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**THE RELATIONSHIP OF SPIRITUALITY AND DEPRESSION ON THE
SUBJECTIVE WELL-BEING OF JAMAICAN COLLEGE STUDENTS: A
CROSS SECTIONAL STUDY OF TEACHER TRAINING
INSTITUTIONS IN JAMAICA**

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Abstract

Spiritual is an integral component of one's well-being and can serve as a barrier to our wellness as well as a protective factor from ill health. Spirituality helps one to make meaning of life's circumstances and can be an intrinsic motivator helping to regain balance in our world. This study examined the relationship between spirituality, depression, and subjective well-being in 214 students enrolled in teachers' colleges in Jamaica. Researchers (Campbell, Roberti, Maynard & Emmanuel, 2009; Kameel & Kamal, 2011; Lipps, Lowe & Gibbons, 2004; Lowe, Lipps & Young, 2009) have documented depression as an issue for college students in Jamaica; however, studies have not yet included students enrolled in teachers' colleges. Additionally, there is scant research on spirituality and well-being in the Caribbean. This current study tested the extent to which spirituality moderated the relationship between self-reported depression on subjective well-being while controlling for demographic variables like year in college, denomination, and age. The study also tested whether spirituality mediated the relationship between self-reported depression and subjective well-being. All data were collected with self-report measures at a single point in time from a sample of college students. The results of the study supported that there was a significant relationship between depression and spiritual well-being and, between depression and subjective well-being. High levels of depression were related to increase spirituality and depression was found to be significantly related to subjective well-being. The mediation hypothesis was partially supported and the moderation hypothesis was not supported in this study. This study has both practice implication for college counselors to intentionally

address spirituality in counseling, and for administrators to include sessions on spiritual exploration and development in the teacher education curriculum.

THE RELATIONSHIP OF SPIRITUALITY AND DEPRESSION ON THE SUBJECTIVE
WELL-BEING OF JAMAICAN COLLEGE STUDENTS: A CROSS SECTIONAL STUDY
OF TEACHER TRAINING INSTITUTIONS IN JAMAICA

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Submitted in partial fulfillment of the requirement for the degree of Doctor of Philosophy
in Counseling and Counselor Education

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Foreword

About thirty years ago, I left the quiet hills of my home to become a student at one of the teachers' colleges in Jamaica. I remember being simultaneously scared and excited. Being an optimist and explorer, I quickly embraced this new freedom of being away from home and opened up myself to engaging in my academics. Being the introvert that I am I realized that the social scene of college life was not where I would fit in. I instead found comfort and friends in those who engaged in spiritual and religious practices despite being in this new environment. This is what got me through college and graduate school in Jamaica, and continually gave me fulfillment in my professional life as a high school teacher, school counselor, social worker and college professor. My spiritual practices have guided me in my vocation and have been a constant in work, living, and school. Fast forward thirty years later as I am completing my Ph.D. My spirituality practices and religious engagement have been the force that has continued to keep me - providing all types of support and encouragement to get me to the end. So doing research on spirituality and its impact on one's mental health seems to be natural and authentic as it is congruent with the person I am.

In 2007, I emigrated to continue my education at Syracuse University, pursuing further graduate work in rehabilitation and mental health counseling (formerly community counseling). As I studied and engaged in clinical practice in the community, I began to question what was it about Jamaica and being Jamaican that contributed to a seemingly small number of person's living with mental illness, and further what accounted for the resiliency that seems to be embedded in the Jamaican persons. What kept them and helped them to cope with depression and anxiety for example.

These were some of the questions that guided my dissertation research. I wanted to find out if it was the spiritual component that kept persons anchored and helped them to cope with lives challenges. Most Jamaicans are spiritual, religious, or both; and if they are not, they are bound to encounter some form of practice in their daily lives. For example as early as K-12 schooling, religious teaching is part of the curriculum. Students participate in devotional exercises at school, and when parents attend school functions these often commence with a devotional exercise. Outside of the school, other community and civic engagements also have a tradition of beginning with short devotions including prayers. To the best of my knowledge there is no decree that mandates this practice, it is just something that is endemic throughout Jamaica. Our very national anthem is a prayer. Barrett (1976) summed this up when he posited that religious overtone permeates all facets of folk lives, as the society has not made a separation between the secular and the religious.

A search of the literature on religion and spirituality revealed that not much research has explored spirituality in the Jamaican culture even though it is a big part of life in the nation. Further research has identified depression as a concern for Jamaicans (Abel, Gibson & Hickling, 2005) and specifically high levels of depression have been found in the student population at the Jamaican campus of the University of the West Indies (e.g. Kameel & Kamal, 2011; Lowe, Lipps, & Young, 2000). It was against this backdrop that I became interested in finding out if depression was also a concern for students enrolled in teachers colleges and to examine how spirituality impacted their well-being

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Chapter 1

Introduction

Teaching is often said to be a noble profession and one that helps to shape citizenry. Within Jamaican society, teachers are called on to be model citizens, provide services, and foster the well-being of the children in their care (Evans, 2007). Through the academic curricula, as well as programs and extra-curricular activities, they help in the personal and social development of their students (Evans, 2007; Jamaica Government White Paper of Transforming Education, 2007).

Teachers augment the home and are *in loco parentis*; a Latin phrase that implies how teachers sometimes take the place of the parents. To be a positive model for children, teachers need to be healthy and resilient in both their personal and professional lives, and should possess an accurate assessment of their own well-being (Rose, 2010). Some students may enter the teaching profession with unresolved psychological issues, or may have a negative outlook for their future, given the daily realities including high crime rates in Jamaica (Thompson, 2002), or what Harriott (2009) refers to as a subculture of violence, along with systemic inadequacies in supporting infrastructure. Perkins (2013) identified other contributing factors to include the ill effects of poverty, declining values and attitudes, lack of personal responsibility, the rise of individualism, consumerism, as well as declining values and attitudes that result in what she terms as a moral disease. These negative factors can impact students' perception of themselves, their mental health, and spiritual well-being. Furthermore these concerns can result in underperformance, interpersonal and

intrapersonal difficulties, spiritual struggles, and can manifest in physiological or mental health issues like depression (Harriott, 2009; Perkins, 2013; Thompson, 2002). As a result some graduates may enter the classroom unprepared to cope with the challenges of the classroom. Thompson (2002) summed this up in his contribution to the education debate noting that, “there is strong evidence [to suggest] that a large number of teachers now being turned out by the Teacher Training Colleges are not intellectually, psychologically or pedagogically capable of coping with current problems endemic in the system” (The Education Debate Part 1, section, para. 9). Faced with the challenges of being role models and fostering students’ well-being, teachers need to be healthy and resilient. It is against this background that this dissertation study examined Jamaican teachers’ college students’ subjective well-being as it relates to their mental health and spiritual well-being.

The purpose of this study was to obtain an estimate of hidden depression in a non-clinical sample of students’ enrolled in teachers’ colleges in Jamaica and then understand the moderation and mediation effects of spirituality on depression and well-being of students. This study is significant as it brings attention to the need for more targeted and intensive focus on students’ mental health on college campuses as well as increased education on spiritual development. This focus will result in producing healthier teacher trainees who are both intellectually and psychologically ready to cope with the challenges of educating the nation’s children.

Mental Health: A Brief Overview

Depression is the leading cause of mental health problems globally, and is the leading cause of disability worldwide (World Health Organization, 2012). The World

Health Organization (WHO) indicated that depression can result in impairment, limit one's involvement in activities of daily living, and can result in restriction from participating in the workforce (WHO, 2012). Classified by the Diagnostic and Statistical Manual for mental disorder (DSM -5, American Psychiatric Association, 2013) as a mood disorder, depression can present with sadness, loss of interest or pleasure, feelings of guilt and low self-worth, decreased energy, difficulty in concentrating, changes in appetite, changes in sleep and activity, and recurring thoughts of death or suicide (American Psychiatric Association, 2013; Sadock & Sadock, 2007). This study focused on depression as an indicator of students' mental well-being.

Wilks, Younger, Tulloch-Reid, McFarlane, and Francis (2008) reported in The Jamaica Health and Life Survey (2007-2008) that one in five Jamaicans were clinically depressed. Persons of lower educational and socioeconomic backgrounds reported being more depressed than those in other socioeconomic groups. The researchers also noted that four percent of the sample in the 15-24 age group reported suicidal ideation in the past year, and 25.6% of females and 14.8% of males in the sample group were depressed. Further, the WHO and the Pan American Health Organization [PAHO] reported that in 2005 an estimated 20% of the Jamaican population was living with a mental illness, and 20,000 individuals were being newly diagnosed with schizophrenia yearly (WHO, 2009). Consequently, depression has been noted as a public health priority for Jamaica (Abel, Gibson & Hickling, 2005) and provides a rationale for its focus in this study.

The following section provides some background into depression in the college population to explain the rationale for this focus in students enrolled in teachers'

colleges. The students enrolled in teachers' colleges in Jamaica are also referred to as teacher trainees' so the terms students and teacher trainees are used interchangeably in this study.

Depression and the College Age Population in the Caribbean

Research into the mental health concerns of college students in the Caribbean has identified high levels of depression in the student population at the University of the West Indies (UWI) three campuses. For example, Lowe, Lipps, and Young (2009) found that 39% of the students in their study showed signs for serious depression, while Kameel and Kamal (2011) reported that 40% of their sample indicated signs of significant clinical distress. It should be noted that students on the campuses of the University of the West Indies are a composite of students from all the territories in the Caribbean. Past research (e. g. Able, Gibson & Hickling, 2005; Campbell, Roberti, Maynard & Emmanuel, 2009; Kameel & Kamal, 2011; Lowe Lipps, & Young, 2009) conducted on these campuses does not break down the data by territory, so it is difficult to assess the levels of depression found in this population by country. In other studies, Maharaja, Reid, Misir & Simeon (2005) reported high incidences of depression (25%) among adolescents in a Trinidadian sample, while Lipps et al. (2010) reported that 41% of a sample of Jamaican adolescents exhibited signs of moderate to severe depression.

Studies examining the mental health concerns of students enrolled in other tertiary institutions in Jamaica (e. g. University of Technology, Northern Caribbean University, Community Colleges), and specifically those enrolled in teachers' colleges are non-existent. A search using the following search engines, PSYCHINFO; EBSCO, ERIC revealed no studies about the mental health concerns of students enrolled in

institutions outside of the UWI. According to the Tertiary Unit in the Ministry of Education (MOE), data on students' mental health needs are not collected from counseling offices of teachers' colleges (personal communication, January 24, 2014). As such, the purpose for this dissertation was to assess the levels of depression in a sample of the teachers' college population in Jamaica; and to examine how spirituality moderates and mediates depression and subjective well-being. This study provides data and adds to the discourse, as it explored depression, spirituality, and well-being in students enrolled in higher education institutions.

The Biopsychosocial Aspect of Depression

The biopsychosocial aspect of depression made popular by Engel (1977) provides an important link between biological, social, and physical factors in explaining the client state. This model advances the notion that an individual's social needs and emotional realities have significant impact on their mental and physical health (Engel, 1977). The bio refers to genetic factors, body-physical and biochemical influences on the client's problem (Kaplan & Coogan, 1996; Dwairy, 1997). Conversely, the psycho-examines developmental issues and crisis, psychological elements, and psychopathology. The social looks at sociocultural factors (e. g. ecological systems) including family systems, diversity, and social justice issues (Kaplan & Coogan, 1996; Dwairy, 1997). These are concepts that are congruent with the Caribbean world view that sees self as part of a whole, an interconnectedness of mind, body, and spirit (Allen & Khan, 2014; Morgan, 2014; Sutherland, 2014).

Research on depression in the Caribbean often examines how the biopsychosocial aspects impact individuals. In their study of the effects of income and

wealth on depression and poor self-rated health, Martikainen et al. (2003) reported that social class was a strong moderator for depression. Others have noted a link between gender and depression symptomatology, in that females often report having higher rates of depression in comparison to males (Harper & Peterson, 2010; Kameel & Kamal, 2011; Lipps et al., 2010). In one study Lipps et al. (2010) found that gender was a unique contributor to the overall prediction of depression for a sample of adolescents (14-18 years) in Jamaica ($n=278$), St. Vincent ($n=716$), and St. Kitts and Nevis ($n=744$). Using multiple regression analysis, the research found that females reported higher levels of depression on Beck Depression Inventory-II (BDI-II) than their male counterparts combined. However, when analyzed by country the Jamaican male students self-reported significantly higher BDI-II scores than their counterparts in the St. Vincent and St. Kitts and Nevis. The effect size for this relationship was smaller than typical suggesting low practical significance.

Lifestyle illnesses, like diabetes mellitus (Nanjundappa, 1986), as well as heart disease (Abel et al., 2005; Martin, Neita & Gibson, 2012; Maharaja et al., 2005), have also been found to contribute to depression. Consequently, it may be that different sociocultural factors, as well as medical conditions, serve to amplify or buffer depression and ultimately impact one's perception of their well-being. There is, however, a gap, as previous research have not considered any potential ameliorating factors like spirituality, and instead focused more on contributing influences to depression.

According to McDermott (2002), Jamaicans' cultural pride, faith, and resiliency are grounded in their spiritual beliefs and practices. As such it can be envisaged to be a

protective factor or a buffer for depression and well-being. Most Jamaicans believe that spirituality and religion have mystical and divine powers that can help in their everyday lives, including combating physical and mental illnesses (Miller, 2002; Wane & Sutherland, 2010). Jagers and Smith (1996) noted that spirituality is seen as a worldview, a belief system, and is an integral part of Afrocentric cultures. It, therefore, has the potential to play a central role in their health and well-being. The current study investigated whether spirituality helps in increasing or decreasing depressive symptomatology and perceptions of students' well-being. The following section provides a brief overview of spirituality, and then discusses spirituality in Jamaica in the context of a Caribbean worldview, spiritual beliefs, and healing practices.

Spirituality

Spirituality is largely viewed as an inclusive term and is viewed as part of the individual's experience of how one makes sense of the world around them. Spirituality is sometimes seen as devoid of doctrine, is a core of individuals' existence, and is about the self in relationship to others and the world. Whereas religion "ties people together with common principles, doctrines and rules...spirituality embraces intangibles, gray areas and paradoxes" (McAuliffe & Associates, 2013, p. 13). As such spirituality is sometimes seen as nebulous and difficult to define and is sometimes conflated with religion. This brief introduction on spirituality seeks to delineate spirituality from religion and clearly articulate how spirituality is conceptualized in this study. In chapter two a more detailed analysis of the literature on spirituality and religion is discussed and further refined. Jamaican spirituality is complex and little has been documented on this

aspect of the culture. As a result much of the literature is from a Western philosophical background with reliance on a western conceptualization and language.

Distinguishing Between Religion and Spirituality

Some researchers (Koenig, Larson & McCullough (2001) view religion as organized, having a prescribed set of behaviors, rituals, and symbols, while others define religion “as the organized set of beliefs that encode a person’s or group’s attitude towards, and understanding of, the essence or nature of reality” (McAuliffe & Associates, 2013, p. 14). Whereas these definitions of religion are broad, others conceptualize religion more narrowly, focusing on relationship to the divine, a personal deity or the supernatural (McAuliffe & Associates, 2013, Koenig, 2008), as well as designating religion as more communal and institutional (Miller & Thoresen, 2003; Pargament, 1997; Taylors & Chatters, 2010). Jacobsen and Jacobsen (2012) noted that a narrow definition of religion limits the term to recognized world religions while excluding other worldviews especially those that do not subscribe to a belief in a divine or supernatural being. .

Conversely, spirituality can be understood as part of one’s inner, subjective reality, involving affective experiences, reasoning, and logic (Astin, Astin & Lindholm, 2011). Spirituality is about personal values, beliefs about one’ existence in relationship to life’s meaning and life purpose, as well as one’s interconnectedness to others and the world around us (Astin et al., 2011). Spirituality is sometimes described as having elements of transcendental experiences, a search for meaning and purpose in life, a worldview, meditation, rituals, an existential being, and belief in non-physical interventions, like prayer (Cornah, 2006; Miller & Thoresen, 2003; Muller, Plevak, & Rummans, 2001).

In defining the transcendent Koenig et al. (2010) noted that this extends both within and outside one's self. The transcendent "in Western traditions is called God, Allah, HaShem, or a Higher Power, and in Eastern traditions maybe called Brahman, Budda, Dao or ultimate truth/reality" (p. 46). Spirituality is also seen as part of the developmental process (Levin 2010), or as Muller et al. (2001) described a dynamic, personal and experiential process. The analogy of spirituality as a journey is apt as it includes an ultimate search (oftentimes referred to as a quest) and a discovery of the transcendent, and it is this experience that is used to make sense of life.

Spirituality and religion are intimately interconnected and difficult at times to distinguish. Some researchers posited that the terms are often conflated (Taylor & Chatters, 2010; Oritiz, Villereal & Engel, 2009), while others posited them as having overlapping features (Miller & Thoresen, 2003). This conflation of the terms is recurrent throughout the literature and is reflected in this study. In summary spirituality is described as a search for life meaning and life purpose (e. g. Astin et al., 2011, Koenig et al., 2001, Muller et al., 2001). It is subjective and individualistic, as well as being concerned about others and the world, (Cornah, 2006; Koenig et al., 2001; Muller et al., 2001; Thoresen & Harris, 2002) spirituality is about self-discovery, authenticity, and compassion (Astin et al., 2011; Jacobsen & Jacobsen, 2012) and spirituality is a process (Levin, 2010; Muller et al., 2001). Spirituality does not always have an organized form of practices (Koenig et al., 2001) and/ or rituals, and as Jagers and Mock (1993) stated, spirituality is vital to one's well-being.

People of the Caribbean experience high spiritual and religious values and believe in the interconnectedness of the mind, body, and spirit (Allen & Khan, 2014;

Bisnauth, 1989; Crawford-Daniels & Alexis, 2014; Morgan, 2014; Sutherland, 2014).

Additionally, they believe in the harmony of nature and that illness and death can result from spiritual causation and an imbalance in the individual aura or energy (Crawford-Daniels & Alexis, 2014; Handler, 2001). As such, spirituality can be seen as impacting how some persons in the Caribbean deal with personal challenges, as well as their physical and mental health, and in turn influence how they perceive themselves. For this study, spirituality is viewed through Jagers and Mock's (1993) definition, as it is closely aligned the spiritual worldview of many Caribbean people.

[Spirituality] entails believing and behaving as if non observable and nonmaterial life forces have governing powers in ones' everyday affairs. Thus, a continuous sensitivity to core spiritual qualities takes priority in ones' life and indeed is vital to one's personal well-being. Although often expressed in God concepts, this ongoing spiritual sensitivity is not necessarily tied to formal church doctrine or participation (Jagers & Mock, 1993, p. 394).

Jamaican worldview, religious, and spiritual practices are consistent in viewing the mind, body, spirit and the universe as interconnected (Crawford-Daniels & Alexis, 2014; Handler, 2001). This connection is very important and is evident in their lived reality and the principles of holism, which is central to the worldview of many Caribbean people (Allen & Khan, 2014; Sutherland, Moodley, & Chevannes, 2014). Research has indicated that a high percent of Caribbean people identify religion and spirituality to be important in their lives (Chatters, Taylor, Bullard & Jackson, 2008; Chatters, Taylor, Bullard, & Jackson, 2009; Taylor, Chatters & Joe, 2011).

The current research examined the impact of spirituality in relation to depression and well-being in a sample of the teachers' college population. Specifically the researcher explored to what extent individual's spirituality serves to buffer or mediate issues of depression and impact well-being. Empirical research addressing the spiritual health connection among Jamaicans is sparse (G. Roper, personal communication, February 27, 2014).

The Religion/Spiritual Health Connection

Increasingly research has explored the impact of religion and spirituality (R/S) on health with the seminal contribution to this area being the work of Pargament (1990; 1992; 1997; 1998; 2000). This work was primarily focused on the effects of religious coping, which examined how individuals exercised their religious and spiritual beliefs to manage life stressors and negative events (Pargament, 1977). A more precise definition of religious coping is "the use of cognitive and behavioral techniques, in the face of stressful life events, that arise out of one's religion or spirituality" (Tix & Fraser, 1998, p. 411). So even though the term is "religious coping" it includes elements of spiritual coping, which is an example of how the terms spirituality and religion are conflated in the literature.

Specifically, Pargament examined the effects of religious coping on psychopathology and negative life events in various US populations. McConnell, Pargament, Ellison, and Flannelly (2006) summarized that the research on religious coping has predominantly pointed to a positive association with religious coping and successful health outcomes. They further posited that spiritual struggles and negative religious coping (e. g. individuals who believe they have a direct communication with the

divine, and individuals who are irresponsible) have been linked to anxiety and depression throughout the research (e. g. Ano & Vasconcelles, 2005; McConnell et al., 2006; Pargament, 1990; Schinttker, 2001; Simon, 2002). This is in keeping with research findings of spirituality having an adverse effect on clients' health, and in some cases has exacerbated mental health issues (Ano & Vasconcelles, 2005; Gartner, 1996; McConnell et al., 2006; Pargament, 1997; Seybold & Hill, 2001).

Mental health as defined by the World Health Organization (WHO, 2001) is a state of well-being where individuals can recognize and fulfill their potential, are able to cope with life events and daily hassles, and are productive members of society. Mental health is the "foundation for well-being and effective functioning for individuals" (WHO, 2004; p. 10). Researchers have found that depression and psychological distress were predictors of well-being (Hammermeister & Peterson, 2001; Koenig et al., 2001; Ritt-Olson et al., 2004; Schnittker, 2001; Suh, Diener & Updegraff, 2008). Specifically, researchers found that persons who reported being more spiritual experienced more positive health outcomes, and enjoyed greater life satisfaction when compared to individuals with low spirituality and those in the nonreligious category (Diener, Tay & Myers, 2011; Eliassen, Taylor & Lloyd, 2005; Koenig, et al., 2001; McCullough & Larson, 2001; Miller, 2002; Musick, 2001; Pardini, Plante, Sherman & Strap, 2000; Ritt-Olson, et al. ; 2004; Ross, 1990; Schnittker, 2001). Conversely, research also pointed to the opposite, in that high spirituality was also associated with poor health outcomes for example suicide and delinquency (Gartner, 1996) psychological issues (Miller, 2003; Pargament, 1997), abuse and personality disorders (Seybold & Hill, 2001) and substance use (Gartner, 1996; Shorkey, Uebel & Windsor, 2008). Religion and

spirituality therefore can be seen as both positively and negatively impacting health and well-being and can therefore be seen as a significant contributor to mental health.

Further one's mental health can be said to influence one's spiritual life.

It is important to further emphasize the point that the terms spirituality and religion are often conflated in the literature. This observation is often cited as a critique of research in this area (e. g. Koenig et al., 2001; Miller & Thoresen, 2003; Muller et al., 2001; Taylor & Chatters, 2010; Oritiz, Villereal & Engel, 2009). As Miller and Thoresen (2003) explained, spirituality and religion have overlapping features and "both involve the search for meaning and purpose, transcendence, connectedness and values" (Muller et al., 2001; p. 1225). Further spiritual research measures often focuses on the observable, or measureable, elements of religious participation like church attendance (Cornah, 2006; Koenig, 2001; Muller et al., 2001). Baetz and Towes (2009) summarized this conflation by stating that "the literature is dominated by spirituality that finds expression through religious observance" (p. 282). As a result in reviewing and analyzing existing research these terms are sometimes used interchangeably reflecting the nature of the literature being discussed.

Spirituality as a Moderator and Mediator on Health Outcomes

Some researchers have examined religion as a moderator for well-being. Religious involvement is said to serve as a buffer for negative life events by way of religious coping (Pargament et al., 1990). Religious involvement can be seen as including engagement in religious activity, affiliation with formal religious traditions like attendance at worship, finding solace and strength from ones' religious beliefs, prayer, or other devotional practices (Mueller et al., 2001; McCullough, Hoyt, Larson, Koenig &

Thoresen, 2000; Pargament et al., 1990). Additionally religious involvement is also posited as overlapping with spirituality in the following ways. They both include the quest for meaning and life purpose; and speak of the transcendent as well of qualities like connectedness and values (Muller et al., 2001). On the other hand religious coping includes using religious beliefs to manage life stressors and negative events (Pargament, 1977). Several religious coping styles have been identified, with a critique that these all have reference to God and are situated in a Judeo-Christian perspective (Pargament, 1997; Pargament et al., 2000). The view of religion as moderator for well-being is examined and supported by other researchers (e. g. Bowen-Reid & Harrell, 2000; Fabricatore, Handal & Fenzel, 2000; Pardini et al., 2000; Ritt-Olson et al., 2004; Schnittker, 2001) with the results pointing to spiritual practices and religious coping diminishing or moderating the negative consequences of life stressors on individuals' well-being. Even though the above researchers make conclusions about spiritual practices, measures used in the studies assessed religious practices rather than spiritually, demonstrating that these two terms are sometimes conflated in the literature. Some of these studies are examined in more detail in Chapter Two.

Gall et al. (2005) posited that spiritual appraisal and coping act as a mediator for dealing with stressful life events as individuals are prone to make meaning of their experiences through their spiritual beliefs. This view, although supported by researchers (Davis, 2005; Seeman & Seeman, 2003; Tsaousis, Karademas & Kalatzi, 2012), is an area that needs further research, particularly in a college age population, as most of the studies have focused on the elderly population. Depression, religion, and levels of spirituality can then be seen as predictors of well-being. It should also be noted that

there is evidence that suggests that spirituality and religion can have deleterious effects (Kirkpatrick & McCullough, 1999; Larson, Sawyers & McCullough, 1998; McCullough et al., 2000; Miller & Thoresen, , 2003; Pargament, 1999; Seybold & Hill, 2001; Shorkey et al., 2008), as well as a beneficial effect on well-being (Ellison & Levin, 1998; Feher & Maley, 1999; Gartner, 1996; Pardini, Plante, Sherman & Strap, 2000; (Richard & Bergin, 1997; Ellison & Levin, 1998; Ritt-Olson, et al., 2004). These findings are important for this current research and lend support for the design to examine the effects of spirituality on subjective well-being.

Although contributing to the mental health field, a general critique of the studies is that the terms religion and spirituality are used synonymously. They tend to use measures that assess religious practices, church attendance, denominational affiliation, religious orientation and measures that are Theocentric (McConnell et al., 2006; Thoresen & Harris, 2004; Tsaoasis et al., 2012). These measures thereby could be seen as marginalizing and or excluding individuals who have a more pluralistic conception of their faith as well as individuals who are spiritual and do not adhere to any religious practice. Additionally, the samples were predominately drawn from the US population (McConnell et al., 2006). At present there is a dearth of literature that has advanced spirituality and mental health in a population of Jamaican students. The current study focused on spirituality as a moderator and mediator of depression on well-being as opposed to previous studies that examined spirituality as a moderator and/or mediator of the stress/depression variable relationship. Also, this study utilized measures of spirituality to investigate the interaction effects of spirituality on the relationship between depression and well-being in a college population in Jamaica.

Statement of the Problem

The Jamaica Board of Teacher Education (JBTE) stated that the aim of teacher training in Jamaica is to “produce teachers who possess the necessary competencies to take their place as leaders in society” (JBTE, 2011, p. 1) and to work in a variety of K-12 educational settings. Tickle (1999) stated that prospective teachers need to develop the core qualities of empathy, compassion, love, decisiveness, spontaneity, and flexibility in order to function as effective teachers. As such, teachers’ physical and mental issues are intrinsically tied to their well-being and their ability to execute the roles and tasks of the teacher.

Given the Jamaican context of high crime rates, weakened infrastructures, and wide spread poverty, teacher trainees may be under a great deal of stress that in turn, may negatively affect their psychological health (Thompson, 2002). Wilks et al. (2008) reported high levels of depression in an adolescent sample, and research done on students at the University of the West Indies identified depression as an issue in this population (Kameel & Kamal, 2010; Lowe et al., 2009). Additionally, Abel et al., (2005) and Piko (2005) have identified depression as a major concern in Jamaica. The University of the West Indies (UWI) is the premier research institution in the Caribbean and students enrolled on its three campuses are often the research participants. At present, there is no identified research on mental health issues of college students enrolled anywhere other than at UWI. Even though the Jamaican teacher trainees can draw on their religious and spiritual values to help in times of distress and challenges, there is no evidence of research that addresses the relationship of spirituality and well-being in teacher trainees.

Given Jamaica's developmental history and its own social, cultural, and political situations, it is important that research targets students enrolled in teachers' colleges in order to develop programs to address their specific needs. Teachers are required to implement education reform, to be role models, and to respond to the concerns of students (JBTE, 2011). Evans (2007) commented on the crisis of the teaching profession as evident in the public disaffection with teachers, the lack of discipline, the violent behavior of students, and the demoralization of teachers because of changing circumstances of teaching. Given these circumstances, Jamaica needs teachers and trainees who are self-aware and display holistic wellness (JBTE, 2011) to be able to address and adjust to the challenges and the changes that they may encounter (Darling-Hammond, 2004).

Purpose of the study

The purpose of this study was to obtain an estimate of underlying depression in a non-clinical sample of students enrolled in teachers' colleges in Jamaica, and also understand the moderation and mediation effects of spirituality on depression and well-being in those students. In order to accomplish this, the research; (a) assessed the levels of depression and the levels of spirituality in the sample, (b) examined the relationship between students' levels of spirituality and their subjective well-being and, (c) examined the relationship between depression and spirituality. The research sought to ascertain the levels of depression, spirituality, and subjective well-being of students enrolled in teachers' colleges, and answered the following research questions and hypotheses. The rationale for choosing these constructs is explored in the following chapter.

Research Questions

1. What is the level of depression, spirituality and subjective well-being in the teachers' college population in Jamaica?
2. What is the relationship between students' levels of depression and their perceived levels of spirituality?
3. What is the relationship between students' levels of depression and their subjective well-being? That is, do students with overall higher subjective well-being have lower levels or no depression?
4. What is the relationship between students' perceived spirituality and their subjective well-being? Do students who report higher levels of spirituality enjoy greater well-being?
5. How do students' perceived levels of spirituality influence the relationship between their subjective well-being and their levels of depression?
6. Is there a relationship between students' levels of depression, spirituality, and demographic variables (i. e. age, marital status, year in school, children, denomination affiliation, and socioeconomic status –SES)

Research Hypotheses

1. There will be a significant positive relationship between depression and levels of spirituality.
2. There will be an inverse relationship between students' levels of depression and their subjective well-being.
3. The direct effects of depression on subjective well-being will be mediated by spirituality.

4. Students' level of spirituality will moderate the relationship between their well-being and depression.
5. Students' level of spirituality will mediate the relationship between their well-being and depression.
6. Students' demographic variables (e. g., gender, age, SES, year in college, specialization and marital status) will significantly predict their levels of spirituality and subjective well-being.

Potential Significance of the Study

There is a dearth of literature on mental health services and college counseling specific to Jamaica's teachers' colleges. The current study brings attention to the need for increased research with Jamaican teacher trainees, for a more targeted and intensive mental health focus on college campuses as well as increased education around spiritual development. Although some of the college counselors at the teachers' colleges anecdotally agree that, like their counterparts in the US and other developed countries, they are seeing teacher trainees with more severe issues, there is no research to support this claim (C. Jackson, Personal Communication, December 9, 2012). Literature focusing on the mental health concerns that they encounter is unavailable. There seems also to be an absence of any mechanism to monitor and document the mental health trends of college students, as the ministry that offers oversight for the training and evaluation of teachers does not collect this data (Ministry of Education, personal communication, January 27, 2014). The current research study provides useful data that can increase the awareness of college counselors and administrators on the characteristics and profiles of students who may experience

psychological distress. This information can be used to develop policies and interventions aimed at a restructuring of college counseling in these settings, so the role of the counselor can become more focused on teacher trainees' mental health and well-being. Additionally, it is hoped that there will also be an organized focus on the spiritual dimension of teacher trainees.

Structure of Ensuing Chapters

The following chapters provide a theoretical rationale and outline for this study, report the procedures and data collection methodology, and interpret the findings. Specifically, chapter 2 provides a summary and analysis of the literature around spirituality, health, and subjective well-being. Each of these constructs is explored and defined in this chapter and relevant studies analyzed. Chapter 2 also provides information about Caribbean spirituality gives a brief history of mental health in the Caribbean and examines studies that address depression as an issue for University students in the Caribbean. Chapter 3 presents the methodological design, structure, and analysis of this dissertation. This chapter operationalizes key constructs and addresses how they were measured. Chapter 4 presents the study results and statistical tests utilized to answer the research questions and chapter 5 discusses the results. Chapter 6 presents implications for counseling and ends with potential limitations to this study and recommendations for further research.

Definition of Terms

Throughout this dissertation, the following terms will be used. Readers are encouraged to refer to these terms as needed.

Tertiary Education: Refers to post-secondary education, including a range of institutions from trade and vocational schools, to professional colleges and universities.

Teachers' Colleges: Refers to public education institutions charged with providing training for individuals who want to teach and practice as school counselors in K-12 classrooms. Teachers' colleges differ from universities, as until recently students attended for three years and received a diploma in teaching and not a Bachelor's degree. As of 2012, teachers' colleges have begun to phase in a four-year degree program leading to a Bachelor of Arts. The curriculum at the teachers' college is focused on pedagogy and subject specific content. Teachers' colleges provide both in service and pre-service education for teachers. Currently, teachers' colleges offer a diploma in teaching, bachelor's degree, and most collaborate with local and international universities to offer graduate degrees in areas related to school administration, early childhood education, and educational leadership to name a few.

University: Describes institutions that provide graduate and professional education in addition to four-year post-secondary education. Unlike teachers' colleges that have a single focus, a university offers a wider array of disciplines and is larger in scope. Universities are either private or public entities while teachers' colleges are public.

University of the West Indies (UWI): A regional and international institution serving the countries of the Commonwealth Caribbean. UWI is a research institution

with three main campuses: Mona – Jamaica, Cave Hill – Barbados, and St. Augustine – Trinidad and Tobago. UWI offers undergraduate, graduate and professional degrees in the Arts, Humanities, Education, Social Sciences, Pure and Applied Sciences, Natural Sciences, Agriculture, Medicine, Law, and Engineering.

Spirituality: Involves an individual's search for meaning. It is subjective and individualistic, and it does not always have an organized form of practices or rituals. Spirituality is described as having elements of transcendental experiences, a search for meaning and purpose in life, a worldview, meditation, rituals, an existential being and belief in non-physical interventions, like prayer (Miller & Thoresen, 2003).

Religion: Religion is an organized system of beliefs that communicates attitude towards and understanding of reality (McAuliffe & Associates (2013). Religion is manifested through practices, rituals and symbols that facilitate closeness to the transcendent and foster an understanding of one's relationship and responsibility to others (Koenig et al., 2001)

Subjective Well-being: A person's evaluation of their level of satisfaction and happiness with the quality of their lives.

Depression: Depression is classified in the DSM-5 as a mood disorder. Depression presents with sadness, irritability most of the day, loss of interest or pleasure, feelings of guilt and low self-worth, decreased energy, difficulty concentrating, significant changes in appetite, or weight, changes in sleep and activities, and recurring thoughts of death or suicide (Sadock & Sadock, 2007). According to the DSM-5 (American Psychological Association, 2014) to be diagnosed as clinical depressed one

needs to have experienced depressed mood and loss of pleasure for up to two weeks and should exhibit at least five of the nine symptoms listed previously.

CHAPTER 2

Review of Literature

Introduction

The role of spirituality in contributing to health and well-being has been widely researched in recent years. Particularly, spirituality has been purported as a protective factor against poor mental health and physical health (Ano & Vasconcelles, 2005; Bergin, 1983; Ellison & Levin, 1998; Hackney & Sanders, 2003; Hammermeister & Peterson, 2001; Herbert et al., 2009; Koenig & Larson, 2001; McCullough, et al., 2000; Tix & Frazier, 1998). Reviews of the relationship between spirituality, depression, and well-being have focused mainly on religious coping during stressful life events and psychological adjustment (Herbert et al., 2009; McCullough, et al., 2000; Pargament, 1997; Pargament et al., 2000). In a meta-analysis of 49 studies, Ano and Vasconcelles (2005) found a moderately positive relationship between positive religious coping strategies and positive outcomes when faced with stressful life events. They also found an inverse relationship between positive religious coping strategies and negative psychological adjustment, as well as a positive association between negative religious coping strategies and negative psychological adjustment (Ano & Vasconcelles, 2005).

Criticisms have been leveled at studies looking at the religious/spiritual health connection, including critiques of the inadequacy or limitations of the research instruments (Ano & Vasconcelles, 2005; Hackney & Sanders, 2003; Thoresen, 1999; Rockenbach & Mayhew, 2013; Seybold & Hill, 2001; Zwingmann, Klein & Bussing, 2011). In some cases, the terms religion and spirituality were conflated and the construct was focused more on institutional activities of religious involvement, like

church attendance, and not the multidimensional construct of religion and spirituality (Ano & Vasconcelles, 2005; Hackney & Sanders, 2003; Thoresen, 1999). Religion and spirituality were also often defined as monotheistic and linked to the Judeo-Christian belief system (Rockenbach & Mayhew, 2013). This research, therefore, focuses on spirituality by emphasizing purpose and meaning, rather than religious coping and involvement. It should be noted that religion and spirituality can be conceptually dissected and viewed separately; however, in real life, both can be intimately connected and difficult to distinguish as they are frequently intertwined (Jacobsen & Jacobsen, 2012). Religion is generally expressed through some form of spirituality, but the opposite is not true: spirituality is not always linked to religion (Cherry, Deberg & Porterfield, 2001; Fuller, 2001; Love, 2001), as is evident when people classify themselves as spiritual, but not religious.

Despite the support for the contribution of religion/spirituality to positive health outcomes, the literature also provides conflicting evidence regarding the potential moderating effect of spirituality on depression and well-being. Some studies have supported a buffering effect of spirituality and religion on health (Richard & Bergin, 1997; Ellison & Levin, 1998; Feher & Maley, 1999; Gartner, 1996; Pardini, Plante, Sherman & Strap, 2000; Ritt-Olson, et al., 2004). In other words, spirituality and religion are sometimes seen as preventing ill health outcomes, while other studies support the positive benefits of religion and spirituality on health (Kirkpatrick & McCullough, 1999; Larson, Sawyers & McCullough, 1998; McCullough et al., 2000; Miller, 2003; Pargament, 1999; Seybold & Hill, 2001; Shorkey et al, 2008). Miller and Thoresen (2003) noted that contradictions in the research findings could result from the

approaches used to analyze the data. It is important to note that many of these studies measured religion, and not spirituality, as noted earlier. This current study, therefore, focuses on spirituality to see if the data will produce different findings.

A general critique of the research on spirituality is that more focus has been placed on the religion variable and not on spirituality; thus, it is difficult to tell when and for whom spirituality serves as a moderator for well-being (Thoresen & Harris, 2004; Tsaousis, Karademas & Kalatzi, 2012). Few researchers have measured the potential mediators between health, spirituality and religious factors (Seeman et al., 2003; Seybold and Hall, 2001); however, this area has been identified for future study. The lack of research on spirituality as a moderating variable offers a strong rationale for investigating the interaction effects of spirituality on the relationship between depression and well-being, as is explored in this current study

This literature review will analyze and synthesize pertinent research as it anchors the terms and link them. The first part of the review focuses on well-being by presenting the theoretical background for subjective well-being and addresses the link between subjective well-being and spirituality. Coming from the wellness model, spirituality is one dimensional. The second part of this literature review explores the construct of spirituality. The review of the research on the connection between spirituality and health will provide a general analysis of the relevant literature and will cover spirituality as part of the worldview of peoples of the Caribbean. Pertinent research is analyzed and synthesized from the perspective of spirituality as a moderator and buffer for health as well as spirituality as mediator for well-being. The review also examines spirituality and college students, not only because this has received increased attention in recent years,

but also because developmentally, the college years is often the time when spiritual worldviews and practices are questioned and crystallized (Astin et al., 2011). Finally, the review will explore and analyze the literature on depression in college age adults in the Caribbean in order to provide further context for the focus of this dissertation. This review is intended to provide the rationale for the dissertation and to anchor the research hypotheses. The review begins by examining the theoretical background to wellness and well-being and delineates subjective well-being as the construct of interest in this study. This is followed by an overview of spirituality, which narrows to focusing on spirituality in the Caribbean, and then a background on mental health issues in Jamaica.

While the literature review examines spirituality in the Caribbean, it does not review specific spiritual practices within the Jamaican context as these practices are as varied as the ethnic mix of the descendants of the Caribbean. The writer will; however, note that the retention of African spiritual traditions and healing rituals are part of the subliminal culture of the population, part of their worldview, and thus, do impact perceptions of one's well-being.

Theoretical Background

Wellness and Well-being

The holistic wellness model has been used to acknowledge and explicate the significance of the interrelation of spirituality within the multidimensional domains of one's life (Hettler, 1984; Sweeney & Witmer, 1991). Holistic wellness is defined as "A way of life oriented toward optimal health and well-being in which body, mind, and spirit are integrated by the individual to live life more fully within the human and natural community" (Myers, Sweeney & Witmer, 2000; p. 252). Conversely, well-being is also

viewed as multidimensional (McGillivray, 2007), and generally it has been associated with the quality of one's life (Diener, Oishi & Lucas, 2003; Ryan & Deci, 2001). These two terms, wellness and well-being, emerged from the positive psychology movement started by Seligman (Seligman & Csikszentmihalyi, 2000).

Definitions of wellness are tied to the World Health Organization's (WHO, 1967) designation of health, which is described as more than the absence of illness and is understood as a state of complete physical, mental, and social well-being. Although the conceptualization of health is the basis for a number of definitions on wellness, Roscoe (2009) noted that there is still no unified definition of the construct wellness. On the other hand, Kelly (2000) postulated that it may be difficult to clarify the word wellness because of the subjective nature of the terminology; thus suggesting that the term implies a value judgment.

Despite these differences, there are acknowledgements that wellness is holistic (Corbin & Pangrazi, 2001; Myers et al., 2000; Travis & Ryan, 2004; Witmer & Sweeney, 1992; WHO, 1986). Wellness is also a multidimensional concept with areas of interrelatedness and interconnectedness within each dimension of how they affect the life of an individual (Adams, Benzer, Garner & Woodruff, 1998; Chandler, Holden & Kolander, 1992; Hettler, 1979, 1999; Renger et al., 2000). The most frequently identified dimensions of wellness are social, emotional, physical, intellectual, spiritual and occupational (Adams et al., 1997; Anspaugh, Harrick & Rosato, 2004; Diener, Lucas & Oishi, 2009; Dolan, Peasgood & White, 2008; Helliwood, 2005; Hettler, 1980; Myers et al., 2005; Renger, et al., 2000; Travis & Ryan, 2004). Less agreed upon dimensions of wellness include environmental, cultural (Diener et al., 2009; Ryan & Deci, 2001; Myers

et al., 2005; Ryff & Singer, 2008), and economic (Diener et al., 2009; Dolan et al., 2008; Helliwood, 2005; Myers et al., 2005; Ryan & Deci, 2001; Ryff & Singer, 2006).

For this study, wellness is conceptualized using Hettler's six dimensions: physical, social, intellectual, spiritual, occupational, and emotional (Hettler, 1979). This conceptualization of wellness was chosen because it augments the mind, body, spirit connection and the principles of holism that are central to the worldview of persons from the Caribbean (Allen & Khan, 2014; Sutherland, Moodley & Chevannes, 2014)

In using the holistic wellness model to explain the spiritual dimension of health, Chandler et al. (1992) noted that spiritual health should not just be considered a dimension of wellness: instead, "spiritual health should be considered as a component present, along with a personal component, within each of the interrelated and interactive dimensions of wellness" (p. 171). Within this frame spirituality is conceptualized as a natural capacity and tendency to surpass one's current locus centricity, including seeking increased knowledge and love (Chandler et al., 1992). Although Chandler et al. (1992) supported the interrelatedness of the holistic wellness model, they added that optimum wellness is only possible when there is harmony and balance in each dimension, and "development of the spiritual component in each of the five dimensions" (p. 171). At the time of their writing Chandler et al. noted that there was no existing objective measure of spiritual development and proposed a subjective qualitative measure. This included making an assessment of clients' personal development and their levels of functioning in each of the dimensions of wellness, as well as attending to clients' spiritual wellness in terms of spiritual repression, spiritual preoccupation, and spiritual development (Chandler et al., 1992). All this information would be gathered

through the clinical interview. A critique of this approach is in the subjective nature of the assessment and without guided questions how this is assessed could be left to the interpretation, judgment, and one's comfort level talking about spirituality.

From the above view posited by Chandler et al. (1992) the integration of spirituality into the physical, social, intellectual, emotional, and occupational dimensions of an individual's life contributes significantly to their well-being. This philosophy is in keeping with the traditional healing practices of the Caribbean. Sutherland (2014) posited that a generally held belief of people of the Caribbean is that there is an interconnectedness of body, mind, and spirit, and that disequilibrium or change in any one aspect can potentially affect changes in their state of well-being.

Well-Being. The WHO (1986) described mental health as a state of well-being and further explicated the conditions of this state to include self-actualization, the ability to cope or adjust to normal and stressful life events, and being productive citizens. Researchers have noted that the construct well-being is broad and conceptually diffused (Andrews & Robinson, 1991), and like its counterpart, wellness, there are several approaches to conceptualizing well-being (Ryan & Deci; 2001; Ryff & Singer, 1998). Some have contended that attempts to define well-being fall short as the proposed definitions address components or dimensions of well-being instead of defining the construct (Dodge, Daly, Huyton & Sanders, 2012).

Well-being has been described as consisting of a hedonic and eudemonic perspective (Lent, 2004). The hedonic perspective is often equated with happiness and is focused on pleasant feelings or positive affect, low negative affect, and life satisfaction (Diener & Lucas, 2000; Diener, Oishi & Lucas, 2012; Diener, Suh & Smith, 1999; Ryff & Keyes,

1995; Seligman & Csikszentmihalyi 2000). On the other hand, the eudemonic perspective is focused on psychological functioning, meaning, fulfillment, and life purpose (Lent, 2004; Ryff, 1989; Ryff & Singer, 1998; Ryff & Keyes, 1995). Lent (2004) noted that in western societies there is a centrality to happiness as evident in the daily exchanges of pleasantries. He further noted that this centrality of happiness is embedded in the United States Declaration of Independence as a right, i. e., “the pursuit of happiness” (Lent, 2004). From the eudemonic perspective, well-being is conceptualized to be more than happiness and instead is concerned with individual life purpose (Ryff, 1989; Ryff & Singer, 1998; Ryff & Keyes, 1995). Within this work, the focus is more cognitive than affective. In other words, the eudemonic perspective of well-being is concerned with what the individual is doing, thinking or their psychological functioning (Ryff, 1989; Ryff & Singer, 1998; Ryff & Keyes, 1995), whereas, the hedonic is concerned with feelings and the individual’s subjective appraisal of self (Lent, 2004). In the following section, subjective well-being will be explored and defined, and then followed by a discussion of two approaches for measuring this construct.

Subjective Wellbeing

Subjective well-being is derived from the hedonic perspective of well-being and describes “people’s emotional and cognitive evaluation of their lives” (Diener, et al., 2003; p. 403). This evaluation is temporal, referring to ‘within the moment or within the past year, ’ and evaluates three components: life satisfaction, positive affects, and lack of negative affect (Diener, 2000; Diener et al., 2003; Diener et al., 2012; Diener et al., 1999; Ryff & Keyes, 1995). Conversely, the cognitive component examines the individuals’ degree of satisfaction with life in general (global life satisfaction) and in

specific domains in areas of vocation, family, and health (Diener et al., 2003; Lent, 2004). Here individuals assess the extent to which their lives match their expectations and the kind of life they envisioned. This cognitive appraisal is reflected in Rath and Harter's (2010) conceptualization of well-being as an integration of evaluation and experiences across five "essential elements" of living: career, social relationships, financial, physical, and community engagement. These elements are similar to the components of wellness identified by Hettler (1979).

Researchers have concluded that other constructs overlap with the term subjective wellbeing because it is seen as evaluating life satisfaction. One such construct is Quality of Life (QoL) (Dodge et al., 2012; Shin & Johnson, 1978; Zikmund, 2003). QOL is defined by WHO (1997) as "an individual's perception of their position in life, in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns" (p. 1). The WHO (1991) posited that QoL is affected by "a person's physical health, psychological state, level of independence, social relationships and personal beliefs, and their relationship to salient features in their environment" (p1). Spirituality, religiousness, and personal belief were later added as a sixth domain to QoL (WHO, 1998).

It is important to note that like health, well-being refers to more than the absence of illness and is also more than happiness (WHO, 1998). It could be said that a person who enjoys high levels of well-being is doing more than just living, is more than just happy (Seligman, 2011; Shah & Marks, 2004) and is doing more than just surviving (Seligman, 2011). Such a person is thriving towards becoming his /her authentic self,

(flourishing (Seligman, 2011), or what others term as focusing on positive functioning (e.g., Duckworth, Steen, & Seligman, 2005; Linley, Joseph, Harrington, & Wood, 2006).

In “Flourish: A visionary new understanding of happiness and well-being, ” Seligman (2011) proposed a well-being theory that moves away from what he calls authentic happiness. According to his theory, authentic happiness is often assessed around three elements: positive emotions, engagement, and meaning. He calls for a focus on well-being that is measured by flourishing instead of happiness. To flourish, according to Seligman (2011), one should embody the core features of positive emotions, engagement, interest, meaning and purpose as well as having any three of the following additional features: self-esteem, optimism, resilience, vitality, self-determination or positive relationships. Seligman (2011) believed these to be more objective measures of well-being and to encompass much more than happiness. When one flourishes, one enjoys positive emotions, is engaged with others, has meaningful relationships, becomes more proficient, and as a result, has more time to do other things (Seligman, 2011).

Seligman (2011) proposed five elements of the construct well-being and further stated that each element should have the following three properties: each element should contribute to well-being; should be pursued for its own sake; and each element should be defined and measured independently (Seligman, 2011). He proposed Positive emotions, Engagement, positive Relationships, Meaning, and Accomplishment (PERMA) as the five elements of well-being (Seligman, 2011). Not all of these elements are new. As noted earlier, happiness is assessed subjectively around positive emotions, engagement, and meaning (Diener, 2000; Diener et al., 2012; Diener et al., 1999;

Diener et al., 2003; Ryff & Keyes, 1989; Park, 2004; Shah & Marks, 2004) and these elements were retained in Seligman's (2011) well-being theory. One could then conclude that Seligman's well-being theory is seeking to expand existing theories on well-being. How these are measured is important. The following section examines measurements of well-being.

Measurements of Well- Being

Subjective well-being is based on an individual's self-appraisal of their emotional and cognitive disposition; therefore how the construct is theorized and measured is important as it is a subjective measure. Diener et al. (1999) presented three groups of theories addressing well-being. These are personality traits or predisposition theories, need and goal satisfaction theories and process activity theories. These theories address how well-being is maintained, gained, and lost (Bates & Bowles, 2011) and reflect how well-being is measured. Instruments to assess subjective well-being vary, though they are typically in the form of self-report survey questions. Bates and Bowles (2011) noted that measurement selection reflects the type of well-being that is being assessed, as well as contextual factors and the availability of resources. The following section provides a brief summary of the theories and approaches to measuring subjective well-being and further explicates the rationale for using subjective well-being as a multidimensional construct to examine how spirituality contributes to well-being.

One of the aims of research on subjective well-being has been to identify predictors of happiness around three foci and methods of studying happiness (Galinha & Pais-Ribeiro, 2011). One the method is the bottom up approach, where contextual or domain specific (external) factors are assessed as predictors of subjective well-being

(Diener et al., 1999; Galinha & Pais-Ribeiro, 2011; Ho, Cheung & Cheung, 2008; Lucas, 2004; Pavot, 2008; Schimmack, 2008). Contextual factors relate mainly to socio-demographic variables like marital status, age, education, income, leisure, and life events. Findings from this bottom-up approach indicate that contextual variables are not the most significant contributors in explaining the variability of well-being; indeed, they account for less than 20% of the variance (Diener et al., 1999; Galinha & Pais-Ribeiro, 2011; Ho et al., 2008). The bottom-up approach seems to be linked to need and activity theories, which emphasize that subjective well-being is fluid and changes overtime in an individual's life (Diener et al., 1999).

The second approach is referred to as the top-down approach, which emphasizes intrapersonal factors as predictors of subjective well-being (Diener et al., 1999; Galinha & Pais-Ribeiro, 2011; Ho et al., 2008; Lucas, 2004; Pavot, 2008; Schimmack, 2008). Interpersonal factors are related to temperament, social comparison, individuals' characteristics, and goal achievement (Diener et al., 1999; Ho et al., 2008; Schimmack, 2008). Research data from this perspective postulate that individuals' personality traits and dispositions are stronger determinants of subjective well-being, in that individuals who tend to have positive appraisal or those who were more optimistic were likely to possess higher levels of subjective well-being (Diener et al., 1999; Diener & Ryan, 2009; Galinha & Pais-Ribeiro, 2011; Ho et al., 2008; Lucas, 2004; Schimmack, 2008).

The integrative approach examines the contributions of both contextual and interpersonal factors. This model is described as a more holistic way of explaining predictors and interactions of well-being. Proponents of this view acknowledge that

subjective well-being is impacted by multiple variables simultaneously and not in isolation (Schwarz & Strack, 1999; Suh et al., 2008). From this perspective, it is believed that the use of separate instruments to assess negative and positive affects as well as cognition and life satisfaction are necessary to identify which variables contribute to subjective well-being.

In one meta-analytic study, the direct effects of the top-down and bottom-up approaches to overall life satisfaction and the domain specific (job, marital status, leisure) approaches were evaluated (Heller, Watson & Ilies, 2004). After examining close to 300 studies, the researchers examined a path model and hypothesized that 1) personality disposition (top-down) would have a direct effect on domain specific and global life satisfaction; 2) life satisfaction would mediate the relationship between personality and domain satisfaction; and 3) personality and domain specific factors would be significant in determining global life satisfaction. The findings revealed a reciprocal relationship between domain specific and global life satisfaction. Further analysis found that both path b (top-down) and path c (integrative approach) were a good fit in the model, whereas path a (bottom-up approach) was a poor fit. Global life satisfaction was found to be a significant predictor for domain specific satisfaction, and domain specific satisfaction significantly predicted global life satisfaction (Heller et al., 2004).

The bottom-up and the top-down approaches are not without critique. Both are said to be limited and time bound (Galinha & Pais-Ribeiro, 2011). Subjective well-being is expected to fluctuate, and individuals will eventually return to a base-state depending on changes in the domain specific and/or the contextual variables (Diener et al., 1999;

Galinha & Pais-Ribeiro, 2011; Ho et al., 2008). This view has received support from Suh, Diener, and Fujita (1996), who proposed that changes in contextual factors (i. e. state variables) and intrapersonal factors (i. e. trait variables) would vary in time and effect on subjective well-being. Changes in context and life events will have short-term changes on subjective well-being, while intrapersonal variability will have more long term impact (Ho et al., 2008). This observation on the impact of intrapersonal variability is important for this current study and provides a rationale for focusing on the construct of spirituality. Spirituality can be seen as a personal disposition, something that comes from within rather than an external or domain specific factor. This dissertation is, therefore, seeking to contribute to the literature through an exploration of spirituality as a predictor of well-being. However, this research will not be assessing other personality factors.

Overview of Spirituality

Defining Spirituality

In recent years, the literature on spirituality in counseling has grown. As part of the multicultural literature, discussions have included how to address and measure spirituality in counseling, and the role of spirituality in the life of the client (Astin et al., 2011; Bowman & Small, 2011; Chatters, Taylor, Bullard & Jackson, 2008; Dew et al., 2010; Eliassen, Taylor & Lloyd, 2005; Ellison, 1983; Ellison & Smith, 1991; Hill & Pargament, 2003; Koenig et al., 2001; Mansager, 2000; Moberg, 2002; Paloutzian, Bufford, & Wildman, 2012; Pargament, 1997; Richard & Bergin, 1997; Standard, Sandhu & Painter, 2000).

In the research arena, there is a growing body of studies exploring the spiritual health connection, specifically in gerontology (Davis, 2005; Eliassen et al., 2005; Ivtzan, Chan Gardner & Prashar, 2013; Lawler & Elliot, 2009), health behavior (Carpenter, Laney & Mezuils, 2011; Hucilak & McLennan, 2010; Kirpatrick & McCullough, 1999), medical science (Dew et al., 2008; Dew et al., 2010; Feher & Maly, 1999), health education and psychology (Egbert, Mickley & Coeling, 2004; Ellison, Boardman, Williams, & Jackson, 2001; Ellison & Levin, 1998; Fabricatore, et al., 2000; Goldstein, 2007; Hammermeister & Patterson, 2001; Mansager, 2000; Miller & Thoresen, 2003) and more recently, college students and spirituality (Astin et al., 2011; Bowman & Small, 2011; Bryant, Choi & Yasumo, 2003; Genia, 2001; Love, 2001). One criticism that is commonly noted is that spirituality is a difficult construct to define. In the literature, spirituality is often referred to as a complex construct with no clear conclusive definition or as a latent multidimensional construct (Miller & Thoresen, 2003; Seybold & Hill, 2001; Thoresen, 1991).

Spirituality is sometimes defined as including the following elements: a transcendental experience, a search for meaning and purpose in life, and a relationship with God or a higher power (Miller & Thoresen, 2003; Paloutzian & Ellison, 2009; Pargament, 1997). It can also be conceptualized as healing through supernatural elements or non-physical interventions in the form of prayer, meditation, religious beliefs, and rituals (Miller & Thoresen, 2003; Seybold & Hall, 2001; Taylor & Chatters, 2010; Thoresen, 19991); a life or energy force (Boykin, 1983; Jagers & Smith, 1996) or obedience to a higher power; and an internalized set of beliefs and values (Mattis, 2000). Other researchers portray spirituality as a worldview or a belief system that is

integral to and a part of the Afrocultural psychological orientation (Boykin 1983; Jagers & Smith, 1996). In an early examination of the term spirituality and the subsequent construction of the Spirituality Scale, Jagers and Smith (1996) posited the following as a definition for spirituality:

Spirituality indicates a belief that all elements of reality contain a certain amount of life force. It entails believing and behaving as if nonobservable and nonmaterial life forces have governing powers in one's everyday affairs. Thus, a continuous sensitivity to core spiritual qualities takes priority in one's life. Indeed, it goes beyond (simple) church affiliation. Moreover, it connotes a belief in the transcendence of physical death and a sense of continuity with one's ancestors (p. 430).

Thus, a person is described as being spiritual when the person has a deep and meaningful relationship with a higher power. This is manifested in the way that an individual conducts his/her daily life (Mattis, 2000).

Several criticisms have been leveled at the way spirituality has been conceptualized in the above definitions, including that the definitions are often equated with religious practices and beliefs and often purport a monotheistic/Judeo-Christian belief system (Astin et al., 2011; Jacobsen & Jacobsen, 2012; Moberg, 2002). Jacobsen and Jacobsen (2012) posited a more embracing and universal definition of spirituality; where, "spirituality is about self-discovery and self-expression, about authenticity, compassion, respect for others, and the freedom to explore any number of potentially life-enriching ideas and ways of life' (p. 37). Astin et al. (2011) seem to sum all these elements and offer a more universal and encompassing conceptualization of spirituality.

They describe spirituality as a part of one's inner, subjective reality, involving affective experiences, reasoning and logic, personal values, beliefs about one's existence in relationship to life's meaning and life purpose, as well as one's interconnectedness to others and the world around us (Astin et al., 2011). In their seminal work exploring spirituality in higher education Astin et al. (2011) purported the following definition for spirituality;

Spirituality... is a multifaceted quality involving an active quest for answers to life's "big questions" (Spiritual Quest), a global worldview that transcends ethnocentrism and egocentrism (Ecumenical Worldview), a sense of caring and compassion for others (Ethic of Caring) coupled with a lifestyle that includes service to others (Charitable Involvement), and a capacity to maintain one's sense of calm and centeredness, especially in times of stress (Equanimity) (p. 5).

While Jacobsen and Jacobsen (2012) see the self as the center of spirituality, Hill et al. (2000) purported that it is more than that, and spirituality involves a searching for the sacred and the transcendent self. Love and Talbot (1999) and Astin et al. (2011) added the components of being connected to self and others, having a sense of community, a relationship with a center of values, and a way of knowing and being. Astin et al. (2011) further saw spirituality as playing a role in creating balance in stressful situations. This is important for this dissertation which examined how spirituality impact well-being in the presence of depression.

The above definitions emphasize that spirituality is expressed in a variety of ways and can be both personal and communal. Furthermore, Jacobsen and Jacobsen (2012)

purported that spirituality is a vague concept and suggested that the distinction made between spirituality and religion is mainly for political reasons. The authors concluded that in reality, religion and spirituality are not that easily separated, but are intertwined as one's religious beliefs can be manifested through spirituality. However, spirituality is not always manifested through religion. Similarly, Miller and Thoresen (2003) noted that any scientific definition and operationalization of spirituality will differ from that of the believer. On the one hand, the scientific definition will address issues of beliefs, feelings, and/or perceptions of spirituality, while the believers' definition will address the physical manifestation, (e. g. attending religious services) (Miller & Thoresen, 2003). This physical or behavioral manifestation is sometimes experienced through religion as discussed in the next section.

Defining Religion

The terms religion and spirituality are often conflated (e. g., Ortiz, Vilereal & Engel, 2000; Taylor & Chatters, 2010). Notwithstanding, they are separate constructs with distinct meanings. Zinnbauer and Pargament (2005) posited that religion could be understood from both a substantive and functional perspectives. From the substantive perspective religion is defined "by its substance: the sacred" (p. 22) or what it is and examines "emotions, thoughts, and behavior" through the relationship to the transcendent or higher power (p. 22). From the functional perspective the focus is on the purpose that religion serves. In distinguishing the differences, Chatters et al. (2008) suggested that the definitions of religion and spirituality should focus on differences in the roles. These definitions would fall within the functional perspective. In the

“Handbook on Religion and Health”, Koenig, McCullough and Larson (2001) proposed the following definition for religion;

an organized system of beliefs, practices, rituals and symbols designed to (a) to facilitate closeness to the sacred transcendent (God, Higher power, or ultimate truth/reality) (b) to foster an understanding of one’s relationship and responsibility to others in living together in a community (p. 18).

The foregoing definition addresses both the substantive and functional perspectives as included the substance and the purpose of religion.

Religion, thus, has a prescribed set of behaviors, rituals and symbols; it has both an inward and outward dimension; and, it has a doctrine or system of beliefs regarding good and evil (Bryant et al., 2003; Hill & Pargament, 2003; Koenig et al., 2001; Thoresen, 1991).

Religion and Spirituality

As stated previously religion and spirituality (R/S) are multidimensional constructs that are sometimes viewed as intertwined, and are at times conflated in the literature. While spirituality is conceptualized to be both personal and communal, religion is mostly viewed as organized and formal (Koenig, et al., 2001; Miller & Thoresen, 2003; Pargament, 1997; Taylors & Chatters, 2010). On the other hand, spirituality sometimes is viewed as part of organized religion, which includes personal, institutional, observable and non-observable factors. Spirituality as a belief system is a path for daily behavior and engagement in the world (Jacobsen & Jacobsen, 2012; Love & Talbot, 1999). Therefore individuals’ expression of spirituality is both personal and communal, and thus, can be done in a private or public way (Jagers & Mock, 1993).

Spirituality and religion, can be seen as reciprocal, in that being spiritual can enhance religious practices and being religious can deepen one's spirituality (Jacobsen & Jacobsen, 2012; Koenig, 2001; Hill & Pargament, 2003; Miller & Thoresen, 2003). However, deep spirituality is not always reflected in consistent religious or denominational affiliation, dedicated attendance, or participation at a place of worship (Jagers & Mock, 1993; Jacobsen & Jacobsen, 2012; Oritiz et al., 2009). This is reflected in a 2012 survey of the American population by the Pew Research Center (Boorstein, 2012), where one-fifth of Americans identified themselves as not having any religious affiliation, but as being engaged in spiritual practices such as prayer and meditation. Additionally, more persons identified themselves as spiritual, but not religious. These researchers attributed this to people's disenchantment and disaffection with organized religion (Boorstein, 2012).

In commenting on the discussion over the definition of the terms religion and spirituality, some researchers (Koenig, 2001; Hill & Pargament, 2003) have noted the polarization in the United States into what could be called two camps: the religious camp and the spiritual camp. This dichotomous thinking, they theorized, can result in a failure to see the connection between religion and spirituality in the following ways: (1) a failure to acknowledge that spiritual expressions are often manifested through the social environment and ultimately religious traditions; (2) the perception that one is better than the other; (3) a failure to acknowledge that many persons see spirituality as part of the religious experience and make no distinction between spirituality and religion; and, (4) this polarization could result in a duplication of concepts and measurements (Hill & Pargament, 2003; Koenig, 2001).

The previous review provides a general review of the construct spirituality as distinguished from religion. It can be concluded that spirituality is universal, and is a component of our wellness. Spirituality is private, and is personal as well as communal, and goes beyond belief in a higher power. It involves self-discovery, compassion, and respect for others. Spirituality is about how we engage in the world and make meaning of what is happening around us. This current study is focused on measuring spirituality, not religion, and will utilize measures that evaluate participants' spirituality and whether spirituality mediates or moderates depression on well-being. In the next section, a review of the research on Caribbean spirituality is examined, which includes an analysis of the research on religiosity and spirituality of Caribbean nationals.

Spirituality in the Caribbean

Caribbean spiritual beliefs and healing practices are said to be an amalgamation from all the groups who occupied the islands (Allen & Khan, 2014; Crawford-Daniels & Alexis, 2014). Before European settlement, the earliest inhabitants on the islands were the Amerindians. They were polytheistic and believed in the existence of a supreme being and lesser gods, known as Zemes, who had power over the elements, the seasons, the rivers, and the woods (Bisnauth, 1989; Dyde, Greenwood & Hamber, 2008). The Amerindians believed that the physical world had all they needed for their existence and sustenance (Augier, Gordon, Hall & Reckford, 2007; Crawford-Daniel & Alexis, 2014). Additionally, they believed that evil spirits were responsible for ill health and misfortunes, and that spirits protected and watched over one from birth to death (Bisnauth, 1989; Crawford-Daniels & Alexis, 2014). Herbs and plants were used for healing and spiritual ceremonies (Crawford-Daniels & Alexis, 2014). While the natives

believed in the interdependence of nature, the Europeans saw nature as something to control and manipulate. The European view was not only the antithesis to the natives' view, but also to the Africans', who the Europeans later trafficked and enslaved to work on sugar plantations in the Caribbean.

In 1492, Christopher Columbus landed on the island of Jamaica with the hope of finding gold (Augier et al., 2007). Instead of gold, the Europeans discovered that the land was fertile for agriculture and they exploited the natives to work the land (Beckles & Shepherd, 2007). The harsh working conditions led to the death of the Amerindians and the subsequent importations of Africans to work the plantations (Crawford-Daniel & Alexis, 2014; Augier et al., 2007). The Africans, like the Amerindians, were polytheistic and believed in the visible and the invisible world (Augier et al., 2007; Bisnauth, 1989; Crawford-Daniel & Alexis 2014). In their writings on the evolution of Caribbean healing practices, Crawford-Daniel and Alexis (2014) reference the work of Handler (2000), who posited that the enslaved "believed illness and death had a spiritual causation which occurred as a result of a cosmic imbalance in the individual aura" (p. 30). This has become part of the Caribbean worldview. The spiritual world and spiritual healing practices in the Maroon traditions as well as Revival Zion, Kumina dances, and obeah can be seen as coming out of the African traditions (Augier et al., 2007; Allan & Khan, 2014) and are still part of the Jamaica reality.

Sutherland (2014) further added that the Caribbean worldview is that "everything in the universe is of one source and will, and that the world is animated by numerous ancestral spiritual entities, gods, and deities that frequently intervene in the everyday lives of individuals" (p. 19). These views have been passed down through the

generations and are reflected with present day realities and the belief in the interconnectedness of mind, body, and spirit—the belief that a problem in one area will affect the other areas of their lives (Allen & Khan, 2014; Morgan, 2014; Sutherland, 2014). Furthermore, many believe that illness and mental disorder can stem from natural, social, spiritual, or psychological disturbances that create an imbalance that is then manifested in physical, social, or mental illness (Wane & Sutherland, 2010). These beliefs are analogous to some current Western practices and beliefs, like the biopsychosocial and wellness models proposed by Engel (1977) and Hettler (1984) respectively. In fact, Amuleru-Marshall, Gomez, and Neckles (2014) posited that spirituality is key to biopsychosocial health. As such, it is important to explore the role that spiritual plays in mental and physical health. The salience of spirituality to people of the Caribbean is borne out by research. The research indicates that a high percentage of Caribbean people identify religion and spirituality to be very important in their lives (Chatters et al., 2008; Chatters et al., 2009; Taylor & Chatters, 2011; Taylor, Chatters & Jackson 2009).

Study on spirituality in the Caribbean is an emerging area of research as an Internet search using Psycho INFO, Psych ARTICLES, and Dissertation Abstracts International generated a little over a dozen articles. These articles were, however, specific to Caribbean immigrants living in the United States. Most of the research relevant to this study utilized the National Survey of American Life database. This section reviews a few of these studies (e. g., Chatters et al., 2008; Chatters et al., 2009; Taylor & Chatters, 2010; Taylor et al., 2009; Taylor, Chatters & Joe, 2009; Taylor, Mattis & Chatters, 1999) that address subjective religiosity and spirituality of African

Americans, Black Caribbean/Caribbean Blacks, and Non-Hispanic Whites. These studies were chosen as the participants were from a non-clinical population; the research was cross-sectional and explored constructs similar to those of this study. The review will focus mainly of the data specific to Caribbean Blacks.

These studies were conducted using the National Survey of America Life (NSAL) and compared African Americans, Caribbean Blacks and Non-Hispanic Whites. In the first study, Chatters et al. (2008) utilized the database to examine race and ethnic differences in self-definition of spirituality and religiosity among African Americans, Caribbean Blacks, and Non-Hispanic whites. Data for the survey were collected in face-to-face interviews between 2001-2003 from 6,082 participants, of which 3,570 identified as African Americans, 891 Non-Hispanic Whites and 1,621 Blacks of Caribbean descent living in the United States.

The instrument used to collect the data on religiosity and spirituality for Chatters et al. (2008) analysis included a two-item questionnaire that asked: "How spiritual are you?" and "How religious would you say you are?" Answers were given on a 4-point Likert scale ranging from very spiritual or very religious to not at all spiritual or not at all religious. The researchers also indicated that respondents were asked to identify their current religious denominational affiliation. In reporting on the methodology and data analysis, the researchers indicated that the Likert scale answers provided by the respondents were combined into a single variable with four categories that reflected persons who were (1) both spiritual and religious, (2) religious only, (3) spiritual only, or (4) neither spiritual or religious. The results indicated that 79.4% of the respondents identified as being both spiritual and religious. For the Caribbean sample 76.9%

characterized themselves as both spiritual and religious, 11.2% as only spiritual, and 7.3% as neither spiritual nor religious. For their analysis, the researchers employed a number of statistical analyses, including multivariate analysis to examine the correlates of gender, social class, education, age, marital status, and denominational affiliation.

Overall, Chatters et al. (2008) indicated that for Non-Hispanic whites there was some significance between religious and spiritual identity and social class. The researchers examined the moderating effect of race and ethnicity on income, religiosity/spirituality, and education, while controlling for the demographic and denominational variables. The results revealed a significant interaction between race and ethnicity and income. Whereas Non-Hispanic whites in the higher income group were likely to self-identify as religious only, the opposite was the case for Caribbean Blacks and African Americans. Those individuals in the lower income group were more likely to identify as religious only. For this current research, it will be interesting to compare the findings on SES to see if it holds true for college students residing in the Caribbean. Chatters et al. (2008) noted that spirituality and religiosity are comparable and inseparable aspects of Caribbean and African American experiences as opposed to the view of religion and spirituality as separate constructs in the wider discourse.

In a follow up study, Taylor et al. (2009) investigated the extent to which African Americans, Caribbean Blacks, and Non-Hispanic whites were similar or different with respect to reports of spirituality. Specifically, they examined the demographic and denominational correlates of spirituality, and examined immigration status and country of origin as predictors of spirituality for Caribbean Blacks. Whereas Chatters et al. (2008) focused on the extent to which participants self-identified as religious or spiritual,

Taylor et al. (2009) focused on the importance of spirituality in the respondents' lives by asking: "How important is spirituality in your life?" The second dependent variable of interest was the self-rating of spirituality with the focus question: "How spiritual would you say you are?" As in the previous research, questions were scored on a four-point Likert scale ranging from very important or very spiritual to not important at all or not spiritual at all.

The findings of this research were comparable with Chatters et al. (2008). While in their study, African Americans and Caribbean Blacks rated themselves as both spiritual and religious, in Taylor et al. 's (2009) study, these two groups identified spirituality to be very important. Marital status was identified as having a significant relationship with spirituality for Caribbean Blacks, as those who were married or widowed identified spirituality as being very important as opposed to those who were cohabiting. For the question regarding self-rating of spirituality, Caribbean Blacks rated themselves as very spiritual (41. 3%) or spiritual (46. 66%). These ratings were comparable to the African American group. Denominational affiliation was identified as significant in self-rated spirituality for Caribbean Blacks. For this group, participants identifying as Pentecostal and Protestant indicated higher levels of spirituality, and individuals who identified as having Jamaican heritage were reported as indicating higher levels of spirituality than other groups. The other demographic variables were not significant in predicting spirituality in Caribbean Blacks.

Three other studies (Chatters et al., 2009; Taylor & Chatters, 2010; Taylor et al., 2011) utilizing the same NSAL data set were conducted and found comparable results even though they asked different questions. Taylor and Chatters (2011) examined the

importance of religion and spirituality in one's life. Using multivariate analysis, the data revealed that 90% of Caribbean Blacks indicated that both religion and spirituality were important. This high level of spirituality and religiosity was found to be consistent across the studies using the NSAL database. The study examining race and ethnic differences in religious involvement (Chatters et al., 2009) also pointed to similarities between African Americans and Caribbean Blacks. Both groups reported higher levels of involvement in non-organizational religious behaviors, which included praying, reading religious materials, as well as high religious participation, like church attendance and church membership.

While two of the studies (Chatters et al., 2009; Taylor & Chatters, 2010) examined the data across the age range, Taylor et al. (2011) focused on older African Americans and Black Caribbean's (ages between 55-93) looking at within group differences. In this particular study, Taylor et al. (2011) examined 11 measures of non-organizational religious participation, subjective religiosity and spirituality. The findings of differences within groups were again comparable to the other studies (Chatters et al., 2008; Taylor et al., 2009; Taylor & Chatters, 2010) that indicated differences in gender, income, marital status, denominational affiliation, as well as immigrant status. Participants were asked to respond to the frequency with which they engaged in non-organizational religious participation (i. e., reading religious literature, watching religious television programs, listening to religious radio programs, praying or inviting others to pray for you). They also responded to measures of subjective religiosity, which examined the "(1) importance of church while growing up, (2) importance of parents

taking or sending their children to religious services, (3) overall importance of religion in the respondent's life, and (4) respondents' self-rating of religiosity" (p. 629).

Participants were also asked to assess the overall importance of spirituality within their life. From a number of regression analyses, the data revealed that age was significantly associated with the frequency of viewing religious television programs. Younger respondents indicated that they engaged in more frequent viewing of religious programs. Gender and income were also seen as significant variables, with Black Caribbean females reporting higher levels of both spirituality and religiosity than their male counterparts. Income was negatively associated with religion and spirituality. Participants in the lower SES group reported higher levels of religiosity and spirituality compared to those in the high-income group. This finding is interesting when compared to Chatters et al., (2008) finding that individuals in the low-income group saw themselves as religious only. The present study extends the research by examining similar constructs with a sample of the Jamaican college age population. For example the gender and income levels were examined as predictors of spirituality to ascertain whether spirituality was viewed to be more salient for females than males; as well as the whether or not a religion and spirituality are construed or embraced differently depending on one's social class status.

These findings can be said to be indicative of the historical development of the Caribbean and the role that church played in nation building (Beckles, & Shepherd, 2007; 2002; Hylton, 2002; McDermott, 2002; Miller, 2002; Millwood, 2011). These studies also point to the importance of spiritual traditions in the lives of the Caribbean people (Allen & Khan, 2014; Crawford-Daniels & Alexis, 2014). Overall, the studies

provide useful information relating to perceived religiosity and spirituality of the Caribbean population as a first step to understanding this growing population in the United States. Additionally, it provides some preliminary understanding of the group and opens up areas for further investigation both within the U. S. and the Caribbean. Some of the strengths of these research studies include the use of the NSAL data set and the large number of respondents. These researchers provide preliminary data and a model that can be used for future data analysis. The variables are well researched and operationalized. The large sample size provides adequate power for testing and strengthens the statistical conclusion and the validity of the findings.

Critique. Though contributing to research on the perception of individuals' spirituality and religiosity, the above studies have some limitations. One could question the validity and reliability of the instruments in the two-item questionnaires that were reportedly different for each research study (Chatters et al., 2008; Chatters et al., 2009; Taylor & Chatters, 2010; Taylor et al., 2009; Taylor, Chatters & Joe, 2009; Taylor, Mattis & Chatters, 1999). It is not clear if there were a number of questions around religiosity and spirituality, with each researcher choosing their area of focus. The researchers do not provide adequate information on the research instruments, nor was information on reliability or validity of the measures stated. These limitations raise issues around construct validity and limits the extent to which the findings in these studies can be generalized (Bellini & Rumrill, 1999; Polit & Beck, 2010). Another issue is around social desirability, which researchers describe as the tendency for participants to project themselves in a more favorable light or exaggerate negative effects for acceptance or approval (Crowne & Marlowe, 1964; Podsakoff, McKenzie, Lee & Podsakoff, 2003).

This is noted as a problem in research as it can bias the answers of the respondents (Podsakoff et al., 2003). Given the sensitive or personal nature of religion/spirituality, participants' responses could have been influenced by the interviews with respondents giving what they thought to be more positive answers. This is an issue for external validity. Notwithstanding the limitations, these studies have implications for the present study, as they demonstrate that spirituality is seen to be important in the lives of Black Caribbean's and provide a starting point to extend and answer some of the questions.

As noted by the previous researchers, spirituality is an organizing framework and is an essential characteristic of an African-centered worldview (e. g. Chatters et al., 2009; Crawford-Daniel & Alexis, 2012; Sutherland, 2014; Wane & Sutherland). The findings from the NSAL research (Chatters et al., 2008; Chatters et al., 2009; Taylor & Chatters, 2010; Taylor et al., 2009; Taylor, Chatters & Joe, 2009; Taylor, Mattis & Chatters, 1999) demonstrated that relationship status, social class, and denominational affiliation were indicators for identifying as being only religious or only spiritual and could potentially influence one's perception of their well-being. This provides a rationale for the focus of this current study on spirituality as a moderator and mediator of well-being, to help us further understand the impact of spirituality on health. In the ensuing sections, the spirituality health connection is examined, followed by some historical context on the development of mental health counseling and depression in Jamaica. The section ends with an analysis and synthesis of the research examining spirituality as a moderator and mediator for health and well-being.

Spirituality and Health

Counseling and health related fields are acknowledging a link between spirituality and health (e. g., Ano & Vasconcelles, 2006; Ellison & Levin, 1998; Koenig et al., 2001; McCullough et al., 2000; Richard & Bergin, 1997; Savolaine & Granello, 2002; Witmer & Sweeney, 1992). In a content analysis of the social science literature that addressed spirituality and culture, Ortiz et al. (2000) noted that spirituality should not be viewed only as a diverse/multicultural issue, but it should be seen as “an essential dimension of human life” (p. 22) and also as a personal experience. Researchers have examined the links between religious involvement and spirituality on a wide range of health outcomes of chronic illnesses (e. g., Feher & Maley, 1999; Kirkpatrick & McCullough, 1999; McCullough et al., 2000). Additionally, others have studied spirituality and mental health, specifically in cases of depression and anxiety (e. g., Ano & Vasconcelles, 2006; Dew et al., 2010; Schinttker, 2001; Simon, 2002) and substance use (Miller, 2003; Pardini et al., 2000; Ritt-Olson et al., 2004; Shorkey et al., 2008). The findings of these studies point to positive mental health outcomes for participants who reported to be more spiritual and for those who indicated involvement that was more religious. These positive outcomes include reduction in risk for psychological distress, reduction of health risk factors, and improvement in quality of life and well-being (Koenig et al., 2001; Miller, 2003; Musick, 2000; Pardini et al., 2000; Ritt & Olson et al. ; 2004; Schnittker, 2001).

Several psychological and behavioral factors have also been known to promote good health independently of religious involvement, but when linked to religiosity they were not believed to lead to more positive outcomes (Ellison & Levin, 1998). Some of these factors include the regulation of individuals' life styles and health behaviors, social

support, positive self-perceptions, coping resources, the promotion and generation of positive emotions, the promotion of a healthy life style, and family support (Ellison & Levin, 1998; Richard & Bergin, 1997).

Ellison and Levin (1998) posited that religious involvement is likely to promote mental and physical well-being through practices and philosophies that discourage risk-taking behavior, and encourage a healthy and balanced life style. Researchers (Richard & Bergin, 1997; Ellison & Levin, 1998) have singled out the Adventists and the Mormons, who have strict moral and dietary codes of practice for their members. As a result of these practices, adherents of these faith communities are said to have higher life expectancies and live with less chronic diseases than other religious groups (Richard & Bergin, 1997). Many different traditions are known to encourage moderation and frown upon conduct or behavior that is contrary to the specific religious teachings and beliefs. It is important to note here that some of the religious teachings and prescription of practice are viewed as manmade rules and are not always in alignment with biblical scriptures. Many religious groups also tend to advocate for marriage and monogamy and promote guidelines for building healthy family life and relationships (Ellison & Levin, 1998; Koenig et al., 2001). When marital status is factored in as a variable in the research, findings show a link between religious involvement and being married as well as a positive association with reduced symptomatology or positive psychological health (Gartner, 1996; Larson et al., 1998). This further reinforces Ellison and Levin's (1998) proposition that religious involvement influences healthy behaviors as members of the religious group tend to internalize 'strong religio-ethical norms' and

conform to the teachings of the group to avoid sanctions and embarrassment by making their lifestyles consistent with the other group members. They explain,

Prayer and other intra psychic religious coping efforts may alter primary appraisals, leading religious persons to reassess the meaning of potentially problematic conditions as opportunities for spiritual growth or learning, or as part of a broader divine plan, rather than as challenges to fundamental aspects of personal identity (Ellison & Levin, 1998; p. 708)

Notwithstanding the salutary effects of religion on health, religion is sometimes said to have a negative effect on mental health (Gartner, 1996; Pargament, 1999; Seybold & Hill, 2001). Pargament (1997) noted that unhealthy religious or spiritual association could lead to psychological ill health. Examples cited include individuals who believe they have direct communication with the divine and those who are not socially accountable or responsible (Pargament, 1997). Another example is of individuals who employ a deferral to God problem solving approach, that is, they leave it all up to God without recognizing a personal responsibility and action (Pargament, 1997). This view concurs with Seybold and Hill (2001), who suggested that blind obedience to religious doctrine, authoritarianism, or conflict ridden and fragmented dogma can result in all forms of abuse and lead to personality disorders. Gartner (1996) also reported a negative association with religion/spirituality and suicide, delinquency, criminal behavior and alcohol use.

Dew et al. (2010) identified a number of variables that could account for the inconsistencies in the religion/spiritual health connection. These include multiple definitions and multi-dimensions of the constructs and geographic variability between

the studies. The researchers felt that the concentration on specific denominations, as well as the local cultural variables in each setting, were likely contributors to the variability between depression and religion. For example, contextual variables in one location could have served to enhance the relationship in one setting while stigmatizing it in another.

The following section seeks to further contextualize the study by examining the development of mental health services in Jamaica. Within this section historical practices and present day approaches to addressing mental illness are discussed. Additionally the section will analyze the data on depression as a mental health issue for students enrolled in the University of the West Indies system and implication for the current study will be addressed.

The Development of Mental Health Counseling in Jamaica

This section reviews the pertinent literature on mental health in Jamaica and provides essential context for this research. In addition, this section will touch on cultural factors that impact access to mental health services and the role of religion and spirituality in Jamaica.

Jamaica has an established history of providing mental health counseling (Hickling, 1988; Hutchinson, 2014). However, the scope of services is limited because of insufficient numbers of trained mental health counselors on the island. The earliest record of counseling indicated that respected community members, pastors, and folk healers did counseling before the epoch of professional counseling (Hickling, 1988; Palmer, 2009). Palmer summarized the history in the following excerpt:

Jamaican's channel for receiving help for issues pertaining to personal problems, family matters, and community relations have existed in Jamaica for hundreds of years. Throughout the generations, Jamaicans have relied on family members, church leaders, and community elders to resolve issues related to psychological stress. (Palmer, Palmer & Payne-Borden, 2012, p. 98).

In an overview of psychiatry in the Commonwealth Caribbean, Hickling (1988) noted that evidence from historical observation suggested that the indigenous Arawak Indians in the 1860s provided mental health services to the population. Service was provided through social support within the community and included cultural therapies and remedies (Hickling, 1988). This practice continued well beyond European colonization from 1509-1962 (Burke, 1979).

Following European colonization, European psychiatry was introduced on the island and the first and only psychiatry asylum hospital was built in the 1860s in the capital, Kingston; it was built to contain persons with 'mental disease' (Palmer & Payne-Borden; 2012; Hickling, 1988). The mental health treatment then mimicked the Eurocentric medical model of psychiatry whereby mental illness was seen as a disease with a biological basis rather than psychological or environmental. In the 1930s, the Lunatic Asylum Act of 1873 was revised and renamed the 1930 Mental Health Hospital Law. These revisions gave police the power to arrest and incarcerate individuals with mental illness at the assent of the Justice of the Peace (Robertson-Hickling & Hickling, 2002). The early 1900s also saw an increase in the number of Jamaicans of African ancestry accessing training in British Universities in the medical field, including psychiatry. Many of these students returned to the island to practice and continued

using the medical model of treatment with an emphasis on pharmacology and invasive treatments with electro convulsive therapy, lobotomy, and insulin coma (Robertson-Hickling & Hickling 2002) to treat mental illnesses.

The nineteenth and twentieth centuries' saw a divide in who received treatment and who was incarcerated. British trained psychotherapists provided service to the white upper class, while the indigenous folk healers served the black community, that is, the enslaved and their offspring (Crawford-Daniels & Alexis, 2014; Hickling, 1988; Palmer, 2009; Robertson-Hickling & Hickling, 2002). As colonization took place, British bureaucracy oppressed and tried to outlaw and eliminate folk healers (Burke, 1979; Sutherland, 2014). Local folk healers and respected community members, however, continued to play a pivotal role in addressing the mental health concerns of community members (Allen & Khan, 2014; Burke, 1979; Crawford-Daniel & Alexis, 2014; Hutchinson, 2014). Burke (1979) speculated that a reason for the continued proliferation of folk healers was their demonstrated understanding of the local societal context and social acceptance by the wider society.

As the nation's mental health services continued to emerge and develop, there was an increase in research, training, and clinical services that began to contribute to improvements in mental health services. A medical faculty was established at UWI Mona in 1947 followed by a department of psychiatry in 1965, which offered and continues to offer post graduate training and continuous education in psychiatry and mental health (Hutchison, 2014). The 1970s saw a shift in approach from hospitalization and incarceration to the treatment of individuals within communities, which gave rise to community mental health services on the island under the influence of the Pan-

American Health Organization (PAHO; Hutchinson, 2014; McKenzie, 2008). The decentralization of mental health services saw reductions in hospitalization and a shift to community care and the training of mental health officers (MHO) to care for patients in communities. Currently, mental health services are provided by individuals with medical training, primary care physicians, community psychiatric nurses, and mental health officers through the Ministry of health (Hutchinson, 2014; McKenzie, undated). Persons accessing these services are largely individuals living with severe mental illness. Services for those with more common disorders like depression and anxiety are minimal (McKenzie, 2008) and their general practitioner often treats them. Hutchinson (2014) cited the reason for this as the prevalence of the commonly held view that mental health treatment is for those who exhibit outwardly “aggressive or violent behavior or consistently inappropriate socially disruptive behavior” (p. 207). It is against this background that this researcher sought to assess self-reported depression in the college population in order to get a better understanding of students’ perception of their well-being. The following section will review research on depression in the college age population in the Caribbean to further contextualize and provide a rationale for the current study.

Depression and the College Population in the Caribbean

Research into the mental health concerns of college students in the Caribbean has not been as extensive as in the United States. A search using *Psych INFO*, *Psych ARTICLES*, and *Dissertation Abstracts International* produced only a few studies that specifically investigated depression in the University population in the Caribbean. Four of these studies are pertinent to this current research. These studies (Campbell et al.,

2009; Kameel & Kamal, 2011; Lipps, Lowe & Gibbons, 2004; Lowe, Lipps & Young, 2009) all reported high levels of depression in the sample population from the University of the West Indies' three campuses in Barbados, Jamaica, and Trinidad and Tobago and are discussed in this section.

Depression is the leading cause of mental health problems globally and is mirrored in the Caribbean population (Kameel & Kamal, 2011; Piko, 2009). Mental health concerns including depression can emerge in adolescence (Kessler et al., 2005; Meunier & Wolf, 2006; Piko, 2009); therefore, the college years are times of great concern and added stressor because of the prolonged period that some students stay in higher education (Piko, 2009). The extended time in higher education in itself contributes to what Piko (2009) terms as a period of unstable identity and psychological challenges. Mental health challenges for some college students arise from the difficulties faced by youth about leaving home, financial problems, and increased achievement pressures (Haynes, 2002; Levine & Cureton, 198; Paul, 2000; Piko, 2009). First year students especially are, "faced with many behavioral challenges and the development of new psychosocial identity, whereas older students face greater achievement pressure geared towards the job market" (Piko, 2009, p. 1). This increased stress results in greater vulnerability and impacts the prevalence of psychiatric distress on college campuses (Kadison & DiGeronimo, 2004; Meunier & Wolf, 2006).

Several studies have examined the level of depression on the University of the West Indies' (UWI) three campuses and have identified depression as a major concern for university students in the Caribbean (Abel et al., 2005; Campbell et al., 2009; Kameel & Kamal, 2011; Lowe et al., 2009). As noted earlier, the UWI is the major

research institution that serves the Caribbean. In this writer's search of the literature, all of the studies addressing mental health issues in the college age population in the Caribbean were on students in one of the three campuses. As a result, this current study will provide data to see if this trend continues in other higher educational facilities, specifically teacher training colleges in Jamaica.

In one study, Lowe et al. (2009) examined factors associated with depression in students at the Mona Campus in Jamaica. The researchers hypothesized that students from lower social classes would be assessed with higher levels of depression and that social class and gender would have a cumulative effect on students' depression scores. Research was conducted on a sample of 690 students and a survey questionnaire was administered to two groups at different times. The survey instrument consisted of the Brief Screen for Depression (BDS-16) and demographic questions related to gender, faculty (school), year of study, relationship status, employment, maternal education, and questions around mental illness.

The result revealed that 39% of the students indicated signs of serious depression based on the BSD guidelines. Gender differences were observed, with females reporting higher mean scores for being clinically depressed than males. Analysis of variance (ANOVA) that compares relationship status indicated that participants who were married had lower mean depression scores than those in a visiting relationship, and chi square analysis did not show an association with marital status and depression.

A visiting relationship is one where the partners share a sexual relationship, but are not legally united nor do they share a common residence (Leo-Rhynie, 1993). Lowe

et al. (2009) did not mention common law unions and living together. This is a significant limitation, as common law unions are believed to outnumber marital unions (Planning Institute of Jamaica, 2009). This report noted that approximately 15% of the respondents were legally married, as compared to 22.5% in common law unions and 31.2% in visiting partner relationships. It would be interesting to know the level of mean scores of these other groups and to explore the contributory factors to their levels of depression. Other results from Lowe et al. (2009) supported that students who were employed and in college reported significantly lower mean depression scores than those who were unemployed and in college. Socioeconomic status (SES), which was measured through mothers' education and student employment, revealed that students with higher SES pointed to less depression than those in lower classes. That is, students with mothers who had a tertiary education had lower mean scores on depression than those whose parent had achieved only a secondary education or less. Further analysis using multiple regressions showed that gender, employment status, maternal education, and mental illness each contributed separately to predict depression scores. This indicates that each contributed unique variance beyond the contribution made by all four predictors. Conversely, other demographic variables like faculty, season, employment status, and intimate relationship status significantly predicted depression scores (Lowe et al., 2009).

Lowe et al. (2009) noted that the results indicated higher levels of self-reported depression when compared to the general population. Four out of 10 students reported being depressed compared to 1 out of 10 in the general population. Depression seemed to be associated with cumulative factors, specifically gender, employment,

socioeconomic status, and illness. For example the cumulative effects of being female, unemployed or underemployed and having ill health can contribute to depressive symptomatology. Social class was seen as a factor in levels of depressive symptoms among students. These are important findings for this current study as it suggests that it is likely that the data may reveal high levels of depression among the college population under study. It will be interesting to see if the findings of the Teachers' college population are reflective of the findings of the University population.

Lowe et al. (2009) also noted the significant differences in levels of depression between the two semesters. Of the students who were surveyed in December, 48% fell into the range of being clinically depressed compared to 34% of the group who took the survey in January. They explained that the period of December and January is marked by less sunlight, shorter periods of day light, and thus, persons are likely to be affected by seasonal affective disorder. Additionally academic and financial stressors could also contribute to students' depression. Nevertheless, they did not believe that this explained the difference in the levels of depression between the two samples. They believed that the conditions at the two points were more or less similar. What they drew on to explain the difference was the social nature of the Christmas season, which would be over by the time students' returned to school in January. Overall this study showed that depression was a significant problem among students on Mona campus and was an area for further exploration. One of the limitations of this study is that they do not report on the effect size or do they provide enough information for this to be calculated, therefore it is difficult to truly assess the magnitude of the relationship and to evaluate the practical significance of the results.

Kameel and Kamal (2011) surveyed students ($N= 1031$) at the St. Augustine Campus in Trinidad by screening for psychiatric illness. Participants for the study were recruited using convenience-sampling procedure, where students self-selected after the investigators attended their classes to recruit participants. The aim of the study was to obtain an estimate of hidden psychiatric morbidity among fulltime students currently enrolled at the St. Augustine campus of the UWI located on the island of Trinidad and Tobago. This cross sectional study compared depression scores with demographic variables very similar to those included in the study done on the Mona campus by Lowe et al. (2009), but went further to include demographic variables of ethnicity, nationality, religion, family structure, number of children, and substance use. Given the diverse history of colonization and globalization, ethnicity in the Caribbean is not homogenous. Specifically, on the island of Trinidad and Tobago, where the St. Augustine campus is located, and in Guyana, there are large East Indian populations and the Muslim religion is more prevalent in these countries than on the other islands. Substance use, another variable included in this study, is of interest for the college population as this is the age of experimentation and risk taking (Santrock, 2008). The issue of ethnicity will not be an issue in the current study as the Jamaica population is on the more homogenous side compared to the islands of Guyana and Trinidad and Tobago (Planning Institute of Jamaica, 2010). On the other hand substance use will be measured, as the college years are a time of experimentation and risk taking (Arnett, 200; Santrock, 2008).

Using the General Health Questionnaire 28 item version (GHQ-28), a demographic questionnaire, and a psychological data sheet, information was collected from a sample of 1, 031 participants in the fall semester at the beginning of class.

Students who participated in this study were full time matriculated students in their first to third year. Kameel and Kamal (2011) noted that of the 1, 031 valid participants, 67% of the respondents were females, a trend which was representative of the overall enrollment in the University. Two hundred and sixty of the participants reported previous medical conditions, and 40% of the scores on the GHQ-28 indicated significant clinical distress. However, these figures may be an underrepresentation of the actual numbers of students with significant clinical distress as the researchers adjusted the cutoff score for significant clinical distress from 5 to 7 points. The researchers justified this increase in the GHQ-28 cutoff score as setting a higher specificity to avoid false positives (Kameel & Kamal, 2011).

When assessed by faculty (school), students enrolled in the faculty of humanities and education and students who were enrolled in their first year of university had poor scores (scoring ≥ 7). Thus, students enrolled in the faculties of humanities and education, and students who were in their first year, reported significant clinical distress. No association was found between alcohol consumption and depression scores. However, a significant association was found between smoking and scores of clinical distress. Students who identified as Muslims had higher scores, indicating significant clinical distress than those self-identifying as Hindu and Christian. The researchers reported not finding any significant association between the scores on the GHQ-28 and nationality, residence, or intimate relationships.

The findings in this research regarding significant distress among female college students are consistent with the findings of other researchers (Lipps et al., 2009; Lowe et al., 2009; Campbell et al., 2009). These studies indicated that females were more

prone to mental health issues and were more likely to experience depression and anxiety compared to males (Harper & Peterson, 2010). Possible contributions for the gender differences on depression have been identified to include subjective life stress, gender inequality and discrimination, relationship issues, and differences in personal values (Kameel & Kamal, 2011; Lipps et al., 2010). Others have posited endocrine differences between the males and females, females experiencing body image and negative attribution styles (Lowe et al., 2009; Lipps et. al., 2010; West & Sweeting, 2003), and gender role expectations (West & Sweeting, 2003). In addition, previous medical conditions were identified as having a significant relationship with mental health status. This finding is consistent with another study (Maharaja et al., 2005) that found that medical illness was a predictor for mental illness in this population. This is important for the current study, as there are more females than males enrolled in teachers' colleges (SATIN, 2013); therefore, it will be interesting to see if similar findings are unearthed in this current study.

Even though this research provides useful information, it had some limitations. It does not provide information on the reliability of the instruments, especially since the cutoff scores were modified. Further, it is unclear what kind of statistical analysis was done to report the findings. Additionally, while the researchers rationalized the manipulation of the cutoff scores for significant clinical depression, the data could have presented things to be better than they really were as more students may be experiencing clinical distress than those captured by the adjusted scores. Finally, the researchers noted the findings to be statistically significant but failed to provide data or evidence to evaluate the practical significance of the results.

Nonetheless, taken collectively, these findings provide a rationale for this current study, which seeks to assess the levels of depression that are present in a sample of the Jamaican population enrolled in Teachers' colleges. Depression, as noted earlier, is a global mental health issue that is mirrored in the Caribbean population (Kameel & Kamal, 2011; Piko, 2009). From the review in this section, it is a concern for the college population in the Caribbean, as evident in the findings (Campbell et al., 2009; Kameel & Kamal, 2011; Lowe et al., 2009) in the research on the population of the University of the West Indies. As there are no current research studies focusing on students in Teachers' Colleges or research examining the spirituality in this population and the role it plays in students overall well-being, this will be groundbreaking research.

Psychological disorders like depression, anxiety, bipolar disorder, and schizophrenia often manifest during late adolescence (18-24) to early adulthood (Prendergast et al., 2014; Kessler et al., 2005). For this reason, it is critical that prospective teachers are provided with adequate services to help them to adjust to any life changes that may take place at this critical time if they are going to be successful practitioners in the field. Thus, it is hoped that this research will provide data that can contribute to change that will improve Teachers' colleges' mental health services.

Research and Literature Related to Methodology

Various approaches have been used to assess the spiritual health outcome. Two of the more often used methodological approaches are the unique variance approach and the casual modeling approach (Miller & Thoresen, 2003). According to Miller and Thoresen (2003), the casual modeling approach takes into account a correlation between factors that share a common variance. In this case, the hypothesized spiritual

and religious variables are entered after one or more predictors and still report substantial contribution to the variance on the health outcome. On the other hand, the unique variance approach views religion and spirituality as having some relationship on improving health outcomes beyond what the other variables accounted for (Miller & Thoresen, 2003).

Researchers (Eliassen et al., 2005; Miller & Stark, 2002; Ross, 1990; Schnittker, 2001) have examined the spiritual health relationship and found that linear or curvilinear relationships were the dominant outcomes. Eliassen et al. (2005) conducted a cross-sectional study of individuals transitioning to adulthood ($N=1785$) from 1997-2000, with a racially and ethnically diverse sample of youth ranging between 19-21 years old. The study assessed the nature of the relationship between subjective religiosity and psychological distress along with other contextual factors. Subjective religiosity was conceptualized as the importance of religious beliefs and the use of religious coping (e.g., prayer, meditation, etc.) to deal with life hassles and stress (Eliassen et al., 2005). The researchers were interested in examining the linear and curvilinear relationship between subjective religiosity and depressive symptoms in youth transitioning into adulthood (Eliassen et al., 2005). They noted an inverse U-shaped curvilinear relationship in which participants identifying as moderately religious reported the highest level of depressive symptomatology. The researchers indicated that lower levels of psychological distress were associated with individuals who were found to be at either end of the continuum from strong religious belief to non-belief (Eliassen et al., 2005). This finding was comparable to Ross's (1990), who found that the highest levels of

distress were reported among individuals who identified with a religion, but had not made a commitment.

Schnittker (2001) also found a U-shaped effect in a longitudinal study that examined the effects of religious involvement on depression. The results indicated that participants at either end of the spectrum, indicating high or low religious salience, reported being more depressed. This finding was inconsistent with the previous notion that indicated that the strength of one's belief was an important predictor of well-being. Eliassen et al. (2005) believed that Schnittker's (2001) results contradicted previous outcomes because he controlled for stress. Further, researchers (Ellison, 1991; Ellison & Levin, 1998; Miller & Stark, 2002) have theorized that a possible reason why participants at either end of the scale reported higher levels of depression could stem from the scales reflecting different degrees of existentialist security or threats, or from participants taking religion too seriously.

Another important finding in the study by Eliassen et al. (2005) was that when the moderators for race, ethnicity, and socioeconomic status (SES) were examined along with gender, there were significant differences between males and females. When SES, stress, and social support were controlled for, gender explained most of the relationship between subjective religiosity and depressive symptoms (Eliassen et al., 2005). The researchers noted that females self-reported as more depressed and more religious than their male counterparts. High scores on subjective religious practices were associated with high levels of depressive symptoms among females who were less religious, and lower levels of depression among those who were more religious compared to males. The researchers also found more variability on the scores for

depressive symptomatology and religiosity in female participants and detected a smaller than typical effect size suggesting low practical significance. They also found that females who were less religious resorted to praying when they became depressed. Hence, they (Eliassen et al., 2005) drew the conclusion that religion could be seen as a protective factor against depression for individuals who were more religious. Schnitker (2001), on the other hand, found that religious involvement and spiritual practices acted as a buffer for stress when multiple life events were present.

Eliassen et al. (2005) findings are comparable to the research of Hammermeister and Peterson (2013) that focused on using spirituality measures instead of religious measures. These researchers examined the relationship among different levels of spiritual well-being and broad psychosocial and health characteristics. In this research, Hammermeister and Peterson (2013) hypothesized that spiritual well-being was a powerful contributor to overall health. The sample was self-selected from students enrolled in health and fitness classes in two colleges in the Pacific Northwest. The data were collected using a survey with 176 questions that asked about physical health indicators as well as health related behaviors. Additionally, the survey included the Spiritual Well-Being scale (Ellison & Smith, 1991), the UCLA Loneliness Scale (Peplau & Perlman, 1982), the Beck Hopelessness Scale (Beck, Weissman, Lester & Trexler, 1974), the Cheek and Buss Shyness Scale (Cheek & Buss, 1981), the Perceived Self-Efficacy Scale (Schwartz & Jerusalem, 1995), and the Rosenberg Self Esteem Scale (Rosenberg, 1965). All of these measures have good psychometrics properties and some are extensively used in research in the field. Additionally, questions were included

around drug and alcohol use, frequency of exercise, suicide ideation, and basic demographics like marital status, age and year in college.

Hammermeister and Peterson (2013) used multivariate analysis of variance (MANOVA) to compare the health profiles of the students and their levels of spiritual well-being, and then, stepwise multiple regression analysis was used to test the hypothesis. Additionally the researchers applied discriminant analyses to further identify what variables were significant contributors to spirituality. From the analysis, low self-esteem, loneliness, drug and alcohol use, and hopelessness were discriminants with students who identified as having low spirituality (Hammermeister & Peterson, 2013). For the prediction hypothesis, that spiritual well-being would be a powerful contributor to overall health; a positive inverse relationship was evident. This indicated that the higher the student's profile on the health characteristics variables (low self-esteem, loneliness, drug and alcohol use, and hopelessness) the lower their spirituality scores; and, the lower their scores on the health variables (indicating better health) the higher their spirituality scores (Hammermeister & Peterson, 2013). When the stepwise regression was applied, loneliness and self-esteem accounted for 17% and 6 %, respectfully, of the unique variance. The researchers concluded that spiritual well-being in itself is a psychosocial variable, and as a result, there is a strong correlation with other psychosocial measures "with the more spiritually "well" also scoring higher on these other psychosocial variables" (p. 296). These findings are in keeping with the literature that points to more positive health outcomes for participants who reported being more spiritual (Koenig et al., 2001; Miller, 2003; Musick, 2000; Pardini et al., 2000; Ritt Olson et al. ; 2004; Schnittker, 2001). However, this view is not always supported, as

Pargament (1997) and others (Gartner, 1996; Seybold & Hill, 2001) have posited that high spirituality can result in poor psychological health. A general critique of the forgoing research is that there is no report on the effect size hence it is difficult to assess the practical significance of the studies.

Spirituality as a mediator

Some researchers have noted other factors that could explain the relationship between health and religion/spirituality. Seybold and Hill (2001) identified social network, support, lifestyle, and psychological factors as mediators. Others concluded that this is an area for future research as few studies have measured the potential mediators between health, spirituality, and religious factors (Seeman et al., 2003; Seybold & Hill, 2001). On the other hand, George et al. (cited in Miller & Thoresen, 2003) noted that psychological mediators on religion have failed to account for the effect of other variables like stress and social support on health behavior. Research on spirituality as a mediator is an area for further research, as is further evidenced by an Internet search using Psycho INFO, Psych ARTICLES, and Dissertation Abstracts International that failed to locate a lot of studies in this area. Further research focusing on the mediation hypothesis seems mainly to have been conducted on the elderly (Davis, 2005; Tsaousis et al., 2012).

In a study examining the role of core self-evaluations (CSE) in the relationship between religious involvement and subjective well-being, Tsaousis et al. (2012) tested the perspective of spirituality as a mediator on well-being. In this study, CSE was defined as a form of self-concept representing basic perceptions of one self, others and the world. Further CSE was described as consisting of individual personality traits such

as self-esteem, generalized self-efficacy, neuroticism and locus of control (Tsaousis et al., 2012). Specifically, the researchers hypothesized that core self-evaluation (CSE) would mediate the relationship between three dimensions of religious involvement, (religious attendance, private activity, and intrinsic religiosity) and physical well-being. Core self-evaluation would serve as a mediator of religious involvement on psychological well-being. The researchers also stated a moderator mediator hypothesis that indicated that age group would moderate the indirect relationship of religious involvement to physical and psychological well-being. The research was conducted with 300 participants over 65 years old. The sample participated in a home care program; therefore, the findings are only generalizable to this group.

For the mediation hypothesis, CSE would mediate the relationship of religious involvement on physical and psychological well-being; it was found that CSE mediated two dimensions of religious involvement: church attendance and intrinsic religiosity on physical and psychological well-being (Tsaousis et al., 2012). This finding is in line with other research (Ellison & Levin, 1998; Fabricatore et al., 2000; Pargament, 1997) that indicated that regular church attendance and intrinsic religiosity displayed through faith and spirituality have better mental health outcomes and helped individuals to employ effective coping mechanisms. Limitations to this study included the homogeneity of the sample, as all of the participants identified as Greek Orthodox and elderly; thus, the research can only be generalized to this group. The research provides an example of religion/spirituality as a mediator variable on well-being and provides the research with some background knowledge.

The studies reviewed provide a theoretical background for this research. The results points to factors like stress, spirituality, age, gender, religious affiliation, and socioeconomic status as predictors of well-being. There is evidence that high spirituality moderates the relationship between stress and well-being (Bowen-Reid & Harrell, 2002; Fabricatore et al., 2000; Schnittker, 2001). Gender and socioeconomic status were also highlighted as predictors of well-being (Eliassen et al., 2005). While these studies are in line with previous research that points to positive health outcomes (Koenig et al., 2001; McCullough & Larson, Miller, 2003; Ritt Olson et al., 2004), there is also evidence that suggests that spirituality can also have a deleterious effect on one's well-being (Gartner, 1996; Pargament, 1997; Seybold & Hill, 2001). Additionally, Dew et al. (2010) pointed out that contextual variables may also account for inconsistencies in the research findings. All of these are factors that will be given attention in this current study.

Spirituality as a moderator and/or buffer for well-being.

Religious involvement is said to buffer negative life events by way of coping (Pargament et al., 1990). Proponents of this buffering idea believe that religion acts as a filter for making meaning of life events, that is, it is used as a way of coping (Pargament et al., 1990) and is a protective factor that helps the individual adjust and remain optimistic. This section reviews four research studies (Bowen-Reid & Harrell, 2002; Fabricatore et al., 2000; Hutchinson et al., 2004; Schnittker, 2001) that tested religion and/or spirituality as a moderator for stress and well-being in terms positive health outcomes.

In a study using the Americans' Changing Life Survey (ACL), Schnittker (2001) examined the effect of religion on depression by looking at the main effects as well as

the buffering effects associated with specific and rare life events. Participants for the ACL were drawn from a stratified multistage probability sample of non-institutionalized adults 25 years and older living in the US (Schnittker, 2001). The sample ($N=2836$) was extensive and included persons who identified as religious as well as non-religious. The researcher used weighted least square regression to estimate the main effects of religious involvement on depression, while controlling for the demographic variables and previous depression. In subsequent models, social support, financial health status, and formal social interaction were controlled (Schnittker, 2001). The research revealed little evidence for a significant main effect of service attendance when forms of social interaction and financial health status were controlled. Conversely, there was a significant positive effect on spiritual help seeking when self-perception factors were controlled (Schnittker, 2001).

To test the buffering effects, the researcher created: (1) an interaction between religious involvement and types of life events (e. g., severe illness or accidents, life threatening illness, financial problems, death), and (2) an interaction between religious involvement and a number of life events [single or multiple events] (Schnittker, 2001). (Interactions were created by first centering the variable, then multiplying them thereby generating a new combined variable). The results indicated that spirituality served as a buffer when it came to multiple severe life events (Schnittker, 2001). This led the researcher to conclude that religion seemed to have a stress buffering effect under extreme circumstances, depending on the amount of stress, rather than the type of stress (Schnittker, 2001). From this conclusion, one could then hypothetically project that spirituality may serve to buffer and/or moderate severe depression. This informs the

current study, which is examining spirituality as a buffer for self-reported depression on subjective well-being.

In another study, Bowen-Reid and Harrell (2002) sought to examine spirituality as a predictor for health outcomes and spirituality as a buffer or stress reducing mechanism with ($N=155$) Black undergraduate students. Following standard procedural practice, correlations analysis was done to determine if there was any association between the four measures used. Hierarchical multiple regression was used to determine if spirituality would buffer the relationship between racist stressors and adverse health outcomes. The findings of this research supported the claim of spirituality serving as a moderator as well as buffering the relationship between perceived stress and psychological health outcomes (Bowen-Reid & Harrell, 2002) and the effect size was smaller than typical for this finding. Notwithstanding the significance of the finding, this research had methodological limitations that could affect the findings. A number of the measurements, for example the Schedule of Racist Events (Landria & Klonoff, 1996) and the Spirituality Scale (Jagers, Boykin & Smith, 1994), were subjective and the researchers did not clearly indicate how they were measured or the criteria for determining if the correlations were significant. This has implications on the validity and reliability of findings. This current study will use empirically validated instruments to measure and define the constructs.

Fabricatore et al. (2000) conducted another study examining the moderator hypothesis. In this study, the researchers examined personal spirituality as a moderator of the relationship between stressors and subjective well-being. Specifically, the researchers sought to examine the following three hypotheses: (1) stressors would have

a negative impact on subjective well-being, (2) personal spirituality would positively predict subjective well-being independently of stressors, and (3) personal spirituality would moderate the relationship between stressors and subjective well-being (Fabricatore et al., 2000). Participants ($N=120$) were undergraduate students from a private, religiously affiliated liberal arts college on the U. S. east coast. The variables were clearly operationalized and reliable, and valid instruments were utilized to measure these constructs.

Analysis was done using multivariate analysis of variance (MANOVA) to determine if gender and religious affiliation were related to two components of well-being: satisfaction with life (SWL) and affective well-being (AWB), as measured by The Satisfaction with Life Scale (Diener, Emmons, Larsen & Griffin, 1985). Personal spirituality measured by the Spiritual Involvement Scale (Fenzel, 1996) had a small significant positive relationship with SWL and no relationship with AWB. In separate hierarchical multiple regressions to test hypothesis two and three, Fabricatore et al. (2000) entered the predictor variable first, followed by spirituality, and then the interaction term. The hypothesis predicting satisfaction with life, (one of the components of well-being) stressors, personal spirituality, and the interaction term (personal spirituality and stressors) each showed a significant contribution, with the total model accounting for 21% of the variance. The effect size for the total model was medium or typical. On the other hand, only stressors was a significant contributor in the model predicting affective well-being, and with a smaller than typical (.25) effect size suggesting low practical significance. This led the researchers to conclude that the moderator hypothesis was only minimally supported.

Nonetheless, the researchers suggested that future research should look at whether personal spirituality moderates the effects of daily hassles on well-being (Fabricatore et al., 2000), which further informs the rationale for this current study. These researchers noted that while there is evidence that religious coping acts as a moderator, it was instructive to look at how religious coping differs from individual spirituality and how individual spirituality moderates the effects of stress on well-being in this sample.

The findings of the Fabricatore et al. (2000) study, though contributing to the discourse, are not generalizable because of limitations, some of which the researchers noted. The small, homogenous sample utilized is a limitation in itself. This research has implications for the current dissertation. Both satisfaction with life and affective well-being are components of subjective well-being and personal spirituality as used and measured in their study can be equated to spirituality. As such, the findings are important and it will be interesting to see the extent to which the current research findings may be comparable. This study-moderating hypothesis helped to inform the current research structure and hypothesis.

Dew et al. (2010) identified a number of variables that could account for the inconsistencies in the religion/spiritual health connection as evidenced by the findings in various research reviewed in this section. They posited that the inconsistencies could stem from the use of multiple definitions and multi-dimensions of the constructs and geographic variability in the studies. Dew et al. (2010) posited that the concentration on specific denominations, as well as local cultural variables in each setting, were likely contributors to the variability in the findings between depression and religion across

these studies. For example, contextual variables in one location could have served to enhance the relationship between variables while reducing it in another. On the other hand the theology regarding what beliefs, practices, and rituals are included in defining the construct spirituality could account for these differences. Theologies represents a wide diversity of divergent worldviews, therefore using a worldview scale might help to reduce the variability. Dew et al. (2010) noted that psychosocial variables were not always controlled for, nor were they explored as mediating or moderating variables in these studies. Finally, they noted that most studies in this area were cross sectional, hence they are inherently limited in the strength of their casual claims; nonetheless, they contributed to the research on religious/spiritual health connection.

An examination of social and health determinants of well-being and life satisfaction in Jamaica was conducted in 1994 as part of a larger study that examined the psychosocial and socio-cultural factors related to sexual decision making among adult Jamaicans (Hutchinson et al., 2004). Using the existing data the researchers conducted post hoc analysis to investigate determinants of psychological well-being and life satisfaction. The sample for this study was 2, 580 households comprising of males (n=979) and females (n=1601). Data were collected through an interview-administered questionnaire of one member per household. The instruments administered in the interview included the shortened version of the Center for Epidemiological Studies of Depression Scale (CES-D), the shortened version of the Rosenberg Self-Esteem Scale (Rosenberg, 1965), and a Satisfaction with life measure that the researchers developed asking a single question on whether the individual felt satisfied with life as a whole. Both the CES-D and the Rosenberg Self-Esteem Scale (Rosenberg, 1965) are widely used,

reliable and valid instruments. Demographic data on gender, marital status, employment status, church attendance, and religiosity were collected.

Basic statistics were generated for the data along with chi-square and t-test to examine differences in mean. Multiple regressions were conducted to assess the interaction between gender and age, and forced multiple regression analyses were conducted to identify the independent predictors of well-being and life satisfaction. An examination of the data indicated a mean age of 29.7 years. For the religious variable, women who were in stable unions were identified as more religious and attended church more than men. However, women reported lower levels of self-esteem, more acute illnesses, and were less satisfied with their lives. These findings were similar to other research findings as chronic illness was associated with a lower sense of well-being in women. The findings further indicated that men who reported as more religious indicated a lower sense of well-being. This finding lends support to other research that alluded to negative effects of religiosity and spirituality on health and well-being (Eliassen, et al., 2005; Gartner, 1996; Ross, 1990). In other findings, there was a negative relationship for the moderation hypothesis. That is a negative relationship between well-being, having higher education, being religious, and having an acute or chronic illness. Hettler (1997) posited that illness in any one area of the dimensions of wellness would result in reduction in other areas. It is, therefore, quite plausible that individuals who had good standing on all of the dimensions of wellness would perceive themselves as experiencing higher life satisfaction as compared to those who indicated a struggle in one or more dimensions. The results also identified predictors of well-being, which are in keeping with previous research findings. The moderation variables

(age, gender, and gender by religiosity) were significant indicators of well-being along with not having a chronic illness.

In sum, research points to a link between spirituality and health outcomes (Bowen-Reid & Harrell, 2002; Eliassen et al., 2005; Fabricatore et al., 2001; Hammermeister & Peterson, 2001; Miller & Thoresen, 2003; Pargament et al., 1990; Schnittker, 2001). Further research indicates that spirituality can serve as a protective factor that helps one to remain optimistic and cope (Pargament et al., 1990), and this moderates the relationship between perceived stress and psychological health outcomes (Bowen-Reid & Harrell, 2002; Schnittker, 2001). That is, even though individuals may be experiencing ill health, it may not result in a low perception of their well-being if there is high spirituality (Eliassen et al., 2005). This review examined four studies in which the moderating effect was tested using hierarchical multiple regression. The results of these studies indicate, in general, that spirituality moderates health outcomes especially when stress and other demographic variables were controlled (Bowen-Reid & Harrell, 2002; Eliassen et al., 2005; Fabricatore et al., 2001; Schnittker, 2001).

The preceding research studies pointed to high spiritual practices and religious involvement serving to diminish or moderate negative consequences of stressors on mental health and well-being (Bowen-Reid & Harrell, 2002; Fabricatore et al., 2000; Schnittker, 2001). This buffering or moderating perspective can imply that high spirituality or religious practices have a positive significant effect on individuals who face high levels of stress or mental health issues like depression, and negative life events. That is, spirituality alters the direction or strength of the relationship between spirituality

and overall well-being. This is important for this current study as it provides a theoretical rationale for the moderating hypothesis examined herein.

While moderators, as discussed previously, serve to alter the direction or strength of the relationship between a predictor and an outcome, which in this current study are spirituality and subjective well-being respectively, mediation tries to explain the relationship between the predictor variable and the outcome measure and establish why the relationship works.

Chapter Summary

This chapter presented a review of the literature on the relationship of spirituality on health and well-being. Research analyzed demonstrated mixed findings on the impact of spirituality on well-being. For some, the results indicated that spirituality moderates between stressful life events and well-being, while others indicated that high levels as well as low levels of spirituality could have a negative impact on subjective well-being. The examination of the literature provides a theoretical framework for the research hypotheses. The methodology and statistical analyses employed by the different researchers influenced the design for this current dissertation research as well as informed the choice of statistical analysis used to test the hypothesis.

The literature review revealed few studies conducted on college age students in the Caribbean. The population for all of the studies in the Caribbean was out of the University of the West Indies with a primary focus on depression. The need for this research was further evidenced by the lack of research on the teachers' college population as well as the lack of research relating to spirituality and well-being in this population.

Chapter 3

Methodology

Introduction

This chapter details the methodological process undertaken to complete this research. The chapter is divided into four major sections. In the first section the characteristics of the participants are described including sampling and recruitment methods. The second section discusses on instrumentation, and the psychometric properties of each instrument. The Spirituality Scale [SS] (Jagers & Smith, 1996) and the Spirituality Well-Being Scale [SWBS] (Ellison, 1983) were used to measure the construct spirituality. The Zung Self-Rating Depression Scale [SDS] (Zung, 1965) was used to measure depression, and the Perceived Wellness Survey [PWS] (Adams, 1995) was used to measure subjective well-being. The third subsection of this chapter focuses on procedure. In this subsection, the data collection process is described. The final chapter subsection details the statistical analyses that were used to determine how the variables were analyzed.

Participants and Sample Settings

Participants were solicited from three public teachers' colleges in the country of Jamaica: Church, Sam Sharpe, and Shortwood Teachers' Colleges. Located in the county of Middlesex, Church Teachers' College (Church) began training teachers in 1965 as a coeducational institution. In 2010, the college reported an enrollment of 525 teacher trainees with 15% being male (Economic and Social Survey, 2010). Sam Sharpe Teachers' College (Sam Sharpe) is located in Western Jamaica in the county of Cornwall and has an enrollment of 903 teacher trainees with the male population

accounting for 8% of the population (SSTC, 2010). Sam Sharpe began training teachers in 1975. Shortwood Teachers' College (Shortwood) is one of the oldest teacher training institutions in Jamaica, beginning teacher training in 1885. It is located in the county of Surrey in the capital city of Kingston and attracts teacher trainees from across the country. Shortwood was originally an all-female college, but in the recent past it has begun to admit and train male teachers (STC, 2013). During the 2010 academic year, the college had an enrollment of 310 teacher trainees with 6% of the population being male (Economic and Social Survey, 2010).

All three teachers' colleges are coeducational, residential institutions offering housing accommodations to over 80% (Ministry of Education (MOE), Personal Communication, 2013) of their pre-service student teachers. Training is offered at two different levels: a teaching diploma, and a bachelor's degree. All three teachers' colleges began to offer the bachelor's degree in 2010 and were phasing out the teaching diploma (MOE, Personal Communication, 2013). In terms of specialization, all three colleges train teachers for early childhood (grades K-2), as well as for the secondary levels (grades 7-12). In addition to preparing teacher trainees for the two levels previously mentioned, Sam Sharpe also offers training for primary levels (grades 3-6), as well as training for special education teachers and school counselors. The three colleges also offer an evening college for post service teachers working to upgrade their diploma to a bachelor's degree, and the colleges offer master's degrees jointly with U.S.-based universities. In general, the day full time program includes a range of individuals including those coming straight from high school, to older students who are

embarking on a second career. Permission was secured from all three colleges to use their students as human subjects in this research study.

To be included in the study, participants needed to be full-time matriculated students enrolled in the diploma or first degree program in the first, second, or third year of their studies. Students enrolled in evening college, and those who were enrolled part time were excluded from participating. Notwithstanding these exclusions, the sample included non-traditional students as some of these individuals are also enrolled in the fulltime day program. The researcher offered students an opportunity to be entered into a drawing to win phone cards valuing J\$100.00 as an incentive to participate. This is J\$1.00 is equivalent to US\$1. 20.

Procedure

Data Collection

Prior to data collection, IRB permission and approval were sought from Syracuse University. Letters (see Appendix I) were sent to the principals of the colleges requesting permission for use of their campuses and their students as human subjects for this research. Anonymity and confidentiality of the data were assured. Data were collected over a one-month period using the standard paper and pencil format.

At Sam Sharpe, 120 questionnaires were collected during two predetermined instructional sessions: a morning session and an afternoon session. The college administrator sought approval from the faculty, giving permission to the researcher to use instructional time for data collection. Upon their approval the researcher attended these classes and collected the data. On arriving at the classes, the researcher was introduced. She read the protocol (Appendix B) to the students. This protocol informed

the students about the nature of the research and the estimated 10-15 minutes that it would take to complete the instruments. Students were informed that they had the option of participating or not participating in the study. It was stressed that participation was voluntary. The students were also informed that if they began the survey and felt uncomfortable they could withdraw at any time. Students who agreed to participate in the study were given a consent form to read and to sign (Appendix A). If there were no questions and they signed, they were given the questionnaire packet and instructed to begin. Once the participants completed the questionnaire, the packets were collected by the researcher and secured in an envelope. Participants who wanted to enter in the drawing for the phone cards were asked to write their email address on a separate sheet of paper that was removed from the questionnaire and placed in a separate envelope.

At Church and Shortwood, data collection was originally scheduled to be completed online using Survey Monkey. However, logistical and technological problems necessitated collecting the data using the traditional paper and pencil format. As a result, the researcher worked with two faculty members who volunteered to collect the data on behalf of the researcher the following week when school was in session. These faculty members were briefed on the nature of the research and the recruitment protocol that they should read to the students. Data was then collected over a two-day period from four classes. Following the protocol, students were informed about the nature of the research and were told that their participation was voluntary. Those who volunteered to participate were given the consent form and, if they signed, were given the questionnaire to complete. Once students completed the questionnaires, and signed

the consent forms, the packets were collected and secured by the faculty and sent by courier to the researcher in a secured envelope.

The researcher anticipated recruiting equal numbers of participants ($n = 150$) from each institution, however this was not realized. At Sam Sharpe, 120 students were recruited with 113 returning questionnaires. At Shortwood, 80 questionnaires were distributed and returned while at Church Teachers' college 50 students were recruited with 40 returning the questionnaire. After eliminating questionnaires with missing data 214 students participated in the research. Over 80% of the participants were females ($n=188$) with most identifying in the 18-25 age range. Forty two percent of the participants were in their second year of college, and the others were almost evenly split between year one (29%) and year two (28%). In terms of major 29. 4% ($n=63$) were enrolled in secondary education, 28. 5% ($n=60$) in early childhood, 16. 4% ($n=35$) primary education, 14% ($n=30$) enrolled in guidance and counseling and 11. 7% ($n=25$) in special education. A more detailed breakdown of the participants can be found in chapter 4.

Instrumentation

Demographic Questionnaire

Demographic and contextual variables were collected using a demographic data sheet developed for this study (see Appendix C). The information gathered included, participants' age, gender, year in school, major, on or off campus residency, relationship status, spiritual and religious affiliations, socioeconomic status, and number of children. The survey sheet also asked students to identify if they had any disabilities and or chronic medical conditions.

Spirituality Measures

Spirituality includes an existential component, a belief in a higher power, life or energy force, a search for meaning (Ellison, 1983) as well as a belief that non-observable life forces have power over one's daily experiences (Jagers & Smith, 1996). Spirituality is also described as a search for meaning and life purpose (Astin et al., 2011). It is subjective, both communal and individualistic; it is about self-discovery, authenticity, and compassion (Astin et al., 2011; Jacobsen & Jacobsen, 2012). Two instruments were used to measure spirituality: The Spirituality Scale (SS; Jagers, Boykin, & Smith, 1997) and the Spiritual Well-Being Scale (SWBS, Ellison, 1983).

The Spirituality Scale (SS). The Spirituality Scale (Jagers & Smith, 1996); see Appendix D) is an instrument that assesses spirituality from an Afrocultural perspective. The original instrument is comprised of 25 items with five filler items, and seven items that are reversed scored. However, a further examination of the scale reduced it to 20 items (Jagers & Smith, 1996). The items are responded to on a 6-point scale ranging from one (completely false) to six (completely true). Some examples of items included are: "To me, everything has some amount of spiritual quality"; and "Though I may go to the doctor when I am ill, I also pray" (Jagers & Smith, 1996). A total score is generated for the entire scale by summing the score of the individual items (excluding the filler items in the 25 question version). A high score indicates high spirituality and a low score indicates low spirituality.

Previous validations of the instrument yielded alpha reliability coefficients of .73, .84, and .91 (Bullard, 1991; Jagers, 1987; Smith, 1994). Additional research with African American college teacher trainees revealed Cronbach's alpha coefficient of .84 and .87,

and test-retest reliability was reported at .88 (Jagers & Smith, 1996). When used with a mixed group of African American and European American college teacher trainees, reliability estimates were .77 and .83 respectively (Jagers & Smith, 1996). Construct validation was established using constructs such as religious motivation, personal agency, and spiritual well-being (Jagers & Smith, 1996). The SS demonstrates statistically significant differences between African American and European American participants, suggesting that it addresses spirituality from the Afro-cultural perspective for which it was designed. The SS has been used in a number of dissertation studies and has been normed on African American college teacher trainees. While the spirituality scale has been used extensively in a number of dissertations, the original work by the authors remains unpublished. Additionally, the suggested interpretation of scores is limited, as it makes reference to high and low scores, but these are not clearly defined.

Spiritual Well-Being Scale (SWBS). The Spiritual Well-Being Scale (Ellison, 1983; see Appendix E) assesses two dimensions of the construct spirituality, Religious Well-being [RWB] and Existential Well-being [EWB] (Paloutzian & Ellison, 1982). The RWB scale is the vertical dimension, which examines satisfaction with life in terms of one's relationship with God, while the EWB scale assesses the horizontal dimension in terms of the degree to which one has a sense of purpose and life satisfaction in one's daily affairs (Cobb, Puchalski, & Rumbold, 2012; Bufford, Paloutzian & Ellison, 1991). Whereas the RWB scale contains religious-specific language such as God, the EWB scale contains no religious-specific language and instead uses terms like meaning, connection, and general satisfaction (Cobbs et al., 2012). Examples of questions on the RWB scale include: "I have a personally meaningful relationship with God"; and "I

believe that God loves and cares about me.” For the EWB scale sample questions are: “I feel very fulfilled and satisfied with life”; and “I don’t enjoy much about life.”

The SWBS includes 20 items with six Likert scale responses from strongly disagree to strongly agree. Items are scored from one to six with the higher scores reflecting more well-being. Three scores are yielded from this scale; the total score for the entire scale SWBS, and scores for the two subscales RWB and EWB (Paloutzian et al., 2012). Scores for the overall spiritual well-being scale are derived from the sum of all the items on the instrument and ranges from 20 to 120. Scores falling in the range 20-40 reflect a sense of low overall SWBS; scores within the 41-99 range reflect a sense of moderate overall SWBS; and scores within the 100-120 range reflect a sense of high overall well-being.

Scores for the RWB, which measure one’s perception of his/her relationship with God, are the sum of the odd numbered items. Scores ranging from 10-20 reflect a sense of unsatisfactory relationship with God; scores within the 21-49 range reflect a moderate sense of religious well-being; and scores ranging from 50-60 reflect a positive view of one’s relationship with God (Paloutzian & Ellison, 1991/2009). For the EWB, scores are derived from summing all the even numbered questions. The interpretation for this subscale, which reflects one’s level of life satisfaction and life purpose, are as follows. A score of 10-20 suggests low satisfaction with one’s self and possible lack of clarity about one’s life purpose; 21-49 is interpreted as a moderate level of life satisfaction and life purpose; and 50-60 suggests high level of life satisfaction with one’s life and a clear sense of purpose (Paloutzian & Ellison, 1991/2009).

The SWBS is one of the more widely used instruments to measure spirituality. It has been used internationally and has been translated into Spanish, Portuguese, Chinese, Arabic, and Malay (Bruce, 1996; Cobbs et al., 2012). The instrument has been normed on different religious groups, college students, counseling patients, caregivers, medical outpatients, and criminals falling on the sociopathic spectrum (Bufford et al., 1991). Ellison (1983) reported reliability estimates for the RWB scale at $\alpha = .87$ and $.89$ for the EWB scale. In another study, internal consistency was estimated at between $\alpha = .89$ and $.94$ (Bufford et al., 1991). Test retest reliability over a ten week period revealed estimates of $\alpha = .82$ to $.99$ for the total scale and $\alpha = .88$ to $.96$ and $.73$ to $.98$ for the RWB and EWB scales respectively. Internal consistencies are reported as $\alpha = .82$ to $.94$ for the RWB, $\alpha = .78$ to $.86$ for the EWB and from $\alpha = .82$ to $.99$ for the SWBS (Paloutzian & Ellison, 1991/2009; www.lifeadvance.com). In a study to evaluate the scale with a sample of college students, Genia (2001) reported reliability coefficients for students identifying with different religious affiliations in the range of $\alpha = .91$ to $.94$ for the RWB scale, $\alpha = .78$ to $.91$ for the EWB scale, and $\alpha = .76$ to $.93$ for the total scale (Genia, 2001). Alpha coefficients of $.92$ and $.84$ have been reported for African American college students for RWB and EWB respectively (Jagers et al., 1997)

The SWBS is considered a valid instrument. Original factor analysis of the SWBS yielded two dimensions as identified by the subscales RWB and EWB (Bufford et al., 1991). In a more recent analysis of the factor structure, Genia (2001) found that the odd numbered questions representing RWB loaded on one factor, and the remaining questions loaded on the second factor as is represented by the EWB, confirming the structure reported by Bufford et al. (1991).

A major critique of SWBS is that it has a ceiling effect among persons who espouse Evangelical and Protestant beliefs (Bufford et al., 1991; Ledbetter, Smith, Vosler, & Fischer, 1991). Because of this ceiling effect, scores for certain religious samples can be negatively skewed. Another critique is that the SWBS does not discriminate well among persons scoring above the median (Bufford et al., 1991). Other researchers have noted a lack of variation in some of the responses to some items (Brinkman, Capes, Kunkel, & Tackett, 1991). The SWBS can be considered to be Theocentric (God centered) and does not account for individuals who are non-theistic (do not subscribe to a belief in a god/gods), or those from polytheistic faith traditions (believing in more than one god). The definition of spiritual as seen on the EWB scale is also a bit narrow in its conceptualization.

The definition for spirituality used at the beginning of this section is broad and distinct from religion. Nevertheless the two instruments discussed above (SS & SWBS) may be seen by some as having theological groundings and therefore be a limitation to this study.

Depression Measure

The depression construct was operationalized using the Zung Self Rating Depression Scale (SDS). The SDS (Zung, 1965) is a 20-item Likert-style scale for depression that takes approximately five minutes to complete. It is used extensively to monitor the progress in treating depression as well as a screening device (Zung, 1990). The SDS contains 10 positively worded and 10 negatively worded questions all scored on a 4-point scale. Total scores for the instrument range from 20 - 80. Scores in the range of 20-44 are interpreted to be normal; 45-59 mildly depressed; 60-69 moderately

depressed, and 70 and above severely depressed (Romera et al., 2009; Zung, 1965; Zung & Zung, 1986). The SDS has reported internal consistency of between $\alpha = .76$ and $\alpha = .88$ in varying samples (Thurber, Snow & Honts, 2002). The instrument has been used with Caribbean populations and was validated on a Jamaican sample showing good reliability at $\alpha = .81$ (Ward, Matthies, Wright, Crossman & Hickling, 2001). The SDS was found to correlate with other measures of depression such as the Hamilton Depression (HAMD-D) rating scale (Cusin, Yanh Yeng, & Fava, 2010), as well as the Beck Depression Inventory (BDI; Beck, Steer, & Brown, 1996), and the Minnesota Multiphasic Personality Inventory (MMPI, Schaefer et al., 1985). The SDS (Zung, 1965) is valid for depressed and non-depressed populations (DeJonghe & Baneke, 1989).

Factor analysis identified between three and four major factors that are reflective of the symptomatology of depression. Romera et al. (2008) identified four factors: depressed affect, confusion, sleep disturbance, and decreased appetite. Alternatively, factor analysis conducted by Sakz motto, Kijima, Tomoda and Kambara (1998) on 2, 258 Japanese undergraduate students from 10 universities extracted three factors. The researchers indicated that following the Kaiser's criterion; three factors were extracted that were moderately correlated with each other. These three factors, cognitive, affective, and somatic, are in keeping with the symptoms of depression as indicated by the DSM-5 (American Psychological Association, 2013).

The Zung SDS (Zung, 1965) was developed in 1965 and is used extensively in psychological and clinical studies, as well as in clinical practices to screen for depression (e. g. Barrett, Hrust, DiScala & Rose, Jara, 1978; Campbell, Maynard, Roberti, & Emmanuel, 2012; Campo-Arias et al., 2005; Slovackek et al., 2010; Jara et

al., 2011; Ward et al., 2001). While the reliability and validity measures for the SDS are well documented (DeJonghe & Banke, 1989; Thumber, Snow & Honts, 2002; Zung, 1990; Ward, et al., 2001), it has been critiqued by Campbell et al. (2012) for having psychometric problems compared to the Beck Depression Inventory-II [BDI-II] (Beck et al., 1996), which is a gold standard for assessing depression. In their study that compared the psychometric strength of the SDS and the BDI-II in a Caribbean population, the SDS reliability (0.84) was slightly weaker than the BDI-II (0.88). The item correlations were also significantly lower compared to the BDI-II. Additionally, Campbell et al. (2012) noted that the SDS had a lower response rate than the BDI-II, which raised concerns about the adequacy and/or clarity of the items. Another limitation of the SDS is that it is reported to be less sensitive to changes than other measures of depression (Cusin, et al., 2010). Notwithstanding these limitations, the SDS is a good measure of depression, has been used extensively and translated into different languages. The rationale for use of the SDS is that it is easily accessible and is an economical option. It is available on line in the public domain and can be copied and administered, compared to the BDI-II (Beck et al, 1996), which is costly and copyrighted.

Subjective Well-Being Measure

The construct subjective well-being refers to individuals' emotional and cognitive appraisal of their lives (Diener et al., 2003). In this study subjective well-being was conceptualized within the wellness model using the Perceived Wellness Survey (PWS) (Appendix F). The PWS was designed by Adams (1995) who defined perceived wellness as a multidimensional construct, which is conceptualized, measured, and

interpreted consistent with (1) an integrated systems view of the mind-body-spirit, (2) a salutogenic focus (defined as causing health rather than illness), and (3) a dispositional orientation. The PWS is a 36-item self-report measure that is used to assess the subjective well-being of participants across six life dimensions. Each dimension represents a scale in the PWS.

The six scales on the PWS are: (1) psychological optimism, which describes optimistic feelings and positive expectations in life; (2) emotional centeredness, which describes the perceptions of a secure self-identity and positive self-regard; (3) the social connectedness scale, which describes the perception of being supported by family or friends and of providing social support to others; (4) physical resilience scale, which describes a positive perception of an expectation for good physical health and activity; (5) the spiritual life purpose scale that relates to the positive perception of life's meaning and of purposeful living, and (6) the intellectual stimulation scale, which describes perceptions of engaging in a moderate amount of stimulating mental activity (Adams et al., 2000; Harari, Waehler, & Rogers, 2005). The spiritual life purpose scale will not be used in this research due to the similarities with the spirituality variable. The survey can be completed in approximately 5 minutes and requires participants to respond using a 6-point Likert scale ranging from 1 = *very strongly disagree* to 6 = *very strongly agree*. Responses to negatively scored items are reversed in the final scoring procedures so that high scores indicate high self-ratings on the dimension assessed.

Scoring for the PWS is done by summing the scores for each of the subscales, which gives the result for the wellness magnitude. Standard deviations are then computed for each of the six-wellness scales along with the variance for the overall

scale. The wellness balance is then computed by finding the square root of the variance + 1.25. The addition of the 1.25 to the denominator is done to prevent a wellness balance of 0 from creating an invalid wellness composite score. Finally, the wellness composite score is calculated by dividing the wellness magnitude by wellness balance (perceivedwellness.com/pws_scoring.html). A detailed explanation of the scoring is attached in Appendix F along with the PWS. For this study the spirituality scale will not be computed. As a result, each of the five remaining subscales was summed to arrive at the wellness magnitude and the five subscales were used to compute subjective well-being.

The Perceived Wellness Scale (PWS) has reportedly established consistently high reliability and validity across a number of studies and is translated into a number of different languages and used globally. The PWS has been employed to investigate wellness in various age groups (Adams, Bezner, Garner, & Woodruff, 1998; Tsai, 2004) and cultures (Carter, 2004; Tsai, 2004), including Chinese-speaking communities (Tsai, 2004). Adams et al. (1998) reported alpha levels of .88 to .93 for the total scale in four different samples. Internal consistency for the subscales is reported to be physical (.81), spiritual (.77), psychological (.71), social (.64) emotional (.74) and intellectual (.64) (Adams, Bezner, Steinhardt, 1997).

Although the PWS purports to measure the multidimensional nature of the construct wellness, factor analysis suggests that the PWS is a one-dimensional scale as the items are loaded on one factor (Adams et al., 1997; Harari et al., 2005). This is a benefit for this study, as only the total score of five scales were used. This PWS scale was chosen for use in this study as it is free and is accessible in the public domain. It is

a reliable scale with good psychometric properties that is used to measure subjective well-being

Data Entry

After the data were collected, the researcher developed a code book in which a numerical code was given to each participant, and questions were assigned a variable name. Each participant had a unique code that indicated the college of that participant. This code book presented instructions for entering the data into SPSS following the guidelines set out in Leech, Barrett, and Morgan (2008). In cases where a participant circled two numbers instead of one on Likert-scale items, the smaller of the two numbers was entered in the data file. After entering the data, the researcher tested the accuracy of the data to ensure that data were inputted correctly with the correct codes. To accomplish this, a detailed examination of the frequency tables and box plots for possible errors was done (Leech et al., 2008). Where necessary, the data were reviewed and corrections were made. Next the data were examined for missing values, which is a common occurrence with survey questionnaires. This can affect the external validity of the study and creditability of the data set (Heppner & Heppner, 2004). One strategy for addressing missing data is deletion where cases with missing values are completely dropped. This researcher followed the Bennett (2001) recommendation of discarding a case if there was more than 10% missing data. Even though this method has the potential of reducing the sample size it was chosen over other methods of data imputation, which would maintain the sample size, but has the problem of producing biased means and underestimating variance and covariance (Schlomer, Bauman & Card, 2011).

Data Analysis

This research employed a descriptive survey design that examined the relationship between depression, spirituality, and subjective well-being in a sample of Jamaica teacher trainees. To provide a description of the sample and to check for errors and violations of statistical assumption, descriptive statistics (e. g. maximum, minimum, mean, standard deviation, zero –order correlations, and skewness) were computed for each variable and for the sample at each location. T- Test and Analysis of Variance (ANOVA) were computed to satisfy statistical assumptions (independence of observation, normal distribution of data, linearity, and homogeneity of variances), as well as to assess if there were differences between the two data collection methods (Leech et al., 2008; Lund Research Ltd, 2013). The test for linearity satisfied the assumption that the variables were related in a linear way, while the test for independence of observation demonstrated that there was no relationship between the scores of the participants (Leech et al., 2008; Lund Research Ltd, 2013). The test for normality was calculated to ensure that the scores on the variables were normally distributed and thus falling within the normal curve, while the test for homoscedasticity ensured that the variance for the dependent variable were the same for all the data (Leech et al., 2008; Lund Research Ltd, 2013).

Leech et al. (2008) suggested that whenever two measures are used to assess the same variable, reliability of the instruments should be assessed to check for consistency in measurement of the construct and to ensure that each measure is free of measurement error. As such, internal consistency reliability was computed for the SS and the SWBS as they both were assessing spirituality. Reliability estimates were

calculated for the other instruments, PWS and the SDS, as measures of reliability reduce measurement errors. Correlation statistics were used to test the relationship between students' depression (dependent variable) and the predictor variables spirituality and perceived wellness.

Exploratory factor analysis was performed on the PWS. Although the PWS is purported to measure the multidimensional nature of the construct wellness, factor analysis suggested that the PWS is a one-dimensional scale as the items load on one factor (Adams et al., 1997; Harari et al., 2005). Thus, factor analysis was used to determine the number of latent constructs in the instrument scales as well as to establish convergent and divergent validity of the instruments. Keith (2006) described exploratory factor analysis (EFA) as a reduction technique used to reduce multiple scales into fewer measures. This was especially appropriate for the PWS, which has 6 scales (Adams et al., 1997). This was used to confirm whether the PWS was a one-dimensional scale instead of a multidimensional scale as reported by Harari et al. (2005). This factor analysis will add to that finding, as well as the validity of the instrument to measure well-being in this population.

Simple bivariate regression was used to test research question (1) what is the relationship between students' levels of depression and their perceived levels of spirituality. Simple regression is used when there is only one independent variable. That is, the variable of influence (depression) being tested on one outcome (spirituality) or dependent variable (Keith, 2006, Leech et al., 2008; Lund Research Ltd, 2013). To do this, levels of spirituality, the outcome variable, was regressed on depression. This analysis also helped to answer the corresponding research hypothesis, which states,

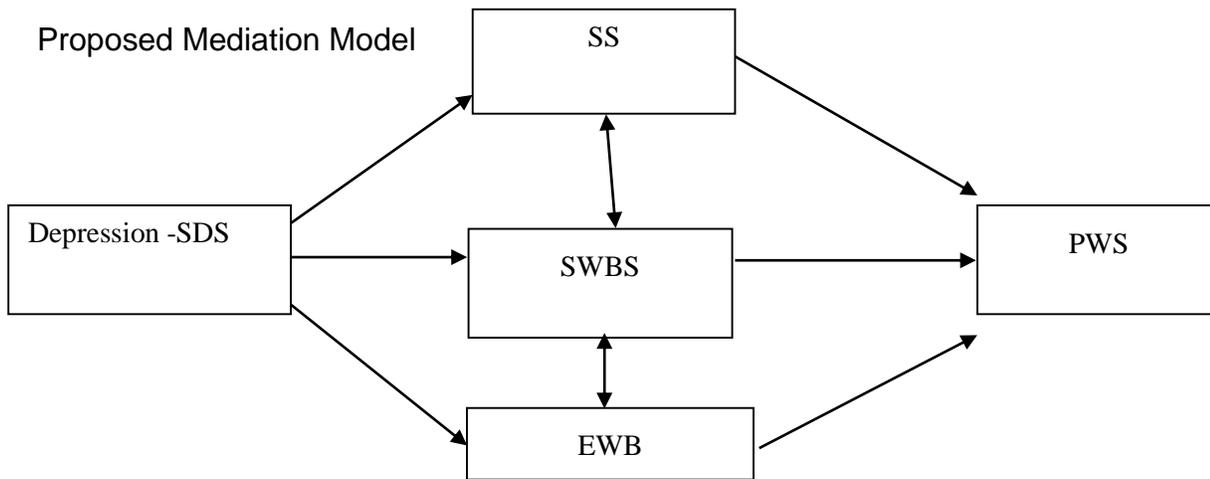
there will be a significant relationship between depression and levels of spirituality and research question (2) which asks, what is the relationship between students' levels of depression and their subjective well-being. That is, do students with overall good subjective well-being have lower levels or no depression? This research question was also answered by simple regression analysis.

The other research questions were answered using sequential multiple regression, which determined both the separate and combined contributions that each variable contributed to the outcome measure, perceived wellness (Keith, 2006, Leech et al., 2008; Lund Research Ltd, 2013). Multiple regressions (MR) are statistical procedures used to examine covariance between two or more predictor variables and an outcome variable (Keith, 2006). This permitted the calculation of the total and indirect effects of each variable, focusing on the R^2 change, which is used to determine if the variables were important (Keith, 2006). Additionally, MR was used to test the statistical significance of each of the variables in the equation (Keith, 2006).

Mediation Model. A mediator variable is a mechanism in which one variable is correlated with another variable (Baron & Kenny, 1986; Frazier et al., 2004). Mediation therefore provides answers to “how” or “why” variables correlate with each other (Frazier et al., 2004). Mediation is useful in theory advancement, as it is a relatively strong test of a specific casual mechanism. Baron and Kenny (1986) referred to three tests for mediation:

A variable functions as a mediator when it meets the following conditions: (a) variations in levels of the independent variable significantly account for variations in the presumed mediator (i. e., Path a), (b) variations in the mediator

significantly account for variations in the dependent variable (i. e., Path b), and (c) when Paths a and b are controlled, a previously significant relationship between the independent and dependent variables is no longer significant, with the strongest demonstration of mediation occurring when Path c is zero. (p. 1176)

Figure 1. Diagram for the proposed mediation model

To test the mediation model, it is hypothesized that students' spiritual levels would mediate the relationship between their depression and well-being (see Figure 1). Baron and Kenny (1986) proposed three simultaneous regressions computations to test for mediation, which was used for this analysis and are outlined below.

The first step in testing for mediation was to regress the predictor on the outcome variable to show if there was a significant relationship between these two variables (see Figure 2 path a). In this case depression was regressed on well-being. In the second step the effect of the predictor on the mediator was tested (see Figure 2 path b). The final stage was to test the effect of the predictor on the outcome while controlling for the predictor (see Figure 2 path c).

If the direct effect of depression on well-being represented in path a decreased to a non-significant amount when the mediator path b was included, then partial mediation would occur (Baron & Kenny, 1986; Preacher & Hayes, 2004). On the other hand, perfect mediation is said to occur if the effects of depression on well-being (c') is reduced to zero with the inclusion of the mediator (Baron & Kenny; Preacher & Hayes.

2004). Baron and Kenny (1986) stressed the importance of examining both the significance of the coefficient and its size. The correlation between depression and spirituality is important since it is being assumed that one has an effect on the other.

Moderation Model. Baron and Kenny (1986) noted that a moderator affects the direction and/or strength of the relationship between the predictor variable and the criterion variable. A moderation variable provides answers to the questions of “when” and “for whom” (Frazier, Tix & Barron, 2004). The moderator (spirituality) is posited to alter the direction between the predictor (depression) and the outcome variable [spirituality] (Frazier et al., 2004). For this dissertation, the interaction effect was important to determine if the outcome, subjective well-being, was stronger for some participants than for others.

Previous research indicated that spirituality could serve as a protective factor to help one to remain optimistic and to cope (Pargament et al., 1990), and to moderate the relationship between perceived stress and psychological health outcomes (Brown-Reid & Harrell, 2002; Schnittker (2001). Fabricatore et al. (2000) recommended that researchers examine how spirituality moderates stress on well-being. As indicated by Baron and Kenny (1986), a moderator affects the direction and/or strength of the relationship between the predictor variable and the criterion variable. Here, students’ spiritual level is depicted to moderate the relationship between depression and well-being. Specifically, it is being predicted that when spirituality is high, the relationship between depression and well-being would be lower. That is, even though a student may be depressed, it may not result in a low appraisal of self if there is high spirituality.

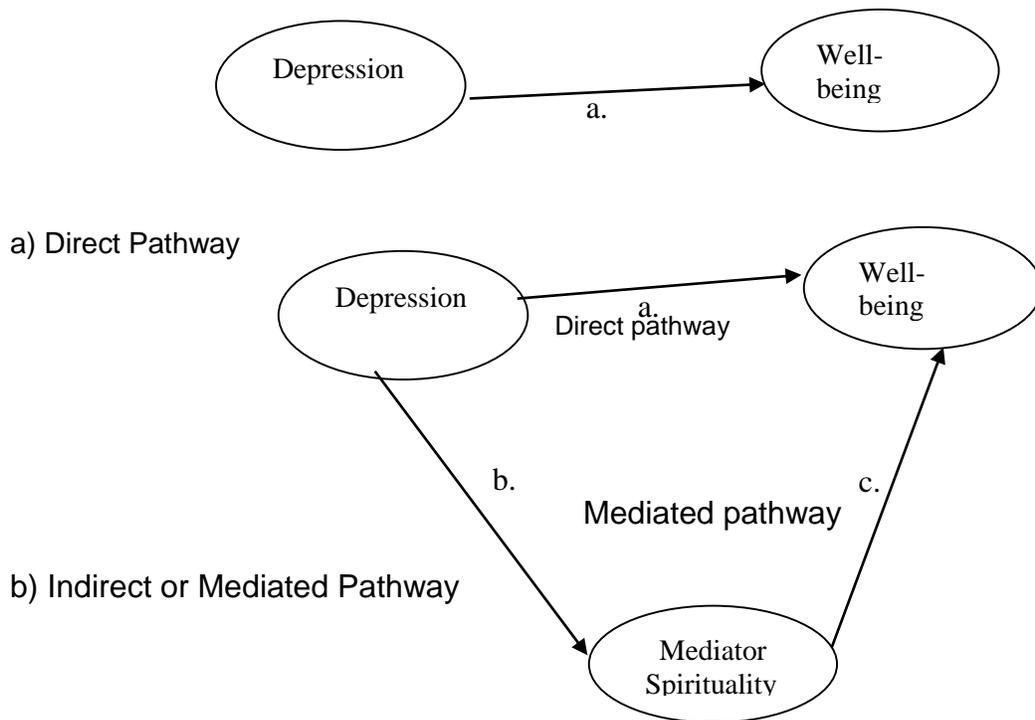
Figure 2. Path Model of Mediation Design

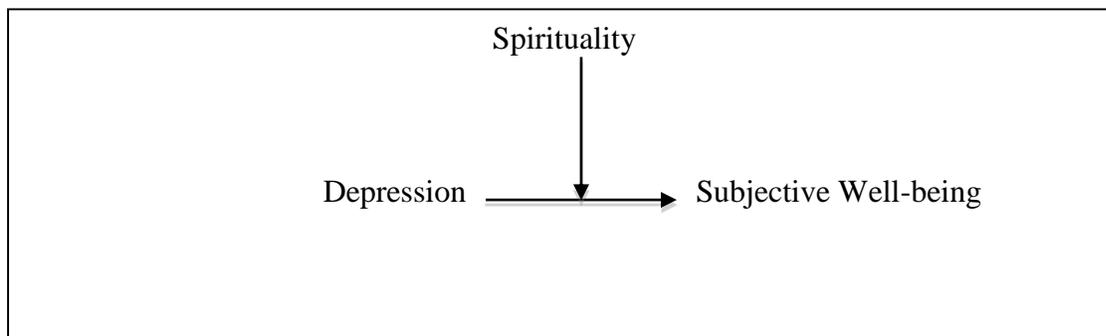
Figure 2: Proposed mediation model testing the theory of spirituality as a mediator for self-reported depression on subjective well-being (on the basis of Baron & Kenny, 1986).

The moderating effect was tested using hierarchical multiple regression. Using Cohen's power table as referenced in Whisman and McClelland (2004) the researcher concluded that 200-400 was an adequate sample size to have adequate power of .80 at alpha level of .05 to detect a medium effect size in the moderation analysis. The final sample of 214 was within the range to have adequate power and detect medium effect size.

The following considerations were addressed in this analysis. Data entry in sequential regression should be formulated on some theory (see chapter 2 for the

theory on which this research was established). Entry should be determined a priori, and the order should presume time precedence (Keith, 2006, Lund Research Ltd, 2013). The model of this research presumed that depression was likely to activate spirituality and subsequently have an impact on perceived well-being. The researcher also postulated the existence of additional moderating factors that potentially serve to buffer the outcome. The hypothesis suggested that students' spiritual levels would moderate the relationship between depression and subjective well-being. This path is depicted in the following graphic represented in Figure 3.

Figure 3: Diagram depicting the moderation hypothesis



Frazier et al. (2004) proposed the following steps for analyzing the data to test moderation. First there is the coding of categorical variables, followed by standardizing of the original continuous predictor and moderator variables. Then a new variable is created representing the interaction term of the product of the predictor and moderator variables. As posited by Frazier et al. (2004) standardizing the predictor and moderator variables is twofold. It has the advantage of reducing issues of multicollinearity among the variables, and standardizing allows for easier interpretation of the results. This is because the scores are standardized using convenient representative values (i. e. that

is the mean and ± 1 standard deviation from the mean). Hence for this dissertation, the demographic variables were coded, while the predictor variable depression and the mediator variable spirituality were standardized. The new variable, that is the interaction term, represents the product of the predictor variable (depression) and the moderator variable (spirituality). The hierarchical regression was accomplished in the following four steps.

Step 1. Participants' demographic variables (marital status, year in school, number of children, denomination affiliation, and SES)

Step 2. Depression: SDS

Step 3. Spirituality:

- a. SS (Spirituality Scale)
- b. RWB (Religious well-being)
- c. EWB (Existential well-being)

Step 4. Interaction Effects:

- a. SDS x SS
- b. SDS x RWB
- c. SDS x EWB

Outcome: Perceived Wellness (PWS)

To interpret the interaction effect, the amount of variance at each step of the regression model was analyzed, and the significance of the moderator effects was plotted in order to interpret changes in the intercept, and the slope. Whisman and McClelland (2005) suggested plotting separate regression lines for each variable level.

Chapter 4

Results

This research examined the relationship between depression, spirituality, and subjective well-being in a sample of teacher trainees in Jamaica. To test the relationship between students' levels of depression and their perceived levels of spirituality (hypothesis 1), and the relationship between students' levels of depression and their subjective well-being (hypothesis 2), simple bivariate regressions were calculated. Further, three simultaneous regressions were computed to test the potential mediating role of spirituality between depression and subjective well-being (hypothesis 3) and hierarchical multiple regression was conducted to examine the possible moderating effect of spirituality on the relationship between depression and subjective well-being (hypothesis 4). This moderating effect was tested while controlling for demographic variables (i. e. relationship status, gender, denomination, year in college and mother education) on the outcome. These were the principal statistical analyses used to address the research hypotheses and research questions in this current study. Several other procedures and preliminary analyses were conducted to check for errors, violation of statistics assumptions and to generate descriptive data for the sample.

To provide a description of the sample and to check for errors and violations of statistical assumptions, descriptive statistics (e. g. maximum, minimum, mean, standard deviation, zero –order correlations, and skewness) were computed for each variable. T-Test and Analysis of Variance (ANOVA) were computed to satisfy statistical assumptions of independence of observation, normal distribution of data, linearity, and homogeneity of variances. Additionally reliability estimates were calculated for the each

of the scale instruments: Spirituality Scale (SS; Jagers & Smith, 1996), Spiritual Well-Being Scale (SWBS; Ellison, 1983), Self-Rating Depression Scale (SDS; Zung, 1965) and Perceived Well-Being Scale (PWS; Adams, 1995). Exploratory factor analysis was calculated for the PWS as described in Chapter 3.

This chapter summarizes the statistical methods used to analyze the research questions and hypotheses, discuss, and present the results of these calculations.

Replacing Missing Data

Missing data were addressed using deletion for participants with more than 10% missing values randomly scattered throughout the questionnaire, as recommended by Bennett (2001). In the questionnaire used for this study, participants had 111 possible responses. For any participant where there were 11 or more responses missing (i. e. 10%) that participant was removed from the data set. Twenty-eight cases were deleted because of this 10% rule resulting in a final sample of 214 participants.

Some researchers (George & Mallery, 2007; Heppner & Heppner, 2004) recommend replacing randomly scattered missing data points for an item with the series mean for that item in cases where the missing data is 15% or less of the possible responses for the item as a way of maintaining the sample size. In order to avoid further reduction in the number of participants in the study, the researcher decided to replace missing responses with the group mean for any item that had 15% or less of its cases missing without threatening the validity of the results (George & Mallery, 2007). In this current study, only 1.5% of the data were missing (314 missing data points out of a total of 20,544 data points). Therefore 1.5% of the data points were replaced with the

series mean for that item. Following is a summary of the missing data point for items in a scale, which benefited from the imputation of the series mean for that item.

For the Spiritual Well-Being Scale (SWBS; Ellison, 1983) items 14, 15, 18, 19 had one missing response (0.5% missing). Items 16 and 17 had two missing responses (0.9%), and item 10 had three missing responses (1.4% missing). The breakdown of missing values for the spirituality scale (SS; Jagers & Smith, 1996) was as follows: Items 3, 6, 9, and 14 each had one response missing (0.5% missing). Items 7 and 8 had two responses missing (0.9% missing); items 13 and 16 had three missing responses (1.4% missing); items 15 and 19 four responses missing (1.9% missing); items 1, 4, 5, 11, 18, and 20 had between six (2.8%) and nine (4.2%) missing responses.

For the Self-Rating Depression Scale (SDS; Zung, 1965) item 6 had 29 responses missing (13% missing); item 19 had 26 responses missing (12% missing); items 8 had 18 responses missing (8.4% missing); item 9 had 19 responses missing (8.9% missing); items 7 and 10 had 12 responses missing (5.6% missing). Item 13 had nine missing (4.2% missing); item 15 had seven responses missing (3% missing); while item 18 had six responses missing (2.8% missing). Items 2, 11, 12, and 17 each had three responses missing (1.4%); items 3, 4, and 14 had five missing (2.4% missing); item 18 had six missing (2.8% missing); item 20 had four responses missing (1.9% missing); item 16 had two (0.9% missing), and item 1 had one response missing (0.5% missing). The data were missing at random and have implication for validity and reliability of the scale, which is discussed in chapter Five.

Missing values for the subjective well-being measure the Perceived Well-Being Survey (PWS; Adams, 1995) were as follows: items 3, 8, 13, 14, 16, 22, 26, 28, had one missing response (0.5% missing); items 7, 12, 17, 18, 20, 21, 27, 31, 33 had two missing responses (0.9% missing), while item 32 and 34 had three missing responses (1.4% missing). Items 2, 4, 23, 35 had four missing responses (1.9% missing), while item 36 had eight missing responses (3.7% missing). All these items were subjected to the 15% rule and hence the missing data was replaced by the imputation of the series mean for that item.

Table 1

Means and Standard Deviations for Total Scores on Measures (N=214)

Measures	<i>M</i>	<i>SD</i>	Possible Range	Actual Range	Skewness
SWBS	95.67	12.73	20-120	36-114	-1.188
RWB	52.64	7.30	10-60	16-60	-1.528
EWB	48.32	8.03	10-60	17-60	-.812
SS	83.29	7.64	20-120	62-104	-.096
SDS	40.37	6.94	20-80	20-60	-.099
PWS	165.79	24.45	36-216	96-216	-.088

Note: SWBS=Spiritual Well-Being Scale (Ellison, 1983), RWB=Religious Well-Being (Ellison, 1983), EWB=Existential Well-Being (Ellison, 1983), SS=Spirituality Scale (Jagers & Smith, 1996), SDS=Self Rating Depression Scale (Zung, 1965), PWS=Perceived Well-Being Survey (Adams, 1995)

Normality of distributions

Before conducting the data analyses, variables were examined using SPSS 22 to assess for normality of distributions as well as check for errors and violations of

statistical assumptions. Descriptive statistics including the values of skewness and kurtosis were examined for all the scale variables as well as examination of the histograms and scatter plots to check for outliers. This researcher utilized the guide that a distribution could be approximated to normal if the skewness value was less than or equal to plus or minus two [$\leq \pm 2$] (Garson, 2012; Miles & Shevlin, 2001). The skewness values for the scale variables revealed skewness values that were less than minus or plus two ($\leq \pm 2$) indicating approximately normally distribution. These are reported in Table 1.

Preliminary Analyses

Analysis of Sample Demographics

The population for this study was students enrolled in first to third year in three teachers colleges in Jamaica. The final sample consisted of 214 participants after eliminating cases due to missing data. It was anticipated that there would be close to equal number of participants (150) from each college, however this was not achieved because of technological and logistical issues. (See Chapter Three for description on how this issue was addressed). It was also anticipated that data would be collected electronically at two of the colleges and this would allow for comparison of the two data collection methods; this however did not occur. As a result, the data are examined as a unit because the small number of participants from two of the colleges would not allow for meaningful differences to be examined.

To better understand the characteristics of the sample, the researcher calculated frequency distributions and percentages for each demographic variable. The following presents a description of the sample demographic information.

Of the 214 participants 76. 6% ($n=164$) were in the 18-25 age range, and 87.9% ($n=188$) identified as female. In response to intimate partner status 46. 3% ($n=99$) indicated involvement in dating, 9. 3% ($n=20$) in a visiting relationship, and 20. 1% ($n=43$) indicated being married or in a common law union. Twenty-two point four percent ($n=48$) of the participants were not involved in an intimate partner relationship. Twenty-three percent ($n=49$) of the participants indicated that they had children, while 77% ($n=165$) did not have children. On the question of alcohol consumption 61. 5% ($n=131$) indicated that they drank occasionally, 31. 5% ($n=67$) did not consume alcohol, and 7. 1% ($n=15$) consumed alcohol on a daily or weekly basis. On the smoking variable 96. 7% ($n=207$) of the participants did not smoke, and 70. 3% ($n=150$) did not indicate having a medical nor mental health issue.

On parents' education the participants indicated that 34. 3% ($n=73$) of their mothers compared to 25. 4% ($n=54$) of their fathers had tertiary education, this included trade/vocation, community college, and/or undergraduate college education. Further it was reported that 37. 6% ($n=80$) of mothers and 31. 5% ($n=67$) of fathers had achieved secondary education, while 13. 6% ($n=29$) of mothers and 15% ($n=32$) of fathers had only attained primary education. Five point six percentage ($n=12$) of mothers and 2. 8% ($n=6$) of fathers had graduate education. The majority of students (61. 5% or $n= 132$) indicated that they lived off campus. On the religious spiritual variable 94. 4% ($n=202$) of the participants identified as Christians, 4. 2% ($n=9$) as Jehovah's Witness, and 1. 4% ($n=3$) identified as Hindu, Atheist, Rastafarian, or None. Table 2 shows the breakdown of the religious denomination variable along with the year in college and major. Here it should be noted that a number of denominations were collapsed to form the category

Mainline Protestants as represented in Table 2. The denominations included in this category include Anglicans, Baptist, Disciples of Christ, Lutheran, Methodist, Moravians, and Wesleyan Holiness. Church of God was kept as a separate category because of the variation within this group some could be protestant and others evangelical. Additionally Catholic and Adventist were also kept as separate categories for further analysis.

Table 2*Demographic Variables Frequency Count and Percentages for the Total Sample*

Variables	Frequency	Percentage
Denomination		
Mainline Protestant	57	27.0
Adventist	49	23.2
Church of God	47	22.3
Pentecostals	45	21.3
Jehovah's Witness	10	4.7
Judaism	01	0.5
Catholic	01	0.5
Rastafarian	01	0.5
Year in College		
Year 1	63	29.4
Year 2	90	42.1
Year 3	60	28.0
Major		
Early Childhood	60	28.5
Primary Education	35	16.4
Secondary Education	63	29.4
Special Education	25	11.7
Guidance & Counseling	30	14.0

Reliability of Measures

Internal consistency reliability estimates (Cronbach's Alpha) were calculated for the SWBS scale as well as the two subscales EWB and RWB. Cronbach's alpha coefficients were generated as follows: .86 for the SWBS, .81 for EWB, and .78 for RWB subscale. These alpha levels indicated good internal consistency comparable to sample estimates reported by Paloutzian and Ellison (1991, 2009) estimates, which ranged from .82 to .99 for SWBS, and .78 to .86 for EWB and .73 to .89 for RWB. Overall the alpha coefficient for the SWBS and its two subscales EWB and RWB suggested that they have acceptable internal consistency for this Jamaican sample.

Reliability estimates for the other SS -spirituality scale (Jagers & Smith, 1996) was calculated at .47 revealing poor internal consistency for this scale in this specific population. This alpha coefficient was lower than those found in previous studies (Bullard, 1991; Jagers, 1987; Smith, 1994) that ranged between .73 and .91. Conversely, the alpha of .47 calculated for this current study was also lower than the .84 and .87 of African American college teacher trainees in Jagers and Smith (1996) study. The researcher made the decision not to use this scale in answering any of the research questions as it was shown to have very weak internal consistency, indicating that perhaps the items do not consistently measure the construct for this population.

For the Self-Rating Depression Scale (SDS; Zung, 1965), the measure for depression, the alpha reliability estimate was computed at .75. This is in the acceptable alpha range indicating reasonable internal consistency and is in keeping with the alpha levels of between .76 and .88 reported in Thurber et al. (2002). However, it was lower than the .81 found in a sample used to validate the SDS

(Zung, 1965) on a sample of the Jamaican population (Ward et al., 2001) and was weaker than the reliability estimates of .84 in the same population as found by Campbell et al. (2012).

To assess whether the thirty-six items formed a reliable scale for the Perceived Well-Being Scale (PWS; Adams, 1995), Cronbach's alpha was computed. The alpha for the total scale was .80 indicating good internal consistency. This .80 alpha level was comparable with other research. Even though the PWS (Adams, 1995) was reported to be a multidimensional scale, subsequent factor analysis suggests that it was a one-dimensional scale as all the items loaded on one factor (Adams et al., 1997; Haran et al., 2005). Consequently, reliability estimates were not calculated for the individual PWS subscales.

As discussed in Chapter Three only the items of five scales would be used in the computation of the PWS, because the items related to the spirituality scale were similar to the spirituality variable and would result in multicollinearity. As a result a second reliability estimate was calculated for the combined scale minus the items linked to the spirituality scale. The alpha for the thirty items was .75, indicating that the items have reasonable internal consistency reliability.

Correlations of Scale Variables

Pearson's product correlations were calculated to assess the relationships between the predictor variable SDS (Zung, 1965) and SWBS and its two subscales RWB and EWB (Ellison, 1983), and the PWS (Adams, 1995). This analysis showed significant correlations between the variables. All significant correlations were in the expected directions. The SDS (Zung, 1965) showed negative correlations with all the other variables at a significance level of $p = .01$. These negative correlations between SDS (Zung, 1965) and the outcome variables indicated that self-reported

depression scores were inversely related to spirituality and subjective well-being. The spirituality variables SWBS (Ellison, 1983) demonstrated positive correlations between themselves as well as with the PWS (Adams, 1995). The results are presented in Table 3.

Table 3

Pearson's Correlations for Scaled Variables with their Mean and SD (N=214)

Measures	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. SWBS	95.66	12.72	1				
2. RWB	52.64	7.29	.875**	1			
3. EWB	48.32	8.03	.879**	.560**	1		
4. SDS	40.37	6.94	-.344**	-.253**	-.346**	1	
5. PWS	27.5	4.07	.322**	.142*	.403**	-.343**	1

Note: SWBS=Spiritual Well-Being Scale (Ellison, 1983), RWB=Religious Well-Being (Ellison, 1983), EWB=Existential Well-Being (Ellison, 1983), SDS=Self Rating Depression Scale (Zung, 1965), PWS=Perceived Well-Being Survey (Adams, 1995)

** Correlation is significant at the level of 0.01 (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

Primary Analyses

Linear Regression

Two simple regressions were computed to investigate if students' levels of depression (SDS) predicted their (a) spirituality (SWBS) and (b) subjective well-being (PWS) as to answer question one and two. Assumptions for normality of distribution and linearity were checked and met. The SDS ($M=40.37$, $SD=6.94$) significantly predicted SWBS ($M=95.67$, $SD=12.73$), $F(1, 212) = 28.84$, $p < .001$, adjusted $R^2 = .114$, indicating higher levels of depression were related to increase in spiritual levels. According to Cohen (1988) this is considered a small effect size.

In the second equation SDS also significantly predicted PWS ($M=11.76$, $SD=2.91$), $F(1, 212) = 28.25$, $p < .001$, adjusted $R^2 = .113$. The negative B weights

shown in the Table below indicate that, each 10-unit increase in self-reported depression is associated with a 6.3 unit decrease in subjective well-being. SDS was inversely correlated with both SWBS and PWB as shown in Table 4. In this case the detected effect size was smaller than typical suggesting low practical significance.

Table 4

Simple Linear Regression Analysis Summarizing Depression Predicting Spirituality and Subjective Well-being

Variable	<i>B</i>	<i>SEB</i>	β
SWBS Constant	121.12	4.8	
SDS	-.631	.12	-.34***
DV is SWBS			
PWS Constant	17.55	1.11	
SDS	-.144	.03	-.34***
DV is PWS			

Note SWBS=Spiritual Well-Being Scale (Ellison, 1983), SDS= Self Rating Depression Scale (Zung, 1965), PWS= Perceived Well-being Survey

*** $p < .001$

Mediation Hypothesis

To test the extent to which spiritual well-being (SWBS) mediated self-reported depression (SDS), four conditions of mediation needed to be addressed as stipulated by Kenny, (2014) and Frazier et al. (2004). These conditions were analyzed using three sequential regression analyses.

Assumptions of multiple regression. Before conducting the mediation analyses, the data were examined to ensure that they did not violate statistical assumptions of multiple regression as outlined in the literature (Keith, 2006; Lund Research Ltd., 2013; Miles & Shevlin, 2001). Examination of the p-p plot of residuals showed that the residuals approximated normality (Keith, 2006; Lund Research Ltd., 2013). There was independence of residuals as assessed by Durbin-Watson statistics of 1.645, additionally homoscedasticity was examined via several scatter

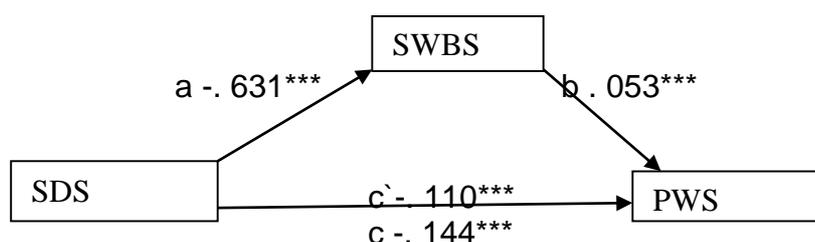
plots and these indicated reasonable consistency of spread through the distributions (Tabachnick & Fidell, 2007; Lund Research Ltd., 2013). Finally correlation statistics for tolerance values were examined to check for multicollinearity (Lund Research Ltd.). Tolerance values were greater than 0.1 (the lowest .875). This indicates that multicollinearity was not a problem for this data set (Lund Research Ltd.).

Several conditions are needed to support mediation (Baron & Kenny, 1986; Kenny, 2014; Frazier et al., 2004; Fairchild & MacKinnon, 2009; MacKinnon, Fairchild & Fritz, 2007). For the first condition of mediation the independent variable or predictor (SDS-depression) must demonstrate a significant relationship to the mediator (SWBS-spiritual well-being). Secondly the predictor (SDS-depression) must be related to the dependent variable or outcome (PWS-subjective well-being). These two conditions were supported by correlations coefficient as demonstrated in Table 3. Having met these two conditions the researcher proceeded with the regression equation utilizing three steps consisting of several regression analyses in which the coefficients were examined for significance at each step (Kenny, 2014; Fairchild & MacKinnon, 2009; MacKinnon et al., 2007). In step one the predictor depression (SDS) was regressed on the outcome subjective well-being (PWS). This path provided the coefficient for path c as identified in figure 4a. $SDS = -.144$ and was statistically significant [$t(214) = -5.3, p = .000; r = .34$]. In step two, the mediator spirituality (SWBS) was regressed on depression (SDS) which provided the unstandardized path coefficient denoted $a = -.631$ with $t(212) = -5.3, p = .000$. Step three saw SDS regressed on the PWS and the mediator SWBS. This regression equation provided the unstandardized coefficient for path b as well as path c` the direct effect [$b = .053, t(211) = 3.457, p = .001$]. To establish spirituality as a full mediator of self-reported depression on subjective well-being, the relationship

between SDS and PWS needed to be reduced to zero in step three of the calculation (Frazier et al., 2004; Fairchild & MacKinnon, 2009; MacKinnon et al., 2007). If path c' decreased to a non-significant amount when path b is included then partial mediation would have occurred. In this case, after adding the mediator to the regression equation, the relationship between self-reported depression and subjective well-being remained significant (>0) after controlling for spirituality. Figure 4a and 4b display the mediation path identified in the present study with unstandardized weights and the standardized beta weights to indicate the direction and strength of variable relationships.

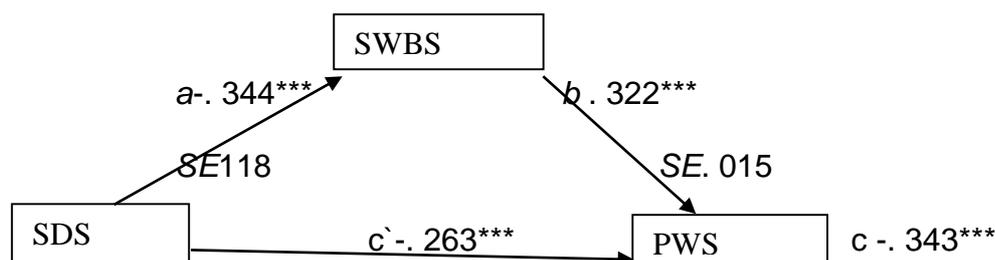
Figure 4a

Mediation Path Model



a) Unstandardized coefficients

Figure 4b



b) Standardized beta weights

Figure 4. Mediation model testing spirituality as a mediator for self-reported depression on subjective well-being (on the basis of Baron & Kenny, 1986). *** $p < .001$

After controlling for spirituality the relationship between SDS and PWS was strengthened, hence the Sobel test (Sobel, 1982) was applied to determine the

significance of the mediated effect (Preacher & Leonardell, 2009; Soper, 2009). This Sobel test examined the difference between the two unstandardized coefficients of path $c = -.343$ and path $c' = -.263$ (without the mediator) in Figure 4b along with the two standard errors (SE) and was found to be statistically significant, $z=2.948$, $p=.003$. Hence, the Sobel test indicated significant partial mediation of the relationship between self-reported depression and subjective well-being by self-reported spirituality. That is, the effect of depression on subjective well-being is significantly reduced in the presence of the mediator, self-reported spirituality. The results of this multiple regression analysis and Sobel Test indicated that the fourth condition for mediation was met.

Moderation Hypothesis

In this study the researcher examined the moderating effects of spirituality (as measured by SWBS, Ellison, 1991) on the relationship between depression (measured by the SDS, Zung, 1965) and subjective well-being (as measured by the PWS, Adams, 1995). The hypothesis stated that students' self-reported spirituality levels would moderate the relationship between self-reported depression and subjective well-being. Before examining the moderating effects in the multiple regression equation the predictor (SDS), the moderator (RWB and EWB), and their interactions terms (SDS*RWB, SDS*EWB) were centered to eliminate multicollinearity issues as proposed by Frazier et al. (2004). It should be noted that the two scales of the SWBS were used to see if there would be any difference between religious well-being (RWB) and existential well-being (EWB). Histograms, Shapiro Wilks test, normal Q plots and skewness and kurtosis were calculated to test the assumptions for linearity (Keith, 2006; Tabachnick & Fidell, 2007; Lund Research Ltd., 2013). Independence of errors, homoscedasticity, and normality of residuals

were met as previously discussed (Keith, 2006; Tabachnick & Fidell, 2007; Lund Research Ltd., 2013).

The regression was then run sequentially as recommended by Frazier et al. (2004). This four-step hierarchical multiple regression model was used to analyze the individual and cumulative contributions made by the independent variables as well as by any significant moderator interactions. Table 5 presents the full model, including the R^2 , *Adjusted R²* as well as the R^2 *change* values, the unstandardized B coefficients and standardized beta (β) weights associated with each independent variables and levels of statistical significance.

In the first step the demographic variables relationship status, gender, denomination, year in college and mother's education were entered to predict the outcome subjective well-being (PWS). These variables were entered in this first step to control for the known influences and to make the test of the primary hypothesis more rigorous. In this step denomination was significantly related to PWS. In examining the results only denomination significantly related to the outcome. However the demographic variables combined accounted for 6% of the variation in outcome at of PWS at $F_{\text{change}}(5, 200) = 2.56, p < .05, R^2 = .06$.

In the second step the predictor variable SDS was entered. In this step the demographic variables gender, denomination and year in college were significant contributors to PWS. The results indicated that the demographic variables accounted for 6% of the variance and the SDS accounted for an additional 12% of the variance in the outcome in PWS a statistically significant increase at $F_{\text{change}}(1, 199) = 30.222, p < .001, R^2 = .18$ with the incremental increase $R^2 = .12$ added also statistically significant. The effect size for this stage was smaller than typical suggesting low practical significance.

In the third step the spirituality variables were entered. Only gender and year in college from the first step impacted PWS at this step of the model. These spirituality variables contributed an additional 9% of the variance in PWS bringing the overall variation accounted for to 26%. In addition to the full model significance at this step, $F_{\text{change}}(3, 196) = 10.272, p < .001, R^2 = .26$, the incremental increase here was also significant (R^2 added = .08). In the final step the interaction terms of SDS*RWB and SDS*EWB were added. While the completed model remained significant $F_{\text{change}}(2, 195) = .283, p = .789, R^2 = .26$, this fourth step with the interaction variables did not add significant incremental variances accounted for and was therefore not statistically significant ($R^2 = .00, p = .79$). Therefore, spirituality as a moderating variable for the relationship between depression and subjective well-being was not supported.

Table 5

Hierarchical Multiple Regression Analyses Examining the Moderating Effects of Spirituality between SDS and PWS.

Variables	R ²	Adjusted R ²	R ² Added	B	β	t
Step 1	.06	.04	.06			18.564
NEW STATUS				.419	.096	1.370
NEW GENDER				1.151	.130	1.837
DENOMINATION				-.349	-.156	-2.258*
NEW EDUCATION				-.197	-.064	-.923
COLLEGEYR				-.391	-.105	-1.523
Step 2	.18	.16	.12			20.445
NEW STATUS	.285			.285	.065	.993
NEW GENDER	1.315			1.315	.148	2.244*
DENOMINATION	-.372			-.372	-.166	-2.574**
NEW EDUCATION	-.186			-.186	-.061	-.933
COLLEGEYR	-.568			-.568	-.152	-2.348**
CENTERED SDS	-.150			-.150	-.357	-5.497***
Step 3	.26	.23	.08			20.943***
NEW STATUS				.179	.041	.649
NEW GENDER				1.119	.126	1.950*
DENOMINATION				-.246	-.110	-1.744
NEW EDUCATION				-.137	-.045	-.717
COLLEGEYR				-.499	-.133	-2.149*
CENTERED SDS				-.109	-.259	-3.871***
CENTERED RWB				-.040	-.101	-1.328
CENTERED EWB				.124	.346	4.394***
Step 4	.26	.23	.00			20.701***
NEW STATUS				.182	.042	.658
NEW GENDER				1.152	.130	1.993*
DENOMINATION				-.241	-.107	-1.692
NEW EDUCATION				-.147	-.048	-.765
COLLEGEYR				-.503	-.135	-2.157*
CENTERED SDS				-.108	-.257	-3.810***
CENTERED RWB				-.039	-.098	-1.246
CENTERED EWB				.125	.350	4.410***
INTERACTION CSDS_CRWB				.001	.012	.142
INTERACTION CSDS_CEWB				-.003	-.050	-.604

* P < .05 *** P < .001 DV is PWS

SDS =Self Rating Depression Scale;

RWB= Religious Well-Being;

EWB= Existential Well-Being;

In this model gender was a significant variable with women reporting higher PWS. Year enrolled in college was also significant with students enrolled in the beginning of their college years reporting higher well-being. Additionally the findings revealed that students with higher self-reported depression and spirituality reported lower well-being while students who report higher existential well-being also reported higher subjective well-being. One could conclude that spirituality can affect the relationship between depression and subjective well-being of individuals, and that those with higher existential well-being will show lower depression and greater wellness. However the relationship exists regardless of the level of spirituality. From the mediation test it can be concluded that spirituality reduces the negative effect of depression on subjective well-being, as indicated by the reduced beta weight of depression on the outcome in the presence of the mediator. Also, interpreting the standardized coefficients indicates that depression and spirituality (EWB) had the strongest effects on subjective well-being when controlling for the other variables in the model.

Chapter 5

Discussion of Results

This cross sectional quantitative study sought to explore the relationship between depression, spirituality, and well-being in a sample of teacher trainees enrolled in teachers' colleges in Jamaica. More specifically, the researcher wanted to obtain an estimate of hidden depression in a non-clinical sample of students enrolled teachers' colleges in Jamaica; test the relationship between depression and spirituality, and between depression and perceived well-being. Additionally the study explored the mediation and moderation effects of spirituality on self-reported depression on subjective well-being. The current study was guided by six research questions with corresponding hypotheses. This chapter will discuss the results and contextualize within the extant literature the findings from the statistical analysis presented in Chapter Four.

Previous research conducted with students enrolled in the University of the West Indies in Jamaica indicated that depression was prevalent for this population (Kameel & Kamal, 2011; Lipps et al., 2004; Lowe et al. 2009). Further Abel et al. (2005) and Piko (2005) identified depression as a major concern for the Jamaican population. This current study sought to investigate unreported depression in a non-clinical sample of students' enrolled in three teachers' college as well as explore the relationship between self-reported depression, spirituality and subjective well-being.

The first research question sought to identify students' level of depression, spirituality, and subjective well-being. The levels of depression reported in this sample were below that of previous research (i. e. Kameel & Kamal, 2011; Lipps et al., 2010; Lowe et al., 2009). The findings indicated minimal levels of depression in this sample,

compared to those at the University of the West Indies where 40% reported as clinically depressed in Lowe et al. (2009) and similar levels of depression were found in Kameel and Kamal (2011). Additionally students' level of self-reported depression in this current study was considerably lower than those in a sample of adolescents (14-18 years) in Jamaica as reported in Lipps et al. (2010) and is estimated to be lower than the levels found in the general population.

It should be noted that a number of factors could have contributed to this difference. Social desirability could have impacted the responses. Students could have chosen options that placed them in a more favorable light, especially on items that could be perceived as self-disclosing of depression symptoms (Johnson & Fendrich, 2002; Podsakoff, Mackenzie & Podsakoff, 2012), and as a result the issues of depression could remain masked. Timing of the data collection was another factor that could have influenced students' responses and feelings. The data were collected at the end of February and was during the time when educational institutions celebrated Jamaica day. This is a time of happiness, great pride and celebration of the Jamaican people, culture, and their achievements (<http://jis.gov.jm/media/JAMAICA-DAY-MEDITATION-2014-2.jpg>). Consequently, the festive atmosphere and the feelings of being part of a larger community could have lifted students' mood. Institutional context of the population could also be a contributor to depression level differences.

Teachers' colleges are smaller, with a more intimate and relaxed atmosphere than that of the University of the West Indies, which is a large research institution with a more competitive atmosphere (Economic and Social Survey Jamaica, 2010).

Another issue was in terms of how depression was operationalized using Zung (1965) Self Rating Depression Scale. Some students did not respond to all the questions on the Self-Rating Depression Scale (SDS; Zung, 1965). Similarly to Campbell et al. (2009) students wrote anecdotal comments indicating that these questions were not applicable to them. These questions could have been problematic with this sample and could be a reflection of sexual conservatism where premarital sexual relationships are discouraged. Researchers (Campbell et al. 2009; Wilks et al., 2007) have noted a trend of low non-response to questions around sex related activity in health related surveys conducted in Jamaica.

For Spiritual Well-Being (SWBS), most of the students reported moderate to high overall sense of spiritual well-being. In examining the two subscales Existential Well-Being (EWB), and Religious Well-Being (RWB), more students identified themselves at the high end of the RWB scale reflecting a positive view of their relationship with God. In contrast there was more variability in the range of scores for EWB scale. These findings are a bit different when compared to Genia (2009) who found more variability in the scores for the RWB scale in a mix group of college students in the US. Additionally there were also significant differences between the mean scores and of the two studies, with students in this current study scoring higher on both the total scale (SWBS) and the subscales (RWB and EWB). One could argue that there are a number of possible explanations for the differences between studies. One explanation for students in the current study identifying at the high end on the RWB could be the difference in the social and cultural environments of the Jamaican population. Whereas there is a noted and distinct difference between religion and spirituality in the US, in Jamaica this

distinction is nebulous, and the differences are not discussed. Also religion is more mainstream and emphasized through the denominations more than spirituality. Also the response could be attributed to social desirability since religion is an important facet in Jamaica. Additionally the variability in the scores on the EWB could reflect the spiritual development trajectory as posited by Fowler (1981). Spiritual formation is a process, while some students' spiritual levels could be crystallized others could be at varying stages in their spiritual formation thereby accounting for the variability on the EWB subscale.

A little over half of the students identified as experiencing moderate life satisfaction and life purpose compared to those who perceived themselves as experiencing high levels of life satisfaction with a clear sense of life purpose. The results of these scores indicate that students identified themselves as both spiritual and religious which is consistent with the findings on spirituality and religiosity in the Caribbean nationals living in the United States (e. g. Chatters et al., 2008; Taylor & Chatters, 2011). The variability in the EWB score is important. Whereas religion is clearly organized with rituals, spirituality that the EWB measured is broader looking at life satisfaction, life purpose etc. and students could be anywhere on this journey. That is, some students' spiritual levels could be highly crystallized, while others could be experiencing spiritual challenges or disillusionment; as the college years is a time when students search for meaning and may be examining their spiritual beliefs and values (Bryant et al., 2003; Fowler, 1981; HERI, n. d.).

Results from the correlational analysis and linear regression supported hypothesis 1: that there would be a significant relationship between depression and

spiritual well-being. The correlations for depression with the spirituality variables showed an inverse relationship in that as spirituality increased depression decreases at a significant level with a medium effect size of practical significance. This is congruent with that of previous research that found similar inverse relationship between spirituality and depression (Ano & Vasconcelles, 2006; Dew et al., 2010; Schinttker, 2001; Simon, 2002), and spirituality and anxiety (Hammermeister & Peterson, 2013). This finding is also congruent with the Jamaican worldview on the interconnectedness of mind, body, and spirit and the belief that problem in one area will affect the other areas of their lives (Allen & Khan, 2014; Morgan, 2014; Sutherland, 2014).

The second research question explored the relationship between students' levels of depression and their subjective well-being. The results showed that depression had a negative correlation with subjective well-being. Participants' moderate perception of their life, in this study, is comparable to research conducted by Alleyne, Alleyne and Greenridge (2010) on a sample of students from the University of the West Indies, Cave Hill campus, Barbados in which participants also expressed moderate perception of their well-being. The results of Alleyne et al. (2010) also found a significant negative relationship between perceived stress and satisfaction with life. As in this current study high levels of perceived stress were associated with lower levels of life satisfaction among participants. The Alleyne et al. study noted a medium effect size ($r=.46$), while the effect size in the current study ($r=.11$) was small indicating medium to small practical significance. These findings however provide additional support indicating that there is a negative correlation between perceived stress and satisfaction with life. It should be

noted that while Alleyne et al. (2010) used stress as the predictor variable, this current study used depression as the predictor variable for subjective well-being.

One of the principal analyses of this study was to assess the relationship between the levels of depression and subjective well-being. The researcher tested whether self-reported spirituality mediated the relationship between self-reported depression and self-reported subjective well-being. In this study, self-reported spirituality was found to be significantly related to with subjective well-being. Individuals who reported high levels of spirituality tended to have low to normal levels of depression. The results of the mediation hypothesis indicated that self-reported spirituality was a partial mediator of the relationship between self-reported depression and subjective well-being. Though full mediation was not found, the findings lend some support to the view that individuals who self-report high levels of spirituality are likely to have better subjective well-being and mental health outcomes, such as, minimal to no depression (Ellison & Levin, 1985; Fabricatore et al., 2000; Pargament, 1997; Tsaousis et al., 2012). This partial mediation suggests that there might be other mechanisms by which the negative impact of depression on subjective well-being is reduced. It should be noted that whereas previous studies mentioned above tested the established relationship of stress/spirituality/depression, the current study deviated and instead tested the depression/spirituality/subjective well-being relationship and could be a contributor to the differences in the mediation results.

Grom (2000) noted that subjective well-being is influenced by religiously motivated social interaction and can be seen as a protective factor against mental health deficits like depression. Spirituality is a central component of Jamaican life

(McDermott, 2002; Miller, 2002; Wane & Sutherland, 2010) and along with engagement in religious activities could be seen as protective factors for students. Students' spirituality could also be seen as influencing their perception of their subjective well-being.

There is empirical support suggesting that spirituality can act as a buffer or stress reducing mechanism on health outcomes (Brown-Reid & Harrell, 2002, Fabricatore et al., 2000, Hutchinson et al, 2004; Pargament et al., 1990; Schnittker, 2001). In this current study, it was hypothesized that students' self-reported spiritual levels would moderate the relationship between self-reported subjective well-being and self-reported depression. Spirituality as a moderating variable for the relationship between depression and subjective well-being was not supported. One conclusion drawn is that spirituality can affect the relationship between depression and subjective well-being of individuals. That is those with greater spirituality will show lower depression and greater wellness. However this relationship can exist regardless of the level of spirituality.

The lack of support for the moderation hypotheses may be attributed to choice of the risk factor used in this study. In this current study the risk factor and the outcome variable were different from previous research that tested moderation. Most of the studies (Ano & Vasconcelles, 2006; Brown- Reid & Harrell, 2002; Eliassen et al., 2005; Hammermeister & Peterson, 2013; Hutchinson et al., 2004; Schinttker, 2001) that showed significant moderation used a measure of stress as the predictor, spirituality/religiousness as the moderator and depression as the outcome variable. The correlational analysis in the present study showed that depression (predictor) and subjective well-being (outcome) are very different as they shared only 10% of their

variance in common. As noted, most studies reviewed utilized the classic stress/depression dynamic and tested the influence of spirituality on this well-established relationship while the current studies used different variables. In the current study, depression was used as the predictor variable, spirituality/religiousness as the moderator and subjective well-being was used as the outcome variable. This change in variable and variable placement could also contribute to the lack of support for the moderation hypothesis. Depression was within the normal range for most students and was therefore not a risk factor or stress for the participants in this current study. Schnittker, (2001) noted spirituality may serve as a moderator under extreme circumstances depending on the amount of stressor rather than the type of stress. Thus, one could conclude that spirituality may buffer severe depression as its presentation can be a stress factor and should be tested in future research with a clinical population.

Some studies show strong support for the moderation or buffering effect for physical and mental health outcomes (e. g. Ano & Vasconcelles, 2006; Brown- Reid & Harrell, 2002; Eliassen et al., 2005; Hammermeister & Peterson, 2013; Hutchinson et al., 2004; Schinttker, 2001), while others show minimally support for moderation (Fabricatore et al., 2000) or no support as finding in this current study. Dew et al. (2010) noted that contextual and cultural variables (i. e. geographic variability, denomination, year group, gender) might contribute to the inconsistencies in the result as well as the cross-sectional nature of the research. Spirituality may have a more significant effect in influencing psychosocial and relational variables (social support community engagement, optimism, and resiliency) than psychological variables. Future research

could examine other variables like social interaction, (Chao, 2010; Grom, 2000), self-esteem, or self-concept (Myers, Wilise & Vaillalba, 2011; Tsaousis et al., 2012) and socioeconomic status (Eliassen et al., 2005) on subjective well-being as these have been posited to have positive influence on health outcomes.

These research findings contribute additional evidence of the role of spirituality on well-being. When controlling for the demographics and for depression, in the moderation analysis, spirituality contributed significantly to predict well-being with a medium effect size. Additionally this current study examined the depression, spirituality, and subjective well-being variable relationship, which is different from the constructs and variable relationship (stress, spirituality and depression) of most studies in this area.

Chapter Summary

The purpose of this study was to obtain an estimate of underlying depression in a non-clinical sample of teacher trainees' enrolled teachers' college in Jamaica and understand the moderation and mediation effects of spirituality on depression and well-being in this population. This chapter discussed and contextualized results and linked them to extant literature review. In this current study, students enrolled in teachers' colleges did not self-report experiencing depression as their counterparts at the University of the West Indies at similar levels of severity. Students could be less depressed as a result of contextual factors such as the nature of teachers' colleges, the small intimate size, and the relaxed atmosphere. The researcher noted other contributing factors including the issue of social desirability, operationalization of the construct, as well as the time of data collection. On the spirituality variable, students'

level of spirituality varied and this could be consistent with the developmental trajectory for young adults (Fowler, 1981). College is often the time for questioning about life and life's purpose as well as crystallization of one's place in the world. This is important as the interest in the current research wanted to bring focus to student spirituality, this will be addressed further in the implication for future research.

In the current study, partial mediation was found for the influence of spirituality on depression and subjective well-being and the moderation hypothesis was not supported. This indicated that other psychosocial variables like social support and resiliency could also be influencing the outcome. The next chapter will discuss the implication of the current study for practice and future research as well as examine the study's strengths and limitations.

Chapter 6

Implications and Limitations of Study

In this chapter the researcher will discuss strengths and limitations of the study. This will be followed by addressing some implications for counselor education and teacher training and suggest possible next steps in terms of future research. The chapter ends with a conclusion for future research.

Strengths and Limitations of Study

Strengths of Study

The present study had several strengths, including the focus on spirituality in the teachers college population in Jamaica. This study is a first step in examining mental health issues in the teachers college population. It provides some preliminary information on the levels of depression, spirituality, and subjective well-being on tertiary students outside of the University of the West Indies system. Focusing on the teachers college population was a strength of this study, as to date no other study could be identified that focused on mental health issues in this population. Additionally, few studies have examined spirituality in the Jamaican population: notably these studies were usually focused on Jamaicans and Caribbean nationals who had emigrated (Chatters et al., 2008; Chatters et al., 2009; Taylor & Chatters, 2010; Taylor et al., 2009; Taylor et al., 2009). This study is important, as it is the first of its kind to examine spirituality in the college age population living in Jamaica and is also the first one to examine the relationship between spirituality, depression, and subjective well-being.

Drawing participants from three colleges and the large sample size enhanced the external validity of the study. By sampling participants from three different colleges, one

in each county, allowed for diversity on the demographic variables, and provided a stronger warrant for generalizing the findings to the teachers' college population in Jamaica. Additionally, the number of participants in the study strengthened statistical conclusion validity. Prior research indicated that at least 200 participants were needed to set statistical power of .80 for detecting medium effect (Cohen & Cohen, 1983; Hoyle & Kenny, 1999). Hence the 214 participants in this study provided sufficient power to detect effects of the relationship that existed in the population, thereby reducing the possibility of making Type II Error.

The statistical conclusion validity of this study was further enhanced by the use of measures with high reliability. Prior research on the depression measures Self Rating Depression Scale [SDS] (Thurber et al., 2002; Ward et al., 2001; Zung, 1965) and Spiritual Well-Being [SWBS] (Bufford et al., 1991; Ellison, 1983; Genia, 2001; Jagers et al., 1997; Paloutzian & Ellison, 1991/2001) reported acceptable reliability. Likewise the Spirituality Scale [SS] (Bullard, 1991; Jagers, 1987; Smith, 1994; Jagers & Smith, 1996) and the Subjective Well-Being measure [PWS] (Adams et al., 1997; Adams et al., 1998; Carter, 2004; Tsai, 2004) all reported acceptable internal consistency reliability estimates.

In the current study the alpha levels fell within the acceptable range for the depression [SDS], spiritual well-being [SWBS] and subjective well-being [PWS] measures. Given the weak reliability of the second spirituality measure SS, the researcher made the decision not to use this scale in answering any of the research questions since it would reduce statistical conclusion validity. This decision was important, as utilizing measures with poor reliability would negatively impact the

mediation analysis (Frazier et al., 2004). Using measures with acceptable Cronbach's alpha levels reduced the likelihood for both Type I and Type II errors and strengthened statistical conclusion validity (Bellini & Rumrill, 1999). Overall the scores on the SWBS scales reflected the pattern of the ceiling effect as students fell within scoring at the higher end of the scales that is one to two standard deviation above the mean as reported by (Bufford et al., 1991; Ledbetter, Smith, Vosler, & Fischer, 1991). This finding supports the need "to find items which have greater variability in highly religious groups" (Bufford et al., 1991) with the aim to provide greater variability and discrimination on the scales.

Finally, the use of hierarchical multiple regression over stepwise regression is a strength of this study. Hierarchical multiple regression is used when there is a rationale for the order of variable entry as opposed to stepwise regression where the order is decided by the computer statistical program (Keith, 2006; Tabachnick & Fidell, 2007). In this study hierarchical multiple regression was selected given that the design and constructs were based on empirical rationale and a priori decision on the order of variable entry. In addition, the reliability of the measures and the correlations among them indicate that the changes in the magnitude are by chance and do not exaggerate the relationship between the variables and therefore strengthen the statistical conclusion validity.

Limitations of Study

Key limitations to this study are addressed in this section. The self-report nature of the instruments could have led to inflated correlations among the variables due to common methods of variance. Because students were aware that they were being

evaluated, the self-report nature of the measures could have resulted in students either over-reporting or underreporting their levels of depression, spirituality, and well-being on the instruments either consciously or unconsciously as a result of social desirability (Crowne & Marlowe, 1960, 1964). This limitation weakened the construct validity of the study. Despite limitations in terms of social desirability, self-report measures are robust measures and are used extensively in counseling as practitioners often rely on their clients self-report in therapy.

Another key limitation is related to the instruments involved assumptions of reliability. Although the depression instrument (SDS; Zung, 1965) had past acceptable level of reliability, it encountered problems in that some students responded anecdotally by saying the questions did not apply to them instead of circling one of the given responses to some questions. As such, the construction of the questions may have been problematic in this context and threatened the construct validity of the scale. As a result, readers should be cautious about conclusions drawn about depression, since this research used a single scale to measure this construct. Future research should consider coming up with a modified version of the SDS (Zung, 1965) by revising the items "I still enjoy sex" and " I feel others would be better off if I were dead" as 14% and 12% of the sample respectively failed to respond to these statements. Revisions of these items could lead to a higher response rate in future surveys. Additionally future research should use multiple measures of depression. The Spiritual Well-Being Scale (SWBS) was used to measure the construct spirituality. This scale has two sub scales Existential Well-being (EWB) and Religious Well-Being (RWB). Because the SWBS was used in some calculations this is a limitation as the total scale (SWBS) conflates the

scores from the two subscales (RWB and EWB) and is therefore not a pure measure of spirituality. As a result, readers should be cautious about conclusions drawn about spirituality. In future research it would be instructive to use instrument/s that do not conflate the constructs spirituality and religion. Additionally the instrument used to measure spirituality should be more encompassing.

Another limitation is that participants were from a convenience sample drawn from three colleges. One could argue that the convenience sample limits the generalizability to the broader teachers' college population as well as other post-secondary institutions. This is a threat to external validity, as the results may not be generalized to other populations and settings (Bellini & Rumrill, 1999). It is also possible that the students who self-selected to participate differed from those who did not volunteer in this study. Students who participated may have experienced higher levels of well-being and limited to no depression. Therefore certain students may have been more willing to be engaged. This limitation is a threat to internal and external validity (Bellini & Rumrill, 1999). Use of systematic or stratified sampling procedure could help future research to address this limitation.

There is another limitation with respect to the convenience sampling as not all trainees within these three colleges had an equal chance to participate in the study based on the inclusion criteria. Students who were registered as part time or those who were in their fourth year were excluded which may have contributed to sampling bias. Additionally, data were collected at a specific time during the day when students who were unassigned to classes at that time did not have an opportunity to participate. This could lead to the possibility that the research sample does not reflect the true population

of teacher trainees and limits the extent to which the findings can be generalized. Moreover, since all the data were collected at one time only, time precedence cannot be assumed. This also means that the direction of the variable effects cannot be completely assured. A longitudinal research would allow the researcher to make a warrant for causation.

Participants in this current study were largely heterosexual females (88.4%) who identified as Christians (94%). It is unknown whether these results could be generalized to a population with a higher percentage of males and higher percentage of persons belonging to other spiritual groups. Though this is seen as a limitation, the gender ratio reflected the enrollment of female to male in teachers' colleges (Ministry of Education, 2013) and high rates of Christianity reflected the dominant spiritual practice of Jamaicans (Allen & Khan, 2014; Wane & Sutherland, 2010). Finally the number of missing data that required replacing with the series mean for the item (George & Mallery, 2007; Heppner & Heppner, 2004) is a limitation. This could have resulted in some standard errors of either underestimating or overestimating test statistics. This weakens the external validity of the study and creditability of the data set (Heppner & Heppner, 2004).

Implications of Study

Practice Implications. This study has implications for counseling practice, as well as teacher education. College counselors and administrators are well positioned to promote teacher trainees health, wellness, and work preparation, as such they should consider a two tier approach that involves preventative as well as intervention programs for students. The following implications are aimed at college counselors, lecturers, and

administration to realize that college is not only about academics, but there is also a need to focus on enhancing of the student teacher character so that they are better able to fill their roles in society.

Given that spirituality was found to partially mediate the relationship between self-reported depression and subjective well-being, college counselors are advised to explore clients' spirituality values in counseling sessions. In so doing teacher trainees would be encouraged to examine spirituality as a possible contributor to their depression, as a barrier to their well-being and a resource for enhancing their well-being. This exploration could take place in both individual and group counseling sessions. The aim of this exploration is not to change the client's values, but to help the client to see how their values are integrated into their spiritual beliefs, in how they make sense of the world and understand what is happening to them as well as around them (Osborn, Street & Bradham-Cousar, 2011; Seligman, 2002).

From a teacher education perspective, administration should consider including content on exploring spiritual development in the broader psychoeducational curriculum. Teachers are charged to help with value formation in their students and students' emulate teachers' behavior. Through the facilitation of exploring college students' values and spiritual development college students will have a model on how to initiate discourse on spirituality. This would help them to keep the focus on spirituality as a core component of self, something that is common to all, irrespective of one's religious or non-religious ideology.

A focus on spirituality could help to increase students' awareness of their spiritual development, as well as help with students' spiritual formation. If one wanted to focus

on spirituality some proposed pedagogical strategies could include: the development of a wellness based orientation for self-awareness, utilizing constructivist and inclusive dialogue about spirituality, exposure to diverse beliefs and values as well as assessments (Myers & Williard 2003) and the use of creative individual and group class activities (Briggs & Rayle, 2005; Hagedorn & Gutierrez, 2009). More specific strategies include integrating spirituality into case studies, class discussions and assignments, using role-play and modeling (Osborn et al., 2011), use of spirituality bibliotherapy where students read spiritual literature around themes of love, forgiveness, spirituality identity, and grace (Richards et al., 1997). Finally themes on spirituality could also be interspersed throughout the curriculum into appropriate existing courses. Facilitators of these sessions would therefore need to have gone through their own spiritual formation and feel competent to facilitate this discourse in the classroom without imposing their values or indoctrinating the students. Incorporating spirituality and normalizing its evaluation in discourse would serve the purpose of helping students to critically evaluate their spiritual formation and use spirituality as way to enhance their subjective well-being.

On a wider scale contemplative pedagogy can also be introduced and modeled in the classroom. Contemplative pedagogy introducing meditation practices in higher education class has been seen to enhance the holistic development of students (Barbezat & Bush, 2013; Hart, 2004; Shapiro, Brown & Astin, 2008) while meeting traditional education goals around cognitive and academic performance. Specifically this practice has contributed to increase self-awareness, enhance creativity, compassion, interpersonal skills and critical thinking skills (Hart, 2004; Shapiro et al.,

2008). Contemplative pedagogy would therefore enhance the mind, body spirit connection while achieving the traditional education goals of improving cognitive and academic performance.

More specifically aspects of contemplative pedagogy including breath work, visualization, guided meditation, sitting and walking meditation, art, journaling, deep relaxation, and loving kindness meditative practices could be incorporated and practiced for ten minutes in some of the core courses, thereby exposing teacher trainees to these techniques and practices. This daily practice of ten minutes in each class could eventually grow into a daily practice for students. The following core courses could be adapted to facilitate teaching and practice of contemplation: personal development, child and adolescent development, citizenship and the emerging professional. Additional content area specific courses specifically in counseling and religious studies could also include this approach.

In order for the incorporation of contemplative pedagogy to be effective, faculty would need to be exposed and educated around this methodology, incorporating it into their lives before they would be expected to model and guide students. It should be acknowledged that not everyone may be open to these practices as a result of social, spiritual, religious, and other cultural values and biases. As a result, psychoeducation and awareness raising will need to take place to demystify contemplative practice, addressing history, benefits, and specific practices. This awareness component will need to be a system wide effort to help stakeholders realize that the practice being implemented is not promoting any specific spiritual, or religious ideology; instead it is aimed to enhance resiliency and inspire both students and faculty;

... ability to maintain preparedness, orient attention, process information quickly and accurately, handle stress, regulate emotional reactions, and cultivate positive psychological states; that one-pointedness practice improve academic achievement; and that meditation enhances creativity, social skills, and empathetic responses (Repetti, 2010, p. 12).

This awareness raising and education could be done through workshops, seminars, including the use of guest lectures. Faculty and students who are not interested in incorporating this practice in their work and learning should not be forced to do so. Barriers to implementation would include time, lack of experience, expertise, and resistance at the administrative level. One also needs to recognize and consider the context and tailor practices and approaches to be congruent with the specific context.

Research Implications. Depression has been identified as a major concern globally (WHO, 2012), and as a public health priority for Jamaica (Abel et al., 2005; Piko, 2005). In Jamaica researchers have found high levels of depression in college students enrolled at the University of the West Indies (Campbell et al., 2009; Kameel & Kamal, 2011; Lipps et al., 2010; Lowe et al., 2009). Recognizing that depression is a mental health concern for Jamaicans and the college age population, there is the need for more research that specifically targets college students enrolled in nearly a dozen tertiary level institutions scattered across the island. Focusing on teachers' colleges is important as the literature also indicated that individuals may enter teachers' colleges with unresolved issues and may not have an accurate assessment of their well-being (Harriott, 2009; Thompson, 2002). Given the breaking down of the social fabric of the society, as a result of poverty, a subculture of violence, systemic inadequacies in

supporting infrastructure, and declining personal responsibility (Harriott, 2009; Perkins, 2013), it is important that the mental health concerns of students enrolled in teachers colleges be addressed. This study was an initial step in assessing the level of depression and subjective well-being of teacher trainees and needs to be expanded to look at all teachers' colleges and affiliated institutions that are charged with gate keeping for the teaching profession. Further research should look at both anxiety and depression, as common psychological conditions that impact subjective well-being. Additionally research should also seek to utilize measures of depression that do not explicitly ask questions around "sex" given the trend of low to no response to this type of question as noted (Campbell et al., 2009; Wilks et al., 2007).

This study provides a preliminary step to identifying a pathway that explains the relationship between depressive symptomatology, spirituality, and subjective well-being. Specifically the findings of this study are in line with previous research (Ano & Vasconcelles, 2006; Dew et al., 2010, Schinttker, 2001; Simon, 2002) which indicates that spirituality impacts depression, and that participants who report to be more spiritual and/or more religious often benefit from reduction in risk for psychological distress and improvement in quality of life or well-being (Koenig et al., 2001; Miller, 2003; Musick, 2000; Pardini et al., 2000; Ritt et al., 2004; Schnittker, 2001). Since this was a non-clinical population it may be more instructive to include an examination of stressors more broadly (Fabricatore et al., 2000) as these are potential contributors to depression and anxiety. As previously noted, there is a gap in the literature examining the stress/spirituality/depression relationship in a Jamaican sample. Further there is also a gap in the research as most of the studies reviewed in Chapter Two examined the

classic stress/depression dynamic and test the influence of spirituality on this well-established relationship. This current study contributed to the field by examining the relationship between depression and well-being and tested the influence of spirituality on this relationship. Hence, this is groundwork for longitudinal research into whether spirituality helps to lower levels of depression and improve well-being. A longitudinal research design may also help to ascertain under what circumstances this happens, as well as what are other contributing variables that account for this outcome.

The findings of this study lend support for spirituality as a partial mediator in the relationship between self-reported depressions on subjective well-being. Spirituality is therefore only one pathway that influences the outcome. Research needs to be directed towards testing additional psychosocial variables like social support, ego identity, resiliency, and self-esteem as possible moderators between spirituality, depression, and subjective well-being. Although this study did not find spirituality to be a full moderator of subjective well-being research suggests that social support moderated the relationship between stress and psychological well-being in college students (Chao, 2010). This moderating effect was linked to problem focus coping (Chao, 2010), which can be linked back to Pargament et al. (2000) research on religious coping. The seminal work of Erikson (1968) pointed to identity formation as a significant contributor to well-being, while Myers et al. (2011) have noted that self-esteem is positively related to wellness. Attention to these variables would expand knowledge on contributors to well-being, as well as continue to identify other mediators and moderators that account for the relationship between spirituality, depression, and subjective well-being. Additionally since the spirituality instrument used has both a spiritual well-being scale and a religious

well-being scale this research could be strengthened by conducting similar tests of the religious well-being scale to see the comparison and or difference in the effect of religious wellbeing as a moderator and mediator of depression on well-being.

Methodological Implications. This study has methodological implication for counseling and education research in general in terms of choice of statistical measures, instrumentation and design. For this study simultaneous multiple regression and hierarchical regression were utilized. Multiple regression is useful for explanation or prediction as well for providing information on direct effects of the independent variable on the outcome variables after controlling for other variables (Keith, 2006). On the other hand hierarchical regression is a very rigors statistical procedure for testing mediation hypothesis and critically relies on the ordering for variable entry. In other words, it is a procedure anchored in research as variable entry needed to be entered in actual time preference, variables entered first will have larger effects (Keith, 2006). Hierarchical regression as used in this research for testing mediation effect examined total effects that is a combination of direct and indirect effects while the moderation tests for direct effects over above what is accounted for by other variables (Keith, 2006). Moreover multiple regression includes ANOVA and utilize both categorical and continuous variables for computation.

Unlike some of the studies in the review of literature (Fabricatore et al., 2000; Hammermeister & Peterson, 2013) this research did not employ MANOVA, which is used, with two or more dependent variables while controlling for correlations between the two dependent variables. MANOVA tested the difference between groups and determined the differences but cannot tell which is different and therefore suggest that

moderation is present whereas hierarchical regression formally tests for the moderation (Keith, 2008). The use of multiple regression was the better choice for this current research as it works with multiple independent variables and one dependent variable, which was the base structure for this research. This procedure was also used in Brown-Reid & Harrell (2000), Hutchinson et al. 2004 and Tsaousis et al. 2012). It should be noted that hierarchical regression, which includes use of an interaction terms, is the preferred method for test moderation (Frazier et al., 2004). Notwithstanding the use of path analysis through structural equation model could be utilized to test the mediation effect but would have required a more complex designed with more variables. An advantage to using path model is that it allows for flexibility and works with measurement errors; it takes common causes or extraneous variables or residual into account. Additionally the path model allows for testing and comparing an alternative model that could account for potentially explain the relationship among variables (Keith, 2006).

Spirituality is complex, fluid and dynamic. As noted there is little evidence of research on this concept and what it means in the Jamaican context. Measurement instruments like those utilized in this study are grounded in some theological position. As a result a qualitative design maybe more useful as this will help to see if the participants understanding and articulations of their spirituality is from a purely spiritual perspective as opposed to a theological view. Qualitative research in this area would help in the understanding of spirituality and provide a personal framework on how Jamaicans understand their spirituality, how they express it, and how they understand themselves as spiritual beings. This qualitative research would include personal

narratives and provide rich data on a central aspect of Jamaica life style and how their lived spirituality impact coping and well-being

Two of the main research reviewed noted a curvilinear relationship between levels of religiosity and depressive symptomatology (Eliassen et al., 2005) and between religious involvement and depression (Schnittker, 2001). This research did not test the curvilinear effect and could be strengthened by examining the curvilinear relationship between levels depression, levels spirituality and subjective well-being. The relationships found between the variables in the linear regression may have varied depending on the range of depression or levels of spirituality found in the population. Future research can test for the interaction of spirituality with different levels of depression (low-moderate-high) as well as the interaction of depression with different levels of spirituality and subjective well-being. In addition to providing more information, this examination could also help to solve the small effect size between these variables.

Conclusion

Caribbean Christian traditions share the principle of health or wholeness, that is, “the human is more than a material or mind-body being, but also infused with spiritual...each individual is a whole or complete being, having capacity to be rational, creative, and relational. As part of their wholeness, individuals are able to sustain spiritual relations with God and fellow creatures . . . By God holding together our wholeness, health is then not just the absence of disease or infirmity but is also a harmony of mind, body, spirit . . . health is a positive quality of life, the creature sustaining the right relation to the Creator and to the other creatures, including the natural order of life” (Allen & Khan, 2014, p. 156)

The above quotation can be seen as the cornerstone to Caribbean well-being and the centrality and prominence of mind, body, and spirit as working together to regulate health and well-being (Allen & Khan, 2014; Morgan, 2014; Sutherland, 2014; Wane & Sutherland, 2010). Infirmary in one aspects result in infirmity within the whole person (Allen & Khan, 2014; Morgan, 2014; Sutherland, 2014). Furthermore, a Caribbean traditional belief is that illness and mental disorder can stem from natural, social, spiritual, or psychological disturbances creating imbalance that is then manifested in physical, social, or mental illness (Wane & Sutherland, 2010). These beliefs are analogous to some current Western practices and beliefs, like the biopsychosocial and wellness models proposed by Engel (1977) and Hettler (1984) respectively. In fact, Amuleru-Marshall, Gomez, and Neckles (2014) posited that spirituality is a key in the biopsychosocial health. As such it is important to explore the role that spiritual plays in mental and physical health.

Future studies could examine the implementation of contemplative pedagogy at the teachers' college level, and its impact on the teaching learning process. Further research could examine the overall wellness of teacher trainees and in particular their mental health and academic success. This could further be extended to see how these trainees utilize these techniques in the k-12 classroom, and how it impact the students. Such a study could be longitudinal and utilize a mixed method approach thereby providing empirical data to help us understand the impact of these interventions throughout the education system.

The present study aimed to contribute to an understanding of the relationship between depression, spirituality, and subjective well-being and more specifically an

understanding of the role of spirituality in contributing to subjective well-being in a sample of the Jamaica population. Overall the findings in this study support previous research indicating that spirituality strengthens health outlook and well-being.

Conversely it also added to the conflicting evidence regarding the potential moderating effect of spirituality on depression and well-being. Some studies have supported a buffering effect of spirituality and religion on health (Ellison & Levin, 1998; Feher & Maley, 1999; Gartner, 1996; Pardini, Plante, Sherman & Strap, 2000; (Richard & Bergin, 1997; Ellison & Levin, 1998; Ritt-Olson, et al., 2004). While some studies support an amplifying effect of religion and spirituality on health (Kirkpatrick & McCullough, 1999; Larson, Sawyers & McCullough, 1998; McCullough et al., 2000; Miller, 2003; Pargament, 1999; Seybold & Hill, 2001; Shorkey et al., 2008).

The ability to tap into ones spirituality whether through “divine therapeutic intervention”(Allen & Khan, 2014, p. 157) through the forms of prayers, spiritual rituals, miracles, faith healing, as well as utilizing western medicine and human services including counseling, appear to reduce the risk of stress, and increases positive attitudes and perception of one’s well-being. Low spirituality, which may be coupled with spiritual struggles on the other hand, may exacerbate individuals stress symptoms and negatively influence their thoughts and overall perceptions of their lives.

As one reflects on the findings of this research in conjunction with the literature on Caribbean worldview and healing traditions it becomes clear that addressing spirituality in practice is essential. This addressing of spirituality needs to be two fold. On the one hand helping individuals to explore this aspect of the integrated self to see it as a source of strength, support or resource and also helping individuals explore when spirituality is

a barrier to their well-being, and finding ways to bring back harmony to mind, body, and spirit. This can be done through counseling as well as through group psychoeducational sessions as community plays a part in the healing process. On the other hand mental health practitioners like college counselors and interdisciplinary support services and staff need to be able integrate addressing spirituality with students, as this is congruent with the worldview of their constituents. By neglecting to address this issue they may fail to identify the source of the client issue.

Future research should be continued to examine the association and the role of spirituality in both mental and physical health outcomes and how it overall impact clients' well-being. Increased theoretical and empirical knowledge will better assist counselors and educators understanding of this phenomena and help clients and students to utilize spirituality to bring harmony and balance as they encounter psychological and psychosocial challenges in their lives.

Appendix A: Informed Consent



SYRACUSE UNIVERSITY
SCHOOL OF EDUCATION
COUNSELING AND HUMAN SERVICES
259 Huntington Hall
Syracuse, NY 13244-2340
315-443-2266

Title: The relationship of spirituality and depression on the subjective well-being of the Jamaican college students - A cross sectional study of teacher training institutions in Jamaica

Informed Consent

Investigator: Claudette A. Brown-Smythe, doctoral candidate, and Dr. Derek Seward, faculty advisor.

This informed consent form will provide you with information about confidentiality and privacy, describe the research procedures, and explain your rights as participant in this study. You may direct questions, concerns, or complaints regarding this research to the investigators, Claudette Brown-Smythe (315-863-1427) and Dr. Derek Seward, Faculty Advisor (315-443-2266). If you have questions regarding your rights as a participant, you may contact the Syracuse University Institutional Review Board (315-443-3013). Also if you have questions, concerns, or complaints regarding this research and you are unable to reach the investigators, or if you wish to direct questions to someone other than the investigators (Claudette Brown-Smythe or Dr. Seward), you may contact the Syracuse University Institutional Review Board (315-443-3013).

My name is Claudette A. Brown-Smythe, and I am a doctoral candidate at Syracuse University, Counseling and Human Services Department in the School of Education.

I am conducting a research study entitled "The relationship of spirituality and depression on the subjective well-being of Jamaican College students-A Cross-sectional study of teacher training institutions in Jamaica, in partial fulfillment for the completion of my Ph.D. degree in Counseling and counselor Supervision. Your participation in this study is voluntary. If you do not want to take part in the study you have the right to refuse to do so without any penalty. If you choose to participate you have the right to withdraw at any time, for whatever reason without any penalty.

My interest in conducting this research is to examine the relationship between spirituality and depression on subjective wellbeing in teacher trainees in Jamaica. You will be asked to complete a demographic questionnaire and a few brief survey instruments. Some of the questions will address religion and spirituality, your relationships with others, and how you feel about yourself. The instrument should take approximately 10-15 minutes to complete.

As an incentive to participate in this research, a random drawing for forty (40) J\$100.00 phone cards immediately after the data collection phase is ended. This is expected to take place around the January 31, 2014. The recipients will be notified via email. There is no fee, and you do not have to complete the survey to enter, although I encourage you to do so. If you wish to enter the drawing you will be asked to provide your email address on a sheet provided at the end of the survey. You will be asked to pick up the gift card on campus, or you may request to have it mailed to you. This will require the provision of your mailing address. The total number of people who entering the drawing for the gift cards on your campus is estimated to be around 150; therefore, the probability percent of you winning a phone card is 37.5%.

All information you provide on the research survey will be kept confidential. The data will be kept in a secured place and will be destroyed when the research is completed. Participants' personal information will not be used in this study and will be unknown to the researcher, as each participant will be assigned a number ensuring anonymity. The following detail the steps that have been taken to ensure your privacy: (1) the informed consent form will be stored in a separate secure, locked location from the instruments; (2) no names of identifying information will be requested on the survey instrument; (3) your email address will not be linked to the Informed Consent or the survey and will be stored separately from the survey; (4) the data generated from the survey will be kept in secured, locked locations and only the investigators listed above will have access to the data; and (5) in any ensuing reports and/or publications, only demographic information and group scores will be reported; individual participants will not be identified.

The direct benefit in participating in this research study is the potential of increasing your awareness of your wellbeing and spirituality state. You may also feel gratified that you are assisting researchers to better understand the relationship between spirituality and depression on one's wellbeing. This may have an impact on how mental health services are offered and structured for teacher trainees. The potential risk to you in participating in this research study is minimal. You may experience some stress and discomfort at most. Though risk is estimated to be low, if discomfort does arise and you wish to speak to a professional, you may contact the counseling center.

Claudette A. Brown-Smythe, M.S.W., M. Sc., NCC, CRC
 Doctoral Candidate, Syracuse University
 Counseling and Human Services Department

I have read the contents of this consent form and have been encouraged to ask questions. All my questions have been answered. I give my consent to participate in this study. I have received a copy of this form for my records and future reference. I also affirm that I am 18 years old or older.

Participant Printed Name

Participant Signature

Date

Researcher Signature/Date

Appendix B

Recruitment Protocol

Hello, my name is Claudette Brown-Smythe, and I am a doctoral candidate at Syracuse University in Syracuse, New York. I am conducting a study to explore the relationship between health and spirituality in college students and am requesting your participation in this research.

The study has been approved by the Syracuse University Institutional Review Board (IRB # 13-378) and takes approximately 10-15 minutes to complete. Participation consists of completing demographic information, the *Spirituality Well-being Scale*, and three additional instruments. Participation is anonymous, and participants can withdraw from the survey at any time.

As an incentive to participate in this survey, you can enter a drawing to win one of 40 phone cards that will be offered to students on your campus. You will be asked to provide your email address to enter the drawing. Participating in the drawing for the phone cards is voluntary and you can choose not to submit your email address and not enter the drawing.

By completing this survey, you may be able to help improve our understanding of the role spirituality plays in teacher trainees' health. Thank you very much for your participation!

If you have any questions, please contact me at cabrowns@syr.edu. My faculty advisor, Dr. Derek Seward, can also answer questions or concerns via e-mail at dxseward@syr.edu or phone at 315-443-2266.

Sincerely,

Claudette A. Brown-Smythe, Doctoral Candidate
Counseling and Human Services Department
School of Education
Syracuse University

Appendix C

Demographic Questionnaire

Please complete this demographic section of this questionnaire. It is important that you answer each question carefully and accurately. No personal information will be revealed in the study result.

1. Please indicate the age range in which you fall
 - a. 18-25
 - b. 26-30
 - c. 31-35
 - d. 36-40
 - e. 41 and over

2. Which best describe your intimate partner relationship status?
 - a. Married
 - b. Common law union
 - c. Visiting relationship
 - d. Dating
 - e. Not in a relationship
 - f. Other (specify) _____

3. How many children do you have?
 - a. None
 - b. 1-2
 - c. 3-4
 - d. 5 or more

4. What is your gender?
 - a. Male
 - b. Female
 - c. Transgendered

5. With what religious or spiritual tradition do you identify?
 - a. Christians
 - b. Jehovah's Witness
 - c. Hindu
 - d. Judaism
 - e. Muslim

- f. Rastafarian
 - g. Atheist
 - h. Other (please identify) _____
 - i. None
6. What is your denominational affiliation?
- a. Pentecostal
 - b. Church of God
 - c. Seventh Day Adventist
 - d. Jehovah's Witness
 - e. Jew
 - f. Muslim
 - g. Protestant (Anglican, Baptist, Moravians, Methodist, , United Church)
 - h. Roman Catholic
 - i. Rastafarian
 - j. Other (please specify) _____
7. What year are you in college?
- a. First Year
 - b. Second Year
 - c. Third Year
 - d. Fourth Year
8. In which major are you currently enrolled?
- a. Early Childhood Education
 - b. Primary Education
 - c. Secondary Education
 - d. Special Education
 - e. Guidance and Counseling/School Counseling
9. What is the highest education level attained by your mother?
- a. Primary school or less
 - b. Secondary School
 - c. Trade/Vocational School (HEART, Business School)
 - d. Community College
 - e. Three or four college degree or diploma (Teachers' College, Nursing School, UTECH, University)
 - f. Graduate School (Master's degree and above)

10. What is the highest education level attained by your father?
- Primary school or less
 - Secondary School
 - Trade/Vocational School (HEART, Business School)
 - Community College
 - Three or four degree or diploma (Teachers' College, Nursing School, UTECH, University)
 - Graduate School (Master's degree and above)
11. Where do you live while in college?
- On campus
 - Off campus with family
 - Off campus alone
 - Off campus with friends
12. How often do you consume alcoholic beverage?
- Daily
 - Weekly
 - On special occasions
 - Now and then
 - Not at all
13. Do you smoke
- Cigarette/Tobacco
 - Marijuana/Ganja
 - Seasoned Spliff
 - Other_____
 - I do not smoke
14. Have you ever been diagnosed with any of the following conditions? Check all that apply.
- Diabetes
 - Hypertension
 - Cancer
 - Depression
 - Anxiety
 - I have never been diagnosed with any medical condition
 - Other medical or mental health diagnosis (please specify)_____

Appendix D

Spirituality Scale

The items in this questionnaire each consist of a single statement. Under each statement there is a scale ranging from 1 to 6. In each instance these numbers mean the following

- 1 = Completely False –
- 2 = Mostly False
- 3 = Somewhat false (more false than true)
- 4 = Somewhat true
- 5 = Mostly true
- 6 = Completely true

Using this scale, please respond to each statement by circling the number, which best represents, the degree to which the statement is true or false for you.

	Completely False	Mostly False	Somewhat false	Somewhat True	Mostly True	Completely True
1. To me, every object has some amount of spiritual quality.	1	2	3	4	5	6
2. To have faith in each other is to have faith in God.	1	2	3	4	5	6
3. I believe that the world is not under our control but is guided by a greater force.	1	2	3	4	5	6
4. All people have a common core which is sacred.	1	2	3	4	5	6
5. I act as though unseen forces are at work.	1	2	3	4	5	6
6. We all need to have knowledge of the world's religions.	1	2	3	4	5	6
7. Just because I have faith and beliefs does not mean I live that way all of the time.	1	2	3	4	5	6
8. No preacher could ever understand the problems I have.	1	2	3	4	5	6
9. Without some form of spiritual help, there is little hope in life.	1	2	3	4	5	6
10. I pray before eating a meal.	1	2	3	4	5	6

11. The most important part of me is the inner force which gives me life.	1	2	3	4	5	6
12. My happiness is found in the material goods I own.	1	2	3	4	5	6
13. I feel that all life is simply made up of different chemicals.	1	2	3	4	5	6
14. I pray before I go on a trip.	1	2	3	4	5	6
15. To me the world can be described as a big machine.	1	2	3	4	5	6
16. If I had more money, life would be happier.	1	2	3	4	5	6
17. I don't know where to find the answers to life's questions.	1	2	3	4	5	6
18. To me, an object's material worth is that object's value.	1	2	3	4	5	6
19. Though I may go to the doctor when I am ill, I also pray.	1	2	3	4	5	6
20. I feel that life is made up of spiritual forces.	1	2	3	4	5	6

Appendix E

Spiritual Well Being Scale

For each of the following statements circle the choice that best indicates the extent of your agreement or disagreement as it describes your personal experiences.

SA = Strongly Agree	D = Disagree
MA = Moderately Agree	MD = Moderately Disagree
A = Agree	SD = Strongly Disagree

Circle the choice that best indicates the extent of your agreement or disagreement as it describes your personal experiences.	Strongly Agree	Moderately Agree	Agree	Disagree	Moderately Disagree	Strongly Disagree
1. I don't find much satisfaction in private prayer with God.	SA	MA	A	D	MD	SD
2. I don't know who I am, where I came from, or where I am going.	SA	MA	A	D	MD	SD
3. I believe that God loves me and cares about me.	SA	MA	A	D	MD	SD
4. I believe that life is a positive experience.	SA	MA	A	D	MD	SD
5. I believe that God is impersonal and not interested in my daily situation.	SA	MA	A	D	MD	SD
6. I feel unsettled about my future.	SA	MA	A	D	MD	SD
7. I have a personally meaningful relationship with God.	SA	MA	A	D	MD	SD
8. I feel very fulfilled and satisfied with life.	SA	MA	A	D	MD	SD
9. I don't get much personal strength and support from my God.	SA	MA	A	D	MD	SD
10. I feel a sense of well-being about the direction my life is taking.	SA	MA	A	D	MD	SD
11. I believe that God is concerned about my problems	SA	MA	A	D	MD	SD
12. I don't enjoy much about life.	SA	MA	A	D	MD	SD

13.	I don't have a personally satisfying relationship with God.	SA	MA	A	D	MD	SD
14.	I feel good about the future.	SA	MA	A	D	MD	SD
15.	My relationship with God helps me not to feel lonely.	SA	MA	A	D	MD	SD
16.	I feel that life is full of conflict and unhappiness.	SA	MA	A	D	MD	SD
17.	I feel most fulfilled when I'm in close communion with God.	SA	MA	A	D	MD	SD
18.	Life doesn't have much meaning.	SA	MA	A	D	MD	SD
19.	My relationship with God contributes to my sense of well-being	SA	MA	A	D	MD	SD
20.	I believe there is some real purpose for my life.	SA	MA	A	D	MD	SD

Appendix F

Perceived Wellness Survey

The following statements are designed to provide information about your wellness perceptions. Please carefully and thoughtfully consider each statement, and then select the one response option with which you most agree.

Make a check (✓) in appropriate column.	Very Strongly Disagree	1	2	3	4	5	Very Strongly Agree
1. I am always optimistic about my future.				3	4	5	6
2. There have been times when I felt inferior to most of the people I knew.	1	2	3	4	5	6	
3. Members of my family come to me for support.	1	2	3	4	5	6	
4. My physical health has restricted me in the past.	1	2	3	4	5	6	
5. I believe there is a real purpose for my life.	1	2	3	4	5	6	
6. I will always seek out activities that challenge me to think and reason.	1	2	3	4	5	6	
7. I rarely count on good things happening to me.	1	2	3	4	5	6	

8. In general, I feel confident about my abilities.	1	2	3	4	5	6
9. Sometimes I wonder if my family will really be there for me when I am in need.	1	2	3	4	5	6
10. My body seems to resist physical illness very well.	1	2	3	4	5	6
11. Life does not hold much future promise for me.	1	2	3	4	5	6
12. I avoid activities which require me to concentrate.	1	2	3	4	5	6
13. I always look on the bright side of things.	1	2	3	4	5	6
14. I sometimes think I am a worthless individual.	1	2	3	4	5	6
15. My friends know they can always confide in me and ask me for advice.	1	2	3	4	5	6
16. My physical health is excellent.	Very Strongly Disagree 1	2	3	4	5	Very Strongly Agree 6
17. Sometimes I don't understand what life is all about.	1	2	3	4	5	6

18. Generally, I feel pleased with the amount of intellectual stimulation I receive in my daily life.	1	2	3	4	5	6
19. In the past, I have expected the best.	1	2	3	4	5	6
20. I am uncertain about my ability to do things well in the future.	1	2	3	4	5	6
21. My family has been available to support me in the past.	1	2	3	4	5	6
22. Compared to people I know, my past physical health has been excellent.	1	2	3	4		6
23. I feel a sense of mission about my future.	1	2	3	4	5	6
24. The amount of information that I process in a typical day is just about right for me (i. e., not too much and not too little).	1	2	3	4	5	6
25. In the past, I hardly ever expected things to go my way.	1	2	3	4	5	6

26. I will always be secure with who I am.	1	2	3	4	5	6
27. In the past, I have not always had friends with whom I could share my joys and sorrows.	1	2	3	4	5	6
28. I expect to always be physically healthy.	1	2	3	4	5	6
29. I have felt in the past that my life was meaningless.	1	2	3	4	5	6
30. In the past, I have generally found intellectual challenges to be vital to my overall well-being.	1	2	3	4	5	6
31. Things will not work out the way I want them to in the future.	Very Strongly Disagree 1	2	3	4	5	Very Strongly Agree 6
32. In the past, I have felt sure of myself among strangers.	1	2	3	4	5	6
33. My friends will be there for me when I need help.	1	2	3	4	5	6
34. I expect my physical health to get worse.	1	2	3	4	5	6

35. It seems that my life has always had purpose.	1	2	3	4	5	6
36. My life has often seemed void of positive mental stimulation.	1	2	3	4	5	6

Appendix G
Zung Self-Rating Depression Scale (SDS)

For each item below, please place a check mark (☑) in the column which best describes how often you felt or behaved this way during the past several days

Make a check (☑) in appropriate column.	A little of the time	Some of the Time	Good part of the time	Most of the time
1. I feel down-hearted and blue.				
2. Morning is when I feel the best.				
3. I have crying spells or feel like it.				
4. I have trouble sleeping at night.				
5. I eat as much as I used to.				
6. I still enjoy sex.				
7. I notice that I am losing weight.				
8. I have trouble with constipation.				
9. My heart beats faster than usual.				
10. I get tired for no reason.				
11. My mind is as clear as it used to be.				
12. I find it easy to do the things I used to.				
13. I am restless and can't keep still.				
14. I feel hopeful about the future.				
15. I am more irritable than usual.				
16. I find it easy to make decisions.				
17. I feel that I am useful and needed.				
18. My life is pretty full.				
19. I feel that others would be better off if I were dead.				
20. I still enjoy the things I used to do.				

Appendix H

Exploratory Factor Analysis for Perceived Well-being Scale

Item	Factor Loading						Communality
	1	2	3	4	5	6	
EMOT3	.599						.53
SPIR3	.582						.40
SPIR5	.520						.45
SOC2	.476						.42
SOC5	.457						.35
PSY5	.449						.35
SPIR2	.411			.342			.39
PSY6	.394						.35
EMOT1	.352				.333		.40
SOC6	.349						.36
INT2							.25
PSY2							.16
SOC1		.542					.41
EMOT2		.538		.337			.52
PSY3		.517			.373		.48
INT1		.470					.43
PSY1		.458					.35
EMOT5		.444					.42
SPIR4			.682				.54
SPIR6			.557				.52
INT5			.424				.28
INT4			.375				.32
SPIR1			.364				.28
SOC3							.35

PHYS5				. 598			. 41
PHYS6				. 517			β
INT3		. 363		. 457			. 40
PSY4							. 41
PHYS3					. 644		. 48
PHYS2					. 608		. 38
PHYS4					. 514		. 51
PHYS1					. 315		. 27
EMOT6						. 550	
EMOT4		. 303				. 489	. 42
INT6						. 406	
SOC4						-. 336	. 34
Eigenvalues	5. 29	1. 99	1. 49	1. 12	0. 92	0. 87	
% of Variance	14. 70	5. 52	4. 13	3. 07	2. 57	2. 41	

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CURRICULUM VIATE

EDUCATION

December 2015	Doctoral Candidate in Counseling and Counselor Education Syracuse University
2009	Master of Science (MS) , (CACREP accredited), Community Mental Health and Rehabilitation Counseling (CORE accredited), Syracuse University, Syracuse, NY
2000	Master of Social Work (MSW) , Group and Community Development, University of the West Indies, Mona, Kingston, Jamaica Thesis: <i>Strategies for implementing child focus development programs</i>
1994	Bachelor of Science (B. Sc) , Social Work Special, Second Class Honors, University of the West Indies, Mona, Kingston, Jamaica
1986	Diploma in Teaching , Linguistic and Literature, Shortwood Teachers' College, Kingston, Jamaica

CERTIFICATIONS

- Certified Rehabilitation Counselor (CRC), Certification # 00110685 (Expires: September 30, 2018)
- National Certified Counselor (NCC), Certification # 254891 (Expires: December 31, 2016)
- Approved Clinical Supervision (ACS), Certification # ACS01957 (Expires: May 31, 2020)

TEACHING EXPERIENCE

Visiting Assistant Professor, The College at Brockport State University of New York, Brockport NY (January 2015 – Present)

Master's Level Courses Taught

- EDC 614 Contemporary Issues
- EDC 604 Career Development Concepts
- EDC 735 Implementation: Supervision, Experience, and Theory
- EDC 730 Implementation II
- EDC 612 Human Experience
- EDC 613 Diagnosis and Treatment Planning (online and Face to Face)

Clinical Assistant Professor (February 2014-March 2015), Medaille College, Buffalo, NY

Master's Level Courses Taught:

- MHC 640: Cultural and Social Diversity (hybrid format)
- MHC 605: Group Work (hybrid format)
- MHC 634: Grief, Trauma and Crisis Counseling (hybrid format)

- MHC 670E: Helping Relationships (online)
- MHC 677: Practicum in Counseling (traditional)
- MHC 678: Clinical Internship (traditional)
- MHC 678E: Clinical Internship (online)
- MHC 625: Personality of Psychology (Independent Study)

Adjunct Professor (May 2012 – January 2014), Medaille College, Rochester, NY

Master's Level Courses Taught:

- MHC 640: Social and Cultural Diversity (hybrid)
- MHC 727: Counseling Supervision (hybrid)
- MHC 634: Grief Counseling (hybrid)

Adjunct Instructor (July 2013 – August 2013), Syracuse University, Syracuse, NY

Master's Level Course Taught:

- COU 626: Social and Cultural Dimensions of Counseling (traditional)

Teaching Assistant (January 2010 – May 2013), Syracuse University, Syracuse, NY

Co-Taught Master's Level Courses:

- COU 644: Counseling Pre-Practicum (co-taught with Dr. T. Clingerman)
- COU 612: Introduction to Professional Counseling (co-taught with Dr. M. Luke)
- COU 626: Social and Cultural Dimensions of Counseling (co-taught with Dr. D. Seward)
- COU 614: Group Work in Counseling (co-taught with Dr. J. Bernard)

Undergraduate Course Taught:

- COU 101: Developmental Issues in College Age Adults

Lecturer/Social Worker (August 2002 – December 2009), Sam Sharpe Teachers' College, Montego Bay, Jamaica

- Taught undergraduate core courses in Guidance and Counseling:
- GC 1106: Life Management Skills
- GC 1106: Constructs related to Guidance and Counseling
- GC 1107: Methodology in Guidance
- GC 2101: Contemporary Health and Family Life
- GC 2102: Parenting Education
- GC 2104: Conflict Management
- GC 2106: Counseling Techniques
- GC 3101: Program Development
- GC 3102: Career Development

Adjunct Professor (January 2006 – December 2006), Vocational Training Development Institute, HEART TRUST/NTA, Montego Bay, Jamaica

- Lectured in educational psychology and individual counseling skills.

Adjunct Professor (January 2003 – December 2006), International University of the Caribbean, Cornwall Campus, Montego Bay Jamaica

- Coordinated the field practicum for students completing the Bachelor's degree in guidance and counseling.
- Lectured in research methods, counseling techniques, sociology, internship, and group work in counseling.

Adjunct Professor (November 2003 – March 2004), Northern Caribbean University, Montego Bay Campus, Montego Bay, Jamaica

- Lectured in Abnormal Psychology and Administrative Practice of Guidance and Counseling.

CLINICAL EXPERINCE

Personal and Academic Consultant – (August 2007- May 2013), Office of Multicultural Affairs, Syracuse University, Syracuse, N.Y.

- Provided academic advising and personal counseling to assigned students.
- Coached students around academic and career choices, establishing priorities, goal setting, and constructing concrete plans to achieve those goals.
- Designed and facilitated training around academic success skills, stress management, and multicultural competencies.
- Recruited, trained, and supervised peer leaders to provide support to first year students.
- Advised and mentored undergraduate students.
- Provided training in multicultural advising.
- Supervised master's level interns and graduate workers.

Personal Coach (June – August 2011 & 2012), Summer Success at Syracuse (SSUI) - Syracuse University, Syracuse, NY

- Provided academic advising and mentoring to assigned students
- Facilitated personal counseling to assigned students as needed.
- Coached students around academic and career choices, establishing priorities, goal setting, and constructing concrete plans to achieve those goals.

Staff Intern (August 2010- May 2012), Syracuse University Counseling Center, **Syracuse**, NY

- Provided solution- focus and time limited therapy to graduate and undergraduate students around developmental, mental health and life style issues.
- Co facilitated a process group of graduate women of color.
- Documented client functioning and treatment progress.

Mental Health Counseling Intern (September 2009 – July 2009), Brownell Center for Behavioral Health Center, Syracuse, NY

- Conducted individual and family therapy with adolescents and adults.
- Co facilitated coping effectiveness training groups
- Documented client functioning and treatment progress

Rehabilitation Counseling Intern (January 2008 – December 2009), St. Joseph Health Center, Mental Health Center, Syracuse, NY

- Provided vocational and personal counseling to assigned caseload.
- Worked in community residence as a relief mental health counselor teaching and supervising clients around activities of daily living skills.
- Facilitated meditation groups, and women's support groups.
- Documented client functioning and treatment progress.
- Evaluated clients' skills and proficiencies.

Social Worker (August 2002 – December 2006), Sam Sharpe Teachers' College, Montego Bay, Jamaica

- Provided mental health counseling to college students and faculty.

Facilitated crisis intervention.

- On call counselor for evenings and weekend.
- Developed and implemented a mentoring project between college students and an elementary school to support 80 students.

School Counselor (1995- 1997), Donald Quarrie High School, Kingston, Jamaica

- Provided classroom guidance related to wellness, academic success and drug free school environments.
- Designed and implemented peer mentoring program.

Provided support materials to administrators, teachers, and parents.

- Collaborated with community policing department to facilitate group counseling for at risk males.

SUPERVISION

Supervision CMH & SC), The College at Brockport (EDC 735) Fall 2015

Supervision (CMH), The College at Brockport (EDC 724; EDC 730; EDC 735) Spring 2015

Supervisor (CMH, Triadic, Online), Medaille, Internship (MHC 678E), Fall 2014

Supervisor (CMH, Individual and Triadic), Medaille, Internship (MHC 678D), Fall 2014

Supervisor (CMH, Individual and Triadic), Medaille, Practicum (MHC 677), Summer 2014

Supervisor (CMH, SA, and School Counseling (SC); Individual and Triadic) SU, Practicum (COU 750), 2013

Supervisor (CMH and SA; Individual), SU, Internship (COU 790), Spring 2012

Supervisor (CMH and Student Affairs [SA]; Individual) SU, Practicum (COU 750), Fall 2011

Supervisor (CMH, Individual), SU, Internship (COU (790), Fall 2010

Supervisor (CMH, Individual), SU, Practicum (COU 750), Fall 2010

Supervisor (Clinical Mental Health [CMH], Individual), SU, Practicum (COU 750), Spring 2010

GROUP WORK

Co facilitator, *WellsLink Peer Leaders Support/Psychoeducational Groups*, (Fall 2007 – Spring 2013)

Co facilitator, *Transformative group with teenagers of color in an urban school setting*, (Spring 2010)

Co facilitator, *Process group for graduate women of color*, (Fall 2010- Spring 2012)

REGIONAL PRESENTATIONS

Brown-Smythe, C. A. & Spiegelhoff, S. (2014, September). Strategies for addressing spirituality in counselor education programs. North Atlantic Regional Association for Counselor Educators and Supervisors. Providence, Rhode Island.

Brown-Smythe, C. A. & Spiegelhoff, S., & Hernando-Castillo, J. (2014, September). Supervising international students: Strategies for effective supervision. North Atlantic Regional Association for Counselor Educators and Supervisors. Providence, Rhode Island.

Brown-Smythe, C. A. & Spiegelhoff, S. (2013, June). Spirituality: A Transitional Issue for College Students. University and College Counseling Centers of New York. Hamilton, New York.

Brown-Smythe, C.A. & Seward, D. X. (2012, September). Direct Instruction as a Tool to Improve Student Case Conceptualization Ability. North Atlantic Regional Association for Counselor Educators and Supervisors. Niagara Falls, New York.

Gilbride, D., J. Rogers., **Brown-Smythe, C.A.**, Spiegelhoff, Sarah & Stanciu, A. (2010, September). The Brief Wondrous Life of Oscar Wao: Could an Ecological Approach Have Saved Him? North Atlantic Regional Association for Counselor Educators and Supervisors Conference, New Brunswick, New Jersey.

Brown-Smythe, C. A., Goodrich, K., M., Piazza Brass, M., & Shin, R. Q. (2008, September). Facilitating Student Success with Students from Culturally Marginalized Populations. North Atlantic Regional Association for Counselor Educators and Supervisors Conference, Portland, Maine.

Buser, T., Austin, B., & **Brown-Smythe C.** (2008, September). Integrating Mindfulness Practice in Counselor Education. North Atlantic Regional Association for Counselor Educators and Supervisors Conference, Portland, Maine

NATIONAL & INTERNATIONAL PRESENTATIONS

Brown-Smythe, C. A. & Spiegelhoff, S. (October, 2015). Exploring Grief as a fundamental issue for counselors: Implication for Counselor Educators. Association for Counselor Education and Supervision Bi-Annual Conference: Philadelphia, PA.

Brown-Smythe, C. A., Cole, J., Hooper, L., Phillips-Sheesley, A., & Spiegelhoff, S. Incorporating Integrated Care into Counselor Education Curriculum. Association for Counselor Education and Supervision Bi-Annual Conference: Philadelphia, PA.

Brown-Smythe, C. A. & Spiegelhoff, S. (September, 2013). Addressing Spirituality: A transitional issue for college students. America College Counseling Association, New Orleans, Louisiana.

Brown-Smythe, C. A., & Hrovat, A. M. (March, 2012). Counselors and Social Media: What You Need to Know. American Counseling Association Conference, San Francisco, California.

Brown, C. (2004, July) Strategies for implementing Child Focus Development. University of the West Indies, School of Education, Faculty of Humanities and Education Biennial Conference, Ocho Rios, Jamaica

PUBLICATIONS

Shin, R. Q., Rogers, J., Silas, M., **Smythe-Brown, C.** Stanciu, A., Austin, B. (2010). Advancing social justice in urban schools through the implementation of transformative groups for youth of color. *The Journal for Specialists in Group Work*, 35(3), 230-235.
doi: 10.1080/01933922.2010.492899

Brown-Smythe, C. A. & Spiegelhoff, S. (2015). Exploring what makes us! In Luke, M., & Goodrich, K. M. (Eds.), *Group Work Experts Share Their Favorite Activities for Supervision*

Brown-Smythe, C. A. & Spiegelhoff, S. F. (2015). Spiritual tower: Exploring personal spirituality in supervision. In Luke, M., & Goodrich, K. M. (Eds.), *Group Work Experts Share Their Favorite Activities for Supervision*

GRANT

2013 Syracuse University School of Education Research and Creative Grant	\$947.00
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SCHOLARSHIPS, FELLOWSHIPS, AND AWARDS

National Board for Certified Counselor Minority Fellowship (Spring 2013)	\$20,000
Emerging Leader – America College Counseling Association (2013)	\$195.00
Emerging Leader – Association for Counselor Education and Supervision (ACES) (2011)	\$200.00
Emerging Leader – North Atlantic Association for Counselor Education and Supervision	

(NARACES)-2011	\$200.00
Outstanding Doctoral Student – CSI - Sigma Upsilon (Spring 2012)	N/A
Second Place Winner American Counseling Association Ethics Competition (2012)	\$50.00
Syracuse University, Graduate Assistantship 2007 -2012	Full Tuition and Stipend
Certificate of University Teaching – Syracuse University (Spring, 2012)	N/A

LEADERSHIP AND SERVICE

National Board of Certified Counselor Scholarship Reviewer	August 2014 - Present
Chi Sigma Iota – Sigma Upsilon Chapter (CSI-SU), President	2011 – 2012
Chi Sigma Iota – Sigma Upsilon Chapter (CSI-SU), President Elect	2010 - 2011
Chi Sigma Iota –Sigma Upsilon Chapter (CSI-SU), Community Liaison	2009 - 2010
North Atlantic Association for Counselor Education and Supervision	2010
(NARACES) Conference Registration Coordinator	

PROFESSIONAL AFFILIATIONS

American Counseling Association (ACA) 2008 – Present
 American Counseling Association of New York (ACA-NY) 2013 - Present
 Association for Counselor Education and Supervision (ACES) 2011 – Present
 Association for Spiritual, Ethical and Religious Values in Counseling (ASERVIC) 2012 – Present
 American Rehabilitation Counseling Association (ARCA) 2008 – 2015
 Counselor for Social Justice (CSJ) 2014 - 2015
 Chi Sigma Iota (CSI) 2008 –
 Commission on Rehabilitation Counseling Certification 2008 – Present
 North Atlantic Association for Counselor Education and Supervision (NARACES) 2008 – Present
 National Board of Certified Counselors (NBCC) 2009 - Present

OTHER EMPLOYMENT

Project Development Officer (1999 – 2002), HelpAge International, Caribbean Regional Development Office, Kingston, Jamaica

- Facilitated institutional strengthening of organizations working with the older persons in eight Caribbean countries.
- Provided training and counseling to advocate for and promote the wellbeing of older persons.
- Designed intergenerational programs to bridge the generational gap and to increase the livelihood of older persons in four Caribbean countries.
- Pursued and secured external international funding of over UK £ 500, 000.00.
- Provided training on grant writing and project management.

Project Coordinator (1997 – 1999), Council of Voluntary Social Services, Kingston, Jamaica

- Facilitated interagency collaboration and networking for over 30 Non Governmental Organizations working in the children, health, and disability sectors.
- Advocated for improved services and provisions for children at risk through work with the Jamaica Coalition on the Rights of the Child.
- Developed and implemented a national training course to improve the delivery of care in children's homes and places of safety.

Project Coordinator (1991- 1996) Save the Children Canada, Kingston, Jamaica

- Advocated for children's rights around the issues of abuse and neglect.
- Designed training modules and implemented training around issues of child abuse children's rights and parenting education.
- Coordinated and conducted training in project management, monitoring, and evaluation.

- Monitored and evaluated community programs designed to promote children's rights and responsibilities.
- Supervised programs implemented by four community agencies to alleviate child poverty and to improve the wellbeing of children.
- Planned and coordinated yearly residential summer camp program for over 30 children.
- Provided training to community stakeholders on issues relating to advocacy, children's development, and children's rights.

CONTINUING EDUCATION

2014 Mental Health Facilitator Master Training of Trainers, NBCC International, Greensboro

2011 Grant Writing, Association for Counselor Education and Supervision, Nashville, Tennessee

