Also excluded are women who are non-English speaking and those who did not have access to a computer and/or Internet services.

Sample Size Determination

The convenience sample is expected to reflect the demographics of each recruitment site, all of which are unknown to the principle researcher. Sample size will be based on two specific rules regarding number of participants.

According to Fawcett and Garity (2009), the general rule to identify and justify the size of a sample for the multiple regression model-testing requires a minimum of 10 to 30 participants for each independent variable. A more specific rule, as described by

Tabachnick and Fidell (2012) states that the total sample (N) should be equal to or greater than $50 + 8m$ where m represents the number of independent variables for the regression model. This study included four independent variables in the model: Age at diagnosis, level of education, number of children and EI. Considering both of these rules, the minimum number of subjects is 82. To allow for a 20% attrition rate a total of 98 subjects were to be recruited for the study. The response rate for online surveys varies from 10% to 60% depending on many factors (e.g., salience, follow-ups, timing, and length) (Sheehan, 2001). It is assumed that the study topic is of high saliency to the population of the identified recruitment sites (which was in excess of 2000), and a 10% response rate would meet minimum sample size of 98 subjects for the statistical analysis.

Limitations and Strengths

LIMITATIONS

While the Internet enables rapid enrollment of a larger sample of breast cancer patients, it presents inherent limitations. Despite the economy of this methodology, it precludes participation from women who do not have access to a computer. Other anticipated limitations are based on those discovered through other Internet research projects. They include absence of influence over the setting; subject recruitment bias; possible equipment problems and or connection difficulties; problems with authenticity of respondent information; and lack of an appropriate setting in which to complete the survey (Ahren, 2005; Gosling et al., 2004). Additionally, the questionnaire will be offered in the English language only. This will exclude all those participants who are unable to read or write English.

STRENGTHS

Participants were recruited from six venues allowing for a heterogeneous balance of survivors as well as the ability to reach vulnerable populations with total anonymity. As of May 2015, 84% of Americans used the internet (Perrin & Duggan, 2015).

An additional strength to this study is that it offers women surviving cancer the opportunity to participate in research oriented toward improving survivorship care. According to the NHS Cancer Plan of 2000, the Department of Health, patients' view of their care is central to the delivery of good cancer care. The type of questionnaire, as offered in the current study, provides an unbiased glimpse into the subjects' perception of their survivorship.

Procedure

Once approval was received from the Institutional Review Board (IRB) of the University of Texas Medical Branch at Galveston, Texas, a survey was created in Qualtrics that included a demographic profile questionnaire and the TEIQueTM. This study was advertised on several web sites and social media blogs. The principle investigator's web link was posted on Brenda's Blog (the second largest breast cancer blog in the world that is reported to reach over 25,000 survivors at every stage of disease and survivorship), PRMA (second largest breast reconstruction facility in North America), and Facebook social media that includes the principle investigators active page called Breast Cancer Survivorship (reaching 51,504 to date).

Data Analyses

Data were analyzed using SPSS (Version 21.0), and significance was set at $\alpha = .05$. All data were examined for normality and homogeneity. Demographic data collected from the subjects included current age, race, age at diagnosis, relationship status, level of education, number of children, church attendance, self-perception of spirituality, exercise, vitamin supplementation, and perception of health, and were analyzed using descriptive statistics (percentages and means).

SPECIFIC AIM I

Explore the relationship between intrapersonal resources (EI, measured by the TEIQue and age at diagnosis), interpersonal resources (number of children), informational resources (level of education), and length of survivorship (two years out of treatment). For this specific aim, the Pearson Product Moment correlation coefficient was calculated to measure the magnitude of the linear relationship between the variables.

Research Question 1.1

What is the relationship between emotional intelligence and length of survivorship?

Research Question 1.2

What is the relationship between emotional intelligence and age at diagnosis?

Research Question 1.3

What is the relationship between emotional intelligence and number of children?

Research Question 1.4

What is the relationship between emotional intelligence and level of education?

SPECIFIC AIM II

For this specific aim, differences in the length of survivorship based on the associated interpersonal, intrapersonal, and informational resources were determined using the independent t-test.

Research Question 2.1

Is there a difference in length of survivorship between survivors who attend church and those who do not?

Research Question 2.2

Is there a difference in length of survivorship between survivors who designate themselves as spiritual and those who state they are not?

Research Question 2.3

Is there a difference in length of survivorship between survivors who exercise and those who do not?

Research Question 2.4

Is there a difference in length of survivorship between survivors who practice a health life-style and those who do not?

Research Question 2.5

Is there a difference in length of survivorship between survivors who take vitamin supplements and those who do not?

SPECIFIC AIM III

This specific aim determined whether intrapersonal (EI and age at diagnosis), informational (level of education), or interpersonal (number of children) factors are predictive of the length of survivorship in breast cancer survivors.

Research Question 3.1

Do EI, age at diagnosis, number of children, and/or level of education predict length of survivorship? The planned analysis for this research question was forward and backward multiple regression.

Research Question 3.2

Are age at diagnosis, length of education, and/or number of children mediated by the relationship between EI and length of survivorship? The planned analysis for this question was path analysis.

INSTRUMENTS

Two questionnaires were used in this study. The first questionnaire is described as a demographic survey; the second is an emotional intelligence questionnaire known as the TEIQue.

Demographic Survey – The investigator developed a questionnaire to gather data on the following demographics: Current age, age at diagnosis, cultural background, level of education, relationship status, children (if so how many), years in survivorship, if out of active treatment how many years, first degree relative with breast cancer, attend church(if so how many times per month), perception of spirituality, exercise (if so how many times per week), do you take vitamin supplements, and do you have a healthy lifestyle. These demographics were used in the analysis of the research questions.

TEIQue

GENERAL DESCRIPTION OF THE INSTRUMENT

TEIQue is a multi-scale, self-assessment measure of trait emotional intelligence. It contains 153 items that are rated on a 7-point Likert Scale rated from ‘disagree completely’ to ‘agree completely’. Scores were normed against a sample of the UK population. A global score, of general emotional functioning, is determined plus scores for four factors. The factors and corresponding facets are exhibited in Table 3.1.

There are also two independent facets – Adaptability and Self-motivation – making 15 facets altogether. In addition there are a number of response style measures including a single item honesty self-report, and measures of central tendency, random responding and a veracity index which produce warning flags for certain types of responses. TEIQue can be completed online or in paper and pencil format.

Table 3.1. Scale Inventory

Factor	Facets	Description
Well-Being	Self-Esteem	How happy, positive
	Trait Happiness	and fulfilled a person
	Trait Optimism	is
Self-Control	Emotional Regulation	How well a person
	Stress Management	regulates external
	Impulse Control	pressure and stress and controls impulses
Emotionality	Emotion perception	Capacity to perceive
	(Self & others)	and express emotions and
	Emotion expression	use insight into emotions
	Relationships	to develop and sustain close
	Trait empathy	relationships with others

EXISTING PSYCHOMETRIC PROPERTIES OF THE INSTRUMENT

The TEIQue is established on the trait EI theory, which conceptualizes emotional intelligence as a personality trait found in the subordinate level of personality hierarchies (Petrides et al., 2007b). Items cover 15 facets with each of the 153 items being assigned to a single facet. The version used in this study deliver results on 15 facets, four factors, and a global trait EI value. The TEIQue was designed to analyze at the facet level as to

prevent difficulties traditionally experienced with item-level factor analysis (Petrides, 2009).

The TEIQue was found to have acceptable Cronbach's alpha coefficients. (Table 3.2).

RELIABILITY OF INSTRUMENT

Internal consistencies of the 20 variables contained in the TEIQue (15 facets, 4 factors) are reasonably suited for both men and women. Scores are scaled from 1 to 7 with a theoretical average of 3.5. A principal axis factor analysis was applied to the 15 TEIQue facets and based on the Scree plot and Kaiser Criterion, four factors were extracted and rotated to sample structure with Kappa set to four. These four factors cooperatively explained almost 70% of the variance in all 15 facets, all being competently represented in the EI factor space. Of interest is "happiness," ($h^2 = 0.83$), "social awareness," ($h^2 = 0.77$), "emotional regulation," ($h^2 = 0.44$) with slightest represented facets being "self-motivation," ($h^2 = 0.44$), "adaptability," ($h^2 = 0.45$), and "impulsivity," ($h^2 = 0.45$). The four factors, emotionality, self-control, sociability, and well-being, are intercorrelated (average $R_{ff} = 0.42$) as is expected of the hierarchical structure of trait EI. Aligned with the concept model, they as emotionally competent also tend to think themselves more socially competent with more willpower as well as better overall adaptability.

Table 3.2. Internal Consistencies of the Teique Scale

Scale	Cronbach's Alpha	No. of Items
Self-Esteem	.80	11
Emotional Expression	.88	10
Self-Motivation	.70	10
Emotional Regulation	.80	12
Happiness	.86	8
Empathy	.70	9
Social Competence	.81	9
Impulsivity (low)	.75	9
Emotion Perception	.73	10
Stress Management	.80	10
Emotional Management	.71	9
Optimism	.80	8
Relationship Skills	.70	9
Adaptability	.74	9
Assertiveness	.76	9
Well-Being	.83	3 facets
Self-Control	.79	3 facets
Emotionality	.78	4 facets
Sociability	.81	3 facets
Global Trait EI	.90	15 facets

Petrides, K. V. (2009). Internal Consistency Data for the TEIQue and TEIQue-SF (v. 150).

Trait emotional intelligence concerns a palate of emotional self-perceptions found in the lower level of personality traits (Petrides et al., 2007b). Often referred to as trait

emotional self-efficacy, trait EI operationalizes people's perception of emotional experiences in an inherently subjective manner. To speculate if self-perceptions of EI are exact has its inherent flaw, as that person is the only one with access to the information required making the decision where the score is a perception and not an actual ability.

The TEIQue was designed to be factor-analyzed at the facet level. It contains an oblique higher-order structure equivalent to multifaceted construct conceptualization. This allows factor cross-loading as well as overlapping and justifies how a global EI score is determined. In hierarchical fashion, global EI is broader than the factors, which are, in turn, broader than the facets. In addition to the full 153 item full form, there are five other options available. Self-reported questionnaires of this type operate under a domain that is not related to capabilities or skills. Rather they cover emotion-related personality traits where a sufficient number of the facets share common variance with the "big five" personality traits. They are labeled and defined as:

- Neuroticism: A tendency to easily experience unpleasant emotions such as anxiety, anger, or depression.
- Extroversion: Energy and the tendency to seek stimulation and the company of others.
- Agreeableness: A tendency to be compassionate and cooperative rather than suspicious and antagonistic towards others.
- Conscientiousness: A tendency to show self-discipline, act dutifully, and aim for achievement.

- Openness to experience: Appreciation for art, emotion, adventure, and unusual ideas; imaginative and curious.

As previously mentioned, the theory behind the TEIQue asserts that while select emotion profiles can be beneficial in some situations they may not offer the same benefit in others. It is therefore imperative to note that higher EI scores do not particularly suggest high adaptability and low scores do not particularly suggest inability to adapt. It is interesting to note that low scores may be more straightforward than those that are high and have a better chance of not being affected by influences of the ego, depending on the situation (Petrides, 2011). While there are several versions available in seven different languages, the version used in the current study is the English full form (153 items) as developed by T. Petrides. It is grounded in the trait EI theory that conceptualizes emotional intelligence as a personality trait (Petrides et al., 2007b), as previously noted.

Linking trait EI to personality also links it to differential psychological literature allowing conceptualization to be consistent with models of general factor personality (Figueredo & Rushton, 2009) and qualities associated with the personality traits. This is relevant because personality is intricately associated with health (Sirois & Hirsch, 2015), chronic disorders (Friedman, 1990), breast cancer (Grossarth-Maticek et al., 1997), and mortality (Ploubidis & Grundy, 2009).

SUMMARY

A predictive correlational design conducted by internet survey was used to explore the relationships between psychological resources and length of survivorship in breast cancer survivors.

Chapter 4: Results

INTRODUCTION

Chapter four presents the results of the study including the sample characteristics, psychometric properties of the instrument, and the results for each research question. The purpose of this study was to explore the relationship between psychological resources (i.e. interpersonal, intrapersonal, and informational) and breast cancer survivorship. Demographic characteristics of the respondents as well as psychometric properties of the instrument used are illustrated in this unit. The results of each research question are presented separately.

OBJECTIVE

The objective was to determine if the selected psychological resources described in this study as intrapersonal, interpersonal, or informational, extend the length of survivorship in women two years or more out of active treatment for breast cancer.

VARIABLES

The analysis for this study and supporting variables were based on three specific aims. The major variables for this study included length of survivorship, intrapersonal resources (emotional intelligence, age at diagnosis), interpersonal resources (number of children, church attendance, perception of spirituality), and informational resources (level of education, exercise, healthy lifestyle, vitamin supplementation).

DESCRIPTION OF THE SAMPLE

Women over the age of 21 diagnosed with breast cancer and out of active treatment for at least two years were recruited to participate in this study. One hundred and twelve women responded and of those, 34 qualified and completed the demographic form and the TEIQue. Attrition was due to the following: Incomplete demographic profile; participant was not a breast cancer survivor; incomplete TEIQue; survival length was less than two years; participant was in active treatment; or participant did not meet age criteria for inclusion.

Current age at time of survey ranged from 35 to 68 years while the age at time of diagnoses ranged from 29 to 66. Years of survivorship ranged from two to 21 years, with a mean of 7.26 years, while years out of treatment extended from two to 15 years.

The level of education ranged from high school graduate or certification equivalency to the Doctor of Philosophy (PhD) degree or equivalent. For purposes of statistical analysis, the following values were assigned to each level of education based on standard average number of years required to obtain the associated outcome: High school = 12; Associate degree or some college credit = 14; College degree = 16; Master's degree = 18; Doctorate or equivalent = 21.

Although the following racial/ethnic categories were included in the survey African American, American Indian, Asian American, Non-White Hispanic, Pacific Islander, and White, the women who responded to this survey were from three ethnic groups: African American (n = 1, 2.9%), Caucasian (n = 32, 94.1%), and Hispanic (n = 1, 2.9%). Of those completing the survey, two were single (5.9%), 19 were married or in

a committed relationship (55.9%), and 13 were either divorced or widowed (38.2%). Thirty-one (91.2%) of the women have children. Ten of which have one (8.8%), 14 have two (41.2%), five have three (14.7%), and two have four (5.9%). Within the survey group, 17 (50%) had a first-degree female relative diagnosed with breast cancer and 17 (50%) did not. Twenty (52.6%) affirmed church attendance and all (n = 34, 100%) claimed they considered themselves spiritual. Twenty-one (55.3%) exercise, 23 (60.5%) take a vitamin supplement, and 25 (65.8%) consider themselves healthy.

PRELIMINARY ANALYSIS

To conduct further analysis on the study variables, it was necessary to dichotomize several of the demographic and descriptive variables and as a result several of the categories were collapsed (see Table 4.1). Unless otherwise specified, a median split was used for any continuous variables (MacCallum et al., 2002).

As noted above, the women responding to this study were from three different races/ethnicities. They were further categorized into Caucasian (94.1%) and non-Caucasian (5.9%) for data analysis purpose. This is unbalanced as well as worrisome, since a lack of ethnic and racial diversity can hinder the ability to generalize findings and therefore the results may not identify the best treatments available. Furthermore, studies without adequate minority representation may miss relevant findings that are unique to that group due to cultural, environmental, physiologic, or psychological factors (Branson et al., 2007). Similarly, relationship status was collapsed into two groups: having a spouse or significant other (44.1%); and no spouse or significant other (55.9%).

Current age was collapsed into two categories closest to a median split: 35 to 57

(47.1%) and 58 to 74 (52.9%). Age at diagnosis was collapsed into 49 or less (50%) and 50 or more (50%). Length of survivorship was collapsed into two groups: Surviving six years or less out of treatment (52.9%) and surviving greater than six out of treatment (47.2%). This parallels the definition of being a breast cancer survivor by the American Cancer Society (being disease free for at least five years (American Cancer Society, 2016). An overview of the demographics is displayed in Table 4.1.

PSYCHOMETRIC PROPERTIES ANALYSES

The reliability of each scale was calculated for this study (Table 4.2). Except for the empathy and relationships subscales each of the remaining 15 subscales was found to have respectable reliability in this study. A value of 0.70 is an acceptable lower limit for alpha, with a respectable range for this value to be between 0.70 and 0.80 (DeVellis, 2012). It is important to note the subscales “empathy” and “relationships” reflect marginal alpha’s and as such represent low reliability for these two subscales reducing the ability of the subscales to reach significance.

Table 4.1. Demographic Characteristics (N = 34)

Variable	N	%
Race/Ethnicity		
Caucasian	32	94.1
Non-Caucasian	2	5.9
Relationship Status		
Spouse/Significant other	15	44.1
No spouse/Significant other	19	55.9
Current Age		
35 – 57	16	47.1
58-68	18	52.9
Age at Diagnosis		
29-49	17	50.0
Greater than 49	17	50.0
Years in Survivorship out of treatment		
≤ 6	18	52.9
Greater than 6	16	47.1

Table 4.2. Reliability of the Current Study

Scale	Cronbach's Alpha
Self-Esteem	.847
Emotional Expression	.877
Motivation	.813
Emotionality	.831
Happiness	.922
Empathy	.487
Social Awareness	.777
Impulsiveness (low)	.872
Emotional Perception	.684
Stress Management	.754
Emotional Management	.730
Optimism	.890
Relationships	.602
Adaptability	.824
Assertiveness	.828
Well-Being	.909
Self-Control	.840
Emotionality	.700
Sociability	.728
Global Trait EI	.925

DATA ANALYSIS

Following completion of reliability verification, research questions associated with each of the study aims were analyzed.

SPECIFIC AIM I

Explore the relationships between the intrapersonal resources of EI as measured by the TEIQue) and age at diagnosis, the interpersonal resources number of children, and the informational resources level of education and the length of survivorship (two years out of treatment or greater). There are four research questions embedded in this aim. Results summarize the magnitude and the direction of relationships between EI and each of the independent variables. This will be the first step in investigating the complexity of EI in the breast cancer population.

RESEARCH QUESTION 1.1 THROUGH 1.4

The first set of research questions explores the relationship between the length of survivorship, age at diagnosis, number of children, and years of education with emotional intelligence. A Pearson correlation coefficient was calculated to determine the magnitude of the relationship between EI and each of the four independent variables. The magnitude of the Pearson correlation coefficient r determines the strength of the correlation. Cohen's (1988) guidelines were used to examine the magnitude of the coefficient where an r value greater than 0.1 and less than .3 indicates a small correlation, and an r value between 0.3 and .5 indicates a medium or moderate correlation, and an r value greater than .5 indicates a large or strong correlation.

The variables in each research question met the major assumption of Pearson's correlation of interval level data and based on scatterplots there were no bivariate outliers which may be related to the relatively small sample size. After establishing that these assumptions were met a correlation coefficient was determined for each of the four independent variables with the dependent variable (see Table 4.3).

A small significant negative relationship was found between age at diagnosis and emotional intelligence accounting for about 8% of the variance between the two dimensions. This finding suggests that as the intrapersonal resource of age increases the intrapersonal resource of emotional intelligence decreases. When examining each of the remaining variables the magnitude of the variables were even smaller and the variables failed to reach statistical significance (Table 4.3). There were no bivariate outliers which may be related to the relatively small sample size.

SPECIFIC AIM II

Specific aim two explores the differences between the length of survivorship of women who are breast cancer survivors as it relates to selected interpersonal resources (church attendance, perception of spirituality), and informational resources (exercise, healthy lifestyle, and vitamin supplementation).

Table 4.3. Correlation among the Variables Length of Survivorship, Age at Diagnosis, Number of Children, and Years of Education with Emotional Intelligence (N = 34)

Variables	Emotional Intelligence	
	r	p
Length of survivorship (LOS)	-.048	.787
Age at diagnosis (AAD)	-.288	.049*
Number of Children (NOC)	0.036	.840
Number years of education (NOYE)	-.141	.426

RESEARCH QUESTION 2.1 THROUGH 2.5

There are five associated research questions, designed to explore differences in the length of survivorship (LOS) for individuals who do not and those who do engage in selected activities. Specifically, independent t-tests were used to examine if there were differences in the LOS between those subjects who attended church, considered themselves to be spiritual, exercised, lead healthy lifestyles or took vitamins and those who did not engage in those activities. Prior to running these analyses, Levene's test was conducted to determine if the two groups for each of the dependent variables had equal variance. These tests were not significant at $p > .05$, indicating the assumptions that homogeneity of variances was met (Table 4.4)

Table 4.4. Levene's Test of Variances for Church Attendance, Exercise, Healthy Lifestyle, and Vitamins by Group (Engaged and Not Engaged)

Variable		Equal Variance Assumed
Attend Church	F	.335
	Sig	.269
Exercise	F	3.533
	Sig	.069
Healthy Lifestyle	F	.217
	Sig	.646
Take Vitamins	F	.014
	Sig	.908

Next a t-test was run for each of the dependent variables by group (engaged vs. not engaged). The results in Table 4.5 showed there were no significant differences between length of survivorship (LOS) in those survivors who attend church and those who do not; those who exercise and those who do not, those who consider themselves healthy and those who do not; and those who claim to take a vitamin supplement and those who do not. Differences in those who considered themselves spiritual and those who do not could not be examined because all participants considered themselves to be spiritual.

Table 4.5. Differences between LOS and Selected Psychological Resources Variables

Variable	Do Engage			Do Not Engage			<i>t</i>	<i>p</i>
	M	SD	N	M	SD	N		
Attend Church	8.85	5.13	20	7.07	4.07	14	1.08	.269
Exercise	8.95	5.29	21	6.77	3.47	13	1.32	.069
Healthy Lifestyle	8.28	4.94	25	7.67	4.39	9	.33	.646
Take Vitamins	7.91	4.94	23	8.55	4.50	11	-.36	.908

Mann-Whitney U

The test for heterogeneity determined that equal variances are assumed based on all *p* values being greater than .05. While the subgroups for the sample were relatively small, indicating that the Mann-Whitney *U* could possibly yield significance, the Mann-Whitney *U* was conducted and the results showed no statistically significant differences between the groups.

SPECIFIC AIM III

This specific aim is designed to determine if age at diagnosis, level of education, number of children or EI are predictive of length of survivorship.

RESEARCH QUESTION 3.1

This research question asks if EI, age at diagnosis, number of children, or years of education predict length of survivorship. The statistical analysis used for this research question was Forward and Backward Stepwise Multiple Regression.

The criterion variable in this study is years in survivorship and the predictor variables are age at diagnosis, number of years of education, number of children, and emotional intelligence. Prior to starting the analysis, it is important that the assumptions of Multiple Regression are tested. Multiple Regressions assumes there is a high correlation between the criterion variable (dependent) and the predictor variables (independents). Additionally it assumes there is a low correlation between predictors.

Examining the assumption of correlations between age at diagnosis, number of years of education, number of children, and emotional intelligence, Table 4.6 shows that except for the negative relationship between age at diagnosis and EI there are no other relationships between these predictor variables. The magnitude of the correlation between the predictor variables age at diagnosis and EI is small.

Although there was only a small correlation among the predictor variables age at diagnosis and EI, the variables were examined for tolerance and variance inflation factors (VIF). Tolerance was .998 for age at diagnosis, .901 for EI, .987 for number of children, and .998 for number of years of education. The VIF was 1.002 for age at diagnosis, 1.110 for number of children, and 1.002 for number of years of education. These findings suggest that the concern for multicollinearity is not warranted as tolerance should be $>.01$ and VIF should be < 10 .

Table 4.6. Correlations among the Predictor Variables in Multiple Regressions (N = 34)

Variables	Age at Diagnosis	Number Years Education	Number Children	EI
Age at diagnosis		.045	.109	-.288*
Number of years education			.020	-.141
Number children				.083

*p = .049

Table 4.7 shows a negative correlation between age at time of diagnosis and the criterion variable survivorship suggesting that as age at diagnosis increases, years in survivorship decreases. In addition, there was a marginally significant positive relationship between years of education and survivorship indicating that as the education level increased there was an increase in the length of survivorship. There are no other significant relationships between the criterion and predictor variables.

Table 4.7. Correlation between Predictor Variables and Criterion Variables in the Multiple Regression (N = 34)

Variables	Years in Survivorship	p
Age at diagnosis	-.328	.029*
Number years education	.277	.056+
Number children	.094	.299
EI	-.048	-.394

+Marginally significant

While previous analysis showed only small simple correlations between predictor and criterion variables regression analysis, both forward and backward were executed to explore the possibility of synergistic combinations.

None of the variables qualified for inclusion into the model using forward regression's default criteria of $p = .05$ to be included. Therefore, none of the predictor variables was a good fit for the forward regression model.

However, the failure to meet the criteria for forward regression assessing each variable's contribution separately does not provide for the inclusion of synergistic effects between variables. Thus, the backward multiple regression was conducted to determine whether any combination of variables were missed during the forward regression analysis or whether there are variables that may not predict well individually but may contribute to the model jointly.

Stepwise backward regression using all of the predictor variables resulted in a model with years of education and age at diagnosis being retained, accounting for 19% of the variance ($R^2 = .193$, $F(2, 143) = 3.716$; $p < .036$). Of the two variables retained age at diagnosis accounted for a slightly greater proportion of the variance explained (see Table 4.8). The lack of significance for years of education in the model indicates the conjoint contribution to the model that would have been missed in the more restrictive forward stepwise analysis.

RESEARCH QUESTION 3.2

This question asks if age at diagnosis (AAD), length of education (LOE), and/or number of children (NOC) is mediated by the relationship between EI and length of survivorship (LOS). A path analysis was conducted using IBM SPSS AMOS (version 22.0) based on maximum likelihood estimation with age at diagnosis, years of education and number of children as predictors of years of survival mediated by emotional intelligence (see Figures 4.1 & 4.2). Unstandardized path coefficients are presented in Figure 4.1 and represent relationships in terms of variables' original, raw units.

Since education is measured in *years* and emotional intelligence in *scale scores*, the interpretation would be for every increase in a *year* of education there is a decrease of .02 points in emotional intelligence.

Table 4.8. ANOVA Model for Backward Regression

Variable Included in the model	Standardized <i>B</i>	p	R ²	F value	(df)
		.036	.193	3.716	(2,143)
Age at diagnosis	-.343	.043			
Years of education	.293	.079			

Figure 4.2 provides standardized path coefficients in which all variables have been standardized so that their variances are one (*1*) and coefficients refer to how many standard deviations a dependent variable will change, per standard deviation in the predictor variable.

Standardized coefficients are useful for comparisons within a model while unstandardized coefficients are useful for predictive purposes. For purposes of discussion of results in which an evaluation of mediation within the model is being addressed, standardized coefficients (Figure 4.2) will be the focus.

Figure 4.1. Full Model Unstandardized Path Coefficients

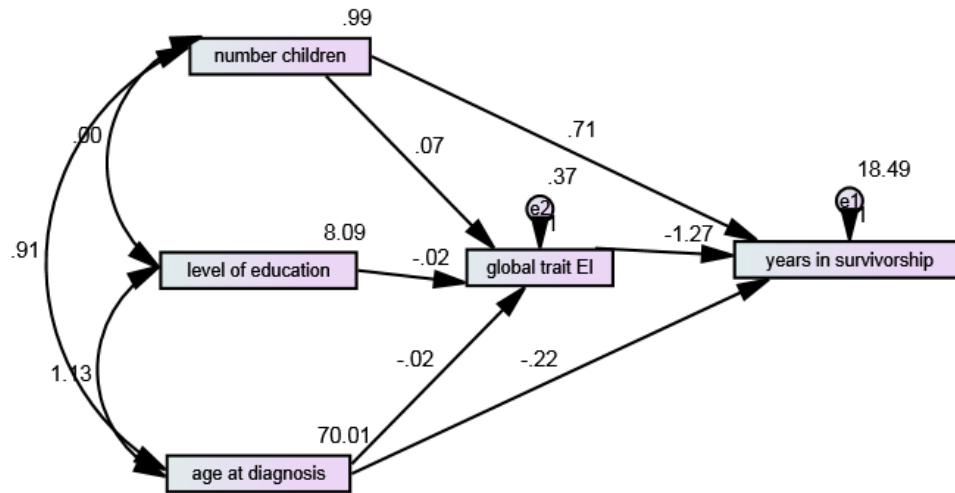
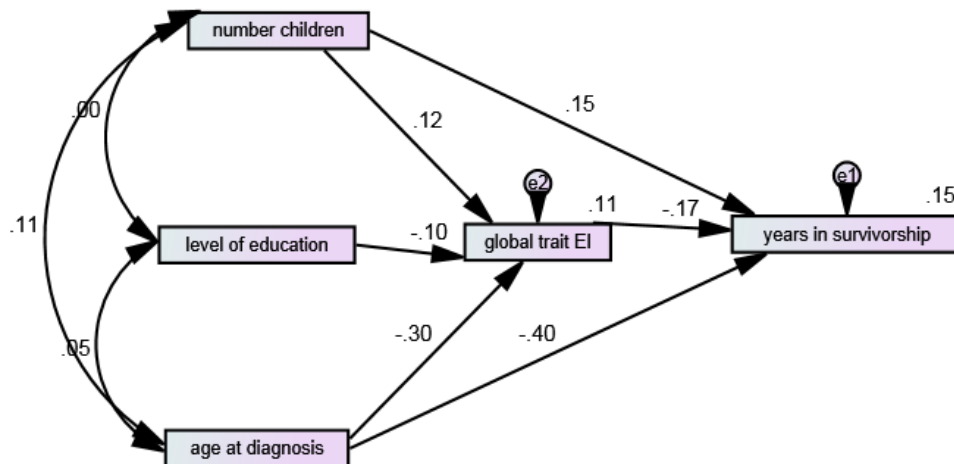


Figure 4.2. Full Model Standardized Path Coefficients



As can be seen in Figure 4.2, the partial correlations (curved arrows) between predictor variables are extremely low while R^2 values (representing the percent of variance accounted for with the set of variables in the path) for paths terminating at EI and years in survival were modest (.11 and .15 respectfully). The strongest relationship

can be seen between the two direct paths from age at diagnosis to EI (-.30) and age at diagnosis to years in survivorship (-.40).

Regression weight analysis (Table 4.9) indicates that the path from age at diagnosis to EI was marginally significant ($p=.074$) while the path from age at diagnosis to year's survivorship was significant ($p=.019$). All other paths were non-significant.

An evaluation of mediation involves an examination of the indirect (through one or more intervening variables) and direct effects (no intervening variables involved), which are decomposed from total effects (i.e., the effect of one variable upon another). Indirect effects are the products of the path coefficients along any progressive line of direction, e.g., from *age at diagnosis* to *EI* to *survivorship*. Total *effects* would be the sum of the indirect effects and the direct path coefficient from *age at diagnosis* to *survivorship*. These values are presented in Table 4.10.

To qualify as a mediator, three conditions must be met:

Condition 1): The independent (predictor) variable must be a significant predictor of the dependent (criterion) variable;

Condition 2): the independent variable must be a significant predictor of the mediator; and

Condition 3): the mediator must be a significant predictor of the dependent variable while controlling for the independent variable.

Table 4.9. Regression Weights

		Estimate	S.E.	C.R.	P	Label
Total EI	←---Number of Children	.075	.107	.699		.484
Total EI	←---Length of Education	-.023	.037	-.621		.535
Total EI	←---Age at Diagnosis	-.023	.013	-.786		.074 _[1]
Years of Survival	←---Total EI	-1.268	1.225	-1.035		.301
Years of Survival	←---Number of children	.713	.763	.934		.350
Years of Survival	←---Age at Diagnosis	-.221	.094	-2.338		.019 _[2]

₁ Marginally significant

₂ Significant

Table 4.10. Standardized Total, Indirect, and Direct Effects

Total Effects	Age at Diagnosis	Years of Education	Number of children	Total EI
Total EI	-.296	-.102	.116	.000
Years of Survival	-.344	.018	.132	-.175
Indirect Effects	Age at Diagnosis	Years of Education	Number of children	Total EI
Total EI	.000	.000	.000	.000
Years of Survival	.052	.018	-.020	.000
Direct Effects	Age at Diagnosis	Years of Education	Number of children	Total EI
Total EI	-.296	-.102	.116	.000
Years of Survival	-.395	.000	.152	-.175

Age at diagnosis significantly predicted *survivorship* ($p=.019$) satisfying *condition 1* (Table 4.9). *Age at diagnosis* marginally, significantly predicted *EI* ($p=.074$) and therefore marginally satisfied *condition 2* (Table 4.9).

Full mediation would be indicated if the path coefficient dropped to zero between the independent variable and the dependent variable once the mediator was included in the model with the independent variables as specified in *condition 3* (Table 4.10). The standardized direct effects path coefficient for *EI to years in survival* ($-.175$) is much less than the direct negative and significant coefficient from age to years in survival ($-.395$) and is not significant. This provides some weak evidence of a possible mediation of *age at diagnosis* to *years in survival* by *EI*.

Finally, an evaluation of the model fit for path analysis utilized various indicators (Table 4.11 and 4.12). There is no uniformly accepted evaluation of model fit. The Chi Square Model is typically for sample sizes of 75-200 where it is considered a reasonable measure of it. However, the current is considered smaller than this range and small sample sizes are known to produce too many Type I errors. The Chi Square fit results indicates that a minimum model was achieved. A p-value greater than 0.05 suggests that we could accept this model.

Table 4.11. Chi Square Model Fit

Chi-square	2.866
Degrees of freedom	1
Probability level	.090

Table 4.12. RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.238	.000	.581	.104 _[6]
Independence model	.087	.000	.219	.315

₆ Indicates “close” fit and that a value of 0 (perfect fit) cannot be ruled out

The Root Mean Square Error of Approximation (RMSEA), the Akaike Information Criterion (AIC), the BIC (Bayesian Information Criterion) analysis are other commonly used indices of fit with AIC addressing equivalency between proposed and saturated models (i.e., a model in which all relationships are specified) and BIC evaluating the difference desired (Rafferty, 1999).

For models with small df and low N, RMSEA can produce artificially large values. Results for the RMSEA (4.12) indicate a close fit (PCLOSE), i.e., the RMSEA value is greater than 0.05 and falls above the lower confidence interval (CI). Confidence intervals should reflect a lower 90% CI that includes or is very near zero and an upper 90% value that is less than .08. The range of the CIs for this study indicate that the possibility of a perfect fit cannot be ruled out. AIC and BIC both compare the achieved models to hypothetical models that have all degrees of freedom accounted for (no unknown). In both approaches, the lower the score, the better the fit. Both have a minimum criterion of at least two (2) points difference (BIC increases the penalty as

sample size increases) between the default model and the saturated model (Table 4.13) which the current model fails to meet. Akaike Information Criterion results suggest that the model (the “default” model) of 30.866 could only be reduced to a value of 30.00 by saturating our model. This is less than the minimum recommended AIC difference of 2.0, between the study model and the fully saturated model, suggesting the models are indistinguishable. But AIC is often not a reliable measure. However, the saturated model in the more popular BIC approach is only .66 greater, which is still less than the 2.0 difference recommended for picking among models. This index tells us that while the evidence is better for the default model, the saturated model cannot be ruled out.

Last, the Consistent AIC (CAIC) is generally viewed to be a better measure than the AIC (Rafferty, 1995). In Table 4.13, results indicate that the default model value is still less than 2.0 units smaller than the saturated model, supporting the conclusion that our model is not adequate.

SUMMARY FOR PATH ANALYSIS

There is little support for the full model with only one predictor, *age at diagnosis*, significantly contributing to either *EI* or *length of survival*. At best, *age at diagnosis* significantly negatively predicts *length of survivorship* (i.e., older age is associated with shorter length of survival) and is marginally negatively predictive of *EI* (i.e., older age is associated with lower EI) supporting a weak mediation effect. All other variables in this model are not predictive of either *EI* or *length of survivorship* when other variables are controlled for nor is there obtainable evidence supporting a mediation effect for *EI* for *education* or *number of children* on survivorship.

Table 4.13. AIC, BIIC and CAIC Indices of Fit

Model	AICC	BIC	CAIC
Default Model	30.866	52.235	66.235
Saturated Model	30.000	52.895	67.895
Independence Model	22.522	30.154	35.154

OVERALL CHAPTER SUMMARY

There is a negative relationship between age at time of diagnosis and EI within the intrapersonal resources category with no other relationships found between EI and other selected psychological resources. Also there were no significant differences between length of survivorship and interpersonal resources of church attendance, exercise, and informational resources of healthy lifestyle and vitamin supplement. In the backward regression analysis age at diagnosis and education accounted for 19% of the variance as a set with age at diagnosis being the large contributor (34% compared to 29% for education) of the variance. The path analysis revealed that only age at diagnosis negatively predicts length of survivorship and EI is a weak potential mediator.

Chapter 5: Discussion of the Findings, Limitations, Recommendations, and Conclusions

INTRODUCTION

This chapter presents the findings of the current study as compared to existing literature as well as to the theoretical model on which the research is based. Following this discussion, the limitations of the current study will be discussed as well as recommendations for future research surrounding cancer survivorship. Concluding information will recommend implications for nursing and future research.

DISCUSSION OF FINDINGS

One hundred and twelve women responded to the survey with thirty-four completing both the demographic and the emotional intelligence survey. The demographics of this sample were similar to those of other studies who have used the TEIQue, with a majority of the sample being Caucasian between the ages of 35 and 68 years. Also the majority of the sample had a college bachelor's degree with some participants holding a doctorate or equivalent. Findings from the study will be discussed in the context of the aims as they relate to each research question.

Specific Aim I

Specific aim I explored the relationship between the intrapersonal resource EI, and other selected psychological resources (i.e., age at diagnosis, number of children,

number of years of education) and length of survivorship. The results seem to suggest that EI is only related to age at time of diagnosis.

Age at Diagnosis – There is no clear explanation for this finding of a negative relationship since some researchers have shown that aging in general increases emotional intelligence scores (Schutte et al., 2007) suggesting that emotional intelligence is a developing ability associated with enhancing one's ability to cope with the psychological aspects of a cancer diagnosis (Smith et al., 2011). If this is true, one would expect a positive relationship between EI and age at time of diagnosis. In contrast, other researchers have shown, in a study of 18 to 76 year old healthy adults, that older people had lower scores on EI than younger people (Cabello et al., 2014). These findings would suggest that as one ages the EI scores decrease and would, in part, support the findings of the current study. Further study of the intrapersonal resource of EI and age is needed to better understand this relationship.

Years of Education – The findings from this study indicate there was no relationship between the years of education and EI. Although not significant, the magnitude of the correlation between EI and years of education implies a small negative relationship suggesting that the greater the number of years in education the lower the EI.

While more study is needed to understand the relationship between these two psychological resources, the results of the current study are not without interest or merit. Trait EI, as measured by the TEIQue, is emotional self-efficacy and not cognitive emotional abilities (Petrides & Furnham, 2001). As such, trait EI is not expected to correlate with measures of general cognitive ability (Perez et al., 2005), the essence of

which can be conceptualized as education. Other researchers have shown that older healthy adults with a university education have higher EI scores than older adults with a primary or secondary education. Their findings suggest that there is a positive relationship between EI and education (Cabello et al., 2014).

Length of Survivorship – It is unclear why there is no relationship between EI and length of survivorship since, in the health field in general, literature tends to indicate that EI is related to physical well-being (Mikolajczak & Luminet, 2008; Williams et al., 2010). One possible explanation may be that length of survivorship is perhaps a gross indicator of physical well-being and more specific indices of well-being such as physical functioning, bodily pain, or physical limitations should be used when studying survivorship and EI.

Number of Children – The current study shows no relationship between number of children and EI. Other researchers have examined the relationship between EI and social support (i.e., significant other, family, and friends) and found no relationship between family and friends (Gallagher & Vella-Brodrick, 2008). While those researchers did not examine number of children in isolation, their findings of no relationship between the social support of family and EI provides partial support for the findings of this study. In addition, it has been shown that younger women with breast cancer having children experience more strength of family related to greater emotional support (Bloom et al., 2001; Coyne et al., 2011). Although number of children was not related to EI, given that family is related to emotional support, perhaps it would be beneficial to examine the presence or absence of children in relation to EI rather than number of children.

In summary the main finding from this aim is that as age at time of diagnosis increases EI decreases. This finding differs and has support from the literature and thus warrants further study.

Specific Aim II

Specific aim two explores the differences between the length of survivorship and interpersonal resources (church attendance, perception of spirituality), informational resources (exercise, healthy lifestyle, vitamin supplementation) in breast cancer survivors out of treatment for two years or greater.

Church Attendance and Spirituality – The results showed no differences in length of survivorship in breast cancer survivors out of treatment for two years or greater and church attendance. As all of the participants considered themselves to be spiritual, a test of differences on this psychological resource was not possible. There are no other studies that directly examine the relationship between length of survivorship and church attendance and spirituality to determine a difference in length of survivorship. However, Salsman et al. (2015) builds a case for the importance of the inclusion of religion and spirituality in breast cancer as women are more likely to be considered “religious.” While their meta-analysis did not present findings on religion and spirituality as it relates to cancer survivorship, it did recommend behavioral resources such as public (organized religion attendance) and private (prayer and meditation); and cognitive resources such as faith, strength of a belief system, and God’s role in healing.

Exercise – The findings did not show a difference in length of survivorship between breast cancer survivors out of treatment for two years or greater who exercise

and those who stated they do not. This finding is not in keeping with the literature which indicates that regular physical activity (3-5 days/week) is associated with reduction in cancer-specific mortality and all-cause mortality in breast cancer (Harris, 2009). It is unclear why there is not a relationship between exercise and length of survivorship in this population, perhaps, however, the study was underpowered due to the small sample size.

Healthy Lifestyle – A healthy lifestyle for cancer survivor patients includes a healthy diet, weight management, physical activity, and no smoking. There were no difference in the length of survivorship between those who considered their lifestyle healthy from those who did not. Literature does, however, document evidence that a healthy lifestyle may be more beneficial than vitamin supplementation (Dharmarajen, 2015). Perhaps the findings from the current study are unclear since subjects self-reported their lifestyle as healthy. Maybe more direct questions regarding diet or physical activity would reveal more specific information about their health.

Vitamins - Findings of the current study show no differences in the length of survivorship in survivors taking vitamins and those who did not. Researchers have provided evidence to the contrary which indicates that antioxidant supplementation might possibly reduce cancer and all-cause mortality (Li et al., 2012; Watkins et al., 2000). Again, these findings may be due to the small sample size or the lack of specificity of the measure for how or how often vitamins are taken.

In summary, the findings for this aim suggest there are no differences in breast cancer survivors who engage in interpersonal and informational resources and those who

do not engage. Most of these findings are contradictory to the literature and are perhaps due, in part, to the small size of the current study.

Specific Aim III

Specific aim III determined if intrapersonal resources (EI, age at diagnosis), informational resources (level of education), or interpersonal resources (number of children) were predictive of length of survivorship. It also questioned the ability of intrapersonal resource age at diagnosis, the informational resource number of years of education, and the interpersonal resource number of children to mediate a relationship between the intrapersonal resource emotional intelligence and length of survivorship in this population.

Findings from the current study showed a significant negative relationship between age at diagnosis and length of survivorship and a marginal relationship between education and length of survivorship. Years in education and increased survival are in keeping with the current literature (Sprague, 2016). In a study focused on the effects of education on survival following a diagnosis of invasive breast cancer these authors found that the women who had no education beyond high school and community level did not survive as long as college graduates. No other relationships between the criterion and predictor variables were noted

There was little support for the path analysis model. At best, age at diagnosis negatively predicts length of survivorship and is marginally negatively predictive of EI. Researchers in an effort to determine mediators as interventions for women with breast cancer found that while social support and coping significantly mediated depressive

symptoms, emotional processing related to psychological adjustment to the disease was unrelated (Cleary & Stanton, 2015). The results of this current study provide limited support to other studies where increased levels of emotional expression and processing may be advantageous for some women and not for others (Jensen-Johansen et al., 2013).

In summary, for this aim, age at time of diagnosis is predictive of the number of years in survivorship and a level of education is marginally predictive of length of survivorship.

DISCUSSION OF FINDINGS WITHIN THE CONTEXT OF THE THEORETICAL FRAMEWORK

This study was based, in part, on a framework focused on the psychological health, cancer burden/stress, and psychological resources concepts (Andrykowski et al., 2012). Embedded within the psychological resources concept are intrapersonal, interpersonal, informational, and tangible resources. The purpose of this study was to examine the relationship among these resources (with the exception of tangible resources) and determine their impact on length of survivorship.

The findings from this study indicate that, the psychological resources (intrapersonal, interpersonal and informational) for cancer survivors are independent resource categories, however, there is interrelatedness within the intrapersonal resources category between age at diagnosis and emotional intelligence. In addition, the intrapersonal resource of age at the time of diagnosis can predict years in survivorship with evidence of marginal ability to predict length of survivorship by years of education.

LIMITATIONS OF THE STUDY

The main limitations are related to sample. First, the sample may have been too small to adequately power the study to detect statistically significant changes between and among some of the variables. Second, the population was relatively homogenous in racial participation allowing a narrow representation of diversity.

Third, since only 34 of the 112 subjects completed the survey in its entirety, the length of the survey may have been a deterrent. There is a shorter version of the TEIQue, which is valid and reliable and perhaps could have been used for the purposes of this study. A fourth limitation may be due to the lack of specificity regarding the measurements for some of the psychological resources.

DISCUSSIONS ON FUTURE RESEARCH

Considering that current research provides evidence that stressful systems or events diminish the potential of supportive psychological resources (O'Neal et al., 2016), investigating other measures, instead of length of survivorship, like physical functionality, may prove to be more advantageous when determining successful survival. The intrapersonal resources may be expanded to include those that are linked to better psychological health to include optimism or self-efficacy. The interpersonal resources may be expanded to include other forms of social support, perhaps in the form of relationships with family or society, instead of number of children. Finally, a larger sample and shorter instrumentation are presented as recommendations for future studies.

IMPLICATIONS FOR NURSING

In the current study, the implications for nursing are modest and guarded. These implications include the need for nurses to consider the psychological resources of cancer patients who are two years out of treatment. While all resources are important, the findings from this study would suggest that particular attention should be given to the intrapersonal resources of age at the time of diagnosis and emotional intelligence and the influence of age at the time of diagnosis on the length of survivorship. Since EI scores were shown to decline with age, nurses may want to be aware of the emotional intelligence of their cancer survivors, giving special attention to the emotions of the older survivors. By being aware of the EI of the cancer survivor, interventions may be made available to support the emotional resources of the individual. Also, perhaps there is a need to develop a simple instrument that could be used in the clinical setting that would quickly and accurately assess the EI of the cancer survivor. However, as discussed above, recommendations for future research can guide and direct nursing toward different, more successful, methods of evaluating breast cancer survivorship.

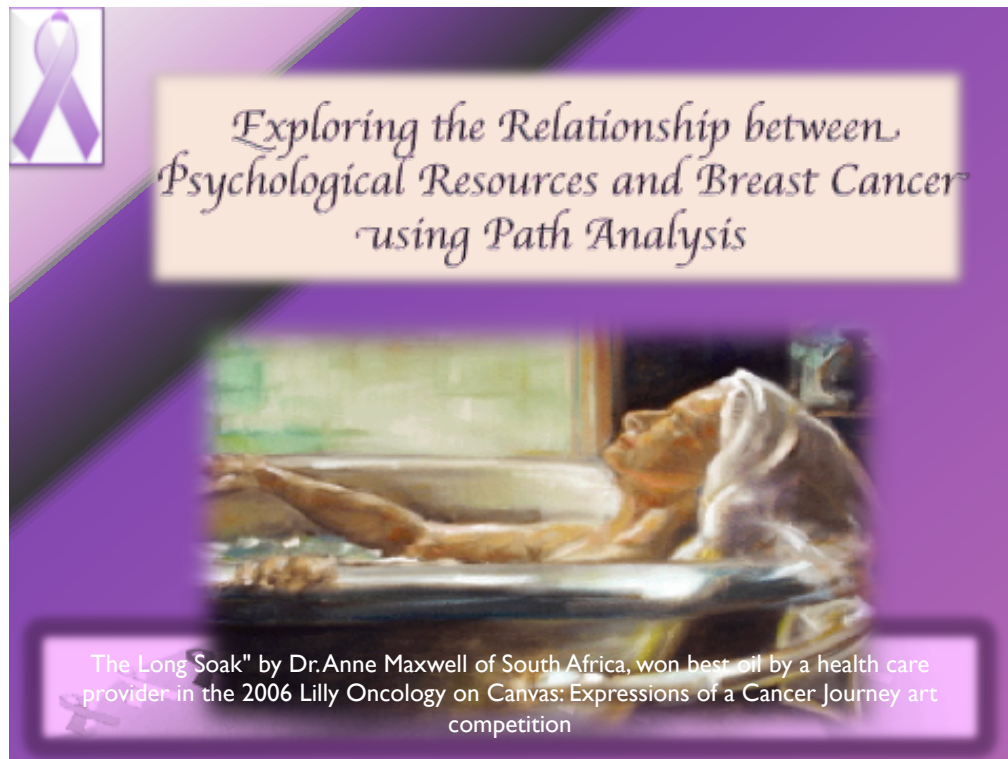
SUMMARY

In summary a portion of the findings of this study are supported by the literature specifically as it relates to age at diagnosis, EI, number of years of education and length of survivorship. However, the findings examining the difference between individuals who engaged in and those who did not engage in the informational and interpersonal resources are contradictory to the current literature.

CONCLUSIONS

It may be concluded with caution, due to a small sample size, that the intrapersonal resource element of age at diagnosis is negatively related to the intrapersonal resource element of emotional intelligence and it may predict the length of survivorship with EI as a weak mediator. In addition, the informational resource of years of education is marginally related to the length of survivorship for women two years out of treatment for breast cancer.

Appendix A: Study Flyer



You are invited to participate in
Breast Cancer Survivorship research.

Please log into

Survivorshipandbreastcancer.com

Complete an anonymous, confidential survey*

Principle Investigator Deborah K. Arnold, MSN, RN
936.414.3573 or email dkarnold@utmb.edu

*Inclusion criteria:

Out of active treatment for two years
Female & 18 years of age or older
Able to read and understand English
Have access to the Internet

Appendix B: Demographic and TEIQue Instrument

(begins on next page)

EXPLORING THE RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE AND BREAST CANCER SURVIVORSHIP USING PATH ANALYSIS

Block 1

WELCOME

My name is Deborah Arnold, RN, MSN. I am a doctoral student at the University of Texas Medical Branch in Galveston, Texas and I am conducting this study as a part of the requirements for my degree. The title of my study is, "**Exploring the Relationship between Emotional Intelligence and Breast Cancer using Path Analysis.**" Breast cancer is the leading cancer in women worldwide. While the chances of surviving breast cancer are very good, a diagnosis of breast cancer is a time of stress. This study will ask you questions aimed understanding how your well-being as seen in your personality may affect your cancer experience. Your answers are completely anonymous. There are no right or wrong answers.

Women who are at least 21 years of age and in remission are invited to participate. Participation is by completing a 174 question survey. You may stop answering the questions at any time if you feel uncomfortable. You may withdraw from the study any time before you complete the questionnaire and submit the survey. Once you have submitted your answers, there is no way to identify your answers and therefore after submission, we will be unable to remove your answers from the study. The entire survey will only take about 35 minutes for you to complete. We value your time and are grateful for your participation. If you would like to participate and do not have time to complete the survey now, please return when it is more convenient. Once you start the survey, you will want to have enough time to complete it in one setting.

THANK YOU FOR YOUR PARTICIPATION

If you have any questions, concerns, or complaints before, during, or after the research please contact Deborah Arnold at (936)414-3573 or email concerns to dkarnold@utmb.edu or my Supervising Professor Dr. Alice Hill at (409)772-8251 or ahill@utmb.edu. You may also contact the Institutional Review Board Office at (409)266-9475 if you have complaints, concerns, input, or question regarding your rights as a subject participating in this research study.

I have read the description of the study and I have decided to participate. I understand I may refuse to answer any or all of the questions by simply exiting the survey. By answering the questions, I am allowing the use of my information for the purposes of the study. The authorization continues until the end of the research.

Click to write the question text

YES, I agree to participate



NO, I do not agree to participate

**Demographics**

I am a breast cancer survivor

My age is

My age at diagnosis was

My cultural background is best described as

What describes your level of education

- ☐ High School or GED
- ☐ Trade school and/or some college
- ☐ College degree
- ☐ Masters degree
- ☐ Doctoral degree or equivalent
- ☐ Other

What is your relationship status

- ☐ Single
- ☐ Married or in a committed relationship
- ☐ Separated or in the process of separation
- ☐ Divorced, widowed

I/we have children

- ☐ yes
- ☐ No

Number of children

I have been a survivor for (number of years)

I am in active treatment for breast cancer

- ☐ yes
- ☐ No

I have been out of treatment for(number of years)

My sister, mother, aunt, or grandmother has or has had breast cancer

- ☐ yes
- ☐ No

I attend church

- ☐ yes
- ☐ no

Times per month I attend church is _____

- ☐ yes
- ☐ No

I consider myself a spiritual person

YES
☐

NO
☐

I exercise

- ☐ yes
- ☐ No

Times a week I exercise

I take a vitamin supplement

- ☐ yes
- ☐ No

I have a healthy lifestyle

YES
☐

NO
☐

Default Question Block

Please complete this questionnaire on your own and in quiet conditions. Please answer each statement below by placing the cursor on the number that best describes how much you agree or disagree with that statement. There are no right or wrong answers. Work quickly, and don't think too long about the exact meaning of the statements. Try to answer each question as best you can. If an any time you wish to leave the survey, simply exit. You have seven possible answers, ranging from:

1=Completely Disagree to 7=Completely Agree
Thank you for your valuable time.

I'm usually able to control other people

- | | | | | | | |
|-----------------------|-----------------------|-----------------------|-------------------------------|-----------------------|-----------------------|-----------------------|
| Strongly
Disagree | Disagree | Somewhat
Disagree | Neither Agree
nor Disagree | Somewhat
Agree | Agree | Strongly
Agree |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Generally, I don't take notice of other people's emotions

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

When I receive wonderful news, I find it difficult to calm down quickly

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I tend to see difficulties in every opportunity rather than opportunities in every difficulty

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

On the whole, I have a gloomy perspective on most things

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I don't have a lot of happy memories

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Understanding the needs and desires of others is not a problem for me

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I generally believe that things will work out fine in my life

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I often find it difficult to recognize what emotion I'm feeling

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I'm not socially skilled

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I find it difficult to tell others that I love them even when I want to

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Others admire me for being relaxed

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I rarely think about old friends from the past

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Generally, I find it easy to tell others how much they really mean to me

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Generally, I must be under pressure to really work hard

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I tend to get involved in things I later wish I could get out of

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I'm able to "read" most people's feelings like an open book

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I'm usually able to influence the way other people feel

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I normally find it difficult to calm angry people down

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I find it difficult to take control of situations at home

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I generally hope for the best

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Others tell me that they admire me for my integrity

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I really don't like listening to my friends' problems

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**I'm normally able to "get into someone's shoes"
and experience their emotions**

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I believe I'm full of personal weaknesses

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I find it difficult to give up things I know and like

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I always find ways to express my affection to others when I want to

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I feel that I have a number of good qualities

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I tend to rush into things without much planning

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**I find it difficult to speak about my intimate feelings
even to my closest friends**

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I'm not able to do things as well as most people

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I'm never really sure what I'm feeling

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I'm usually able to express my emotions when I want to

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

When I disagree with someone, I usually find it easy to say so

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I normally find it difficult to keep myself motivated

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I know how to snap out of my negative moods

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

On the whole, I find it difficult to describe my feelings

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I find it difficult not to feel sad when someone tells me about something bad that happened to them

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

When something surprises me, I find it difficult to get it out of my mind

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I often pause and think about my feelings

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I tend to see the glass as half-empty rather than as half-full

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I often find it difficult to see things from another person's view

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I'm a follower, not a leader

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Those close to me often complain that I don't treat them right

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Many times, I can't figure out what emotion I'm feeling

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I couldn't affect other people's feelings even if I wanted to

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If I'm jealous of someone, I find it difficult not to behave badly towards them

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I get stressed by situations that others find comfortable

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I find it difficult to sympathize with other people's plights

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In the past, I have taken credit for someone else's input

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

On the whole, I can cope with change effectively

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I don't seem to have any power at all over other people's feelings

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I have many reasons for not giving up easily

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I like putting effort even into things that are not really important

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I always take responsibility when I do something wrong

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I tend to change my mind frequently

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

When I argue with someone, I can only see my point of view

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Things tend to turn out right in the end

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

When I disagree with someone, I generally prefer to remain silent rather than make a scene

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If I wanted to, it would be easy for me to make someone feel bad

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I would describe myself as a calm person

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I often find it difficult to show my affection to those close to me

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

There are many reasons to expect the worst in life

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I usually find it difficult to express myself clearly

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I don't mind frequently changing my daily routine

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Most people are better liked than I am

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Those close to me rarely complain about how I behave toward them

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I usually find it difficult to express my emotions the way I would like to

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Generally, I'm able to adapt to new environments

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I often find it difficult to adjust my life according to the circumstances

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I would describe myself as a good negotiator

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I can deal effectively with people

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

On the whole, I'm a highly motivated person

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I have stolen things as a child

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

On the whole, I'm pleased with my life

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I find it difficult to control myself when I'm extremely happy

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Sometimes, it feels like I'm producing a lot of good work effortlessly

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

When I take a decision, I'm always sure it is the right one

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If I went on a blind date, the other person would be disappointed with my looks

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I normally find it difficult to adjust my behavior according to the people I'm with

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

On the whole, I'm able to identify myself with others

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I try to regulate pressures in order to control my stress levels

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I don't think I'm a useless person

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I usually find it difficult to regulate my emotions

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I can handle most difficulties in my life in a cool and composed manner

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If I wanted to, it would be easy for me to make someone angry

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

On the whole, I like myself

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I believe I'm full of personal strengths

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I generally don't find life enjoyable

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I'm usually able to calm down quickly after I've got mad at someone

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I can remain calm even when I'm extremely happy

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Generally, I'm not good at consoling others when they feel bad

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I'm usually able to settle disputes

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I never put pleasure before business

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Imagining myself in someone else's position is not a problem for me

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I need a lot of self-control to keep myself out of trouble

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

It is easy for me to find the right words to describe my feelings

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I expect that most of my life will be enjoyable

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I am an ordinary person

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I tend to get "carried away" easily

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I usually try to resist negative thoughts and think of positive alternatives

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I don't like planning ahead

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Just by looking at somebody, I can understand what he or she feels

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Life is beautiful

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I normally find it easy to calm down after I have been scared

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I want to be in command of things

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I usually find it difficult to change other people's opinions

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I'm generally good at social chit-chat

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Controlling my urges is not a big problem for me

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I really don't like my physical appearance

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I tend to speak well and clearly

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

On the whole, I'm not satisfied with how I tackle stress

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Most of the time, I know exactly why I feel the way I do

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I find it difficult to calm down after I have been strongly surprised

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

On the whole, I would describe myself as assertive

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

On the whole, I'm not a happy person

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

When someone offends me, I'm usually able to remain calm

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Most of the things I manage to do well seem to require a lot of effort

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I have never lied to spare someone else's feelings

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I find it difficult to bond well even with those close to me

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I consider all the advantages and disadvantages before making up my mind

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I don't know how to make others feel better when they need it

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I usually find it difficult to change my attitudes and views

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Others tell me that I rarely speak about how I feel

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

On the whole, I'm satisfied with my close relationships

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I can identify an emotion from the moment it starts to develop in me

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

On the whole, I like to put other people's interests above mine

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Most days, I feel great to be alive

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I tend to get a lot of pleasure just from doing something well

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

It is very important to me to get along with all my close friends and family

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I frequently have happy thoughts

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I have many fierce arguments with those close to me

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Expressing my emotions with words is not a problem for me

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I find it difficult to take pleasure in life

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I'm usually able to influence other people

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

When I'm under pressure, I tend to lose my cool

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I usually find it difficult to change my behaviour

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Others look up to me

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Others tell me that I get stressed very easily

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I'm usually able to find ways to control my emotions when I want to

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I believe that I would make a good salesperson

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I lose interest in what I do quite easily

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

On the whole, I'm a creature of habit

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**I would normally defend my opinions even if it meant arguing
with important people**

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I would describe myself as a flexible person

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Generally, I need a lot of incentives in order to do my best

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Even when I'm arguing with someone, I'm usually able
to take their perspective**

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

On the whole, I'm able to deal with stress

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I try to avoid people who may stress me out

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I often indulge without considering all the consequences

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I tend to "back down" even if I know I'm right

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I find it difficult to take control of situations at work

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Some of my responses on this questionnaire are not 100% honest

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Block 3

Thank you for participating. I wish you peace and love on your journey.

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