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ABSTRACT

VARIATIONS IN INDIVIDUALISTIC AND COLLECTIVISTIC
CULTURAL ORIENTATION AND THE PROTECTIVE
FACTORS THAT CONTRIBUTE TO RESILIENCE:
COMPARISONS FROM JAMAICA, RWANDA,
AND THE UNITED STATES

by

Stacey Ann Nicely

Chair: Ronald D. Coffen

ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University

School of Education

Title: VARIATIONS IN INDIVIDUALISTIC AND COLLECTIVISTIC CULTURAL ORIENTATION AND THE PROTECTIVE FACTORS THAT CONTRIBUTE TO RESILIENCE: COMPARISONS FROM JAMAICA, RWANDA, AND THE UNITED STATES

Name of researcher: Stacey Ann Nicely

Name and degree of faculty chair: Ronald D. Coffen, Ph.D.

Date completed: April 2019

Problem

Despite the advancement in resilience research, and although mental health professionals are encouraged to become culturally competent, it is still unclear how I/C cultural orientation influence various protective factors that contribute to resilience. Individualists emphasize independence and autonomy while collectivists emphasize interdependence and in-group consensus (Hofstede, 1991; Markus & Kitayama, 1991). Therefore, it is expected that the protective factors that promote resilience will also operate differently for individualists as compared to collectivists (Triandis, 1995). Yet, mental health practitioners have very little information available to them to guide their

intervention efforts with individualists and collectivists. When practitioners work with individuals who have experienced trauma, it is necessary that intervention strategies are aligned with clients' subjective cultural orientation in order to prevent further injury to clients (Allen & Smith, 2015) and best promote positive outcomes. Therefore, this study was expected to clarify which protective factors are influential for individualists as compared to collectivists.

Method

This study employed a descriptive, non-experimental, correlational, online survey research methodology to collect quantitative data. Snowball sampling was employed to recruit participants from Jamaica, Rwanda, and the U.S. The Class Climate survey link was distributed via email invitations, postings on social media (Facebook, LinkedIn), and a posting on one professional organization's web page. Participants were required to be 18 years or older, residing in Jamaica, Rwanda, or the U.S. (natives only), and having experienced a traumatic life event.

A demographics questionnaire collected relevant demographic characteristics of the sample. The Traumatic Life Events Questionnaire (TLEQ) measured lifetime experience of trauma. The Cultural Orientation Scale (COS) measured normative and evaluative cultural orientation. The Resilience Scale for Adults (RSA) and the Connor-Davidson Resilience Scale-25 (CD-RISC-25) spirituality scale measured resilience as a process (assessed multi-level protective factors). The Brief Resilience Scale (BRS) measured resilience as an outcome (bouncing back).

Results

Measures of participants' evaluative cultural orientation (ECO) showed that mostly collectivists were included in the samples from the U.S. and Jamaica. Rwanda was excluded due to unreliable ECO. Therefore, hypothesis testing was conducted only using collectivists from Jamaica and the U.S. Pearson correlation analysis showed that there was a small but significant relationship between ECO and some protective factors. ECO had the strongest correlation with spirituality. However, ECO was not significantly related to outcome resilience (BRS). Spirituality and *perception of self* were higher among Jamaicans than Americans. There was no difference between Jamaicans and Americans in their ability to bounce back (resilience as measured by the BRS). *Perception of self* was the only significant predictor of bouncing back among Jamaicans. *Perception of self*, *social competence*, *social resources* (inversely related), and *family cohesion* were significant predictors of bouncing back among Americans. Spirituality was not a significant predictor of bouncing back for either Jamaicans or Americans. Additionally, when spirituality was included in the standard regression analysis, *family cohesion* was no longer a significant predictor of bouncing back among Americans.

Conclusions

The findings showed that making assumptions about individuals' cultural orientation and the protective factors that are likely to be most salient based on their country of residence alone can lead to erroneous and potentially harmful clinical interventions and research practices. The study's exploration of resilience as both a process and an outcome helped to shed further light on potential best-practice for clinical interventions and future resilience research.

Andrews University

School of Education

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AND THE UNITED STATES

A Dissertation

Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

by

Stacey Ann Nicely

April 2019

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APPROVAL BY THE COMMITTEE:

Chair: Ronald Coffen

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Member: Carole Woolford-Hunt

Member: Jimmy Kijai

External: Lionel Matthews

Date approved

DEDICATION

Dedicated to every individual with limited income/resources, who wonders if they have what it takes to pursue and achieve their dreams. I hope the completion of this research helps them believe that they can.

Also dedicated to the family, friends, and the numerous individuals (including the researcher of this study) who were trained and mentored by the late Master Guide, and Senior Youth Leader, Lorenzo Eschoe. Lorenzo offered to help with recruiting participants for this study. His gruesome murder that occurred during the data collection phase of this study was an extremely painful reminder of the negative impact of one kind of trauma in Jamaica. It is my hope that the completion of this project will encourage all who are hurting to continue to pursue their calling in spite of their grief. Lorenzo would want nothing less.

To the memory of my dad, the late Ewart Baldwin Nicely who first modeled resilience. I watched him work as a small-scale export farmer of coffee and bananas, as one of the few barbers in town, and as he masterfully did his craft at being the family's shoemaker. During my childhood years, he consistently got my attention as he skillfully peeled our oranges (mine and Lisa's) as part of our family's morning routine. He did all that, and *so much more*, with just one hand and a prosthetic arm. I always knew I had no excuse. Thanks, Dad!

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LIST OF ABBREVIATIONS

APA	American Psychological Association
BRS	Brief Resilience Scale
CCO	Collectivistic Cultural Orientation
CD-RISC-25	Connor-Davidson Resilience Scale-25
COS	Cultural Orientation Scale
ECCO	Evaluative Collectivistic Cultural Orientation
ECO	Evaluative Cultural Orientation
EICO	Evaluative Individualistic Cultural Orientation
HSCL-25	Hopkins Symptoms Checklist
HVS	Hofstede's 1994 Values Survey
I/C	Individualism/Collectivism; Individualistic/Collectivistic
ICC	Intra-class correlation
IDV	Individualism Index
IRB	Institutional Review Board
IST	Independent samples t-test
MCAR	Missing Completely at Random
MINEDUC	The Ministry of Education
MLR	Multiple Linear Regression
NCCO	Normative Collectivistic Cultural Orientation

NCO	Normative Cultural Orientation
NCU	Northern Caribbean University
NICO	Normative Individualistic Cultural Orientation
PTSD	Post-traumatic Stress Disorder
RPS	Rwanda Psychological Society
RS	The Resilience Scale
RSA	Resilience Scale for Adults
SES	Socioeconomic Status
SPSS	IBM Statistical Package for the Social Sciences
TLEQ	Traumatic Life Events Questionnaire
ULK	Kigali Independent University
VIF	Variance inflation factor
WISC	Wechsler Intelligence Scale for Children

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CHAPTER 1

INTRODUCTION

Background of the Problem

Resilience has been a subject of inquiry among social researchers for decades (Garmezy, 1971, 1991, 1993; Masten, 1994; Rutter, 1985, 1987; Ungar, 2004, 2005, 2007, 2011; Ungar & Liebenberg, 2011; Werner & Smith, 1982). Resilience refers to overcoming risk or adversity (Masten, 2001) and bouncing back after trauma (Smith, Tooley, Christopher, & Kay, 2010). It is marked by “good outcome” despite potential threat to development (Masten, 2001, p. 228) or despite the experience of events that puts individuals at risk for developing psychopathology (Rutter, 1999). Resilience is also conceptualized as a dynamic process that fluctuates over time and situations (Luthar, Cicchetti, & Becker, 2000). *The American Psychological Association (APA) Dictionary of Psychology* defines resilience as “the process and outcome of successfully adapting to difficult or challenging life experiences” (VandenBos, 2015, p. 910). The American Psychological Association (2017a) suggested that resilience has to do with bouncing back from difficult circumstances (para. 4). Some factors that contribute to how well people adapt to adversity include “(a) the ways in which individuals view and engage with the world, (b) the availability and quality of social resources, and (c) specific coping strategies” (VandenBos, 2015, p. 910).

The study of resilience implies the presence of adversity or risk (Kolar, 2011;

Liebenberg & Ungar, 2009; Luthar et al., 2000; Masten, 2001). Researchers have examined different kinds of risk factors, for example, parental psychopathology (Garmezy, 1971, 1974), poverty (Garmezy, 1971, 1991, 1993; Werner & Smith, 1982), community violence (Luthar & Goldstein, 2004; O'Donnell, Schwab-Stone & Mueeed, 2002), and traumatic life events (Bonanno, 2004; Bonanno, Galea, Bucciarelli, & Vlahov, 2006; Küenzlen, Bekkhus, Thorpe, & Borge, 2016; Ruiz-Parraga & Lopez-Martinez, 2015). In the current study, I operationalize risk as traumatic life events.

According to the *American Psychological Association Dictionary of Psychology*, a trauma or by extension a traumatic event is “any disturbing experience that results in significant fear, helplessness, dissociation, confusion, or other disruptive feelings.” These disruptive feelings may be “intense enough to have a long-lasting negative effect on a person’s attitudes, behavior, and other aspects of functioning. Traumatic events include those caused by human behavior (e.g. rape, war) as well as by nature (e.g. earthquakes)” (VandenBos, 2015 p. 1104). Traumatic events may involve betrayal of trust and disruption of one’s belief systems about the world and other people. They may challenge an individual’s view of the world as a just, safe, and predictable place (Masten & Wright, 2010, VandenBos, 2015).

Instead of identifying and investigating one specific risk factor, the current study employed the broad term *traumatic life events* to allow for the inclusion of a wide range of risk factors such as community violence, abuse, natural disasters, and motor vehicle accidents among others. The term also reflects one of the domains used by mental health professionals to refer to different sorts of events that have potentially negative personal

and social impact, and which warrant research efforts and health services interventions (Barad, Lemelson, & Kirmayer, 2007).

In exploring the impact of traumatic life events, some researchers have focused primarily on an outcome marker of resilience—for example, the absence of post-traumatic stress disorder (Bonanno et al., 2006; Heetkamp & de Terte, 2015). In contrast, in the current study I examined both an outcome criterion of resilience (bouncing back from trauma), but I also examined the protective factors that contribute to resilience (i.e., dynamic processes rather than only an outcome marker). Zautra, Hall, and Murray (2010) suggested that it is essential to make a clear distinction between the process and the outcome of resilience in order for the field to advance. Having a clear distinction helps to reduce confusion in the field. It allows researchers to examine the empirically supported protective resources that increase the likelihood of resilience (which suggest interventions), as well as to examine an outcome criterion (which suggests effectiveness of factors and interventions).

As researchers seek to strengthen the existing resilience literature, authors (e.g., Khanlou & Wray, 2014; Kolar, 2011; Theron, Liebenberg, & Ungar, 2015; Ungar, 2011; Ungar & Liebenberg, 2011) have suggested that further articulation and exploration of culturally specific protective factors is necessary. They suggested that researchers should seek to understand the factors or processes that contribute to good outcomes. The factors that contribute to good outcomes are rooted in the environment, and, the dynamic social interactions that play various roles in the lives of individuals (Khanlou & Wray, 2014; Kolar, 2011; Liebenberg & Ungar, 2015; Ungar, 2011, 2013). Thus, researchers should consider a perspective that involves an exploration of the cultural factors such as the

dynamic social interactions between the individual and the environment to assess how those factors influence resilience.

Some authors have engaged in cross-cultural research to investigate cultural factors that influence resilience in different regions of the world. For example, Ungar's (2012) *The Social Ecology of Resilience: A handbook of theory and practice* documents research that investigated the impact of resilience-promoting factors in Australia (Hopkins, Taylor, D'Antoine, & Zubrick, 2012), New Zealand (Simpson & Ungar, 2012), Northern Canada (Durrant & Ungar, 2012), and South Africa (Malindi & Ungar, 2012), among others. Additionally, Theron, et al. (2015) *Youth Resilience and Culture: Commonalities and Complexities* brings together various studies that discuss ways in which culture influences resilience. Likewise, other authors (e.g., Alessi, 2016; Hill & Gunderson, 2015; Shaw, McLean, Taylor, Swartout, & Querna, 2016; Sirikantraporn, 2013; McCleary & Figley, 2017) have investigated resilience within cultural contexts. However, despite the increase in the number of studies that have examined resilience among various cultural groups and how cultural factors influence resilience, studies that explore the relationship between individualistic and collectivistic (I/C) cultural orientations and resilience are lacking.

Studies that examine resilience within the I/C cultural framework are important because the I/C constructs provide a perspective that allows for the exploration of cultural factors such as the dynamic social interactions between the individual and the environment and how those influence resilience (Triandis & Gelfand, 1998). Authors (e.g., Kim, Triandis, Kagitcibasi, Choi, & Yoon, 1994; Markus & Kitayama, 1991; Oyserman, Coon, & Kemmelmeier, 2002) suggest that the essence of the I/C constructs

lie in the definition of the self as being independent or interdependent. Therefore, the I/C cultural construct (one aspect of culture) provides a framework, and a more concise differentiation for understanding how loving, supportive relationships differ across cultures (Oyserman et al., 2002; Triandis, 1995).

Research that employs a comparative analysis provides insight into how conditions or psychological phenomena vary in different regions of the world (Sinha, 2002). The comparative approach can help shed light on resources that are culturally relevant to specific populations and can enhance clinicians' multicultural competency skills.

For example, the countries of Jamaica and Rwanda rank as being collectivistic (Hofstede, 1980; 1991) whereas the U.S. ranks as being individualistic (Hofstede, 1980; 1991; Triandis, 1995). If mental health professionals employ interventions with individuals from one cultural group when those interventions might have been more suitable for another cultural group their work may be unsuccessful. For example, if a clinician applies more individualistic interventions when working with collectivists, the interventions may prove to be ineffective and the individuals may remain traumatized (Allen & Smith, 2015) or even be further traumatized. Therefore, the differences in I/C cultural orientations have implications for working with individuals who have experienced trauma, and for designing interventions that enhance resilience.

To date, no known studies have been found that combined the investigation of trauma, I/C cultural orientation, and resilience in a comparative analysis of any regions, and in particular, an analysis of the three countries under investigation (Jamaica, Rwanda, and the U.S.). Generally, psychology as taught and applied in the U.S. influence the

understanding and application of psychology in many regions of the world (Wedding & Stevens, 2004). This condition often contributes to the permeation of ethnocentric and individualistic applications of psychology (Triandis, 1995) to the neglect of more contextual considerations of how individuals' cultural orientations influence a psychological phenomenon such as resilience (Theron et al., 2015; Ungar, 2011, 2012). Therefore, a comparative study that clarifies how I/C cultural orientation influence resilience-promoting resources is necessary.

There is agreement among resilience researchers (e.g., Garmezy, 1991; Masten, 1994; Rutter, 1985, 1987; Werner & Smith, 1982) that loving, supportive relationships are protective factors. However, the characteristics of loving, supportive relationships as experienced by individuals in different cultural contexts are likely to differ and have potential implications for resilience outcomes. Ungar (2007) posited that it is how individuals experience cultural interactions that determines what factors are protective.

According to Hofstede (1991), individualism emphasizes autonomy, independence, and a focus on oneself in societies. On the other hand, collectivism emphasizes shared decision-making, interdependence, and a reference to the self in the context of a shared identity. The I/C constructs have been used successfully to investigate and predict variables such as behavior patterns (Wheeler, Reis, & Bond, 1989), differentiation in cognitive and social styles required to thrive (Berry, 1994), experiences of daily stressors (Ben-Ari & Lavee, 2004), perceptions of racial discrimination (Hunter, 2008), and organizational stress and depression (Singh, Gupta, Dubey, & Singh, 2016), among others.

In the current study, the I/C constructs provide a framework for investigating how the definition of self in the context of I/C cultural orientations influences the protective factors that contribute to resilience in Jamaica, Rwanda, and the U.S. According to Allen and Smith (2015), culture-specific research informs mental health professionals about case conceptualization and intervention. In particular, knowledge about the factors that account for how I/C influence resilience has importance for prevention and intervention strategies. For instance, such knowledge is likely to inform mental health professionals about when interventions that include strategies such as building or affirming personal strengths are likely to be more suitable, and when interventions that promote collective sharing and healing might be expedient.

In light of the scarcity of resilience research that examines the impact of I/C cultural orientations on resilience-promoting resources, and given that clarity about those resources could inform culturally relevant prevention and intervention efforts, there is need for the current study. The study will investigate how variations in I/C cultural orientations influence the protective factors that contribute to resilience.

Statement of the Problem

Despite the significant body of research conducted on the concept of resilience (e.g., Garmezy, 1991, 1993; Masten, 1994, 2001; Satterwhite & Luchner, 2016; Ungar, 2005, 2007, 2011; Werner & Smith, 1982, 1992, 2001) it is still unclear how I/C cultural orientations influence particular protective factors that contribute to resilience. It is true that psychotherapy has evolved so that multiculturalism (which represents the fourth force in psychotherapy) encourages therapists to explore clients' meaning making systems within a cultural context (Comas-Diaz, 2012). However, the use of culture as a

construct is often confounded by other related constructs such as country, race, and ethnicity (Ben-Ari & Lavee, 2004; Cohen, 2009). If a therapist acts on the notion that a client is individualistic because he/she is from a country, race, or ethnic group that is generally regarded as individualistic, and applies more “individualistic-centered methods” when working with a more collectivistic client, the interventions may be unsuccessful and the client may feel invalidated and remain traumatized (Allen & Smith, 2015, p. 323).

When working with individuals who have experienced trauma, there is a need for the alignment of mental health intervention strategies with clients’ subjective cultural orientation in order to prevent further injury to clients (Allen & Smith, 2015). Since individualists emphasize independence and autonomy while collectivists view themselves as being interdependent and influenced by in-group consensus (Hofstede, 1991; Markus & Kitayama, 1991), it is therefore expected that the protective factors which will be most influential in promoting resilience will also operate differently for individualists as compared to collectivists (Triandis, 1995). Yet little information is currently available to practitioners to guide treatment with these two distinct groups. Thus, the current study seeks to begin clarifying which protective factors are more valuable for individuals with these different worldviews.

Purpose of the Study

The purpose of the study is to examine how variations in I/C cultural orientation influence the protective factors that are most influential in promoting resilience. The findings should prove useful for informing prevention and intervention efforts. The study:

1. Identified the traumatic life events reported.

2. Examined levels of resilience as measured by the Resilience Scale for Adults (RSA; and including the Connor-Davidson Resilience Scale-25 (CD-RISC-25) spiritual influences factor), and resilience as measured by the Brief Resilience Scale (BRS).

3. Investigated whether there were differences in the protective factors (*perception of self, planned future, social competence, family cohesion, social resources, structured style, and spirituality*) that contribute to resilience between individualists when compared with collectivists from the countries surveyed (Jamaica, Rwanda, and the U.S.).

4. Investigated whether there were differences in resilience as measured by the BRS between individualists compared with collectivists from the countries surveyed.

5. Determined the linear combination of protective factors that contribute to resilience among individualists and collectivists from each country surveyed.

6. Determined if there was any interaction effect between cultural orientation, country of residence, and protective factors.

The study generated discussions about the importance of a contextual understanding of resilience. Researchers and clinicians who choose one instrument or method of assessing resilience over another must keep in mind the role that individuals' contexts and cultural orientations play in how they experience and express resilience.

Theoretical Framework

A theoretical framework provides a set of principles that explains how the variables in a study are related. It describes the conceptual and theoretical ideas that undergird the topic and the approach to researching the phenomenon (Creswell, 2014). Following are the theories, models, and perspectives that provide a framework for

examining the relationship between I/C cultural orientations, protective factors, and outcome resilience. They are the individualism/collectivism cultural orientation framework (Hofstede, 1980; Oyserman et al., 2002; Triandis, 1995, 2005), the ecological perspective (Berry, 1994), the ecological theory of human development (Bronfenbrenner, 1979, 2005), and the triadic model of resilience (Garmezy, 1991). Taken together, they provide the context for understanding: (a) the impact of environmental factors on the manifestation of risk and resilience, (b) characteristics of the person-environment linkage that mediate against risk, (c) the characteristics or markers of resilience, and (d) what interventions will be appropriate. I have outlined each aspect of the framework in the paragraphs below.

Individualism and Collectivism (I/C) Cultural Orientations Framework

The work of Hofstede (1980) contributed to the introduction of the I/C constructs into the psychological research agenda (Triandis, 2005). Triandis (1995) indicated that all people have attributes of individualism and collectivism; however, environmental factors (such as socialization by parents, or affluence and mobility) play important roles in influencing which orientation becomes predominant in each of us. Each orientation has consequences for psychology. For example, each orientation has implications for the individual as it pertains to self-concept, well-being, and relationality (Oyserman et al., 2002).

Individualism

According to Hofstede (1980), individualists emphasize ‘*I*’ much more than they emphasize ‘*we*.’ Individualism emphasizes “personal goals, personal uniqueness, and

personal control” much more than social endeavors (Oyserman et al., 2002, p. 5).

Attributes that are highly valued by individualists include emotional independence, autonomy, feeling good about oneself, and personal success. Individualists emphasize freedom of choice, personal responsibility, and self-fulfillment. They tend to base their identity on personal accomplishments and maximizing one’s potential (Oyserman et al., 2002). There is less social support among individualists.

Consequences of individualism include having more freedom to act on one’s own wishes (Triandis, 1995). Individualists experience a sense of satisfaction and personal well-being when they are able to act on their own wishes and desires (Oyserman et al., 2002; Triandis, 2005). Since much emphasis is on personal choice and responsibility, causal inference and judgement are oriented toward the individual rather than the social context. For example, in instances of distress, or failure, the individual is responsible for his or her own problems and for effecting changes in his or her own life, as opposed to considering the social context. Individualists may have to deal with failures on their own. Relationships tend to be less permanent. For the individualist, when the cost of maintaining a relationship exceeds the benefit, he or she may leave the relationship and form new ones that are more beneficial to his or her own personal goals. Superficial relationships and loneliness are more common among individualists than among collectivists. Individualists value open emotional expression as an important means of maintaining personal well-being (Oyserman et al, 2002).

Collectivism

Collectivists on the other hand, have a strong sense of “we” consciousness; they value interdependence more than they value independence. Collectivists value group

harmony and have a strong sense of duty to the group (Hofstede, 1980). They primarily base their personal identity on the attributes and expectations of the group (Oyserman et al., 2002; Triandis, 1995). Personal traits that are valued include being able to maintain harmonious relationships and make personal sacrifices for the good of the in-group. Traditional religious upbringing is likely to be present among collectivists (Triandis, 2005).

Consequences of collectivism include deriving a sense of well-being and life satisfaction from being able to avoid failures in carrying out social roles (Oyserman et al., 2002; Triandis, 1995). Collectivists are praised when there is conformity to group norms. They are likely to receive much social support from their in-groups; however, if they do not conform to group expectations, the punishment (which varies depending on the culture) may be severe. Emotional restraint rather than open expression of feelings is valued as a means of maintaining harmony in the group. Collectivists consider the social context in their judgement and perception of events and in instances of causal reasoning. “Meaning is contextualized and memory is likely to contain richly embedded detail” (Oyserman et al., 2002, p. 5). Relationships between in-group members tend to be more permanent or fixed. Collectivists base exchanges between members of their in-group on equality and generosity.

Implications for the Study

In the context of the current study, the characteristics and consequences of I/C cultural orientations provide a basis on which to test the hypothesis that there are differences in the individual, family, social/environmental, and spiritual protective factors that contribute to resilience among individualists and collectivists. Collectivists are likely

to engage family support and religious/spiritual coping strategies more than individualists do (Allen & Smith, 2015). Additionally, individualists and collectivists differ in terms of their perception of self in relation to others (independence compared to interdependence: Oyserman et al., 2002; Triandis, 1995). Both cultural groups differ with regard to the personal attributes that are valued in each culture (autonomy and personal freedom compared to in-group loyalty and personal sacrifice for the good of the group). Consequently, the I/C cultural orientations framework will also guide the exploration and interpretation of protective factors as measured by the RSA.

Bronfenbrenner's Ecological Theory

Bronfenbrenner's (1977, 1979, 2005) ecological theory of human development describes the individual as living in a series of social systems that is frequently illustrated as a series of concentric circles (Shaw et al., 2016). The theory holds that each of those different environmental systems influence development. Additionally, individuals reciprocally interact with and influence their environment (Bronfenbrenner, 2005). The series of systems are the microsystem, the mesosystem, the exosystem, the macrosystem (Bronfenbrenner, 1977, 1979) and the chronosystem (Bronfenbrenner, 2005).

The microsystem refers to the patterns of activities, roles, and interpersonal relations that individuals experience in a given setting, such as home, school, or neighborhood (Bronfenbrenner, 1979). Bronfenbrenner emphasized the term *experienced* in the definition to highlight the importance of the ways in which the interactions within the system influence human behavior as opposed to the mere presence of the different components of the system. The individual with his or her personal attributes is at the center of the microsystem. Some of those personal attributes include sex, temperament,

physical and emotional health, cognitive abilities, among others. The individual's attributes influence his or her behavior and interactions with the environment. The environment also influences the individual. Those bi-directional influences may be strongest at the microsystem during the individual's childhood years.

The mesosystem is the interconnectedness that exists between two or more microsystems—for example, the relations that exist between the family and the neighborhood. Greater possibilities for interconnection occur when the individual leaves home to engage in activities such as, attend college, find a job, or join organizations. Bronfenbrenner (1979) suggested that in some instances, the old setting (for example, the family) is not abandoned, resulting in a greater possibility for interconnection. However, the theory suggests that there are variations in how different individuals experience those transitions and interconnections between systems. The variations in transitions and interconnections have implications for how different individuals develop.

At the exosystem level, there are indirect connections between the individual's direct context and an external system in which the individual does not have an active role. Events that occur in the exosystem may affect what happens in the person's immediate environment although the individual is not actively involved in those events. For example, if the primary income earner suffers a job loss, it could potentially have a negative impact on the dependent individual(s).

The macrosystem refers to the attitudes and ideologies of the larger culture in which the individual lives. It refers to the consistency observed within a culture or subculture as well as the belief systems that underlie such consistencies. The values generally held by members of a given culture also help to inform such consistencies.

Most macrosystems are informal and implicit – often carried unwittingly in the minds of members of society as ideologies that are made manifest through customs and practices in everyday life (Bronfenbrenner, 1977), such as the American value of individualism (Shaw et al., 2016).

Finally, the chronosystem refers to environmental changes that occur over time that impact development (Bronfenbrenner, 1986). For example, the ways in which globalization influences individuals' attitudes and values in various cultures.

According to Fergus and Zimmerman (2005) when researchers examine resilience from an ecological perspective (e.g., Fernando, 2012; Greene, 2010; Shaw et al., 2016; Ungar, 2011), it allows for the consideration of multiple factors (i.e., the different social systems described above) that influence resilience. It allows for the exploration of how social-level factors moderate the development of individual-level factors (Kolar, 2011) and vice versa, and how those influence resilience.

Implications for the Study

Therefore, in the context of the current study, Bronfenbrenner's ecological theory highlights the importance of considering how the interactions of multi-level factors influence resilience trajectories (Kolar, 2011). The theory provides a meaningful framework for exploring and understanding the nested, diverse social and societal factors that influence the process of resilience.

The Ecological Perspective for Cross-Cultural Research of I/C

According to Berry (1994), cross-cultural researchers have used the ecological perspective for a number of years to understand human diversity and behaviors. Triandis (1994) indicated that the ecological perspective is a comprehensive framework for

understanding the I/C constructs. It provides an understanding of how factors in the environment influence social interactions in both individualistic and collectivistic cultures. The ecological perspective holds that humans culturally adapt to their environmental contexts. It considers that individual psychological characteristics develop as a function of the various influences and circumstances in their environment. Individuals' direct engagement in their ecological context may influence their developmental trajectories.

Additionally, the process of acculturation influences the transmission of cultural values. Acculturation means that interactions with, and influences from a culture other than one's native culture may result in the acquisition of elements of that culture's values and belief system while retaining elements of one's native culture (Castro & Murray, 2010). The ecological framework considers that factors such as sociopolitical influences from other societies may influence and produce changes in individuals and their societies. Berry (1994) indicated that those sociopolitical influences operate by way of acculturation, and modify, sometimes in substantial ways, the psychological characteristics previously found in that cultural group. Additionally, Triandis (1994) posited that geographic mobility and migration are also factors that influence individualism and collectivism among individuals. Increased geographic mobility results in collectivistic groups exerting less influence on the individual. Individualism tends to emerge when individuals rather than collective groups make decisions about norms.

Implications for the Study

The ecological perspective provides a context for exploring and understanding differences between participants' personal cultural orientation and the generally held

individualistic or collectivistic orientation of the country where participants reside. For example, since Hofstede (1980, 1991) found that the U.S. is individualistic, if there are participants who reside in the U.S., who identify as being collectivistic, the ecological perspective suggests factors such as geographic mobility or acculturation that may help explain such variation. The ecological perspective will also be applied to make sense of any variations in individual-level versus country-level cultural orientation associated with Jamaica and Rwanda. The ecological perspective also provides a framework to explore and understand how changes in individuals' nested systems (i.e. Bronfenbrenner's 1977, 1979, 2005 ecological theory) are likely to influence cultural orientations and resilience outcomes.

Having discussed how multiple factors are likely to influence resilience, I will discuss Garmezy's (1991) triadic model of resilience in order to provide a framework for understanding the characteristics that mark resilient individuals.

Garmezy's Triadic Model of Resilience

Norman Garmezy is one of the seminal researchers who pioneered the field of resilience research. Garmezy (1991) developed the triadic model of resilience to describe the interaction between risk and protective factors at the individual, family, and societal levels. He indicated that there are hints in the literature which suggest what aspects of the variables at the individual, family, and societal levels are operative during adversities and which help to mediate risk. Another well-known resilience researcher, Werner (1989), also agreed with those resilience characteristics.

The three resilience characteristics that make up the triadic model are: (a) personal attributes of the individual (e.g., cognitive ability, social skills, internal locus of

control, temperament, competence in communication skills, among others); (b) responsive, caring parents, and affectionate, cohesive family ties that provide emotional support during times of distress; and (c) the presence of an external support system (e.g., school, church, work, or other institutional structures) that provides a sense of community connectedness, a system of rewards for achievement, and a belief system that guides individuals' lifestyle (Garmezy, 1991; Werner, 1989).

Implications for the Study

These resilience characteristics vary in the degree to which they manifest in individualistic cultures compared to collectivistic cultures. Based on Garmezy's (1991) model, personal attributes and the nature of social interactions influence resilience outcomes. Therefore, the current study assumes that the personal attributes of the individual and the differences in the nature of social interactions that exist between individualistic compared to collectivistic cultures (Kim et al., 1994; Markus & Kitayama, 1991; Triandis, 1994) have bearing on resilience outcomes.

Summary of Theoretical Framework

In summary, the I/C cultural orientations framework (Oyserman et al., 2002; Triandis, 1995), Bronfenbrenner's (1977, 1979, 2005) ecological theory of human development, the ecological perspective for cross-cultural research (Berry, 1994), and Garmezy's (1991) triadic model of resilience provide a meaningful framework to explore how cultural orientation is related to which protective factors mediate adversity. Based on the tenets of the theories, individuals are viewed as operating in social milieus (Berry, 1994; Bronfenbrenner, 1977, 1979, 2005; Oyserman et al., 2002; Triandis, 1995). Social milieus involve core belief systems that influence the value placed on various personal

attributes, interpersonal interactions (Oyserman et al., 2002; Triandis, 1995), and subsequent protective factors that influence resilience characteristics (Garmezy, 1991). There are differences between individualists and collectivists in terms of core belief systems, personal attributes that are valued, and interpersonal interactions (Oyserman et al., 2002; Triandis, 1995). Therefore, the study sought to demonstrate differences in which individual-, family-, and social/environmental-level protective factors characterize resilient individualists when compared with resilient collectivists. The theoretical framework assumes that resilience is embedded in culture. An exploration of the contextual protective factors that influence resilience may provide greater insight into differences in resilience-promoting factors across cultures – an area that requires greater theoretical and empirical interrogation (Kolar, 2011; Ungar, 2005, 2007, 2011).

Research Questions

Following are research questions:

Descriptive Research Question One: What is (a) the level of resilience as measured by protective factors on the RSA (*perception of self, planned future, structured style, social competence, family cohesion, social resources*), and spirituality; (b) the level of resilience as measured by the BRS among individualistic and among collectivistic participants from Jamaica, Rwanda, and the U.S.?

Research Question Two: Are there significant differences in the degree to which the linear combination of protective factors on the RSA (*perception of self, planned future, structured style, social competence, family cohesion, social resources*), and spirituality, contribute to resilience as a process for individualistic as compared to collectivistic participants from Jamaica, Rwanda, and the U.S.?

Research Question Three: Is there a significant difference between Jamaica, Rwanda, and the U.S. on the linear combination of protective factors (*perception of self, planned future, structured style, social competence, family cohesion, social resources, and spirituality*) that contribute to resilience as a process?

Research Question Four: Is there is an interaction between I/C cultural orientation and country of residence (Jamaica, Rwanda, and the U.S.) on the linear combination of protective factors that contribute to resilience as a process?

Research Question Five: Are there significant differences in outcome resilience as measured by the BRS between individualistic as compared to collectivistic participants from Jamaica, Rwanda, and the U.S.?

Research Question Six: Is there a significant difference between participants from Jamaica, Rwanda, and the U.S. in outcome resilience as measured by the BRS?

Research Question Seven: Are *perception of self, planned future, structured style, social competence, family cohesion, and social resources* significant predictors of outcome resilience as measured by the BRS among individualist and collectivist participants from Jamaica, Rwanda, and the U.S.?

Research Question Eight: Are *perception of self, planned future, structured style, social competence, family cohesion, social resources, and spirituality* significant predictors of outcome resilience among individualist and collectivist participants from Jamaica, Rwanda, and the U.S.?

Research Hypotheses

It was hypothesized that:

Null Hypothesis One (Research Question Two): There is no significant difference between individualistic and collectivistic participants from Jamaica, Rwanda, and the U.S. on the linear combination of protective factors (*perception of self, planned future, structured style, social competence, family cohesion, social resources, and spirituality*) that contribute to resilience as process.

Null Hypothesis Two (Research Question Three): There is no significant difference between Jamaica, Rwanda, and the U.S. on the linear combination of protective factors (*perception of self, planned future, structured style, social competence, family cohesion, social resources, and spirituality*) that contribute to resilience as a process.

Null Hypothesis Three (Research Question Four): There is no interaction between I/C cultural orientation and country of residence (Jamaica, Rwanda, and the U.S.) on the linear combination of protective factors that contribute to resilience.

Null Hypothesis Four (Research Question Five): There is no significant difference between individualistic compared to collectivistic participants from Jamaica, Rwanda, and the U.S. in outcome resilience as measured by the BRS.

Null Hypothesis Five (Research Question Six): There is no significant difference between participants from Jamaica, Rwanda, and the U.S. in resilience as measured by the BRS.

Null Hypothesis Six (Research Question Seven): *Perception of self, planned future, structured style, social competence, family cohesion, social resources* are not significant predictors of resilience as measured by the BRS among individualistic and collectivistic participants from Jamaica, Rwanda, and the U.S.

Null Hypothesis Seven (Research Question Eight): *Perception of self, planned future, structured style, social competence, family cohesion, social resources, and spirituality* are not significant predictors of resilience as measured by the BRS among individualistic and collectivistic participants from Jamaica, Rwanda, and the U.S.

Definition of Terms

Collectivistic Culture: Societies in which characteristics such as emotional interdependence, a sense of solidarity within a group, sharing, group decision making and a sense of duty and obligation to one's group are fostered (Hofstede, 1980; Hui & Triandis, 1986). There are cohesive in-groups that protect members, and members in return demonstrate a deep, unquestioning sense of loyalty to their in-group; the integration among people is strong from birth onwards (Oyserman et al., 2002; Triandis, 1994, 1995).

Culture: The distinctive customs, values, beliefs, knowledge, attitudes, and behaviors of a society or community or of a particular group within society (VandenBos, 2015).

Cultural Orientation: Ideologies, attitudes, and goals held based on aspects of one's culture (Triandis, 1995; VandenBos, 2015). In this study, cultural orientation refers to either individualistic or to collectivistic ideologies, attitudes, and goals. It includes the perceptions individuals have of the frequency of certain cultural norms, values, and social behaviors (normative cultural orientation) and the degree to which individuals approve/disapprove and have internalized those norms and values (evaluative cultural orientation [ECO]).

Evaluative Cultural Orientation: An individual's approval/disapproval and internalized beliefs about cultural norms, values, and social behaviors (Bierbrauer, Meyer, & Wolfradt, 1994).

Family Cohesion: The level of cooperation, support, loyalty, and stability within the family; and the amount of conflict that exists among family members (Friborg Hjemdal, Rosenvinge, & Martinussen, 2003).

Individualistic Culture: societies in which there are loose ties between individuals; there is a strong emphasis on autonomy, individual initiative, emotional independence, the right to privacy, and pleasure seeking. Individuals are also encouraged to be assertive, to value freedom of choice, and to define their own goals (Hofstede, 2001, Kim et al., 1994; Oyserman et al., 2002; Triandis, 1995).

Normative Cultural Orientation: An individual's perceptions of how common or frequent certain cultural norms, values, and social behaviors are in the country of residence (Bierbrauer et al., 1994).

Perception of Self: Self-efficacy, hope, determination, and a realistic orientation to life (Friborg et al., 2003).

Planned Future: Having future goals that are well-thought through and possible to accomplish (Friborg et al., 2003).

Protective Factors: Behaviors, or psychological, environmental, or other characteristics that mitigate or ameliorate the negative effects of adversity or traumatic life events (Rutter, 1985; VandenBos, 2015).

Resilience: “The process and outcome of successfully adapting to difficult or challenging life experiences” (VandenBos, 2015, p. 910). It has to do with bouncing back from difficult circumstances (APA, 2017a, para.4; Smith et al., 2010).

Risk: The probability or likelihood that an event will occur such as the likelihood that a disorder will develop; the likelihood of experiencing loss or harm that is associated with an action (VandenBos, 2015).

Risk Factors: Influences that are potentially harmful (Kolar, 2011) and threaten positive development or adaptation (Waller, 2001). Such factors may occur at the individual, family, and/or community or societal levels (Waller, 2001). “Exposure to trauma is a risk factor for a host of mental health problems” (Kubany, 2004, p. 1).

Social Competence: Cheerful mood, social adeptness, good communication skills, flexibility in social matters, and the ability to initiate activities (Friborg et al., 2003).

Social Resources: Access to external support from friends and relatives; intimacy; and the individual’s ability to provide support (Friborg et al., 2003).

Spirituality: The belief that, good or bad, most things happen for a reason and that sometimes fate or God can help when there are no clear solutions to problems (CD-RISC-25 spirituality scale).

Structured Style: Being able to uphold daily routines and to plan and organize (Friborg et al., 2003).

Traumatic Life Event: “Any disturbing experience that results in significant fear, helplessness, dissociation, confusion, or other disruptive feelings” (VandenBos, 2015, p. 1104).

General Methodology

This study employed a non-experimental quantitative online survey research design. The non-experimental approach allowed the researcher to collect the desired data that represent participants' subjective experience of a traumatic event as well as their subjective cultural orientation and resilience characteristics. The use of an experimental design would be unethical since that would involve exposing participants to trauma in order to assess resilience.

Data was collected using Class Climate, which is an online data collection program. The sample was recruited using convenience and snowball sampling. The survey link was sent to contact personnel in each of the three countries. Those contact personnel in turn forwarded the survey link to participants from universities, churches, business entities, and other organizations. Participants were also recruited via social media (Facebook and LinkedIn). The sample included adults age 18 years and older, from Jamaica, Rwanda, and the U.S., who had experienced at least one traumatic event. Before participants were exposed to the survey items, screening questions ensured that participants met the age, trauma event, and country of residence criteria.

Demographic items captured descriptive statistics about the participants. The following scales were also included in the online survey:

1. The RSA (Friborg et al., 2003) measures protective factors that contribute to resilience. The RSA is a 33-item scale that consists of six factors: (a) perception of self, (b) planned future, (c) social competence, (d) structured style, (e) family cohesion, and (f) social resources. The addition of spirituality (see next scale) creates a seventh process factor. The RSA, with the inclusion of religion/spirituality, allows for the exploration of

multi-level protective factors (personal, social, and environmental) that contribute to resilience (resilience as process).

2. The CD-RISC-25 spirituality factor (Connor & Davidson, 2003) measures spirituality. Religion/spirituality is not included as a factor on the RSA. However, authors (e.g., Allen & Smith, 2015; Connor & Davidson, 2003) have found that individuals employ religion/spirituality to help mitigate the effects of adversity. Therefore, the two items that comprise the CD-RISC-25 spirituality scale were included. The items allowed for the exploration of spirituality as a protective factor.

3. The BRS (Smith et al., 2008) measures resilience as bouncing back from stress and adversity. It is a one-factor scale that consists of six items. In the current study, the outcome criterion that is used to operationalize resilience as successful adaptation to challenging life circumstances is “bouncing back” from adversity.

4. The Cultural Orientation Scale (COS; Bierbrauer et al., 1994) measures participants' I/C cultural orientations. The COS consists of 26 items. It differentiates between individuals' perceptions of the frequency of certain social behaviors and cultural values in their country of residence (normative cultural orientation) and their internalized beliefs about those social behaviors/cultural values (ECO). The normative and evaluative values were reported for individualists and collectivists in each country and were used for data analysis. Higher values represent higher collectivism.

5. The Traumatic Life Events Questionnaire (TLEQ; Kubany et al., 2000) measures participants' exposure to risk. The TLEQ is a 24-item scale that measures potentially traumatic events such as physical abuse, sexual abuse, and natural disasters, among others.

Data was analyzed using IBM Statistical Package for the Social Sciences (SPSS). Statistical procedures performed included descriptive statistics, Pearson-r correlation analysis, independent samples t-test, canonical correlations, multiple analysis of variance, and multiple regression analysis. The findings pertaining to differences and relationships between variables were regarded as statistically significant at a $p \leq .05$.

Significance of the Study

The study addressed current needs and long-neglected suggestions in the resilience literature regarding the relationship between resilience and culture. This study is particularly relevant because it strengthens the existing literature by examining how I/C cultural orientation influences the protective factors that contribute to resilience. It does so by empirically assessing the I/C constructs at the individual level rather than making assumptions about participants' cultural orientation and subsequent protective factors based solely on the country where participants reside.

The findings shed light on which multi-level protective factors contribute to individuals in three regions (Jamaica, Rwanda, and the U.S.) bouncing back from adversity, thereby informing plans for conducting prevention and intervention work in each country. Additionally, the culturally relevant findings and recommendations should prove useful for psychologists and other mental health professionals in settings such as university counseling centers and community mental health agencies in their work with diverse populations as they consider prevention program development and evidence-based intervention strategies when working with individuals from individualistic and collectivistic cultures.

Another important contribution of the study to the literature is that it responds to one recommendation made by Smith et al. (2010). Smith and his colleagues who authored the BRS suggested that for future studies, researchers could compare the BRS with other measures to see if there are differences in the findings across different resilience measures. The current study examined differences in the linear combination of RSA and spirituality protective factors (process resilience) that contribute to BRS (outcome) resilience among participants from Jamaica, Rwanda, and the U.S.

Limitations and Assumptions

There are a number of limitations and assumptions associated with the current study. The study employed a non-experimental research design; therefore, the findings do not indicate causation. This design did not allow the researcher to make cause-and-effect statements about the findings. One limitation that may influence the generalizability of the study is the method of data collection. The study employed an online survey methodology. Therefore, only participants who had access to the internet and an electronic device such as a smart phone or computer were able to participate in the study. This means that individuals from Jamaica, Rwanda, and the U.S. who were 18 years and older and who experienced a traumatic event but did not have access to the internet were not able to participate in the study.

The use of self-report measures is also a limitation. The strength and clinical applicability of the findings is dependent on the honest feedback from participants. Other limitations of the study are the underlying assumptions associated with the use of rating scales. The study assumes that the degree or strength of meanings or quantifiers assigned to how participants “strongly agree” or rate statements as being “very good” reflect the

true sentiments of the participants. It is also assumed that the strength of meanings or quantifiers assigned are similar across cultures and across participants. There is also the assumption that the questions included on the rating scales adequately capture and represent the I/C cultural framework across cultures (Oyserman et al., 2002).

Delimitations

The study is delimited to participants from Jamaica, Rwanda, and the U.S. Only participants who were 18 years and older and who have experienced a traumatic life event were included in the study. All participants must have had access to the internet, an electronic device such as a computer or smart phone from which they completed the survey, and must be sufficiently computer literate to complete an online survey form.

Individuals who access and participate in online activities such as completing online surveys may differ from the general population in terms of their access to internet resources, and their interest in, or experience with different research variables.

Individuals who use the internet may have different value systems, life experiences, and perceptions from those who do not. Likewise, individuals who have access to the internet may have a different set of resilience resources that may be more or less than those who do not internet have access to the internet. As a result, the sample that was drawn from internet users on university campuses, business entities, and other organizations such as churches, or via social media excluded individuals who did not belong to the internet-based audience and who may have had more or less access to resilience resources thereby limiting the generalizability of the findings.

Organization of the Study

This study is organized into five chapters, followed by an appendix and reference list.

Chapter 1 includes the introduction and describes the background of the problem, statement of the problem, purpose of the study, the theoretical framework, research questions, research hypotheses, definition of terms, general methodology, significance of the study, limitations and assumptions, and delimitations.

Chapter 2 presents a historical review of the literature that highlights the variables under investigation, namely, traumatic life events (risk), protective factors, resilience, and culture (conceptualized as I/C cultural orientations).

Chapter 3 documents the methodology of the study. This includes a description of the sample, data collection procedures, measurement scales, and statistical techniques that were used to analyze the data.

Chapter 4 presents the results of the data analysis and the findings as they relate to the research questions and hypotheses of the study.

Chapter 5 includes a summary of the study with relevant conclusions, discussion of the findings, and implications. Recommendations for further research are provided.

The appendix contains all supporting documents and letters.

Finally, the Reference List contains the bibliographic information for the study.

CHAPTER 2

LITERATURE REVIEW

Introduction

The American Psychological Association (APA, 2017a), defines resilience as the process of adapting well and bouncing back from trauma. The experience of trauma and resilience are personal experiences. Different people react to traumatic events in different ways. Individuals' cultural orientation is likely to influence variations in people's responses to traumatic events and subsequent resilience. The literature suggests that there is a need for further research into how culture influences resilience (Khanlou & Wray, 2014; Ungar, 2013; Vindevogel, 2017).

This chapter presents a review of the literature for the variables under consideration in the study. The variables are traumatic life events (how the current study operationalizes risk), protective factors, resilience, and I/C cultural orientation. The chapter discusses some usages of the constructs in the literature that inform the direction of the current study. It also discusses current trends and areas that require strengthening in the resilience research and indicates how the current study responds to some current trends and gaps in the literature. The chapter ends with a summary.

Risk

The study of resilience has its origins in the study of risk. VandenBos (2015) defines risk as the probability or likelihood that an event will occur such as the likelihood that a disease or disorder will develop. Risk indicates that there is the likelihood of individuals experiencing loss or harm that is associated with an action or an event. In the search for the antecedents of schizophrenia, pioneer researchers such as Garmezy (1974) observed that some at-risk children thrived in the midst of adversity. Advancement in the field has led to a shift in focus from searching for risk factors to identifying protective factors and mechanisms, however, the construct and study of resilience implies the presence of risk (Luthar et al., 2000).

Risk factors are influences that are potentially harmful (Kolar, 2011) and threaten positive development or adaptation (Waller, 2001). Such factors may occur at the individual, family, and community or societal levels (Waller, 2001). For example, individual-level risk factors may include low self-esteem and poor physical/mental health. Family-level risk factors may include neglect, abuse, or having parents with poor mental or physical health. Community and societal-level risk factors may include poor social resources such as education, housing, employment opportunities, or unsafe environments (Kolar, 2011).

The presence of multiple risk factors can result in complex interactions and effects (Kolar, 2011). Researchers indicate that the exposure to multiple risk factors may pose a significantly greater threat to one's ability to bounce back than exposure to only one risk factor (Kolar, 2011; Waller, 2001). Additionally, people's response to various risk factors and the social and cultural context within which risk occurs is likely to vary

(Kolar, 2011). Consequently, as researchers interpret and attempt to generalize their research findings, they should demonstrate sensitivity to the variability in the experience of risk across individuals and settings by being mindful of participants' cultures and contexts, and the associated norms, values, and perceptions of what is regarded as risk (Kolar, 2011).

There is some disagreement in the literature pertaining to the operation and impact of risk (Kolar, 2011). Risk factors may increase the likelihood of poor adaptation. However, the presence of risk factors does not necessarily indicate poor adaptation or poor outcome (Rutter, 2006). For example, Waller (2001) suggested that a risk factor might become protective when a person's response to adversity results in the development of new and more effective perspectives and competencies resulting in better coping in the future. Rutter (2006) refers to this phenomenon as the 'steeling effect.'

Olsson, Bond, Burns, Vella-Brodricket, and Sawyer (2003) identified critical limitations to the notion of the steeling effect. The authors believed that there is nothing about exposure to risk that necessarily toughens an individual. The authors indicated that intimating a direct relationship between risk and resilience ignores key factors such as timing, the degree of impact as well as the possible presence and impact of protective factors. They agreed that shielding and over-protecting an individual does little to enhance the development of resilience, whereas, over-exposure to risk can compromise the development of resilience.

There is value in the observations made by Olsson et al. (2003). The issues they raised potentially call attention to the need for consistency among researchers in attending to the two key variables in resilience research, that is, risk factors, and

protective factors, rather than focusing primarily on the impact or operation of risk and coming to arbitrary conclusions about the role of risk in and of itself.

Risk factors have been operationalized as parental psychopathology (Garmezy, 1974), poverty (Garmezy, 1991, 1993; Werner & Smith, 1982), community violence (Hammack et al., 2004), negative or trauma life events (Bonanno, 2004; Bonanno et al., 2006; D’Imperio, Dubow, & Ippolito, 2000), among others. As indicated in Chapter 1, the current study will operationalize risk as traumatic life events because the construct covers a wide range of events that have potentially negative consequences, and which warrants scientific inquiry as well as health services prevention and intervention efforts (Barad et al., 2007).

Traumatic Life Events

The American Psychological Association defines trauma as “an emotional response to a terrible event like an accident, rape or natural disaster” (APA, 2017b, para.1). Kira (2001) stated that traumatic events are out of the ordinary and the most severe kinds of stressors. They generally happen unexpectedly and individuals have very little control over when and how they occur. Traumatic experiences can potentially challenge people’s sense of self (Kira, 2001), their beliefs and meaning-making systems (Masten & Wright, 2010), and trigger emotional distress, health problems, and feelings of shame (Platt & Freyd, 2011).

Prior to research on traumatic events, when individuals were exposed to highly stressful situations, subsequent personal dysfunction was attributed to personal deficits (Mancini & Bonanno, 2010). The impact of the twentieth century wars, for example World War II, led to greater awareness of how humans are negatively affected by

exposure to traumatic events such as combat. That increased awareness continued during the late twentieth century. It was during this period that consensus emerged in the mental health field that, by themselves, traumatic events can be the main source of dysfunction in individuals (Mancini & Bonanno, 2010) rather than attributing dysfunctions to possible deficits or weaknesses in the individual. It was also during this period that the American Psychiatric Association (1980) listed post-traumatic stress disorder (PTSD) as a diagnostic category. This period also saw an increase in the number of research studies on traumatic stress.

The National Comorbidity Survey (a survey that studies the distribution and consequences of psychiatric disorders in the U.S.) represents one such major study on traumatic stress (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). The study was conducted between the years 1990 and 1992 in 176 counties across the U.S. Researchers assessed the prevalence of exposure to various traumatic experiences and the probability of PTSD. Participants included 5877 participants (men, $n = 2812$; women, $n = 3065$) who were 15 to 54 years old. Some of the traumatic events surveyed included rape, molestation, physical attack, combat, being threatened with a weapon, witnessing someone being badly injured or killed, physical abuse, neglect, accidents, and natural disaster. The findings revealed that 60.7% of men and 51.2% of women reported trauma occurrence at least once during their lifetime. The study also found that some events that were reported as being upsetting to some people were not reported as being upsetting by others. For example, when compared to women, almost twice the number of men reported being physically attacked (men = 11.9%, women = 6.9%, $p = .002$), however almost 15 times more women than men (women = 21.3%, men = 1.8%, $p = .01$) reported

that this event was upsetting and associated with PTSD.

According to Mancini and Bonanno (2010), in the face of trauma (for example, survivors of the September 11th terrorist attacks in New York City; Bonanno, 2004; Bonanno et al., 2006), resilient individuals may experience some form of stress reaction such as difficulty sleeping or intrusive memories of the event during the days following the event. However, in resilient individuals, the stress reaction is transient and mild to moderate in intensity. Resilient individuals are able to cope well while continuing to carry out their daily tasks. Resilience researchers (for example, Garmezy, 1991; Werner & Smith, 1982) suggest that various individual-level, family-level, and social/community- or environmental-level factors enhance individuals' ability to cope well and adapt in the face of adversity. These protective factors are discussed in the section following the summary of risk/traumatic life events.

Summary of Risk/Traumatic Life Events

The construct and study of resilience implies the presence of risk (Luthar et al., 2000). Risk is the likelihood of individuals experiencing loss or harm associated with an event or the likelihood that a disease or disorder will occur. Risk factors are influences that are potentially harmful (Kolar, 2011), and which may threaten positive adaptation (Waller, 2001). Risk factors exist at the individual-, family-, and social/community levels (Kolar, 2011). People in different cultures are likely to differ in their responses to risk factors, therefore researchers should be sensitive to cultural perceptions and norms in their attempts to interpret and generalize findings. For example, a risk factor may become protective when individuals' responses result in the development of new and more

effective coping strategies. Rutter (2006) refers to this phenomenon as the ‘steeling effect.’

In the current study, risk is operationalized as traumatic life events because the construct covers a wide range of events that can have potentially negative consequences and which warrants scientific inquiry as well as prevention and intervention efforts (Barad et al., 2007). Traumatic events are the most severe kinds of stressors that generally happen unexpectedly and over which individuals have very little control as to when and how they occur Kira (2001). In the face of trauma, resilient individuals as they are enhanced by protective factors, are able to cope well while continuing to carry out their daily tasks (Bonanno, 2004; Bonanno et al., 2006).

Protective Factors

Protective factors ameliorate the negative effects of adversity when a risk factor is manifested and experienced (Rutter, 1985). The characteristics of the individual and wider community that function to reduce the negative effects of adversity are regarded as protective factors (Masten & Reed, 2002). Hjemdal (2007) conducted a comprehensive review of the literature to identify protective factors as they were examined by various researchers. He categorized the factors identified into fifteen types, namely: (a) personal competence, (b) self-efficacy, (c) social support, (d) social competence, (e) family and youth, (f) internal locus of control, (g) temperament, (h) hope, (i) structure and rules, (j) ego strength, (k) educational and vocational life, (l) religion, (m) self-actualization, (n) amount of stress (similar to the concept of ‘steeling effect’), and (o) problem-solving abilities and intelligence. Another approach taken by Vanderbilt-Adriance and Shaw (2008) was to identify three main categories of protective factors based on where they

reside: within the individual, within the family, and, within the community/environment. These three broad categories encompass the fifteen types of protective factors identified by Hjemdal (2007). The parallel grouping of risk factors (e.g., Kolar, 2011; Waller 2001) and protective factors into three broad categories based on where they reside (within the individual, within the family, and within the community/environment) provides evidence that there is a deep relationship between risk factors and protective factors.

Consistent with the resilience characteristics outlined in Garnezy's triadic model (Garnezy, 1991) and agreed upon by Werner (1989), other authors (e.g., Friberg et al., 2003; White, Driver, & Warren, 2008) also posited similar protective factors or qualities that characterize resilience. The factors are psychological and dispositional attributes (individual-level factors), family support and cohesion (family-level protective factors), and external support systems (social/community/environmental-level protective factors).

Individual-Level Protective Factors

At the individual level, some attributes that have been found to be associated with positive outcome include intelligence, emotion regulation, internal locus of control, and, temperament (Vanderbilt-Adriance & Shaw, 2008). Individuals with high intelligence are likely to possess and demonstrate effective problem solving that enables them to deal with challenges (Vanderbilt-Adriance & Shaw, 2008). Emotion regulation has to do with one's ability to modulate an emotion or set of emotions. This may include learning to construe situations differently in order to better manage them or substituting an emotion such as anger with an emotion that is more likely to produce a better outcome (VandenBos, 2007). Some researchers (for example, Sinha & Verma, 1994; Vanderbilt-

Adriance & Shaw, 2008; Werner & Smith, 1982) have found that emotion regulation appears to be especially important in dealing with adversity.

Individuals who have an internal locus of control see themselves as having control over the events that affect their lives. Individuals who see themselves as having control are better equipped to problem-solve and more likely to respond less negatively in the face of adversity. Conversely, individuals who perceive themselves as having no control over the events that affect their lives are more likely to feel powerless (Vanderbilt-Adriance & Shaw, 2008). Pertaining to temperament, researchers such as Werner and Smith (1982) have found that an easy-going temperament, both in childhood and adulthood, is associated with positive outcome. Individuals with an easy-going temperament may respond less negatively in stressful situations and may be more flexible in response to change (Vanderbilt-Adriance & Shaw, 2008).

In the current study, individual-level protective factors will be assessed by examining the following variables: *perception of self*, *planned future*, *structured style*, *social competence*, (as measured by the RSA), and spirituality. *Perception of self* assesses self-esteem, self-efficacy, and self-liking. It has to do with one's sense of hope, determination and realistic orientation to life (Friborg et al., 2003). *Planned future* involves having future goals that are well-thought through and possible to accomplish (Friborg et al., 2003). *Structured style* assesses individuals' ability to plan, organize, and maintain an effective daily routine. *Social competence* assesses individuals' ability to be flexible in various social contexts, initiate tasks, and communicate effectively. It pertains to social adeptness and having a cheerful mood (Friborg et al., 2003).

Spirituality (as measured by the spirituality factor on the CD-RISC-25) refers to

the belief in a universal, divine power that intervenes in the affairs of one's life (White et al., 2008). Connor and Davidson (2003) suggested that the spiritual component of resilience is likely to include faith and the belief in benevolent intervention or good luck. Other authors have found that spirituality serves as a protective factor and that it serves to enhance psychological well-being (Costanzo, Ryff, & Singer, 2009; Portnoff, McClintock, Lau, Choi & Miller, 2017).

Family-Level Protective Factors

The presence of a nurturing caregiver and the quality of the parent-child relationship have been found to be important protective mechanisms (Vanderbilt-Adriance & Shaw, 2008; Werner & Smith, 1982, 1992). Even in the face of adversity, having a high-quality relationship with at least one parent in which there is low conflict and high levels of warmth and openness is associated with positive outcomes across the lifespan (Werner & Smith, 1982, 1992). Similarly, Zautra et al. (2010) suggested that family interactions that involve acceptance and appropriate emotional regulation are critical protective factors that mitigate the effects of adversity. The authors posited that in order to understand resilience, researchers should examine the capacity of families to help individuals rebound when faced with adversity. In the current study, family-level protective factors are assessed using the *family cohesion* variable from the RSA. The variable assesses the degree of loyalty, cooperation, cohesion, support, stability, and the amount of conflict that exists among family members (Friborg et al., 2003).

Social/Community-Level Protective Factors

Social/community-level protective factors involve those aspects of the

environment that help protect against the negative outcomes associated with risk. These may include social support, educational, and vocational opportunities, and religion (Hjemdal, 2007). Although there are differences in the ways in which protective factors are expressed in various cultural contexts, protective factors ameliorate the negative effects of traumatic life events (Rutter, 1985) and contribute to the process and outcome of resilience. In the current study, social/community-level protective factors will be assessed using the *social resources* variable on the RSA.

According to Ungar (2007), the factors in the environment are often underestimated in terms of their impact on outcomes. Ungar (2007) indicated that the interactions individuals experience in their environment are an embodiment of culture and it is how individuals experience those interactions that determine what factors are protective. Factors must be culturally meaningful if they are to function as protective mechanisms. For example, in describing the factors that protect First Nation children in Canada from identity crises and high rates of suicide, Ungar (2007) stated that strong intervention strategies included focusing on the transmission of culture, and providing community resources to practice the culture. Children were encouraged to develop a sense of pride in their indigenous culture. They were encouraged to spend time with their parents out on the land, even if that means taking time away from formal schooling. They were to learn the ways of their nomadic elders who were forced to settle in communities (Ungar, 2007). While taking time away from formal schooling might be perceived by many as being detrimental to the healthy development of a child, in this cultural context the intervention has been found to be useful in serving as a protective factor against high suicide rates and identity crises among First Nation children in Canada. Ungar (2007)

indicated that in order for educational and intervention opportunities to be helpful, they must be the kind that are culturally relevant and meaningful. They must be the kind that reflect the values of the people for whom such interventions are planned.

In a mixed-method study, that spanned eleven countries on five continents, Ungar and a team of researchers at the Resilience Research center examined the factors that contributed to resilience among youth in fourteen communities (Ungar, 2005, 2008). Research teams were located in each country. They administered surveys and conducted follow-up interviews to determine what resilience looked like in each specific country, how some factors were similar and how some differed. The surveys used included an open section that contained several questions specifically tailored for each country. The assessment of participants' cultural orientation as a determinant of protective factors was not an approach used by Ungar and his colleagues. The qualitative approach was more discursive, meaning that participants shared their narrative and primarily determined what resilience looked like for them.

Although remarkable similarities were found in what the different communities valued (for example, education, connections with family, a sense of one's culture, and ability to problem-solve), there were also differences in the extent to which some factors were emphasized. Interviews were conducted with 89 participants. Analysis of the qualitative data suggested that the more collectivistic factors such as sense of cohesion, sense of belonging to one's culture and community, and religious affiliation were more important parts of the lives of children in non-Western countries such as Palestine or India than they were for children in Western countries such as Canada or the U.S.

Summary of Protective Factors

Protective factors ameliorate the negative effects when a risk factor is experienced (Rutter, 1985). Authors (e.g., Friborg et al., 2003; Garmezy, 1991; Vanderbilt-Adriance & Shaw, 2008; Werner, 1989; White et al., 2008) have grouped protective factors into three main categories based on where they reside—that is, within the individual, within the family, or within the community/environment. Individual-level protective factors pertain to attributes of the individual that are associated with positive outcome. These attributes may include emotion regulation, having an internal locus of control, and effective problem-solving skills. In the current study, the individual-level protective factors that will be examined are *perception of self*, *planned future*, *structured style*, *social competence* (measured by the RSA), and *spirituality* (measured by the CD-RISC-25). Family-level protective factors refer to the capacity of the family to help individuals bounce back in the face of adversity (Zautra et al., 2010). Protective family-level interactions involve acceptance, nurturance, and appropriate emotional regulation. In the current study, family-level protective factors are assessed using the *family cohesion* variable from the RSA. Community-level protective factors include aspects such as social support, and educational and vocational opportunities. Ungar (2007) posited that the interactions individuals experience in their environment are an embodiment of culture. Therefore, the manner in which individuals experience those interactions can determine what factors are protective. In the current study, community-level protective factors will be assessed using the *social resources* variable from the RSA.

Resilience

Defining Resilience

The concept of resilience connects the concept of risk and the concept of protective factors (Kolar, 2011). An individual experiences resilience when there is exposure to risk and, when protective factors are accessed that help to mitigate risk (Kolar, 2011). According to the *APA Dictionary of Psychology*, resilience in psychology refers to the “process and outcome of successfully adapting to difficult or challenging life experiences” (VandenBos, 2015, p. 910). Predominant among the factors that contribute to how well people adapt to adversities are: “(a) the ways in which individuals view and engage with the world, (b) the availability and quality of social resources, and (c) specific coping strategies” (VandenBos, 2015, p. 910). Resources and skills that contribute to greater resilience can be cultivated and practiced (VandenBos, 2015). In the current study resilience is considered to be a dynamic, multi-level, and contextual process that emerges from a set of malleable resources at both individual and community levels (Kretzmann, 2010) and that reflects evidence of bouncing back despite adversity (Luthar, 2003; Metzel, 2009; Smith et al, 2010). I consider that examining both the process and outcome components of resilience is important for a fuller understanding of the construct. That approach is also consistent with the *APA Dictionary of Psychology*.

Variations in Conceptualization Across Different Fields of Study

A review of the literature reveals that resilience has been examined across several fields in a variety of ways (Bhamra, Dani, & Burnard, 2011; Fletcher & Sarkar, 2013; Luthar et al., 2000). Some ways in which resilience has been examined include ecological

resilience (Brand, 2009), organizational resilience (Fiksel, 2006), socio-ecological/community resilience (Allenby & Fink, 2005) and, individual/psychological resilience (Bonanno, 2004, Bonanno et al., 2006; Ong, Bergeman, Bisconti, & Wallace, 2006). The development of the construct across various disciplines such as biology, medicine, education, and, psychology impacts variations in how resilience is operationalized (Khanlou & Wray, 2014). However, despite variations in how resilience is operationalized across various fields of study, the concept pertains to the capacity of an organism to withstand disruption and bounce back despite adversity (Bhamra et al., 2011). The current study examines individual/psychological resilience. It involves an investigation of the processes (protective factors) and outcome (bouncing back) of individuals successfully dealing with difficult or challenging life experiences.

Historical Perspective

This section highlights advancement in resilience research beginning with the search for the antecedents of schizophrenia, to seminal resilience studies, and more current constructivist research trends. Some important shifts in the resilience research agenda are discussed. These include the shift from searching for vulnerabilities to focusing on protective factors, as well as a shift in research emphasis, which the literature described as happening in four different waves. I will also identify and discuss some trends and gaps in the literature that help inform the focus of the current study.

Vulnerability Research

The most recent constructivist approach to the study of resilience as posited by Ungar (2004, 2005, 2007, 2011), presents as a developing trend in an area of research

that began over five decades ago. Initially called vulnerability research (Garmezy, 1971), seminal studies on the etiology of schizophrenia and other psychiatric disorders by investigators (e.g., Anthony, 1968; Mednick & Schulsinger, 1968 as cited in Garmezy, 1974), paved the way for a diverse body of literature on the concept of resilience. Garmezy (1974) documented the work of various researchers who were engaged in a number of different empirical studies and projects to investigate children vulnerable to schizophrenia and other psychological disorders. He credited the development of those research projects to the Mednick-Schulsinger program in Copenhagen. Sarnoff Mednick, a professor of psychology at the New School for Social Research in New York (Garmezy, 1974), collaborated with Schulsinger, then director of the Psychiatry department of Kommunehospitalet in Copenhagen, Denmark.

Mednick and Schulsinger selected normally functioning children ($n = 207$, mean age = 15.7 years) of parents with schizophrenia and designated them as the high-risk group (Garmezy, 1974; Mednick, Parnas, & Schulsinger, 1987). The birth of the children in the high-risk group had taken longer than children in the control group and the placentas of about 11% of the cases were abnormal. The mothers of some of the children had been absent during the first two years of the child's life. A normal control group ($n = 104$) was designated as low-risk. The mothers of these children were not schizophrenic. The children were matched for factors such as age, sex, education, rural-urban residence, and social class.

The researchers subjected the participants to a series of tests and clinical interviews. Some of these tests included the Wechsler Intelligence Scale for Children (WISC), the Minnesota Multiphasic Personality Inventory, a word association test, and a

stress test of conditioning and generalization during which heart rate and other physiological responses were measured. The researchers conducted five- and ten-year follow-up assessments.

Significant differences were found between the control and the high-risk group. Based on clinical interviews (85% agreement between two psychiatric raters) children in the low-risk group reported having more positive self-image and greater ease at making friends. They were less tense, nervous, reactive and sensitive than high-risk children. The high-risk group performed significantly slower on portions of the WISC, for example, the Coding and Arithmetic subtests. The high-risk group had longer latency periods and more fragmented responses on the word association tests. Additionally, the high-risk group was more reactive and labile to a wider range of stress stimuli. The researchers concluded that early maternal loss, hyper-lability, hypersensitive autonomic functioning and disturbance in making the appropriate association between sensory information and appropriate motor responses were precursors of psychiatric breakdown.

Garmezy (1971) stated that in the various vulnerability studies conducted, researchers found children in high-risk groups who demonstrated positive outcome that was contrary to what was expected. These children did not develop psychopathologies and were labeled as invulnerable. Garmezy posited that societies were likely to experience greater, long-term benefits from studying the factors and forces that contributed to the survival and positive adaptation of these “invulnerable” children. He implored the field to begin to study individuals among the at-risk population who were resistant to stress.

Shift in Research Focus: From Vulnerability to Protective Factors

A number of researchers began making the shift from vulnerability research that focused on children at risk for developing schizophrenia and the individual traits of those who did not, to examining protective factors and processes among at-risk populations. Development in the field led to greater emphasis being placed on investigating protective factors and exploring how protective mechanisms transcend risk (Garmezy, 1991). So, whereas vulnerability studies searched for answers to a question that was more pathogenic in nature, that is, *what is the cause of illness?*, resilience research took on a more salutogenic focus. According to Antonovsky (1979) the salutogenic approach examines factors that contribute to health despite exposure to risk. This approach highlights factors such as an individuals' sense of coherence, which has to do with the belief that things will work out as well as expected.

Researchers (e.g., Garmezy, 1991, 1993; Masten, 1989; Rutter, 1979; Werner & Smith, 1982) agreed that various protective factors at the individual-, family-, and environmental levels enable individuals to thrive in the face of adversity. In the following section, I have summarized the landmark resilience projects of Garmezy, Masten, and Tellegen (1984), Werner and Smith (1982), and Rutter (1979) and their focus on identifying protective factors that contribute to resilience.

Seminal Resilience Research

The study of children on the Isle of Wight (Rutter, 1979), the study of the children of Kauai (Werner & Smith, 1982), and Project Competence (Garmezy et al., 1984) are examples of seminal resilience studies. These studies helped mark the shift in the

literature from vulnerability research that focused on the antecedents of schizophrenia, to a focus on protective factors that contributed to successful adaptation despite risk. The studies highlighted that in addition to individual attributes, family resources, and social/community/environmental characteristics were important protective factors in the resilience process.

Having observed that there were large numbers of vulnerable children of mothers with schizophrenia who did not show signs of pathology or incompetence, Garmezy and his colleagues embarked on a longitudinal project referred to as Project Competence (Garmezy et al, 1984). The study followed approximately 200 children from two urban samples. The participants and their parents participated in interviews and completed various surveys of stress and competence. Stress was measured using a Life Events scale developed by the researchers. Competence was operationalized as academic achievement (assessed by grades and standardized test scores), classroom behavior (assessed by teacher ratings), and reputation among peers (operationalized as sociability, leadership, aggression, disruptive behavior, levels of sensitivity, and isolation). The researchers assessed the socioeconomic status (SES) of the children (using the Duncan Socioeconomic Index) to determine the relationship between family resources and competence as well as assess how SES mediates the impact of stress on the family. The researchers found that competence (academic achievement, positive peer relations, and desirable classroom behavior), and the availability of family resources (higher SES) were moderators of the effects of stress (Garmezy et al., 1984).

In another study, Werner and Smith (1982) tracked a cohort of 698 children born on Kauai, Hawaii in 1955. The children were tracked from birth through age 40 (Werner

& Smith, 2001). The participants were included in the longitudinal study based on their exposure to four or more risk factors. The risk factors included perinatal stress, poverty, low parental education, and family discord. Many of the children grew up with parents experiencing alcoholism, mental illness or unemployment. The researchers observed that of the children who were raised under these conditions, two-thirds exhibited destructive behaviors such as substance abuse, chronic unemployment, and teenage pregnancy (in the case of teenage girls) in their later teen years.

Of the participants tracked, about one-third of the children did not exhibit destructive behaviors in later years. Werner called the latter group “resilient” (Werner, 1982; Werner & Smith, 1992). The resilient children and their families had traits that made them different from non-resilient children and families. The traits and protective factors identified included core resources (e.g., communication skills, average intelligence, attachment to parents, sociability, and having an internal locus of control); adaptive resources (e.g., emotional support from loved ones including parents, spouse, siblings, or mate); and external support (e.g., support from school or work environment, and religious affiliation). Having followed the participants for about 40 years, the researchers also found that the core protective resources that were present or formed during childhood and adolescence continued to serve as protective mechanisms during adulthood (Werner & Smith, 1991).

British psychiatrist, Rutter (1979) examined data from a series of longitudinal epidemiological studies of children on the Isle of Wight and inner London. The risk factors examined included severe parental discord, overcrowded home environment, paternal criminal behavior, psychiatric disorder among mothers, and low SES. Rutter

(1979) observed that a less chaotic home environment (in which children had a positive relationship with parents) had a protective effect on children. A positive school climate that provided incentives, awards, and opportunities for students to take responsibility for assigned tasks and behaviors also served a protective role. Other factors that were observed to be protective included high self-esteem, having structure and control (as opposed to chaos) in one's environment, and an environment that provided opportunities to experience mastery and attain higher education (as opposed to becoming pregnant or fathering a child during the teen years).

The three seminal studies highlighted the role that individual-, family-, and community-level factors play in mitigating risk. Thus, researchers who desire to engage in a more comprehensive investigation of resilience beyond the level of investigating purely individual traits must consider these three levels of protective factors. Research studies that fail to account for these levels will be limited in their applicability (Zautra et al., 2010).

Summary of Historical Perspective

Seminal studies (referred to as vulnerability research) that investigated the antecedents of schizophrenia (e.g., Anthony, 1968; Mednick & Schulsinger, 1968 as cited in Garmezy, 1974), helped pave the way for resilience studies. In various vulnerability studies, researchers found that some children did not develop psychopathologies as expected. Garmezy (1971) implored the field to begin to investigate the factors that accounted for individuals who were resistant to stress. Subsequently, a number of researchers shifted their focus from investigating the factors that contribute to disorders, to examining the protective factors that contribute to resilience. Three landmark studies

provide examples of this shift in research focus. They are: the study of children on the Isle of Wight (Rutter, 1979), the study of the children of Kauai (Werner & Smith, 1982), and Project Competence (Garmezy et al., 1984). Those studies revealed that individual-, family-, and social/community/environmental-level factors play important roles in mitigating risk. Therefore, researchers who desire to engage in a more comprehensive investigation of resilience must consider these three levels of protective factors.

Four Waves of Resilience Research Emphasis

The advancement of resilience research is also described as happening in waves with each wave representing a different area of emphasis. The four waves of resilience research are discussed in the next section.

Kolar (2011) grouped the work of Garmezy, his colleagues who worked alongside him (e.g., Masten), and other researchers (for example Rutter, Werner, and Smith) as belonging to the first wave of resilience research. This group of researchers drew attention to the need to define and measure resilience. Their work identified differences between individuals who were deemed resilient (those who showed signs of positive development despite adversity) from those who were not (Masten & Wright, 2010). During the second wave, researchers investigated the processes and mechanisms that explained the identified assets or protective factors (Masten & Obradovic, 2006; Masten & Wright, 2010). So, for the most part, one could say that the first wave involved identifying the characteristics of individuals who were regarded as being resilient (identifying *what* characterized resilience); the second wave focused on the factors or processes that contributed to the individual attaining those characteristics (identifying *how* one became resilient).

Some authors (e.g., Masten & Obradovic, 2006; Masten & Wright, 2010) identified the third wave as having to do with the development of prevention programs and interventions (such as teaching effective parenting), and policies to promote resilience. Masten and Obradovic (2006) argued that the fourth wave has to do with integrating a range of analysis in resilience research, for example examining individual-level differences in resilience in relation to gradients or varying degrees of environmental-level risks. Masten and Wright (2010) indicated that analysis of risk factors during the fourth wave might include understanding the role of genetics or neural plasticity in resilience. On the other hand, Liebenberg and Ungar (2009) posited that the fourth wave involves recognizing that resilience is a broad construct that is defined by contextual factors. They indicated that the fourth wave of resilience research acknowledges that resilience is influenced by the culture and context within which it is found. Likewise, Vindevogel (2017) indicated that contemporary views of resilience involve highlighting the importance of person-environment interactions.

In light of the foregoing and based on the focus of the current study (investigating the influence of cultural orientation on individual-, family-, and community-level factors), the author considers that the current study fits characteristics of the third and fourth waves. Although it investigates differences between individuals on measures of resilience (which is characteristic of the first and second waves), the study aims to propose culturally sensitive prevention and intervention strategies (third wave) from investigating differences in resilience within the context of I/C cultural orientation (fourth wave). Therefore, consistent with some authors' views, the study meets some characteristics of what constitute the third wave (e.g., Masten & Obradovic, 2006;

Masten & Wright, 2010) and the fourth wave (e.g., Liebenberg & Ungar, 2009; Vindevogel, 2017).

There is one aspect of the fourth wave approach suggested by Liebenberg & Ungar (2009) that the current study does not employ: the discursive, constructionist approach. This approach captures detailed narratives about participants' lived experiences by way of qualitative data collection. Participants' narratives help define what resilience looks like for them. While this discursive approach is a common feature of studies conducted by Ungar and his colleagues and is part of how they characterize the fourth wave, the current study does not employ that method because capturing detailed narratives about participants' lived experiences by way of qualitative data collection is outside the scope of the current study. Additionally, inclusion of genetic factors which Masten and Wright (2010) associate with the fourth wave is also outside the scope of this study.

A Cultural Perspective

Researchers should consider cultural values, beliefs, and norms in order to increase understanding of individuals around the world and the resources that contribute to their resilience (Zautra et al., 2010). Some researchers (e.g., Morgan Consoli & Llamas, 2013; Khanlou & Wray, 2014; Luthar & Brown, 2007; Stumblingbear-Riddle and Romans, 2012; Ungar, 2004, 2005, 2007, 2013; Vindevogel, 2017) have contributed to advancing the resilience agenda by investigating and discussing resilience within cultural contexts.

Stumblingbear-Riddle and Romans (2012) examined the role of culture (and other variables such as self-esteem, subjective well-being, and social support) on resilience

among urban American Indians. The participants were 196 adolescents (ages 14 to 18 years) from a South-Central region of the U.S. Of the 196 participants, 114 (58.2%) were female and 82 (41.8%) were male. The study limited measure of resilience to school success. An 11-item self-report survey measured aspects of school involvement such as attitude toward school, academic goals, and current academic grades. The American Indian Enculturation Scale is a 17-item instrument that was used to measure levels of enculturation (having cultural values, ideas, beliefs, and behavioral patterns instilled or internalized in one's worldview) among the participants. Data was gathered pertaining to participants' participation in traditional behaviors and practices (such as seeking help from elders, using American Indian humor or slang or looking at things from an American Indian worldview or perspective), willingness to access and participate in American Indian events or activities and their sense of pride in being an American Indian. Responses were rated on a 7-point Likert scale ranging from 1 (not at all like me) to 7 (a great deal like me). An alpha reliability coefficient of .93 was obtained. The scale's internal consistency was also demonstrated in previous studies in which Cronbach's alpha coefficients of .90 and .91 were obtained.

Multiple regression analyses were conducted to determine the amount of variance in resilience that was accounted for by the predictor variables. Two different combinations of the predictor variables respectively accounted for 33% (enculturation, self-esteem, and social support) and 34% (enculturation, subjective well-being, and social support) of the variance in resilience. Social support from friends was the strongest predictor in both regression results. The researchers found that enculturation served as a protective factor and had a positive correlation with resilience (American Indians with

higher levels of enculturation also had higher resilience scores).

The findings in Stumblingbear-Riddle and Romans (2012) highlight the important role that instilled or internalized cultural values play in resilience. Enculturation may be compared to measures of I/C cultural orientation in the current study.

Individualistic/Collectivistic cultural orientation is determined by assessing participants' perception of the culture where they reside as well as the degree to which they have internalized those cultural values.

In another study, Morgan Consoli and Llamas (2013) used a mixed-method approach to examine the relationship between Mexican American cultural values and resilience among Mexican American college students in America. The Mexican American values investigated were, (a) *familismo* (familism – the belief that the needs of the family are fundamental and takes precedence over individual needs), (b) *respeto* (respect – deference to family members, for example, suppression of negative feelings toward parents and male figures who occupy a position of authority), (c) *religiosidad* (religiosity – the belief in prayer and a higher power), and, (d) traditional gender roles (*machismo* refers to men's leadership role and sense of responsibility to the family; *marianismo* refers to the woman's nurturance, humility, and sense of devotion to the family). The Mexican American Cultural Values scale was used to assess cultural values. The scale assessed traditional Mexican American values, namely, familism support (desire to maintain close relationships), familism obligations (importance of tangible caregiving), familism referent (reliance on communal interpersonal reflection to define self), respect, religion, and traditional gender roles. Resilience was defined as “positive personality characteristics that enhance individual adaptation and predict quality of life”

p. 619. The Resilience Scale (RS; Wagnild & Young, 1993) was used to measure resilience. The researchers developed two open-ended questions to assess participants' feelings about their cultural values and resilience. The questions were: (1) "How do you feel that your Mexican American identity influences how you deal with problems?" and (2) "What Mexican American values do you feel have influenced how you deal with problems?" p. 619.

Participants included 124 students (30% men, $n = 37$ and 70% women $n = 87$) from one university in California. They were required to self-identify as Mexican Americans who were 18 years or older, and spoke English. Surveys were distributed via the university's email system. Participants were entered into a raffle to win one of two \$50.00 gift cards. Participants ages ranged from 18 to 47 (mean age = 21.01; $SD = 3.89$).

Quantitative data was analyzed using hierarchical regression to determine the effect of the cultural values (predictor variables) on resilience. Variables were entered in the model for analysis based on the presumed degree of association (ordered as familism, religiosity, respect, and traditional gender roles). The results revealed that all the predictor variables accounted for 11% of the variance in resilience ($p < .05$). Familism accounted for 8% of the variance ($p < .05$). Religiosity, respect, and traditional gender roles accounted for 1% of the variance respectively. Results from the qualitative analysis of themes indicated that familism and perseverance (continuing to strive in life) were typical themes mentioned by more than half of the cases. Religiosity and respect had variant frequencies (meaning, the core ideas were mentioned in at least four but less than half of the cases). Typical gender role was mentioned in two to three cases.

Morgan Consoli and Llamas' (2013) study highlighted issues discussed in the

literature review so far. For instance, the resilience scale selected suggest that resilience is conceptualized primarily as an individual-level attribute (RS; Wagnild & Young, 1993). Given the cultural focus of the study, the authors might have obtained a more comprehensive measure of participants' resilience and the protective resources that they accessed by employing an instrument (such as the RSA; Hjemdal, 2007) that operationalizes resilience as a process and assesses individual- as well as family- and social-level resources. Additionally, the percent of variance in resilience that is accounted for by the predictor variables (11 percent) is less than half the variance accounted for (33 and 34 percent) by Stumblingbear-Riddle and Romans who used a more culturally-sensitive measurement approach. Again, this raises questions about whether the regression model identified by Morgan Consoli and Llamas (2013) is a comprehensive representation of the predictor variables that account for resilience. Furthermore, there is no indication that the authors established that the participants experienced risk, which raises questions about whether some participants may not have experienced any events that required resilience—which may have affected the manner in which they endorsed items, and subsequent results. The authors acknowledged that the qualitative questions might have only addressed problem-solving in general. Although problem-solving is potentially implicated in resilience, problem-solving does not capture the wide range of possible conditions associated with resilience.

The current study considers a wide range of conditions/risk factors implicated in resilience by using the TLEQ (Kubany et al., 2000) to assess risk. The study also includes a screening question that requires participants to endorse a lifetime experience of trauma in order to participate. Additionally, the study employs a comprehensive measure of

resilience (RSA) that assesses individual-, family-, and social-level protective factors.

The study also uses the COS (Bierbrauer et al., 1994) to measure I/C cultural orientation.

This facilitates the investigation of the relationship between cultural values and resilience.

The delineation and investigation of culture as I/C cultural orientation is important. The constructs define the nature of the variations in social interactions and sense of self in relation to others. One's sense of self and ways of relating to others have potential impact on one's response to psychological and psychosocial interventions. Also, an understanding of the constructs helps create a better understanding of how the presence and expression of factors that protect against adversity may differ across cultures and have implications for prevention and intervention programs and strategies.

Despite the importance of the I/C constructs, the relationship between I/C cultural orientation and resilience remains an area in need of strengthening in the resilience literature. Other researchers have examined how cultural factors influence resilience. For example, Moscardino, Axia, Scrimin, & Capello (2007) examined the impact of cultural values such as pride, heroism, courage, and the reaffirmation of such positive cultural values on resilience. Sirikantraporn (2013) examined resilience among south-east Asian youth. Currie, Wild, Schopflocher, Laing, & Veugelers (2013) studied resilience among Aboriginal adults in Canada. Wexler (2014) examined resilience among Alaska Natives. However, to date, no known studies have been found by the researcher of the current study that conducts a comparative analysis of resilience across countries to examine how I/C cultural orientation influence resilience.

Research conducted by Ungar (2004, 2005, 2007, 2008, 2011) and his colleagues represent the most recent, post-modern constructionist development in the field. Yet, his approach, although groundbreaking and significant, did not employ the I/C constructs in their exploration of cultural factors. The unconventional, constructionist interpretation of resilience posited by Ungar advocated for an investigative approach that encouraged researchers to gather participants' narratives as those participants engaged in the construction of what resilience looks like for them. Ungar argued that studies that emphasized predetermined healthy outcomes were inadequate to accommodate the plurality of cultural meanings that may be associated with resilience. He argued that resilience is more than just the capacity of individuals to cope well with adversity. Ungar posited that the term is better understood as: (a) the capacity of individuals to navigate their way to the psychological, social, cultural, and physical resources that sustain well-being, and (b) their capacity to individually and collectively negotiate for these resources to be provided and experienced in culturally meaningful ways. He believed that it is important to consider and adequately account for cultural and contextual differences in how people express resilience.

Through collaborative mixed methods research in eleven countries on five continents, Ungar and his colleagues at the Resilience Research Centre have shown that cultural and contextual factors exert a great deal of influence on the factors that affect resilience among a population of youth-at-risk (Ungar, 2007, 2008). Over 1400 children ages 12 to 19 participated in the research study. All participants completed the Child and Youth Resilience Measure. The scale was developed by the research team. At least two youth from each research site were asked to participate in the qualitative component.

Some adults were also invited to participate in focus groups where they talked about their lives and their understanding of the challenges facing youth in the communities.

Following analysis of the quantitative and qualitative data, the authors presented the findings in four major themes: (a) there are global and culturally specific aspects to resilience, (b) aspects of resilience exert different degrees of influence depending on the cultural context within which resilience is experienced, (c) aspects of individuals' lives that contribute to resilience are related to one another in patterns that reflect the individuals' culture and context, and, (d) the degree to which tension between individuals and their culture are resolved (such as tension pertaining to values or expectations) will affect the ways in which resilience is experienced and expressed (Ungar, 2008).

While the studies of Ungar and his colleagues have examined resilience in different cultures and countries, it is difficult to compare those results based on just country locations. Additionally, as discussed in the paragraph below, it appears that themes that emerged from studies conducted by Ungar and colleagues may also be adequately captured using the I/C cultural orientation approach. Using the I/C constructs potentially makes it easier to understand, use, and compare results across various studies and regions. The current study does not employ a discursive approach that gathers detailed narratives pertaining to participants' resilience, however, the findings/themes from Ungar's studies provide support for the theoretical and methodological approaches employed in the current study.

There are characteristics of the current study that are consistent with Ungar's themes. Measuring I/C cultural orientation and assessing differences in how the I/C cultural orientations influence resilience in the different countries, is the study's way of

acknowledging that although I/C are global constructs with broad, defining worldviews (e.g., independence and interdependence), the ways in which the constructs influence resilience may differ across individuals and regions. The current study demonstrates that aspects of resilience exert different degrees of influence depending on the cultural context within which resilience is experienced by investigating differences in the protective factors that contribute to resilience among participants in Jamaica, Rwanda, and the U.S. The current study's examination of the relationship between I/C cultural orientation and resilience is supported by Ungar's third theme which suggests that individuals' lives reflect their culture and context. Culture and context are also related to resilience.

In addition, the findings of the current study are discussed within the context of the ecological framework. The ecological framework described in chapter one suggests that individuals operate in a series of nested social and environmental interactions that reciprocally influence each other. Protective factors in the environment contribute to resilience. Additionally, rather than being a passive recipient, the individual can choose what factors he/she accesses or exposes himself/herself to in order to influence his or her resilience.

Resilience as Trait, Process, and Outcome

In addition to recognizing the importance of the three levels of protective factors, and the different waves in which resilience research may be categorized, it is critical that researchers provide a distinction about when the terminologies in their work refer to a personality trait, a dynamic process, or an outcome (Luthar et al., 2000; Zautra et al., 2010; Zimmerman & Brenner, 2010). When researchers provide clear distinctions about the wave of research in which their study can be categorized as well as the trait, process,

or outcome focus of their study, this reduces confusion in the field. A review of the literature regarding resilience as a trait, process, and outcome is presented below.

Resilience as a Trait

Some researchers have investigated resilience as an individual trait. Among seminal researchers, individuals who transcended their adversity were considered to possess extraordinary traits and given labels such as “invulnerable,” “hardy,” or “invincible” (Werner & Smith, 1982). Similarly, other researchers referred to the “ordinary magic” of children and adolescents who overcame daunting social circumstances or traumatic events (Masten, 2001). These terminologies potentially conveyed the idea that resilience was purely an individual trait.

The influential works of Block and Block (1980 as cited in Luthar et al., 2000) who referred to ego-resiliency as a personal characteristic of the individual have also contributed to the conceptualization of resilience as a trait. Block and Block (2006) define ego resiliency as “the individual’s adaptive reserve, a dynamic ability to temporarily change from modal reaction or perceptual tendencies to reactions and percepts responsive to the immediately pressing situation and, more generally, to the inevitably fluctuating situational demands of life” (p. 318). *Ego-resiliency* describes a set of traits that reflect sturdy character, general resourcefulness, and flexibility in functioning in response to a variety of environmental circumstances. The ego-resilient individual has a versatile set of cognitive and social strategies that enable them to adapt (Luthar et al., 2000). The concept pertains to the individual’s ability within personal limits, to increase or reduce attention and behavioral control in the service of the ego (Block & Block, 2006).

Luthar et al. (2000) cautioned that although children labeled as ego-resilient might have experienced some kind of adversity, the term ego-resiliency does not necessarily imply the presence of adversity. On the contrary, when the term resilience is used, by definition, the experience of adversity is a given. The trait of ego-resiliency is likely to serve as a protective factor in the process of resilience, for example, the individual trait of emotional stability may allow one to remain calm during stressful circumstances and may serve as a protective factor during a traumatic event. Other attributes that are associated with trait resilience include positive emotions such as hope, optimism, cognitive flexibility, self-confidence (Fredrickson, Tugade, Waugh, & Larkin, 2003; Schaubroeck, Riolli, Peng, & Spain, 2011).

There are potential negative connotations that arise when resilience is regarded purely as an enduring and extraordinary personality trait (Condly, 2006, Luthar et al., 2000; Mancini & Bonanno, 2010). Presenting resilience as only a personality trait can potentially convey the idea that individuals either have or do not have what it takes to overcome adversity (Luthar et al., 2000) or they either are or are not resilient in any and all situations (Condly, 2006). A purely trait perspective does not shed much light on the dynamic processes or other protective factors involved in adaptation in the midst of adversity; neither does it enhance the development of holistic intervention programs (Luthar et al., 2000; Mancini & Bonanno, 2010).

On the other hand, examining resilience as a dynamic process allows for the investigation of a number of individual traits (individual-level protective factors) as well as family, and social/community/environmental-level factors that enable individuals to

overcome challenging life circumstances. This approach allows for a more comprehensive investigation of multiple protective factors that contribute to resilience.

Resilience as a Process

Garmezy (1991) promoted a shift in the conceptualization of resilience from individual traits to an exploration of processes. He observed that some children thrived despite having a poor prognosis. He encouraged researchers to engage in research that examined resilience processes and for collaboration among researchers, school practitioners, communities, and clinics in order to develop appropriate interventions. From a process perspective, Hjemdal (2007) defined resilience as “the protective factors and processes that contribute to a good outcome despite experiences with stressors shown to carry significant risks for developing psychopathology” (p. 308). Those protective factors include individual attributes, family resources and dynamics, and characteristics of the community/environment. Against this background, Hjemdal along with his colleague Friborg, and others, developed the RSA that directly measures multi-level protective factors. The RSA will be used in the current study to measure resilience as a process. Olsson et al. (2003) indicated that the process approach to the study of resilience serves as a more expansive approach to understanding the protective mechanisms that act to mediate risk. The process approach allows the researcher to view resilience through a broader lens that includes investigating multiple protective resources (Roisman, 2005).

There are different research approaches to examining resilience as a process. For example, Winefield (1994) purported that resilience develops over the life span. When developmental resilience researchers study enduring stressors such as parental mental illness, neglect or maltreatment that occurs over chronological and developmental time,

and examine the protective mechanisms that contribute to resilience, it is most appropriate to regard such studies as examining resilience as a process (Werner & Smith, 1992, 2001). In qualitative inquiries, the process approach allows the researcher to explore how the protective mechanisms contribute to resilience (Olsson et al., 2003). Another process approach to studying resilience (Olsson et al., 2003) involves examining the protective factors or mechanisms at the individual level (individual level factors) in addition to factors within the family or peer network (social factors) and factors within the larger community or society (societal factors). Thus, some researchers (e.g., Friborg, Hjemdal, Martinussen, & Rosenvinge, 2009; Zimmerman & Brenner, 2010) have conceptualized resilience as a process, which expands resilience to include factors beyond just the individual him/herself.

Resilience as an Outcome

There are different ways in which researchers may operationalize resilience as an outcome. Mancini and Bonanno (2010) posited that when the focus of research is on understanding the adaptive functioning of individuals who have been exposed to acute, time-limited adversity, the resilience research should be categorized as outcome-based. For example, Bonanno, Galea, Bucciarelli, and Vlahov (2006) took an outcome approach in a study they conducted to examine the prevalence of resilience following the September 11th terrorist attack in New York City. They defined resilience as having either one or no PTSD symptoms.

Another way in which resilience may be operationalized as an outcome is when the focus of the research is on participants' response to a dependent variable that represents a resilient outcome without measuring or examining the factors or processes

that account for or contribute to that outcome. For example, Seery, Holman, and Silver (2010) studied the impact of cumulative adversity on resilience. Resilience was operationalized as reported low levels of stress, functional impairment, and posttraumatic stress symptoms. The researchers found that people who reported a low history of adversity reported better levels of resilience than people who had a high history of adversity and those who had no history of adversity. The authors discussed that in moderation, adversity may make us stronger. While the authors postulated about how adversity may have functioned in the lives of participants, the factors that contributed to low levels of stress, functional impairment, and posttraumatic stress symptoms were not examined.

Summary of Resilience as Trait, Process, and Outcome

In summary, there are variations in how resilience is operationalized. In order to maintain clarity and minimize confusion in the field, researchers are urged to explicitly identify how resilience is conceptualized in the researcher's particular study and what approach is employed to study resilience. Mancini and Bonanno (2010) noted that whether researchers classify resilience as a trait, process, or outcome, the focus of the research is generally on examining adaptation despite adversity. However, there is some difference in the protective factors or processes that are identified depending on which conceptual approach is taken. The trait approach focuses on individual-level factors such as self-esteem, self-efficacy, emotional and cognitive flexibility, among others (Fredrickson et al., 2003; Hjemdal, 2007; Schaubroeck et al., 2011). The process approach considers that beyond individual attributes, there are also familial and social

factors that mediate adversity and play important roles in resilient outcome. The process approach focuses on the investigation of multi-level protective resources and characteristics at the individual, family, and social/community/environmental levels. This multi-level approach encompasses Garmezy's (1991) triadic model of resilience discussed in Chapter 1. Finally, the outcome approach focuses on the presence or absence of a specific outcome variable, for example the absence of PTSD symptoms (Bonanno et al., 2006).

For clarity in the literature, researchers can indicate whether resilience is being examined as a trait, process, or outcome depending on a number of qualifiers. They include, the operational definition of resilience, the research question(s) being asked, the theoretical framework that underpins the study, and, the research approach - whether the focus is purely on individual traits (resilience as trait), multi-level protective factors (resilience as process), or only on an outcome marker of resilience e.g., the absence of PTSD symptoms (resilience as an outcome).

In the current study, resilience is examined as both a process (multi-level protective resources) and an outcome (bouncing back from adversity). Examining resilience as a process allows for the investigation of the three overarching levels of protective factors. Examining resilience as an outcome allows for a correlational analysis of the protective factors that predict the outcome – bouncing back. Examining resilience as both a process and an outcome also allows the researcher to assess and discuss the value of a contextual understanding of resilience that not only involves the assessment of resilience based on an imposed criterion (e.g., bouncing back) but also considering culturally informed protective factors that contribute to resilience. This approach should

contribute to a more meaningful interpretation of resilience within a cultural context.

Variations in Resilience Outcome Variables

Resilience has been conceptualized as having to do with the presence or absence of various outcome variables. Some of these outcome variables include academic success (Motti-Stefanidi & Masten, 2013), emotional well-being (Denny, Clark, Fleming, & Wall, 2004), overcoming sexual and gender minority stress (Meyer, 2015), absence of PTSD and depression among survivors of the 9/11 terrorist attacks in New York City (Bonanno, Rennie, & Dekel, 2005; Bonanno et al., 2006) among others.

In the current study, consistent with the *APA Dictionary of Psychology*, I have operationalized resilience as a process as well as an outcome. The outcome criterion is: bouncing back after adversity. According to Smith et al. (2008), bouncing back represents the most basic and original meaning of the word. The authors suggest that the term ‘bouncing back’ refers to the act of returning to a previous state of functioning. Smith et al., (2010) suggest that bouncing back involves losing one’s state of equilibrium and regaining homeostasis. It conveys the idea that an individual might experience some instability during adversity but will regain a normal level of functioning. Bouncing back may or may not involve functioning above the norm.

Assessing Resilience

A review of the literature indicated that researchers have employed various methods to assess resilience. One seminal method involved cohort longitudinal studies (for example, Rutter, 1979, 1989; Garnezy, 1991; Werner & Smith, 1982, 1992) that examined development trajectories and the identification of characteristics (personal and

environmental) that protected at-risk children. Another method involves using measurement instruments to identify the presence or absence of an outcome variable to determine participants' resilience, for example, the absence of PTSD symptoms after a traumatic event (Bonanno 2010), or indications of academic success (Motti-Stefanidi & Masten, 2013). The identification of protective factors that indicate positive psychological adjustment is also another method as was employed by Hjemdal (2007) in the development of the RSA. Ungar (2004) posited a constructionist perspective for the study of resilience that allows for plurality of meanings and which reflects a more post-modern self-definition and interpretation of resilience. Ungar's qualitative approach gathers narratives of individuals' lives toward a phenomenological understanding of resilience. The current study will employ the RSA to identify protective factors. It will also employ the BRS to assess 'bouncing back' as an outcome criterion of resilience. Additionally, the study will include an open-ended question that asks participants to identify the ways they deal with and overcome adversity. Responses from open-ended questions will primarily be used as follow-up analysis to the current study.

Culture

Defining Culture

The *APA Dictionary of Psychology* defines culture as the distinctive customs, values, beliefs, knowledge, attitudes, and behaviors of a society or community or particular group within society (VandenBos, 2007). Hofstede (2010) defines culture as "the collective programming of the mind that distinguishes the members of one group or category of people from another" (p. 516). Using the analogy of computer programming (while clarifying that this is not meant to imply that people are programmed the way

computers are), Hofstede posited that every person has patterns of thinking, feeling, and acting that are learned throughout their lifetime. Hofstede referred to these patterns of thinking, feeling, and acting as mental programs. A source of one's mental programming is present in the environment in which one grew up and experienced life. The programming starts within the family and continues with other agents of socialization such as the neighborhood, school, peer group, and workplace. Through the process of socialization, cultures help to shape the beliefs, attitudes, emotions, and behaviors of people who are born into them (Kagitcibasi, 1994). Culture is learned; it consists of unwritten rules, and is a collective phenomenon (Hofstede, 2010). Therefore, one can reasonably presume that learned patterns of thinking, feeling, behaving, and unwritten rules are likely to influence the experience and expression of resilience.

Historical Perspective

The idea that behavior is embedded in culture has existed since ancient times. Hindu tradition holds that attempts to understand and evaluate behavior should be done within the context of *desh* (place), *kala* (time) and *patra* (the person) (Sinha, 2002). This section provides a brief overview of how culture has been researched across some fields of study such as anthropology and cross-cultural psychology to help provide a historical perspective of the place culture now occupies in psychological research. It will highlight how the ideologies and methods of investigation have evolved as researchers seek to understand and explain human behavior and psychological processes within a cultural context.

Founding father of psychology, Wilhelm Wundt (1832-1920), who in 1879 established the first laboratory for experimental psychology as an independent branch of

science (Sinha, 2002), also firmly believed that natural science and cultural science were to be complementary (Danziger, 1983). One of Wundt's unique contributions to the field involved integrating the analysis of psychological phenomena with culture-level analysis (Danziger, 1983). For example, Wundt emphasized that aspects of culture such as language, customs, and myths (primary areas of *Volkerpsychologie* or Folk psychology) were key conditioning agents of human behavior (Danziger, 1983). Wundt's 10-volume treatise on *Volkerpsychologie* (1910-1920) is a testament to the considerable amount of time he spent examining how sociocultural factors influenced psychological and mental processes (Danziger, 1983). Some core ideas of *Volkerpsychologie* that are relevant to the essence of this research are:

- Individual-level psychology is not sufficient to give us a comprehensive understanding of human psychological processes
- There is an essential interdependence between individuals and communities.
- The *Volksgeist* (spirit of the folk or collective spirit) plays an important role in the development of individual psychological processes.
- The *Volksgeist* is also a source for the interpretation of the lawfulness of psychological processes (Wong, 2009).

The concept of 'folk' includes families, classes, clans, groups and communities (Wong, 2009). By interpreting ethnological data, Wundt's *Volkerpsychologie* made significant contributions to the field by providing insight into the underlying psychological processes involved in language, gestures, affect and volition, the development of society's moral systems and the role of culture. According to Wong

(2009), Wundt's *Volkerpsychologie* helped pave the way for Vygotsky's notion that higher psychological processes have their origins in culture.

The study of culture as a psychological construct also has roots in 19th-century British anthropology (Sinha, 2002). In what is considered the initial and most significant contribution to cross-cultural psychology that highlighted the interaction between behavior and culture (Sinha, 2002), Alfred Haddon initiated the 1898 Cambridge Anthropological Expedition to the Torres Strait (CAETS; Hart, 1998). The seven-months-long expedition was a follow-up to the natural history expedition undertaken a decade earlier on islands between Australia and New Guinea (Hart, 1998). The CAETS team included experimental psychologists W.H.R Rivers and two of his students Charles Myers and William McDougall (Hart, 1998) – all co-founders of the British Psychological Society (Richards, 1998). Although the account of this expedition is hardly referenced in the U.S. account of the history of psychology (Richards, 1998), the investigations conducted during this expedition are regarded as the first systematic efforts that engaged psychological methods to study different cultural groups (Sinha, 2002).

Participants were primarily indigenous adult males or male children. The primary means of data collection were diary inscription and photography. In conducting the experiments, the indigenous people were told that it was said by some people that the black man could see and hear, etc., better than the white man and so they (the researchers) had come to find out how clever they were (Richards, 1998). The research investigated psychological processes such as sensory perception, visual acuity and sensitivity to visual illusions, and reaction time. Comparative data was also collected from participants from British New Guinea, Australian Aboriginal people, and the Sea

Dayaks in Sarawak. The findings of this major research were largely inconclusive. Some difficulties arose in instances where natives associated or made references to people's names when identifying colors, or where researchers found it difficult to tell if natives were guessing. Methodological flaws also existed, for example, impurities of some slides used to test for color sensitivity (Richards, 1998).

The hypothesis that guided the research was Herbert Spencer's hypothesis which stated that "primitives" would surpass "civilized" people in psychological performance because more energy remained devoted to this rather than being diverted to "higher functions" (Richards, 1998, p. 137). Difficulties arose with this hypothesis since, at the time, there was still not yet a clear distinction between Spencer's school of thought which advocated for innate characteristics and a linear social evolution compared to Darwinians who rejected the idea of fundamental innate differences and more so embraced the idea that social and cultural differences were a reflection of adaptation responses to the environment (Richards, 1998).

At best, one major contribution of this expedition is that it highlighted the complexities involved when attempting to study racial or cultural differences when the cultural factors themselves served as confounding variables. The study also highlighted how methodological shortcomings resulted in much of the findings being discredited. According to Richards (1998), no similar research was conducted outside European cultures, neither by the British, Americans or Germans, until cross-cultural psychology emerged in the mid-1930s.

The emergence of cross-cultural psychology led to the study of culture as a variable. The interaction of behavior and culture became subjects of focused

psychological research (Sinha, 2002). Prior to that, mainstream psychology had to a large extent focused on experimental designs and the manipulation of variables in determining the causal relationship between behavior and stimuli or factors in the environment (Sinha, 2002). According to Sinha (2002), cross-cultural psychologists find merit in the comparative approach that involves investigating various phenomena across various societies. They see it inherently expressed in Tylor's thoughts regarding the study of culture (Sinha, 2002). According to Tylor (1871), "the condition of culture among the various societies of mankind, in so far as it is capable of being investigated on general principles, is a subject apt for the study of the laws of human thought or action" (p. 1). Sinha (2002) suggested that Tylor's reference to "the condition of culture among the various societies of mankind" (Tylor, 1871, p. 1) inferred the importance of the comparative method in cross-cultural psychological research. This approach allows researchers to investigate conditions in one society or culture that can shed light on or inform conditions in other societies.

Culture as Individualism/Collectivism (I/C)

Kim et al. (1994) described the I/C constructs as particular patterns of moral and philosophical ideologies and structures that serve to maintain, reify, and propagate social structures and norms. The constructs describe the relationship between individuals and the collective society. It is reflected in the way people live and has implications for behavior and values (Hofstede, 2001). The relationship between individuals and the collective society is more than simply a matter of the ways people live together. It affects people's self-concepts, concepts of personality, and mental processes (Hofstede, 1980). According to Hofstede, people from Western cultures perceive the individual as an entity

that is distinct and separate from culture and society. In contrast, Eastern thinking, such as that of the Chinese, embraces the concept of “human constant” which includes the person plus his or her social and cultural environment (Hofstede, 1980, p. 215).

Individuals with this mindset are more likely to be influenced by their environment (Hofstede, 1980). Markus and Kitayama (1991) refer to the two constructs as connoting an independent (individualistic) as compared to an interdependent (collectivistic) view of the self.

Individualism and Collectivism: Historical Perspective

Traces of individualism and collectivism are evident throughout the history of humanity. Aspects of collectivism may be traced throughout the lives and works of early Greek philosophers such as Socrates (469 – 399 BC), Plato (427 – 347 BC), and, Aristotle (384 – 322 BC) (Hergenhahn, 1992). Likewise, in the lives of early Christians, aspects of collectivism are evident. The ideologies of German philosopher Friedrich Nietzsche more closely reflect that of individualism.

For Socrates and Plato, it is in the context of communication with others that truth and a knowledge of oneself are derived (Hergenhahn, 1992). As the early Greeks wrestled with the concept of ultimate truth (Truth) versus subjective or relative truth, Socrates concluded that Truth was a function of one’s personal experience, beliefs, as well as one’s culture. Plato purported that true intelligence or knowledge was reflected only when one understood the interrelatedness or interconnection of abstract forms. Plato’s concept of abstract forms refers to the essence or existence of everything before it is manifested in an intelligible world. For example, the idea or abstract form for chair existed in a pure form before its visible, tangible existence. What we see and experience

through our senses is an interaction of form with matter. The essence or abstract form of an object may be equated with its pure form (that which is manifested to the senses). For Aristotle, nature is arranged in a hierarchy that ranges from neutral matter to the unmoved mover, which is pure and the cause of everything in nature. Everything in nature existed for a purpose and the closer that an object was to the unmoved mover the more perfect it was (Hergenhahn, 1992). These ideologies that support the interconnectedness of essence, matter, objects in the environment, and people resemble the Eastern collectivistic worldview that everything in nature is a result of interactions with the surroundings over periods of time (Bueno, 2012).

The early Greeks valued attributes that are common in individualistic societies such as rational thought, personal courage, and a life of excellence; however, they did so in the context of communal living. Their quest for understanding how forms, nature, and objects are interrelated is a hallmark of a collectivistic worldview. The spirit of collectivism was also evident in the lives of the Early Christians who “had all things in common; and sold their possessions and goods, and parted them to all men” (Acts 2:44-45, King James Version).

The life and works of German philosopher Friedrich Nietzsche (1844 - 1900) appear to be aligned with a more individualistic orientation. According to Hergenhahn (1992), Nietzsche revolted against religion and culture. He held the view that humans were on their own with the “will to power” (p. 197) – that is, the tendency to gain mastery over their own life and destiny. Humans could become supermen by seeking to reach their full potential and live independent lives unhindered by standard morality. Nietzsche promoted self-improvement and self-love. He believed that any religion that

taught humility, self-restraint, or a sense of community was simply incorrect. In order to be supermen, humans had to become “intensely individualistic” (Hergenhahn, 1992, p. 199).

Societies are categorized based on distinct ideologies. The best-known distinction between societies that are categorized as either individualistic or collectivistic was offered by German sociologist and philosopher, Ferdinand Tonnies (1855 - 1936). He introduced the terms *gemeinschaft* (low individualism) and *gesellschaft* (high individualism) to describe two types of social entities. *Gemeinschaft* entities are characterized by mutual sympathy and common beliefs (Hofstede, 1980). *Gesellschaft* entities are characterized by independent social relationships (Greenfield, 2009). Tonnies (as cited in Hofstede, 2001) suggested that modernity and an increase in commercialization have led to a social order transition in which some regions shifted from being predominantly *gemeinschaft*-like (collectivistic) to being predominantly *gesellschaft*-like (individualistic; Hofstede, 2001).

The West or Western world refers to all regions of the world that were largely influenced by European colonization, Christianity, and the period of Enlightenment (17th to 18th century during which ideas of the belief in reason, science, and liberal democracy were regarded as means of making sense of the world; Kurth, 2004). Some territories in this geographic region of the world include Europe, the U.S., Canada, Australia, and New Zealand (Kurth, 2004). In the West, individualism arose out of Liberalism (a philosophy and way of life that rejects an ascribed or communal social order in which individuals' roles and statuses are prescribed). Liberalism assumes that people are rational and able to define their own goals. Liberalism filled a void as people rejected metaphysical

explanations (a philosophy based on abstract ways of knowing and concepts such as form or essence) toward more rational and tangible ways of knowing and interacting with the world (Kim et al. 1994). As Liberalism gave rise to a more individualistic worldview, people assumed the right to be more self-directing - to make their own personal choices and set personal goals. In the East, particularly East Asian cultures (e.g., Japan, China, North Korea, and South Korea), Confucianism formed the foundation of collectivism. The moral and political philosophies of Confucianism that emphasized consideration of the common good over individual interests are important aspects of collectivism. Interrelatedness, interdependency, compromise, and group interests are primary features of collectivistic societies (Kim et al. 1994).

Individualism & Collectivism in Societies and Individuals

The I/C constructs may be viewed differently depending on the theoretical approach and level of analysis employed. Based on Hofstede's (1980) ecological factor analysis, the I/C constructs are viewed as bipolar factors with individualism and collectivism at opposite poles of one dimension. On the other hand, individual-level factor analysis suggests that the two constructs can co-exist in a particular culture. In this instance, either of the constructs may be emphasized more or less depending on the situation (Kim et al., 1994). Triandis (1994) argued that individualistic and collectivistic tendencies reside in all of us; however, the probability that individualistic or collectivistic selves, attitudes, norms, values, and behaviors will be sampled higher in some than in others depends on the cultural context.

Individualism pertains to societies in which there are loose ties between individuals. There is a strong emphasis on autonomy, individual initiative, emotional

independence, the right to privacy, and pleasure seeking (Hofstede, 2010). Individuals are encouraged to be assertive, to value freedom of choice, and to define their own goals (Kim et al. 1994). According to Triandis (1994) individualism is a consequence of a number of factors, namely: (a) the number of available groups, (b) affluence (one does not need groups that much if one is affluent), (c) social mobility, and (d) geographic mobility (if one is mobile, one can change groups more easily hence groups have less influence on the individual). Triandis (1994) argued that migration, affluence, and the American frontier may have been the major determinant of individualism in America. Additionally, in the presence of cultural heterogeneity, people are exposed to diverse standards and normative conflicts. These factors are likely to result in the individual being able to decide which norm to follow among several options. Triandis further asserted that a culture is likely to be more individualistic when individuals rather than groups decide applicable norms.

Collectivism, on the other hand, pertains to societies in which the integration among people is strong from birth onwards. There are cohesive in-groups that protect members, and members in return demonstrate a deep, unquestioning sense of loyalty to their in-group (Triandis, 1994). Collectivistic societies foster characteristics such as emotional dependence, a sense of solidarity within the group, collective identity, sharing, group decision making, and a sense of duty and obligation to the group (Hofstede, 1980; Hui & Triandis, 1986).

Oyserman et al. (2002) discussed consequences of individualism for psychology. The authors stated that individualism implies a decontextualized reasoning style that is not situation-specific. Judgment, reasoning, and causal inference are generally oriented

toward the person rather than a specific situation. Conversely, collectivism implies that social context, situation, and social roles are key factors that influence individuals' perceptions and causal reasoning.

Problems with I/C Conceptualization

The I/C constructs have not been free of semantic issues and problems of conceptualization. Kagitcibasi (1994) noted that the terms often carry value-laden connotations. He discussed that, as with many terms in the social sciences that are formed out of a “sociocultural-ideological context” rather than in a vacuum, it becomes difficult to create concepts that are value-free (p. 55). The I/C constructs often have value-laden sentiments attached, particularly as it pertains to collectivism. According to Kagitcibasi (1994), collectivism is often associated with conformity to group pressure, deindividuation, and other value-laden connotations as depicted in some social psychology literature. For example, many researchers from Western cultures, specifically the U.S., who value individualistic ideologies tend to interpret research findings in ways that demonstrate some bias favoring individualism. This often leads to reactions from researchers from collectivistic cultures who regard such interpretations as value-laden. This dynamic blurs the research boundaries between what is regarded as scientific inquiry versus debates on ideologies (Kagitcibasi, 1994).

In order to address these concerns in the current study, the researcher engaged in ongoing self-reflection, monitoring of personal biases, and consulting with other research professionals regarding the interpretation of findings. One such activity involves maintaining a personal journal of thoughts, feelings, and progression of changes in those thoughts and feelings over time because of ongoing engagement with the research

process and interactions with individuals in each country. The process of self-reflection is necessary for researchers who engage in cross-cultural studies. According to Kagawa-Singer, Dressler, George, and Elmwood (2015), the lack of self-reflection by Western and Western-trained researchers could result in a denial of equal validity of other cultures' perspectives thereby inhibiting adequate representation of the realities of diverse communities. Additionally, as it pertains to discussion of the findings and subsequent recommendations that are appropriate for each cultural context, rather than presenting personal value-laden assumptions and recommendations, the researcher of the current study attended to issues of external validity by engaging in consultation at different levels. Some sources that were consulted include additional peer-reviewed literature, other printed and electronic media (e.g., news reports and national websites for each country), other researchers, and consultation with residents in each country. This approach was expected to help provide further contextual understanding of different kinds of trauma exposure, social conditions, and cultural norms and prohibitions in each country that may potentially influence participants' responses to survey items.

The Value of the I/C Constructs for Research

Some researchers have used variations of the I/C constructs to measure culture at the individual level. For example, Triandis, Leung, Villareal, and Clark (1985) used the term *idiocentric* to refer to individuals who endorse more individualistic solutions and *allocentric* for people who endorse mostly collectivistic solutions; Gardner, Gabriel, and Lee (1999) used the terms *independence-interdependence*; and Trafimow, Triandis, and Goto (1991) used *private self* and *collective self*. The use of those terms by other

researchers did not become prominent in the literature as the use of the I/C constructs (Oyserman et al., 2002).

Since the 1980s, a great deal of work has been carried out on the I/C constructs (Kagitcibasi, 1994). Kagitcibasi (1994) outlined four different empirical pieces of evidence that have led to I/C becoming a focal point of research. They are: (a) the apparent systematic difference among societies to the point where it is possible to rank societies in terms of where they stand on I/C, (b) recognizing that individuals from individualistic and collectivistic societies tend to have respective corresponding individualistic and collectivistic values and behaviors, (c) finding that those differences in values and behaviors are also found in other psychological processes as well so that predictions can be made about a variety of behaviors, and (d) aside from demonstrating cultural differences, the I/C constructs also show individual-level differences within-culture which is useful for explaining individual and group differences in various psychological constructs.

Measuring Individualism and Collectivism

Levels of Analysis

At the heart of the individualism/collectivism debate is the question of what should be the basic unit of analysis in the social sciences – whether it is at the individual or the group level (Kim et al., 1994). Kim et al. (1994) indicated that a strict micro approach (focus on individuals) or strict macro approach (focus on culture, society) present as being too narrow and reductionist when considered separately or independently. Additionally, Hofstede (1980) cautioned that researchers should be mindful of committing ecological and reverse ecological fallacies. When a culture-level

measure, such as country of origin is used to interpret individual-level behavior without first assessing that the values in question are true at the individual level, a researcher commits an ecological fallacy. Patterns observed at the culture-level may differ from patterns observed at the individual level (Hofstede, 1980; Leung, 1989). Likewise, a reverse ecological fallacy is committed when cultural indices are constructed based upon individual-level measurements.

A multi-level approach that acknowledges the interaction between individuals and society should be considered (Kim et al., 1994). In the context of this study, a multi-level approach involved identifying the country-level I/C cultural orientation of each country under study as well as measuring the I/C cultural orientation of participants from each country. The study also explored how individuals' cultural orientations influence the protective factors that contribute to resilience.

Kagitcibasi (1994) indicated that the I/C constructs have high explanatory and predictive value and that differences among research subjects must be demonstrated empirically rather than assumed merely based on what cultural orientation is attributed. When data is examined at the individual level, it allows for more meaningful predictions (Triandis, 1994). This implies that analysis of psychological processes at the individual level reduces the presence of some confounding variables that exist at the larger cultural level. The current study adheres to Kagitcibasi's (1994) and Triandis' (1994) guidelines by using the COS to determine participants' I/C cultural orientation in order to determine how variations in I/C influence resilience.

I/C Measurement Approaches

Hofstede's work on I/C was published in 1980. Following his publication, the use of the I/C constructs became more prominent in cross-cultural literature. Oyserman et al. (2002) conducted a meta-analysis of the literature that involved the study of I/C since 1980. Oyserman et al. (2002) discussed three different approaches to measuring individualism and collectivism that were observed in the literature. These measurement approaches are: applying Hofstede's approach, using I/C rating scales, and conducting cultural priming experiments. There are advantages and disadvantages to each approach. Following is a discussion of each approach and a discussion of the rationale for the measurement approach chosen in the current study.

Hofstede's Approach – Country Individualism Index

In a landmark study that spanned a period of several years (1967-1978), Hofstede (1980) conducted a comprehensive study on country and cultural differences as it pertains to employee values in the workplace. The questionnaires focused on employee values rather than satisfactions and perceptions. Hofstede collected data in a large multinational corporation: IBM. Labeled as the international employee attitude survey program, more than 119,000 questionnaires were collected in two survey rounds from 72 countries in over 20 languages. The initial analysis was limited to 40 countries that each had more than 50 participants. Later, data from 10 more countries and three multi-country regions were added, resulting in a total of 50 countries and three regions. Subsequent studies were conducted to validate the results. The participants in the later studies included airline pilots, elites (policy makers and influential stakeholders such as leaders in politics,

business, labor, and education), civil service managers, students, and market consumers in various countries (Hofstede, 2001).

Data analyses procedures for the IBM sample led to the identification of systematic differences across countries on four dimensions. Through a combination of correlation data analyses and theoretical reasoning, the dimensions of power distance and uncertainty avoidance were identified. From country-level factor analysis, the dimensions of masculinity (versus femininity) and individualism (versus collectivism) were identified. A fifth dimension, long-term versus short-term orientation, was later added based on Bond's Chinese Value Survey - a cross-national replication study of 23 countries (Hofstede, 2001).

Factor analysis yielded country scores on measures of individualism which Hofstede referred to as the country Individualism Index (IDV). The IDV ranged from 0 to 100 with higher scores reflecting higher individualism. The IDV values reflect the participants' goals that stressed either independence from the organization (higher individualistic values) or goals that reflected dependence on the organization (higher collectivistic values). Hofstede (2001) indicated that the IDV in each country was strongly related to the mean importance attached to having personal time away from one's job.

Hofstede (2001, p. 215) reported that the countries with the highest IDV values and their rankings among the countries surveyed were: The U.S. IDV was 91 (ranked number 1), Australia IDV was 90 (ranked number 2), and Great Britain IDV was 89 (ranked number 3). Countries with the lowest IDV values were Panama at 11 (ranked number 51), Ecuador at 8 (ranked number 52) and Guatemala at 6 (ranked number 53).

The IDV values for other regions and countries from which the current study is likely to survey participants are: East Africa at 27 (ranked number 33/35 – tied with Portugal and Yugoslavia), and Jamaica at 39 (ranked number 25). Recall that IDV ranged from 0 to 100 with higher IDV scores reflecting higher individualism (Hofstede, 1980, 2001). According to Hofstede (1980), collectivism is present in much of Africa, Asia, Latin America, and parts of Europe. Hofstede (1980) noted that not all westerners are individualists and not all easterners are collectivists.

One concern about Hofstede's (1980) study is that the values of employed members of a culture may differ from the values of the unemployed or self-employed or those employed at a smaller corporation that was not multinational. The acquisition of employment itself may also represent values, attitudes, and behaviors that might not be equal across non-employed or otherwise-employed members of a given culture.

Some authors in the extant literature have also criticized Hofstede's approach to generalizing and assigning national labels of I/C cultural orientation of select countries based on the responses of some IBM employees from those countries. For example, criticisms include the notion that surveys are not a suitable way to measure cultural differences that exist between nations as a whole. Ailon (2008) noted that in Hofstede's approach, culture (referring to the general multi-dimensional system of beliefs, values, attitudes, and practices that are held by a group of people) was reduced to only a set of values, then further reduced to a set of questions that comprised the IBM questionnaire. The criticisms against Hofstede's work seem to indicate that the process of making inferences about entire nations based solely on survey responses is inadequate and a

research fallacy. There is also the criticism that as a whole, nations are not the best units for studying cultures (Hofstede, 2001).

In response to those criticisms, Hofstede himself cautioned that researchers should not apply his survey approach and IDV country index without adjusting for individual-level analysis that is suitable for the population being studied (Hofstede, 2001). Hofstede seemed to have agreed that in seeking to understand the role of culture and individuals' responses to different phenomena, researchers should establish an individual-level unit of analysis to assess I/C rather than simply using his country-level IDV. Following are examples of research that simply applied Hofstede's country-level IDV ratings to operationalize individualism and collectivism at the individual level.

In two separate studies, Oishi, Diener, Lucas, and Suh (1999) examined cross-cultural differences in predictors of life satisfaction. The participants were drawn from 39 countries that were diverse in culture and varied considerably in standard of living, wealth, economic, geographic, and political status. In study 1, Oishi et al. (1999) surveyed 54,446 participants to examine the role of wealth and individualism in the strength of the relationship between satisfaction with safety (finances and job), and love needs (home life), and global life satisfaction. All participants were 18 years and older with the mean age of 41.9 years and standard deviation of 16.5. The median sample size was 1027 per nation. Data was collected by the World Values Study Group between 1990 and 1993. The researchers obtained ratings for I/C for each nation (where possible) by averaging the ratings of Hofstede and Triandis whom the authors regarded as experts in the field. They obtained ratings from Triandis through personal communication in 1996. Triandis rated the degree of I/C of each country on a scale from 1 (most collectivistic) to

10 (most individualistic). The authors converted Hofstede's individualism scores to a 10-point scale that was compatible with Triandis' ratings. The authors performed hierarchical linear modeling data analyses (similar to multiple regression analyses) to test multilevel interactions between variables. The slope of the regression line indicated that financial satisfaction, job satisfaction, and home life satisfaction were not related to levels of individualism that were based on the I/C value of the country in which the participants lived.

In study 2, Oishi et al. (1999) surveyed 6,782 participants (2,625 males; 4,118 females; and 39 unspecified) to examine the relationship between individualism, satisfaction with esteem needs, and global life satisfaction. The I/C ratings assigned by Hofstede and Triandis were also applied to study 2. Data was collected using the 5-item Satisfaction with Life Scale. The researchers found that the participants from the more individualistic nations were found to have greater satisfaction with self and also greater general life satisfaction. They also found that the degree of positive association between satisfaction with freedom, and life satisfaction was significantly stronger in individualistic nations than in collectivistic nations. Controlling for mean family income, the authors found that self-esteem and satisfaction with one's freedom played a more central role (although marginally) in determining levels of life satisfaction in individualistic nations than collectivistic nations.

According to Oyserman et al. (2002), applying Hofstede's approach (as the Oishi et al studies did) assumes that the country-level conditions that existed during the late 1960s to the 1970s when Hofstede first conducted his landmark study (such as those pertaining to work values and goals indicated by IBM employees) have remained stable

over time. Applying Hofstede's approach also assumes that the country-level ratings are equally accurate as individual-level ratings, and, that those ratings are accurate for individuals across domains measured, for example measuring self-concept and satisfaction with life. Oyserman et al. (2002) indicated that those assumptions render such research vulnerable to criticisms. Efforts to replicate Hofstede's work have highlighted that it is erroneous to assume that the questions used with the IBM-employee sample during the 1960s to 1970s are suitable to survey populations other than the IBM employees (Hofstede, 2001). Hofstede (2001) indicated that questionnaires must be adapted to their intended survey populations.

A major contribution of Hofstede's work is that he generated a model that has helped guide comparative cross-cultural research using mean scores that represent country-level individualism (Oyserman et al., 2002). In conjunction with other meta-analytic findings Taras, Kirman, and Steel (2010) concluded that, so long as Hofstede's dimensions (such as individualism/collectivism in the current study) are relevant to the researcher's questions of interest, continued examination of those dimensions is certainly warranted.

Summary of Hofstede's Approach and Implications for Study

During 1967-1978, Hofstede conducted a landmark study from which he derived the country IDV that he regarded as representing levels of individualistic cultural values for 50 countries and three regions. The country IDV was determined based on IBM employees' responses to values in the workplace. The IDV values ranged from 0 to 100 with higher values representing higher individualism and lower values representing lower

individualism (which implies high collectivism). The U.S. had the highest IDV value of 91 and was ranked as number 1 in levels of individualism. Jamaica had an IDV of 39 and was ranked number 25 on levels of individualism. Although Hofstede did not include Rwanda in his study, Hofstede (1980) indicated that collectivism is present in much of Africa. Other countries in East Africa that were included in Hofstede's (1980) study obtained IDVs of 27 and were ranked numbers 33/35 (tied with Portugal and Yugoslavia) on levels of individualism. In response to criticism about his method of surveying individual values of IBM and generalizing his findings to country IDV, Hofstede (1980) cautioned that country IDV should not be used to investigate cultural differences at the individual level. Instead, researchers should determine to employ individual-level assessment measures to determine individual differences in cultural values.

The current study will employ Hofstede's approach to determine the country-level I/C ranking of Jamaica, Rwanda, and the U.S. However, since individualists and collectivists are likely to reside in each country regardless of the country-level ranking, the current study will avoid potential pitfalls associated with the use of Hofstede's approach by operationalizing participant's own beliefs, values, and worldview (not Hofstede's ratings) as a measure of individual-level cultural orientation in order to examine variance in resilience.

Rating Scales Approach

Another approach to measuring I/C is the use of rating scales. When rating scales are used to measure I/C at the individual level (e.g., Allen & Smith, 2015; Rhee, Uleman, & Lee, 1996; Sinha & Verma, 1994; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988) research participants are required to rate a set of statements based on the degree to which

they find them important or, agree or disagree with the statements as they pertain to attitudes, beliefs, and behaviors. While this method of assessing I/C avoids the vulnerabilities of the assumptions associated with Hofstede's approach, there are limitations. The use of rating scales assumes that the I/C culture of participants can be adequately captured merely by participants' declarative knowledge of their attitudes, values, and beliefs. There is no consideration given to subtler forms of cultural expressions that might be more implicit and deeply rooted in behaviors that become part of normal everyday life that participants might not be able to consciously report on (Oyserman et al., 2002).

There are also some assumptions involved with the use of ratings scale. There is the assumption of convergence across cultures as it pertains to assigned meanings or quantifiers given to how participants "strongly agree" or rate statements as being "very important." Researchers must assume that the degree or strength of meanings attached to these ratings is similar across cultures (Oyserman et al., 2002). Finally, there is also the assumption that the questions included on the rating scales adequately capture and represent the I/C cultural orientations framework across cultures (Oyserman et al., 2002).

Sinha and Verma (1994) utilized the I/C rating scales approach to examine how social support moderates the relationship between allocentrism and psychological well-being in a collectivistic culture (India). The authors conceptualized collectivism as participants' perceptions of *people in general* (not themselves) behaving in an interdependent fashion. Allocentrism referred to participants' level of emotional closeness and dependence upon family and friends. According to the researchers, mental health in the Indian culture (*swath*) emphasizes balance and stability. Psychological well-

being was conceptualized as self-control and detachment from outcomes, cheerfulness, optimism, playfulness, and freedom from frustration, anxiety, and loneliness (Sinha & Verma, 1994). The psychologically well person maintains a sense of detachment and focuses on performing his or her duties rather than on the outcome. A person who is psychologically well maintains “a great deal of control over his or her feelings, ideas, and emotions” (p. 268). He or she “is not carried away by too much joy or sorrow, too much optimism or pessimism” (p. 268). Social support was conceptualized as the extent to which participants had caring individuals who would listen, understand and help without thinking about any inconvenience or cost that might be incurred.

The authors hypothesized that in conditions of high social support, allocentrism and psychological well-being would be positively correlated, but negatively correlated in conditions of low social support. The researchers posited that it was unlikely that all allocentrics would receive high social support. Those who did receive high social support were expected to experience a positive sense of psychological well-being. Conversely, those who did not receive high social support were likely to feel much more miserable than idiocentrics who are less sensitive to social support.

The researchers surveyed 110 masters-level students ages 20 to 23 years old in a city in Western India to examine the relationship between allocentrism, collectivism, social support, and psychological well-being. Only 10 of the participants were females. Participants responded to a series of questionnaires. The questionnaires used were comprised of either items drawn from other scales or items developed for the purpose of the study. For example, collectivism was measured by drawing 11 items from the Cultural Collectivism Scale. Participants rated the prevalence of specific behaviors and

practices (for example, “old people live with their grown-up children” p. 271). Alpha coefficient was .81. Allocentrism was measured using 10 items drawn from a pool of items for cross-cultural studies. Participants rated their emotional closeness and dependence upon others on a 5-point scale with 1 being *quite false* and 5 being *quite true* about degree of emotional closeness and dependence. Seven of the items pertained to allocentrism and three pertained to idiocentrism. Alpha coefficient was .77. Social support was measured by asking participants to indicate the extent to which supporters were available to listen and help without being concerned about their own inconvenience. The quality of social support was rated on a 5-point scale.

Psychological well-being was measured on a scale that assessed participants’ levels of cheerfulness, optimism, playfulness, self-control, a sense of detachment, and freedom from frustration, anxiety, and loneliness. The items were rated on a 5-point scale where 1 = *quite false* and 5 = *quite true*.

The researchers employed correlation analyses to examine the relationship between collectivism, allocentrism, social support, and psychological well-being. They found that, rather than the overall collectivistic orientation of people in general, it was the social support received that was associated with psychological well-being. In a collectivistic culture, although social responsibility seems to be inherent in the culture, the authors found that under conditions of low social support allocentric individuals reported lower psychological well-being while individuals who received high social support reported an overall higher sense of well-being.

Instead of ascribing participants’ cultural values based on their membership in a collectivistic society (India), the authors employed the rating-scales approach to measure

participants' perceptions of other people in general (a measure of *collectivism*), and how they perceived and rated themselves (a measure of *allocentrism*), and how they experienced others (a measure of *social support*). The authors established individual-level values for participants' cultural orientations (their level of *allocentrism*). Triandis (1994) cautioned that researchers should seek to understand cultural influences on behavior at the individual level (which Sinha and Verma did in their rating-scales approach) rather than merely attribute behavior and psychological processes to individuals' affiliation with a particular culture.

Summary of Rating Scales Approach and Implications for Study

The rating scales approach measures I/C at the individual level (e.g., Allen & Smith, 2015; Rhee et al., 1996; Sinha & Verma, 1994; Triandis et al., 1988). Participants rate the degree to which they agree or disagree with, or find a set of statements to be important about their culture. This method of assessing I/C avoids the vulnerabilities associated with Hofstede's approach in which it is assumed that country-level measures are accurate at the individual level. Whereas the use of rating scales is criticized as not considering implicit, deeply rooted, and subtler forms of cultural expressions that participants might not be able to consciously report on (Oyserman et al., 2002), mental health professionals often rely on clients' self-reports as a means of formulating intervention strategies. Therefore, the use of rating scales in Sinha and Verma's (1994) study will help inform the approach that will be used in the current study and in follow-up studies. For example, Sinha and Verma conducted separate assessments of participants' perceptions of their culture's values (their level of *collectivism*) and

participants' own cultural values (their level of *allocentrism*) in order to assess the impact of individual-level values compared to culture-level values on psychological well-being.

In the current study, corresponding constructs are also assessed at both the culture and individual levels by one instrument (the COS) as normative cultural orientation (NCO; participants' perceptions of the frequency of certain social behaviors and cultural values in their country of residence; culture level) and ECO (participants' internalized beliefs about those social behaviors/cultural values; individual level).

Priming Approach

According to Oyserman et al. (2002), priming studies (e.g., Gardner et al., 1999; Trafimow et al., 1991) provide an alternative approach to Hofstede's model and to the rating-scales approach. Rooted in social cognition research, priming studies use experimental designs to prompt I/C cultural values in participants before measuring their response to a dependent variable. Oyserman et al. (2002) identified two different types of priming manipulations.

In one type of priming research, there are two groups of participants: the experimental group that has participants complete an I/C rating scale prior to responding to the dependent variable and the control group that completes the I/C scale after responding to the dependent variable. This type of study allows researchers to examine the effect of bringing I/C cultural values to mind and to explore whether the strength of response to the dependent variable is impacted by participants' endorsement of cultural values. Oyserman and her colleagues stated that this technique provides greater clarity in causal reasoning than a simple correlational approach. Since this approach uses I/C rating scales, the limitations previously cited for the rating scales approach is also applicable.

In the other type of priming research, instead of completing I/C rating scales, participants are asked a series of questions that prompt them to focus on individualistic or collectivistic self-knowledge without directly measuring their attitudes, values, and beliefs. Their subsequent response to a dependent variable is then measured.

Trafimow et al. (1991) applied a priming approach in an experiment to investigate the distinction between the private self and the collective self. “The private self includes cognitions that involve traits, states, or behaviors (e.g., ‘I am honest’). The collective self includes cognitions that pertain to group membership (e.g., ‘I am a son.’)” (p. 649). The authors hypothesized that people from individualistic cultures are more likely to retrieve private and less collective self-cognitions, relative to people from collective cultures.

The participants were 42 students (18 were from a Chinese background and 24 were from a North American Background). Participants were randomly assigned to receive either a private-self or collective-self prime. They were given a booklet containing the informed consent (on page 1), priming manipulation statements (on page 2) and self-attribute questions (on page 3). The priming manipulation statement for participants selected to receive the private-self prime was: “For the next two minutes, you will not need to write anything. Please think of what makes you different from your family and friends. What do you expect yourself to do?” (p. 651). The statement for the collective-self prime was: “For the next two minutes you will not need to write anything. Please think of what you have in common with your family and friends. What do they expect you to do?” (p. 651). After the 2-minute priming, participants completed 20 self-attribute sentences that began with “I am”. An example of an idiocentric response (contained in the private self) is: “I am intelligent.” An example of a group (non-

idiocentric) response (contained in the collective self) is: “I am a Roman Catholic.” The researchers found that the different priming manipulations stimulated some corresponding idiocentric (private-self) response and some group (collective-self response) regardless of participants’ cultural background. However, the results confirmed the research hypothesis that participants from the more individualistic culture (North America) retrieved more cognitions about the private self and provided fewer group responses (collective self-cognition) than participants from China. The researchers obtained similar results in a follow-up experiment (Trafimow et al., 1991).

Summary of Priming Approach and Implications for Study

The use of priming approaches involves employing an experimental design to prompt I/C cultural values before measuring responses to a dependent variable (Oyserman et al., 2002). There are two different types of priming approaches. One approach involves having an experimental group that completes an I/C rating scale before responding to the dependent variable and a control group that completes an I/C rating scale after responding to the dependent variable. The other priming approach involves asking one group of participants a series of questions that prime them to focus on individualistic self-knowledge while another group is asked questions that prime them to focus on collectivistic self-knowledge. Both groups then respond to the same set of items and responses are evaluated for significant differences.

The current research employed the rating scales approach in a non-experimental research methodology. Additionally, the researcher investigated participants’ I/C cultural orientations as experienced and reported by them without any manipulation of the I/C

variables. The researcher was interested in how people respond naturally to cultural issues, rather than in how people respond when forced to think in a certain mode. If manipulations were to be used in the current study, it would be difficult to verify that the responses represent the actual cultural sentiments and real-world experiences of participants in the absence of any manipulations. Therefore, the researcher considered that instead of using a priming approach, the rating scales approach was most appropriate.

Summary and Conclusion

Based on a review of the literature, Chapter 2 discussed issues and relevant studies pertaining to the variables under consideration. The variables are traumatic life events (which is used to operationalize risk), culture (operationalized as I/C cultural orientation), process resilience (individual-, family-, and social-level protective factors), and outcome resilience (bouncing back from adversity). Each variable was defined and discussed within the historical context of how resilience and culture have been investigated in the literature. Various measurement approaches and related criticisms were also reviewed.

The study of resilience examines the process and the outcome of how people adapt to challenging life circumstances (VandenBos, 2015). The literature suggests that the study of resilience implies the presence of risk (Luthar et al., 2000). Risk factors are various influences or stressors that are potentially harmful to the individual (Kolar, 2011), such as abuse, neglect, poor physical and mental health, and traumatic life events. The current study operationalized and examined risk as traumatic life events, which are the most severe kinds of stressors that trigger emotional distress (Platt & Freyd, 2011). The

characteristics of the individual and wider community that mitigate the negative effects of risks are referred to as protective factors. The study examined multi-level protective factors at the individual, family, and social levels that contribute to resilience.

VandenBos (2015) defined resilience as the process and outcome of successfully adapting to difficult or challenging life experiences. The chapter outlined the development of resilience research with its beginnings in vulnerability studies in which researchers examined risk factors and the antecedents of schizophrenia. Following observations from researchers such as Garnezy (1991) that some children thrived despite adversity, the field shifted its focus to investigating protective factors. The works of seminal researchers (e.g., Garnezy, 1991; Rutter, 1979; Werner & Smith, 1982) were discussed. The advancement of resilience research as happening in four different waves that represent different research emphases was also discussed. While there are some variations in the literature about what comprise the third and fourth waves, the current research seems to represent third and fourth wave emphases: identification of prevention and intervention strategies (Masten & Obradovic, 2006; Masten & Wright, 2010) and focus on cultural influences (Liebenberg & Ungar, 2009).

It was also discussed that resilience has been operationalized in different ways (e.g., ecological, and organizational resilience) across different fields of study. As it pertains to psychological resilience, the construct has been operationalized at different times as a trait, a process, and an outcome. Concerns regarding each were discussed. Consistent with the definition by VandenBos (2015), the current study operationalized resilience as both a process and an outcome. Operationalizing resilience as a process involves assessing the multi-level protective factors (individual-, family- and social-level

factors) that mitigate trauma. This was accomplished by using the RSA. Operationalizing resilience as an outcome involved using the BRS to assess resilience as bouncing back from adversity.

Continued advancement in the resilience literature suggests that researchers should consider the cultural context within which resilience is experienced and expressed (Kolar, 2011; Ungar, 2004, 2005, 2007, 2013). Culture is defined as the distinctive customs, values, beliefs, knowledge, attitudes, and behaviors of a society or community or of a particular group within society (VandenBos, 2015). Noting that criticisms indicate that culture (meaning the construct that encompasses the general definition of culture) as an independent variable is too diffuse (Segal, 1983), and the use of nations as a whole are inadequate for individual-level inquiry (Ailon, 2008; Hofstede, 2001), the current study operationalized culture as I/C cultural orientation. The I/C constructs imply differences in interpersonal dynamics. In general, individualistic orientation broadly refers to individuals' preferences for autonomy and independence while collectivistic orientation broadly refers to individuals' preferences for group goals and interdependence. The characteristics of the I/C constructs at the individual level are also reflected in societal norms and values.

Three methods of measuring the I/C constructs were identified and discussed, namely, Hofstede's approach, the rating scales approach, and the priming approach. The implications of each for the current study were also identified. Based on the identified contributions and criticisms pertaining to each method of measurement, Hofstede's approach was used to determine I/C at the country-level. Additionally, the rating scales approach was used to assess individual-level I/C cultural orientation. The COS

(Bierbrauer et al., 1994) was used to operationalize I/C at the individual level. The rating scales approach avoids the pitfall and erroneous assumptions that the country-level cultural values assigned by Hofstede also represent the values of each individual in that country. It also avoids the pitfall that country-level values are applicable for individual-level analysis.

In conclusion, since the study of resilience is important for understanding how people overcome adversity, and since people differ according to the factors in their environment that shape their values, attitudes, and behaviors, this study explored how differences in I/C cultural interpersonal dynamics are associated with differences in the protective factors that mitigate adversity.

CHAPTER 3

METHODOLOGY

Introduction

The literature suggests that the presence of individual, family, and social/environmental protective factors influence resilience (Garmezy, 1991; Masten, 1994; Werner, 1989, Werner & Smith, 1982). Individuals' cultural contexts influence the ways in which protective factors are experienced (Ungar, 2005, 2007, 2011). More specifically, the I/C constructs provide a framework for understanding how the associated variations in social dynamics potentially influence the factors that are considered to be most useful in promoting resilience in each cultural context (Triandis & Gelfand, 1998). Despite the association between I/C cultural dynamics and resilience-promoting resources (protective factors), few studies have been conducted that employ the I/C constructs to explore resilience. The literature reviewed in chapter two (e.g., Khanlou & Wray, 2014; Kolar, 2011; Ungar, 2005, 2007, 2011) suggests that there is a need for researchers to consider the cultural context within which resilience is experienced and expressed. There is a need for further studies that examine how I/C cultural orientations influence resilience. The current study seeks to investigate whether aspects of culture that pertain to differences in I/C cultural orientations influence the protective factors that contribute to resilience.

This chapter discusses the research methodology. It outlines the research

questions and hypotheses, and reviews the type of research design, population and sample, instrumentation, data collection procedures, treatment of data, and statistical data analysis techniques. The chapter closes with a summary.

Research Questions

Following are the research questions:

Descriptive Research Question One: What is (a) the level of resilience as measured by protective factors on the RSA (*perception of self, planned future, structured style, social competence, family cohesion, social resources*), and spirituality; (b) the level of resilience as measured by the BRS among individualistic and among collectivistic participants from Jamaica, Rwanda, and the U.S.?

Research Question Two (Hypothesis One): Are there significant differences in the degree to which the linear combination of protective factors on the RSA (*perception of self, planned future, structured style, social competence, family cohesion, social resources*), and spirituality, contribute to resilience as a process for individualistic as compared to collectivistic participants from Jamaica, Rwanda, and the U.S.?

Research Question Three (Hypothesis Two): Is there a significant difference between Jamaica, Rwanda, and the U.S. on the linear combination of protective factors (*perception of self, planned future, structured style, social competence, family cohesion, social resources*, and spirituality) that contribute to resilience as a process?

Research Question Four (Hypothesis Three): Is there an interaction between I/C cultural orientation and country of residence (Jamaica, Rwanda, and the U.S.) on the linear combination of protective factors that contribute to resilience as a process?

Research Question Five (Hypothesis Four): Are there significant differences in resilience as measured by the BRS between individualistic as compared to collectivistic participants from Jamaica, Rwanda, and the U.S.?

Research Question Six (Hypothesis Five): Is there a significant difference between participants from Jamaica, Rwanda, and the U.S. in outcome resilience as measured by the BRS?

Research Question Seven (Hypothesis Six): Are *perception of self, planned future, structured style, social competence, family cohesion, and social resources* significant predictors of outcome resilience as measured by the BRS among individualists and collectivists participants from Jamaica, Rwanda, and the U.S.?

Research Question Eight (Hypothesis Seven): Are *perception of self, planned future, structured style, social competence, family cohesion, social resources, and spirituality* significant predictors of outcome resilience among individualists and collectivists participants from Jamaica, Rwanda, and the U.S.?

Research Design

This study employed a descriptive, non-experimental, correlational, online survey research methodology to collect quantitative data. It is observational; therefore, the researcher did not apply any interventions. The use of a non-experimental, correlational design means that the study did not make statements of causation but instead made statements about relationships. In addition, since the study required that participants have a lifetime experience of trauma, it would have been inappropriate and unethical to employ an experimental design to establish this criterion.

Sample

Selection Criteria and Recruitment Strategies

The population consisted of adults age 18 years and older who have a lifetime experience of a traumatic event. The participants were drawn from Jamaica, Rwanda, and the U.S. Web-based convenience sampling and snowball-sampling methods were employed to recruit participants. Convenience sampling allowed the researcher to recruit prospective participants based on participants' availability. With snowball sampling, participants assist in recruiting other participants (Schutt, 2012). Since the researcher had contacts in each country under investigation, convenience and snowball-sampling methods were the most cost-effective to implement. Those contact individuals provided email addresses of people in universities and other organizations such as churches, commercial banks, hospitals and other entities. Email addresses were also obtained from websites for organizations such as the Jamaican Psychological Society and the Ministry of Education in Rwanda, and from the Andrews University workers directory.

Data collection began after obtaining approval from the research committees at select research affiliates in Jamaica (Northern Caribbean University), Rwanda (Kigali Independent University (ULK), and The Ministry of Education - MINEDUC), and the Andrews University Institutional Review Board (IRB). The email invitation with the Class Climate link was sent to contact personnel in each country. The initial contact personnel in turn forwarded the email invitation to prospective participants. Participants were also recruited via social media networking such as postings on Facebook and LinkedIn. In order to enhance the representativeness of the sample, participants were recruited from a diverse pool as outlined in the following section.

In Jamaica, participants were recruited from the Northern Caribbean University (NCU) student and employee population via their campus email communication network. The survey was also emailed to seed participants at churches, hospitals, schools, financial institutions, and the Jamaican Psychological Society. Participants were also recruited via Facebook and LinkedIn. In Rwanda participants were recruited from ULK, one other university in Kigali, the MINEDUC and via Facebook. Due to a low response rate (less than 100 of the proposed 220 minimum responses) from the sponsoring university (ULK) after over four months of data collection, the ULK administrator contacted other university officials to assist with recruiting participants. This resulted in the survey being sent to two other universities in Rwanda. The researcher also recruited participants from African Leadership University in Kigali. Those universities consented to assist without any additional approval other than the sponsorship of the ULK administrator and prior approval from MINEDUC. The MINEDUC approval letter was forwarded to the other participating universities. In the U.S., participants were recruited from two universities and one college in the Mid-West, one university in the West, and two universities in the South. Participants were also recruited via the listserv of the National Psychology Training Consortium, and the webpage of the Midwestern Association of School Psychologists. The survey link was also posted on the researcher's social media pages (Facebook and LinkedIn) and shared/redistributed by other social media users. Altogether, those sources and strategies allowed for the recruitment of participants of different gender, ages, ethnicities (in the U.S.), and SES from different regions of each country. More specific descriptions of the sample are provided in Chapter 4.

The researcher employed respondent-driven snowball sampling. In respondent-driven snowball sampling, the researcher distributes the survey to a diverse group of initial participants and requests that those participants forward the link to diverse participants in successive recruitment efforts. This respondent-driven approach was part of the efforts to address the limitation that convenience and snowball-sampling strategies may result in a participant pool that does not yield a representative sample, and may limit the generalizability of the findings (Schutt, 2012).

All participants were offered the same financial incentive. The email invitation informed participants that they would be able to participate in the data collection of a study that is expected to contribute to the social sciences, both in the area of clarifying the protective factors that are most salient for individualists and collectivists, and providing practical guidelines for clinicians. The respondent-driven web-based snowball sampling strategy and the recruitment of participants from diverse entities (e.g., universities, business entities, other organizations such as churches and professional societies) and via social media, was intended to increase the probability that the sample would closely represent each country's population (Schutt, 2012).

Additionally, individuals from Jamaica, Rwanda, and the U.S. who experienced a traumatic event but did not have access to the internet were not able to participate in the study. Additionally, some individuals who experienced trauma may have been reluctant to provide information about their experience via the internet, possibly not trusting that the survey was anonymous and confidential.

Notwithstanding, Gosling, Vazire, Srivastave, and John (2004) indicated that web-based data collection methods can potentially provide a wider range of access to

samples that are beyond what is typically used (e.g., university students) in psychological research. The authors conducted a comparative analysis of several web-based studies carried out via the internet at outofservice.com using personality measures and other questionnaires, with 510 studies published in the *Journal of Personality and Social Psychology* that used traditional (non-internet) samples. When compared with traditional samples, they found that internet samples are also diverse in terms of age, gender, SES, and geographic region and the findings are consistent with those from traditional samples (Krantz, Ballard, & Scher, 1997; Krantz & Dalal, 2000; Srivastava et al., 2003 as cited by Gosling et al., 2004). Gosling et al. (2004) further stated that psychology researchers should seriously consider the benefits of web-based data collection methods and begin to include the use of the internet as a data collection tool among their already existing research methods. Martin (2011) indicated that due to its wider reach and interactive features, the internet provides a fertile platform for conducting psychological research.

Additionally, noting that some editors and reviewers have questioned the quality of internet-based data collection methods, authors (e.g., Birnbaum, 2000; Gosling et al., 2004; Kosinski, Matz, Gosling, Popov, & Stillwell, 2015; Schmidt, 1997) have evaluated the trustworthiness of internet-based studies. They found that the benefits of a web-based approach and the use of internet platforms such as Facebook are largely overlooked as viable sampling and data collection tools for research in the social sciences. For example, they suggested that snowball sampling is an effective means by which Facebook users can invite others to participate in a study. Given the size and reach of Facebook (the world's largest social network platform) with over 1.9 billion monthly active users (Facebook Inc., 2017), Facebook has the potential to be a viable and powerful data

collection platform that provides robust results (Harlow & Oswald, 2016; King, O'Rourke, & DeLongis, 2014; Kosinski et al., 2015).

Recruiting participants via Facebook is a promising avenue that has numerous advantages over traditional samples (Rife, Cate, Kosinski, & Stillwell, 2016). Some advantages include ease and cost-effective data collection, being able to recruit a larger and broader sample size that enhances generalizability of the findings, and using social media to stimulate public interest in psychological research (Gosling et al., 2004; Krantz et al., 1997; Rife et al., 2016). Kosinski et al. (2015) encouraged researchers to consider using Facebook as a research tool. Baltar and Brunet (2012) also indicated that using Facebook as a data collection tool yielded a higher response rate than traditional snowball sampling methods. Participants were also likely to feel more confident about participating when the researcher's personal Facebook profile was visible.

Statistics from the 2015 information technology report in Jamaica indicated that internet applications such as Facebook and Twitter are widely used among 80% of the Jamaican population (Johnson, 2015). In the U.S., statistics from the Pew Research Center indicated that 86% of Americans use the internet with 79% of that number being users of Facebook (Greenwood, Perrin, & Duggan, 2016). The 2017 internet usage statistics for Africa revealed that 30% of the population in Rwanda are internet users (Miniwatts Marketing Group, 2017). Based on the foregoing, although none of the countries surveyed had 100 percent internet usage, the percentage usage in Jamaica and the U.S. offered the potential for a diverse sample for data collection. The percent of users in Rwanda in proportion to the population is less than the percentage usage in Jamaica, or in the U.S. Nevertheless, the researcher expected that the web-based

approach would yield a sample that was more diverse than what could have been collected by the researcher via the traditional paper-pencil means (considering location of each country, travel requirements, and costs involved). Kline (2017) suggested that one important best-practice approach that provides indication that the researcher took action to attend to sampling issues is to seek to obtain copious demographic characteristics of the population. The current study attempted to draw male and female participants with diverse demographic characteristics from the major census regions of each country represented in the study.

The snowball web-based approach is also more cost-effective than employing a survey company such as Survey Monkey or Question Pro. Based on price quotation from Question Pro, it could cost over US\$10,000 to collect data in all three regions. Survey Monkey indicated that they did not have a target sample in Jamaica or Rwanda. Therefore, given the aforementioned factors, the researcher selected the most feasible approach, which was respondent-driven snowball sampling. Any limitations associated with its use are discussed in Chapter 5.

A single basic search using the term *snowball sampling* in PsycINFO (601 articles), PsycARTICLES (575 articles) and EBSCO host (920 articles) yielded over 2000 articles combined although there is likely to be overlap in articles between the three databases. Of the over 2000 articles listed in those three databases, there were hundreds of actual studies that employed snowball sampling as a data collection strategy, separate from those that discussed the strategy as a research tool. Thus, snowball sampling is a method used in the peer-reviewed literature.

Therefore, based on the strategies that were employed in the current study (using

a respondent-driven web-based snowball data collection strategy, and attending to the representativeness of the demographic characteristics of the sample), it was expected that the sample would include participants from a diverse pool that would yield findings that are suitable for publication in professional journals.

Sample Size

Cohen (1988) indicated that as a rule of thumb, based on a medium (.50) to large (.80) effect size, each group for analysis should comprise at least 30 participants. This will yield an 80% power (which is the minimum suggested for a study). For statistical analysis of relationships (e.g. correlation or regression), the general rule of thumb is that no less than 50 participants should be included in the analysis (Wilson VanVoorhis & Morgan, 2007). More specifically, Green (1991) suggested that the number of participants should be at least 50 plus the number of predictor variables when multiple correlations are being tested. However, for testing individual predictors (assuming a medium-sized relationship, that is at least .05), the sample size (N) should be $N > 104 + m$ where m is the number of predictor variables. When both individual predictors and multiple correlations are tested, the larger sample size should be used. When six or more predictors are to be used in a regression equation, it is appropriate to include an absolute minimum of 10 participants per predictor variable.

There are nine predictor variables in the study namely: individualistic cultural orientation, collectivistic cultural orientation (CCO), and seven protective factors (*perception of self, planned future, social competence, family cohesion, social resources, structured style, and spirituality*). In addition, the study assumed that there would be groups of individualists and collectivists from each of the three countries. At maximum,

the researcher anticipated a sample size of 115 participants ($N > 104 + 9$) in each group for a total of 230 from the least populated country, Jamaica. At minimum, it was anticipated that a sample size of 90 participants (10 participants x 9 predictor variables) per I/C group from the least populated country, Jamaica would be obtained. Since the population of each country differs, it is expected that the number of participants from each country would also differ. Therefore, at maximum it was expected that a sample size of 230 from Jamaica, 270 from Rwanda, and 360 from the U.S. would be obtained. The maximum total sample size anticipated was 860 participants. At minimum, it was anticipated that a sample size of 180 from Jamaica, 220 from Rwanda, and 310 from the U.S. would be obtained. The minimum total sample size anticipated was 710 participants. The aforementioned differences in the anticipated sample sizes between each country is based on the researcher's approximation of the differences in the actual population sizes between each country and not on any prescribed statistical formula or rule of thumb.

In the next section, I have outlined the rationale for the countries selected.

Rationale for Countries Selected

According to Hofstede (1980), higher values of country IDV suggest higher individualism; lower country ranks indicate higher individualism with the 1st ranked country being most individualistic and the 53rd ranked country being most collectivistic. Jamaica has a country IDV of 39 out of 100 and ranks at number 25 among 53 countries. While Hofstede did not include Rwanda in his country IDV analysis, he collectively analyzed other countries in East Africa. He found that those countries have an IDV of 27 out of 100 and ranks as 33/35 of 53 (tied with Yugoslavia and Portugal). Other authors also suggested that Rwanda is highly collectivistic (Jayawickreme & Foa, 2012; Seeler,

2015). The U.S. has the highest country IDV of 91 out of 100 and ranks at number 1 on measures of individualism. A comparison of the countries suggests that the U.S. is highly individualistic, Jamaica is less individualistic (more collectivistic than the U.S.) and Rwanda is likely to be least individualistic (most collectivistic of the three).

Based on the variations in I/C country rankings, it was presumed that, at the individual level, there would also be variations in I/C cultural orientation. It was anticipated that the presumed differences in I/C cultural orientation have implications for differences in resilience-promoting resources. Therefore, the selected countries should provide samples that yield meaningful data for cross-cultural comparisons of the variations in protective factors that contribute to resilience.

The incidences of trauma in each country also suggest that resilience is likely to be a relevant issue in the lives of survivors, those closely related to survivors (e.g., families and friends), and the wider societies. Therefore, a study of this nature is necessary.

Jamaica has a population of 2.7 million (Statistical Institute of Jamaica, 2017). The country has one of the highest murder rates in the world (a rate of 36 per 100,000, Plummer, Ferron-Boothe, Meeks-Aitken, & McDonald, 2014). Statistics from the *World Atlas* (2016) indicate that Jamaica ranks fifth in murder rates behind Honduras (84.6 per 100, 000), El Salvador (64.2 per 100, 000), Venezuela (62 per 100,000) and Lesotho (38 per 100,000). Other incidents of trauma such as rape, and, motor vehicle accidents are of major concern (Hibbert, 2016; Plummer et al., 2014). For example, according to Plummer et al. (2014), the death rate from motor vehicle accidents is 18 per 100,000 compared to 10 per 100,000 for the Caribbean region and 10.2 per 100,000 in Britain.

Additionally, because of its geology and geographic location, Jamaica is prone to several natural disasters that can have a negative impact on individuals. Those include floods, landslides, drought, hurricanes, and earthquakes (Government of Jamaica, 2008).

Personnel from one mental health support group in the island commented that the different kinds of trauma to which people are exposed contribute to high levels of psychological and emotional distress and significantly affect people's ability to function at their optimal level (Jones, 2016). There is a need for interventions that help people identify and access culturally relevant resilience-promoting resources.

Rwanda has a population estimate of 12.09 million (National Institute of Statistics of Rwanda, 2018a). Following the 1994 genocide perpetrated against the Tutsi, an estimated 800,000 were killed (Jansen et al., 2015). Despite significant efforts made to restore peace and rebuild trust in communities, the pervasive negative impact has affected the social development and growth of the country. For example, severe attachment trauma and other trauma-related concerns among the large group of orphans and widow survivors have had a significant impact on families and have led to trans-generational trauma (Rwanda Psychological Society [RPS], 2016). Families of victims and perpetrators who live as neighbors continue to deal with the negative impact of the genocide. Other trauma-related issues that are present in the country pertain to high rates of intimate partner violence, and suicidality (Umubyeyi, Mogren, Ntaganira, & Krantz, 2016). According to RPS, most of the efforts aimed at facilitating healing and reducing the burden associated with the trauma from the genocide have mainly been surface interventions that have primarily aided survival rather than healing. Rwanda Psychological Society cited that mental health professionals who currently facilitate such

intervention efforts have received only general training without any specific focus on trauma-specific approaches. Rwanda Psychological Society stated that an imminent need pertains to the large gap between the demand for healing from psychological trauma and the availability of resources to help meet those needs (RPS, 2016).

The population of the U.S. is estimated at 327.1 million (United States Census Bureau, 2018). According to statistics from the National Trauma Institute, in 2014, trauma injury (such as motor vehicle crashes and traumatic brain injuries) was the number one cause of death for Americans between the ages of 1 and 46 years old. Over 190,000 people lose their lives each year due to a trauma injury. This amounts to \$671 billion annually in health-care cost and lost productivity (National Trauma Institute, 2014). Injuries from trauma result in a greater loss of potential years of life than cancer and cardiovascular disease combined (Plummer et al., 2015). According to the Bureau of Justice Statistics (2016), an estimated five million Americans age 12 years and older experienced violent crimes (e.g. sexual assault, rape, robbery, and aggravated assault) during 2015. While several studies have been conducted that examined resilience in the U.S. in the aftermath of trauma such as the September 11th attacks in New York City (e.g., Bonanno et al., 2005; Bonanna et al., 2006, Bonanno et al., 2007; Yeh, Inman, Kim, & Okubo, 2006), and Hurricane Katrina (Ali et al., 2017; Metzel, 2009; Salloum & Lewis, 2010), there is still a need for further studies that examine resilience in the context of I/C cultural orientation (Allen & Smith 2015). Additionally, the U.S. has a diverse population of individuals who might vary considerably in their I/C worldviews and who are likely to benefit from different therapy approaches depending on their I/C cultural orientations.

Finally, Purgato and Olf (2015) observed that much of the research on trauma has been conducted in high-income countries resulting in lack of generalizability to the concerns faced by individuals in low- and middle-income countries. Jamaica is ranked as upper-middle income level, Rwanda is ranked as low-income level, and the U.S. is ranked as high-income level (The World Bank Group, 2016). The comparative analysis of the three countries with varied income/resource levels strengthens the trauma and resilience literature by presenting findings and recommendations that are relevant for the two low- and middle-income countries represented. The findings from the U.S. are relevant for clinical guidelines in the U.S. The comparative analysis contributes findings and recommendations that provide a more contextual understanding of resilience thereby enhancing generalizability to the countries studied rather than applying U.S.-based research to those populations.

In order to understand how different protective factors function in different groups, the researcher needed to obtain responses from groups that were distinct on a number of different characteristics. Therefore, the researcher had expected that because the aforementioned issues pertaining to Jamaica, Rwanda, and the U.S. represent diverse characteristics, the samples would generate the degree of variance needed to distinguish how protective factors function differently for groups with different characteristics.

Instrumentation

In this section, the purpose of each instrument used in the study is reviewed: relevance for the study, scale development, validity, and reliability. The survey instruments used were: (a) The TLEQ (Kubany et al., 2000), (b) The RSA (Friborg et al., 2003; Hjemdal, 2007), (c) The CD-RISC-25 spiritual influence factor (Connor &

Davidson, 2003), (d) The BRS (Smith et al., 2008), and (e) The COS (Bierbrauer et al., 1994).

The Traumatic Life Events Questionnaire

Relevance for the Study

The TLEQ was developed by Kubany et al. (2000). The resilience literature suggests that the study of resilience implies exposure to risk (Masten & Wright, 2010). Kubany et al. (2000) indicated that the item measures a broader range of traumatic events than any other instrument does. The TLEQ covers a broad range of potentially negative or traumatic events that would represent risk and thus be associated with subsequent resilience.

Scale Development

The TLEQ was developed through a series of revisions of items and across several different studies. The TLEQ 1 was developed by Kubany et al. (1996 as cited in Kubany et al., 2000) as the authors worked on another project pertaining to the development of a trauma-related guilt inventory. The authors further refined test items toward developing the TLEQ 2. The TLEQ 2 items were generated by conducting further review of the literature, examining other instruments that measured exposure to traumatic events, reviewing over 1000 open-ended responses to the “other-trauma” question on TLEQ 1, and having the TLEQ 2 items evaluated by trauma experts. The process of item refinement and review by trauma experts continued for over three years. Focus group

meetings were conducted to identify and eliminate item redundancies as well as improve clarity and simplicity of items (Kubany et al., 2000).

The process of item refinement led to the final TLEQ 2 questionnaire that assesses sixteen types of events that are potentially traumatic (Kubany et al., 2000). They are:

(a) natural disasters; (b) motor vehicle accidents involving injuries or death; (c) other accidents involving injuries or death; (d) exposure to warfare; (e) sudden, unexpected death of a close friend or loved one; (f) robbery involving a weapon; (g) severe physical assault by an acquaintance or stranger; (h) witnessing the severe assault of an acquaintance or stranger; (i) being threatened with death or serious bodily harm; (j) childhood physical abuse; (k) witnessing family violence; (l) physical abuse by an intimate partner; (m) childhood or adolescent sexual contact with someone at least 5 years older; (n) unconsenting childhood or adolescent sexual contact with someone less than 5 years older; (o) unconsenting sexual contact as an adult; (p) being stalked (Kubany et al., 2000, p. 212).

A final open-ended question also asks participants to name any other highly disturbing event not listed (Kubany et al., 2000).

The TLEQ 3 is a slightly revised format to the TLEQ 2. Revisions were made to improve consistency and to make the scale easier to complete. The revisions to the response format are: (a) instead of being asked how many times each event occurred, the items now include seven (7) options ranging from *never* to *more than 5 times*; and (b) immediately following each item, participants are asked to identify whether they experienced intense fear, helplessness or horror. Other items were added to assess miscarriage, abortion, life-threatening personal illness, adolescent sexual abuse, and dealing with loved-one's experiences of life-threatening or personally disabling illness, accidents or assaults. The instrument was published as the TLEQ by Western Psychological Services and was used to collect data for this study. It contains 24 items.

Validity and Reliability

Seven experts who had publications in the area of PTSD were invited to assess content validity. They evaluated how well the items were worded, and how well they represented the range of notable traumatic events (Kubany et al., 2000). The experts evaluated each of the items on a 6-point scale ranging from 0 = *not well at all* to 5 = *extremely well*. The experts rated the items as follows: overall item wording was in the *very well* range ($M = 3.64$; $SD = 0.75$); item representativeness was in the *very well* range ($M = 3.93$; $SD = 0.61$). Some items on the scale list examples such as “a serious animal bite, lost in the woods, violent death of a pet” that are meant to draw attention to potentially traumatic events in order to facilitate accurate occurrence of events (Kubany, 2004).

Although formal test scores are not generated from the TLEQ, the reliability was assessed by evaluating the test-retest reports of occurrences and non-occurrences of individuals’ experiences of traumatic events. The scale was administered to Vietnam veterans over a 45-day interval, to college students over a 1-week interval, to battered women over a two-week interval, and to substance abusers over a two-month interval. Results indicated acceptable agreement of reports of occurrences and non-occurrences between time 1 and time 2. For example, among the groups surveyed, the percentage of occurrence agreement between time 1 and time 2 for natural disasters was 91% ($\kappa = .65$), 73% ($\kappa = .52$), 94% ($\kappa = .80$), and 81% ($\kappa = .63$) respectively. The overall mean test-retest was 88% agreement for all events. Kappa coefficients were above .40 on 13 of the 16 items.

The Resilience Scale for Adults (RSA)

Relevance for the Study

The RSA was developed by a group of researchers from the Department of Psychology at the University of Tromsø in Norway. The members of the research team include Friborg, Hjemdal, Martinussen, Rosenvinge, and Stiles (Hjemdal, 2007). As a multidimensional measure, the RSA facilitates the exploration of individual-, family- and social-level protective factors among adults. It assesses the general characteristics of resilience (Hjemdal, 2007; Jowkar, Friborg, & Hjemdal, 2010). Hjemdal (2007) conceptualized resilience as “the protective factors and processes that contribute to a good outcome” (p. 308). The author discussed findings from studies conducted using the RSA that provide an indication of “good outcome.” For example, in one study, the RSA was used to explore whether the scale could predict the development of symptoms of depression and anxiety. Participants ($N = 159$) completed the Hopkins Symptoms Checklist (HSCL-25) which is a measure of psychiatric symptoms such as symptoms of depression and anxiety. Participants also completed the RSA, and indicated whether they had experienced any negative stressful life events over a 3-month period. The findings revealed that individuals who scored higher on the RSA (higher level of resilience), did not experience any increase in their depression and anxiety after experiencing negative stressful events. On the other hand, participants who scored lower on the RSA (lower resilience) showed increased depression and anxiety after exposure to negative life events (Hjemdal, 2007). In this instance, “good outcome” is no increase in the levels of psychiatric symptoms (primarily depression and anxiety) following exposure to negative stressful life events.

As discussed in the previous two chapters, Garmezy (1991) and Werner and Smith (1982) identified three overarching protective categories that characterize resilient individuals that are generally accepted by resilience researchers: (a) dispositions and attributes of the individual, (b) family attributes, and (c) characteristics of the wider social support systems (Hjemdal, 2007). The RSA allows researchers to assess these multidimensional protective factors.

Resilience scales that assess the multidimensional aspect of resilience as suggested by Garmezy (1991), Werner (1989) and Werner and Smith (1982) are scarce (Jowkar et al., 2010). Windle, Bennett, and Noyes (2011) conducted a review of nineteen resilience measures and found that only three of those measures received the best psychometric ratings. The three measures were the CD-RISC-25, the RSA, and the BRS. The CD-RISC-25 is considered to have sound psychometric properties and is a widely recognized scale (Windle et al., 2011). It measures the following resilience factors: personal competence, high standards, and tenacity; trust in personal instincts, tolerance of negative affect, and strengthening effects of stress; acceptance of change, and secure relationships; control; and spiritual influences. The scale does not measure resilience as a process (Connor & Davidson, 2003). Additionally, the CD-RISC-25 does not facilitate the measurement of all three facets that characterize the widely accepted characteristics of resilience. Therefore, the instrument was not selected as being suitable to measure the full range of protective factors for this study.

Consistent with this study's operationalization of resilience as both a process and outcome, the RSA was selected for the measurement of protective factors and the analysis of resilience as a process (examining *the what*, or the protective factors that

contribute to resilience). The BRS will be used to measure resilience as an outcome and will be discussed later in the chapter. According to Friborg et al. (2003), the individual-, family-, and social-level factors as measured by the RSA are most significant in determining positive and healthy adjustment in the face of adversity.

Scale Development

The authors of the RSA conducted a comprehensive review of protective factors in the literature until no new protective factors were identified (Hjemdal, 2007). Five factors comprising forty-five items were generated with Cronbach alphas between 0.92 and 0.74 and a total alpha of .93. The five factors named were: (a) personal competence, (b) social competence, (c) structured style, (d) family cohesion, and (e) social resources. The five-factor solution was replicated in a non-clinical random sample of 276 adults in Norway. In order to limit the consistent tendency to respond in a “yea or nay” fashion, the response format was changed from a Likert-type to a semantic differential-type response format. The psychometric properties remained acceptable (Hjemdal, 2007, p. 311). The RSA was later administered to 482 applicants to a military college. Confirmatory factor analysis was applied resulting in the 33-item RSA that consists of six factors. The factors are: (a) *perception of self* (six items), (b) *planned future* (four items), (c) *social competence* (six items), (d) *structured style* (four items), (e) *family cohesion* (six items), and (f) *social resources* (seven items). Cronbach alphas remained between the acceptable ranges of .74 to .92.

Validity and Reliability

According to Hjemdal (2007), since the RSA measures protective factors that

influence resilience, one test of construct validity was how adequately the scale differentiated between a clinical and a non-clinical sample. In the study that comprised 276 nonclinical adults in Norway (Hjemdal, 2007), the researchers examined the construct validity of the RSA by including 59 individuals seeking psychiatric treatment. The participants were administered the following scales: the RSA, the Sense of Coherence Scale (SOC-29) - a scale that measures healthy adaptation with higher scores indicating positive adaptation, and the HSCL-25 - a measure of anxiety and depressive symptoms with higher scores indicating more symptomology and poorer emotional health. As expected, the results revealed that there were all positive and significant correlations between the RSA factors and the SOC-29 ranging from 0.29 to 0.75. In addition, the correlations between the RSA factors and the HSCL-25 were all negative and significant ranging from -0.19 to -0.61. In general, higher RSA factor scores tended to be associated with fewer clinical symptoms and better mental health and thus likely associated with a non-clinical status. The significant positive correlations between the RSA and a measure of healthy adaptation (the SOC-29), and the negative and significant correlations between the RSA and a measure of anxiety and depression (the HSCL-25) provide evidence that the RSA is a valid measure of healthy adaptation. In another study of 994 individuals, Hjemdal (2007) examined the correlation of the RSA with other mental health outcomes. For example, the RSA was significantly negatively correlated with scores on a measure of hopelessness (the Beck Hopelessness Inventory). Correlations ranged from $r = -0.25$ to -0.63 . The authors indicated that the wide variations in correlations suggest that the factors on the RSA are conceptually distinct although they all measure positive characteristics.

Measures of convergent validity were also tested for the RSA. As expected, all correlations were positive and significant ($p < .01$) for the following two instruments: the Dispositional Optimism/Life Orientation Test (a measure of optimism; $r = 0.32$ to 0.70) and Rosenberg's Self-Esteem Scale (a measure of self-confidence; $r = 0.27$ to 0.75). This provides further evidence that the RSA measures positive characteristics.

The CD-RISC-25 Spiritual Influence Factor

Relevance for the Study

The literature suggest that spiritual influence serves as a protective factor (Connor & Davidson, 2003; Costanzo, Ryff, & Singer, 2009; Portnoff et al., 2017; White et al., 2008). Since the RSA does not include a spiritual influence scale, the researcher opted to include the two items from the CD-RISC-25 that comprise the spiritual influence factor. It was anticipated that the inclusion of spirituality would strengthen the exploration of the protective factors that contribute to resilience as well as enhance the study's cultural emphasis and attention to diversity.

Scale Development

The 25-item CD-RISC-25 was developed from different sources in the literature (Connor & Davidson, 2003). The CD-RISC-25 items (including the spirituality factor) are rated on a 5-point Likert-type scale as follows: 0 = not at all true, 1 = sometimes true, 2 = rarely true, 3 = often true, and 4 = true nearly all of the time. The total score ranges from 0 to 100. Higher scores represent higher resilience. The test items were administered to six different samples: a general population sample recruited via random-digit dialing ($n = 577$), primary care patients ($n = 139$), psychiatric outpatients ($n = 43$),

participants in a generalized anxiety disorder (GAD) study ($n = 25$), and participants in two clinical trials of PTSD ($n = 22$ in each group).

Validity and Reliability

For the full CD-RISC-25 scale, internal consistency was assessed using the sample from the general population ($n = 577$). Cronbach's alpha of 0.89, $p < .05$ was obtained. This score indicates good validity. Test-retest reliability was assessed using 24 participants from the GAD and PTSD groups in whom little or no change was observed between two consecutive visits. The intra-class correlation coefficient of 0.87, $\alpha \leq .05$ demonstrates high levels of agreement between time 1 and time 2 for both groups. For participants in the GAD group, CD-RISC-25 scores were 52.7 at time 1 and 52.8 at time 2. For participants in the PTSD group, CD-RISC-25 scores were 17.9 at time 1 and 19.9 at time 2.

Using data from participants in the general population sample, factor analysis yielded five factors. The factors and their respective eigenvalues are: factor 1 (eigenvalue = 7.47) personal competence, tenacity and high standard; factor 2 (eigenvalue = 1.56) trust in one's instincts, tolerance of negative affect, and the strengthening effects of stress; factor 3 (eigenvalue = 1.38) positive acceptance of change and secure relationships; factor 4 (eigenvalue = 1.13) control; and, factor 5 (eigenvalue = 1.07) spiritual influences. The authors noted that the CD-RISC-25 is a wave two resilience scale that does not measure resilience as a process (Connor & Davidson, 2003). However, the scale is a valid and reliable measure of some characteristics of resilience and includes a spiritual influence scale that was selected for use in the current study.

Although the eigenvalue for the spirituality factor is notably low, the researcher

opted to proceed with its inclusion in the study on the following basis: (a) the scale is only comprised of two items – the length of the survey and concerns about how that might potentially impact participants’ interest and engagement was a concern of the researcher, (b) the three main resilience characteristics (Garmezy, 1991, Werner & Smith, 1982) that are the focus of the study and which help form the basis for the theoretical framework, are adequately addressed using the RSA, and (c) inclusion of the scale was expected to enhance the breadth of protective factors explored, as well as enhance the multicultural component of the study.

The Brief Resilience Scale (BRS)

Relevance for the Study

The BRS was developed by Smith et al. (2008) to assess resilience as bouncing back from adversity. The BRS specifically focuses on bouncing back (Smith et al., 2008), whereas some other measures of resilience focus on protective factors or resources. For example, the RSA (Friborg et al., 2003) measures factors such as planned future, social competence, and social resources; the CD-RISC-25 (Connor & Davidson, 2003) assesses factors such as self-efficacy, faith, optimism, and sense of humor; and the Resilience Scale (Wagnild & Young, 1993) assesses personal competence, acceptance of self and acceptance of life. The BRS was selected for use in this study because it measures resilience on a unitary scale as bouncing back from adversity. According to Smith et al. (2013), the act of bouncing back is consistent with “the original and most basic meaning of the word resilience” that is, “to bounce or spring back” (p. 167).

Additionally, the use of both the RSA and BRS will facilitate analysis of the correlation between resilience as the presence of protective factors (on the RSA) and

resilience as bouncing back (as measured by the BRS). This correlation analysis will allow a comparison of resilience as protective factors and resilience as bouncing back. The comparison of instruments also further enhances the cross-cultural focus of the study. Specifically, the items on the BRS focus primarily on resilience as bouncing back without measuring multi-level protective resources (individual, family and social). Comparing the findings from the RSA which measures the multi-level protective factors with the BRS which measures resilience only as the outcome of bouncing back, should shed light on whether differences in participants' individualistic and collectivistic orientation influence their endorsement of items and subsequent resilience scores on both measures. For example, participants from collectivistic cultures who tend to be more interdependent than individualists may endorse items on the BRS in a manner that focuses less on the self, potentially resulting in lower BRS resilience scores. Differing scores inform discussions about the importance of a contextual and culturally sensitive assessment and understanding of resilience.

Scale Development

The authors of the BRS wanted to develop a scale that contained as few items as possible that would measure resilience as bouncing back (Smith et al., 2008). Six items were generated by a team of researchers, and from a pilot test administration to undergraduate students. Of the six items that comprise the scale, items 1, 3 and 5 are positively worded, (for example, "I tend to bounce back quickly after hard times:" Smith et al., 2008) while items 2, 4 and 6 are negatively worded (for example, "It is hard for me to snap back when something bad happens:" Smith et al., 2008). An equal number of positively and negatively worded items were included in order to reduce the effects of

positive response bias and social desirability. Items are based on a 5-point Likert-type scale with 1 = strongly agree and 5 = strongly disagree.

The BRS was administered to four different samples to test the hypothesis that the BRS would represent one factor and to determine convergent validity, predictive discriminate validity, and reliability. The four samples were drawn from Albuquerque, New Mexico. Samples 1 and 2 comprised undergraduate students ($n = 128$, and $n = 64$ respectively). Sample 3 comprised 112 cardiac rehabilitation patients; sample 4 comprised 50 women who were either diagnosed with fibromyalgia ($n = 20$) or healthy controls ($n = 30$). All four samples were administered questionnaires that assessed variables such as social support and social interactions, personal characteristics, coping styles, resilience, and health-related outcomes (for example, mental health and physical symptoms). The results revealed a one-factor scale that accounts for 57% to 67% of the variance across all four samples (sample 1 = 61%, sample 2 = 61%, sample 3 = 57%, and sample 4 = 67%). The factor loadings for the items in the four samples ranged from .67 to .91 (Smith et al., 2008).

Validity and Reliability

The researchers (Smith et al., 2008) examined the factor structure using principal component analyses with varimax rotation. Eigenvalues greater than 1 were retained. Cronbach's alpha was used to examine internal consistency. Intra-class correlation (ICC) was used to examine test-retest reliability. Convergent validity was tested using zero-order correlations between the BRS and other scales. Discriminant predictive validity was tested using partial correlations with other health outcomes and controlling for other predictors.

The results from the four samples indicated that internal consistency was good with Cronbach's alpha ranging from .80 – .91 (sample 1 = .84, sample 2 = .87, sample 3 = .80, and sample 4 = .91). To examine the test-retest reliability using ICC, the BRS was administered twice to two samples (sample 2 and sample 3). The test was administered twice in one month to 48 participants from sample 2. The ICC showed a moderate test-retest reliability of .69. The test was also administered twice in three months to 61 participants from sample 3. Intra-class correlation test re-test reliability was .62. This test-retest value also reflected moderate reliability (Koo & Li, 2016). The BRS showed evidence of convergent validity by positively correlating with the CD-RISC (sample 1: $r = .59$), measures of optimism (sample 1: $r = .45$) and purpose in life ($r = .46$), and negatively correlating with pessimism ($r = -.40$) and alexithymia ($r = -.47$) where $p < .01$. Using samples 1 ($n = 128$) and 3 ($n = 112$), the researchers controlled for measures on the ego-resiliency and the CD-RISC-25. The partial correlation indicated that the BRS was negatively correlated with health-related outcomes in the expected direction. There was a significant negative correlation between the BRS and perceived stress (sample 1, $r = -.38$, $p < .01$). There was also a significant negative correlation between the BRS and measures of negative affect (e.g., anxiety: sample 1, $r = -.29$, $p < .01$; and depression: sample 1, $r = -.21$, $p < .05$).

The Cultural Orientation Scale (COS)

Relevance for the Study

The COS is a 26-item instrument developed by Bierbrauer et al. (1994). This instrument was selected for the current study because it differentiates between individuals' perceptions of the frequency of the cultural norms in their country of

residence (NCO) and their internalized beliefs about those social behaviors/cultural values (ECO).

Distinguishing between perceived frequency of cultural norms and values (what is practiced in the social milieu - NCO), and the participant's internalized beliefs about those social behaviors/cultural values (ECO) is important in order to determine individual-level cultural orientation (Singelis, Triandis, Bhawuk, & Gelfand, 1995). The COS measures and differentiates NCO and ECO. Since the study explores the relationship between participants' ECO and resilience, the COS was found to be a suitable I/C measurement instrument.

In this study, the COS was used to compute and report individual means for the normative and evaluative items for individualists and collectivists in each country using descriptive statistics. Cultural orientations will be represented by normative (Normative Individualistic Cultural Orientation [NICO], Normative Collectivistic Cultural Orientation [NCCO]) and evaluative (Evaluative Individualistic Cultural Orientation [EICO], Evaluative Collectivistic Cultural Orientation [ECCO]) scores on the COS. Individualistic/Collectivistic cultural orientation grouping will be determined by the use of cut-off scores. Participants with mean scores between 1 and 3.49 were to be grouped as individualists, participants with mean scores between 4.5 and 7 were to be grouped as collectivists, and participants with scores between 3.5 and 4.49 were to be regarded as having a cultural orientation that does not reflect a distinctly individualistic or collectivistic orientation and were to be excluded from data analysis.

Scale Development

The COS (Bierbrauer et al., 1994) was developed in Germany after test items were administered to university students there. The authors suggested that test administration instructions may be adjusted to assess either participants' orientations as they pertain to their native country or their country of residence depending on the purpose of the research. Three different studies were conducted. Twenty-six items were selected for the final COS. Thirteen items measure participants' perceptions of the frequency of certain norms/social behaviors in their native country/country of residence (normative items) and thirteen items measure participants' degree of approval or disapproval of those norms (evaluative items). The students that comprised the sample represented various cultural backgrounds (for example, German, Iranian, Korean, and Turkish).

Following is an example of a normative item: "How often do teenagers in your country of residence listen to their parents' advice on dating?" The 7-point Likert-type scale ranges from 1 = *not at all* to 7 = *always*. Following is an example of an evaluative item: "What do you think of teenagers in your country of residence listening to their parents' advice on dating? I think this is..." The 7-point Likert-type scale ranges from 1 = *very bad* to 7 = *very good*. Higher normative and evaluative mean scores on the COS represent higher collectivism. Items 6, 8, 19 and 21 are reverse scored.

Validity and Reliability

As a measure of validity for differentiating cultural orientations, the authors predicted that collectivism would be higher among Korean than among German students. They also predicted that Koreans would be less collectivistic the longer they stayed in Germany. A higher mean score for Korean and German participants represented a greater

degree of collectivism. The researchers administered the COS in Germany to 27 Korean and 29 German students. The test was administered in German language. The Korean students were recruited from two German universities. They self-reported having at least average competence in German language. The average number of years that they resided in Germany was 2.8 years. Participants were asked to rate the items as they pertain to their native country. Therefore, Koreans would rate normative items that evaluated their perceptions of the norms and values in Korea. They would also rate the evaluative items as it pertains to the degree to which they agree with and have internalized the norms and values of the Korean culture.

As the researchers expected, two-tailed test results (ANOVA) revealed that the COS significantly differentiated between the Korean and German participants. Koreans' mean scores on the overall COS measure of collectivism was significantly higher (mean = 4.77; $SD = .49$) than Germans (mean = 3.68; $SD = .32$). The normative mean scores were: Koreans (mean = 4.75; $SD = .48$), Germans (mean = 3.81; $SD = .32$). The mean scores for the evaluative measure were: Koreans (mean = 4.79; $SD = .65$), Germans (mean = 3.92; $SD = .47$). The p values were less than .001, two-tailed. Since higher means represent higher collectivism, as expected, Koreans reported being more collectivistic than Germans.

The scale also had a good measure of internal reliability (total $\alpha = .82$). The researchers applied Pearson's correlation and found that there was a greater degree of correspondence between normative and evaluative scores among Koreans than among Germans. The Pearson correlation for the Koreans was $r = .51$, $p < .01$ and for the Germans $r = .30$, $p < .10$. The authors indicated that the high correlation of normative

and evaluative scores among the Koreans was characteristic of collectivistic cultures where individuals' personal values also tend to reflect the perceived cultural norms.

Demographic Questionnaire

The demographic information collected in the study allowed the researcher to provide descriptive statistics of the sample using frequency statistics such as mean and standard deviation. The descriptive statistics that pertain to each demographic item will help provide information about the personal characteristics of participants. The demographic items in this study include age, sex, marital status, country of residence (including region), number of years of residence, country of birth, ethnicity, number of years of education, and household income/resources (representing SES). The literature supports the view that some demographic variables such as age (Hawkley et al., 2005), sex, ethnicity, and SES (e.g., Eisman, Stoddard, Heinze, Caldwell, & Zimmerman, 2015) are related to resilience. While the exploration of the demographic variables is not the focus of the current study, Appendix E shows the Pearson (zero-order) correlations between the demographic variables and the variables of interest in this study (protective factors {RSA factors and spirituality} and the outcome criteria {bouncing back as measured by the BRS}). The zero-order correlations table (see Appendix E) shows that there was a small, significant correlation between some demographic variables and protective factors, and between some demographic variables and bouncing back (BRS outcome resilience). Correlations ranged from $-.289$ to $.267$. Zero-order correlations can help shed light on some demographic variables that constitute the latent protective factors, and bouncing back (outcome resilience). This information also helps to substantiate recommendations made in Chapter 5 that future researchers should further

explore how demographic variables contribute to resilience as a process and as an outcome.

Data Collection Procedures

Prior to collecting data in each of the three countries, the requisite research approval was obtained. For Jamaica, an application was submitted to collect data at NCU. Permission was granted by the NCU IRB (see Appendix B). No further institutional or government approval was needed to proceed with snowball sampling and to collect data from the other entities included in the sample from Jamaica.

For Rwanda, the researcher provided the survey instruments to Rwandans living in the U.S. and requested that they provide verbal feedback about whether the surveys being administered in English would be suitable for use with Rwandans living in Rwanda, and especially for those whose first language was not English. The individuals consulted indicated that Rwandans living in Rwanda were not likely to have difficulty with completing the survey in English although Kinyarwanda was the first language for many. Additionally, the researcher needed to obtain government approval prior to conducting research in the country. As a required first step, the researcher (with assistance from an individual known personally to the researcher) secured sponsorship by a university in Rwanda (ULK) whose research administrator agreed to oversee the research project. The research protocol (email requesting participation, informed consent, demographic questionnaire, and all survey instruments) was sent to the university's administrator who reviewed the research protocol and communicated his approval in a letter sent via email (see Appendix B). The administrator also provided written communication to MINEDUC confirming that ULK would serve as a sponsoring

institution. Next, the researcher secured the requisite approval from the MINEDUC there. This was achieved by completing and submitting an application form along with a copy of the researcher's travel document, and the entire research protocol (email requesting participation, informed consent, demographic questionnaire, and all survey instruments) to MINEDUC. The research protocol was reviewed by MINEDUC and approval granted to conduct research in Rwanda (see Appendix B).

Having obtained institutional approval from NCU, as well as institutional and governmental approval from Rwanda (ULK and MINEDUC) and following approval of the study by the dissertation committee, the proposal was submitted to the Andrews University IRB for approval. Once IRB approval was secured, data collection began. Once the study was approved by the Andrews University IRB, no further approval was requested from the other U.S.-based college/universities that participated in the study.

The survey scales (RSA, BRS, COS, TLEQ, and the CD-RISC-25 spiritual influence factor), demographic questionnaire, and informed consent (containing the contact information for the researcher, dissertation chair, and Andrews University IRB) were entered into Class Climate. Class Climate is an online data collection program developed by Scantron Corporation – a company that develops assessment and survey products to help educational, commercial, and governmental organizations capture data for performance evaluation. Scantron serves 98 of the largest 100 school districts in the U.S., as well as 48 Ministries of Education worldwide (Scantron Corporation, 2017).

Email invitations containing the survey link were sent to potential participants via email. The survey link was also posted on Facebook and LinkedIn. Once participants clicked on the survey link, they were presented with the title page of the study as well as

the informed consent. In the informed consent, participants were notified that participation was strictly voluntary and that their responses were anonymous. They were informed that they may exit the survey at any time with no negative consequences if they wished to discontinue. The informed consent also notified participants that due to the sensitive nature of data collected on the TLEQ, should they experience any distress as a result of completing the survey, they should contact a mental health professional, trusted individual such as a pastor, or call the emergency contact numbers provided for each country. Participants were asked to indicate that they agreed with the information provided in the informed consent, that they agreed to voluntarily participate in the study, and that they would complete the survey only one time. If participants indicated that they did not agree with the informed consent, they were re-directed to a page that ended the survey. If they agreed to the conditions outlined in the informed consent, they were able to proceed to the screener questions.

Screener questions asked whether or not participants were citizens of one of the three countries, were 18 years or older, and had a lifetime experience of trauma. If participants indicated “no” to any of the aforementioned conditions, they were redirected to a page that by-passed the drawing and ended the survey

Participants who completed the survey had the option to click on a link embedded in the survey that redirected them to a separate page where they were asked to provide their email address to enter a drawing for one of six US\$50.00 gift checks. In order to help maintain anonymity and avoid potential researcher bias in the selection of awardees, the dissertation chair managed the random selection of awardees for the drawing. The six awardees were informed of their selection via email. Five of six US\$50 checks were

delivered to the selected awardees while one remained unclaimed at the time of completion of this project.

It was proposed that the survey link would remain open until the desired number of responses were obtained. After one week, the researcher sent general email reminders to seed participants who re-sent the survey to other potential participants, and via university's email communication systems. Re-postings were also done on Facebook and LinkedIn. This follow-up procedure was employed at least once every week and sometimes bi-weekly. However, after about six months of data collection, the desired number of responses were still not obtained for Jamaica and Rwanda within the timeframes projected (maximum sample size if response rate was good within 1 month or minimum sample size if response rate was poor after two months). After about six months of ongoing follow-up for data collection, the survey links were disabled and data collection was closed. SPSS files were downloaded from Class Climate and data cleaning and analysis began.

Treatment of Data

Survey responses were kept confidential throughout the research process. Data files were password protected and stored on the researcher's computer. Only the researcher, committee members, and the Andrews University Class Climate administrator had access to the research data. A password-protected backup of the data was stored on an external hard drive in a fixed location and on a portable USB drive belonging to the principal researcher. The data will be stored for a minimum of three years. Data will be securely discarded after the desired publications and presentations have been achieved.

Data Analysis

Data Cleaning

Prior to conducting the desired data analysis procedures, the data was screened and cleaned to ensure that it was fit for valid interpretation. Meyers, Gamst, and Guarino (2013) indicated that valid interpretation depends on whether the data collected is an accurate representation of what was measured, and that the data meet the underlying assumptions of the relevant data analysis procedures. The variables were manually coded in SPSS. Frequency distributions graphs were generated and inspected for normalcy and outliers.

The SPSS missing values analysis procedure was used to show all fields that contained missing values and to identify patterns of missing data. The data was then physically examined to determine whether values would be imputed or cases deleted. Kline (2017) suggested that one approach that may be employed is to determine whether data is missing at random or missing completely at random (MCAR). Missing at random data does not show any pattern of relationship to the variable containing the missing data, however, a pattern of relationship to another variable in the data set may be observed. Missing completely at random data shows no pattern of missing items that are specifically related to any variable in the data set (Kline, 2017). In this study, the missing values for each continuous variable, was imputed using SPSS multiple imputation analysis. Participants were required to respond to each demographic item, therefore there were no missing values for categorical variables. Outliers were visually checked to see whether they represented participants with common demographic characteristics. It was expected that this information might present interesting points of interest about some

participants that might be useful for follow-up data analyses. Extreme outliers with data points that were 3 or more standard deviations around the mean, were removed from data analysis to enhance the representative characteristics of the sample (Kline, 2017).

Otherwise, outliers with values that were not significantly different from the sample were left alone (Meyers et al., 2013).

Statistical Procedures

All data was analyzed using SPSS. The survey instruments determined the subscales for data analysis. The individualistic cultural orientation and CCO independent variables were obtained from the COS. The protective factor variables were obtained from the RSA (six factors) and the CD-RISC-25 spiritual influence scale (one factor). The dependent variable (resilience as ‘bouncing back’) was obtained from the BRS. The variables table in Appendix A provides additional details pertaining to the variables, conceptual definition, and the item numbers from each instrument used.

Multivariate assumptions were also tested to determine whether criteria for multivariate statistical procedures were met. Chapter 4 includes a discussion on the findings for multivariate assumptions. According to Meyers et al. (2013) the multivariate assumptions include normal distribution of the data, that there is absence of multicollinearity among predictor variables, that variables are continuous, and that there is homogeneity of variance (the range of variability of the dependent variable across the range of independent variables is equal – Box’s M test for equality).

Below are the descriptive research questions, the null hypotheses for the study, and the corresponding statistical procedures.

Descriptive Research Question

1. What is (a) the level of resilience as measured by protective factors on the RSA (*perception of self, planned future, structured style, social competence, family cohesion, social resources*), and spirituality; and (b) the level of resilience as measured by the BRS among individualistic and among collectivistic participants from Jamaica, Rwanda, and the U.S.?

Descriptive statistics represented mean resilience among individualists and among collectivists in Jamaica, and the U.S. as measured by the RSA plus spirituality and also the BRS. Higher values indicate higher levels of resilience. Descriptive statistics for individualists and collectivists from Rwanda were not reported due to unreliable ECO for the Rwanda sample.

Null Hypotheses & Statistical Procedures

Null Hypothesis One (Research Question Two): There is no significant difference between individualistic and collectivistic participants from Jamaica, Rwanda, and the U.S. on the linear combination of protective factors (*perception of self, planned future, structured style, social competence, family cohesion, social resources*, and spirituality) that contribute to resilience as process.

Null Hypothesis Two (Research Question Three): There is no significant difference between Jamaica, Rwanda, and the U.S. on the linear combination of protective factors (*perception of self, planned future, structured style, social competence, family cohesion, social resources*, and spirituality) that contribute to resilience as a process

Null Hypothesis Three (Research Question Four): There is no interaction between I/C cultural orientation and country of residence (Jamaica, Rwanda, and the U.S.) on the linear combination of protective factors that contribute to resilience as a process.

It was proposed that multiple analysis of variance (MANOVA) would be applied for hypotheses one, two, and three to determine whether there were differences in the protective factors between individualists and collectivists in Jamaica, Rwanda, and the U.S. However, the small number of individualists in the sample (Jamaica EICO $n = 5$; U.S. EICO $n = 9$) did not allow for methodically sound comparison of individualists and collectivists. Additionally, Rwanda was not included in hypothesis testing due to unreliable ECO.

Therefore, for Hypothesis One, Pearson correlation was used to examine the relationship between ECO and protective factors for participants from Jamaica and the U.S. For Hypothesis Two, MANOVA was performed to test significant differences between participants from Jamaica and the U.S. on the linear combination of protective factors. Box's M test of assumption of homogeneity determined statistical significance. Wilks' lambda (an indicator of unexplained variance) and Pillai's trace (an indicator of explained variance) were used to assess the effect of the predictor variables and determine whether there were differences among the variables. Since unequal variances were observed, Pillai's trace was used to assess and report the multivariate effect.

It was proposed that if statistical significance was obtained ($p < .05$), it would be concluded that at least one of the predictor variables significantly differentiated the protective factors that contribute to resilience better than would be explained by chance alone. If differences were observed, follow-up univariate analysis and Bonferroni

procedure would be applied to explore where those differences exist between individualists and collectivists, and across countries. However, since only Jamaica and the U.S. were included in the analysis, Bonferroni procedure was not necessary. ANOVA tests of between-subjects differences were used to interpret significant predictors. If no significant differences were observed, it would suggest that there were no significant differences between individualists and collectivists in the degree to which they find the factors to be protective. The variables (protective factors) were either equally protective or not protective depending on the mean value of each variable across cultural orientations and across countries.

For Hypothesis Three, instead of the proposed MANOVA, canonical correlational analysis was performed to explore the relationship between the set of protective factors and ECO, country of residence, and ECO*country of residence. The predictors (independent variables) were: ECO, country of residence, and ECO*country of residence. The set of dependent variables were six protective factors (five RSA plus spirituality; *structured style* was excluded due to unreliable Cronbach's alpha coefficient).

Null Hypothesis Four: There is no significant difference between individualistic compared to collectivistic participants in the level of resilience as measured by the BRS

It was proposed that one-way analysis of variance (ANOVA) would be used to test for significant differences between individualists and collectivists from each country on outcome resilience (BRS; $p \leq .05$). The distribution of individualists and collectivists in each country did not allow for meaningful or methodologically sound within-country comparisons using ANOVA. Instead bivariate correlation analysis was used to examine the relationship between ECO and BRS.

Null Hypothesis Five: There is no significant difference between participants from Jamaica, Rwanda, and the U.S. in the level of resilience as measured by the BRS.

It was proposed that ANOVA would be applied to examine differences between groups. ANOVA was not needed to test the hypothesis due to Rwanda being excluded from hypothesis testing due to low BRS reliability estimates. Instead, an independent samples t-test (IST) was performed to examine differences in BRS (outcome) resilience between participants from Jamaica and the U.S.

Null Hypothesis Six: *Perception of self, planned future, structured style, social competence, family cohesion, social resources* are not significant predictors of resilience as measured by the BRS among individualistic and collectivistic participants from Jamaica, Rwanda, and the U.S.

Null Hypothesis Seven: *Perception of self, planned future, structured style, social competence, family cohesion, social resources*, and spirituality are not significant predictors of resilience as measured by the BRS among individualistic and collectivistic participants from Jamaica, Rwanda, and the U.S.

Multiple Linear Regression (MLR) was used to examine how the combination of the predictor variables (i.e., protective factors on the RSA without and then separately with the spirituality factor [CD-RISC-25]) contributes to ‘bouncing back’ on the BRS ($p \leq .05$). The independent variables are the protective factor sub-scales on the RSA and the spiritual influence sub-scale on the CD-RISC-25. The unitary scale on the BRS represented the dependent variable. *Beta* (β) values were examined to determine the strength of the predictor variables. Larger β suggested greater strength of predictors. The degrees of tolerance (ranging from 0 to 1) were also observed. Values that range from 0

to .3 suggested good/acceptable levels of relatedness among the independent variables (protective factors) and how they predict the dependent variable (bouncing back). Values of .9 and above suggested too much collinearity among predictor variables. The t -statistics were also examined. Predictor variables with values of 1 or less and having $p > .05$ were not significant predictors.

Since the sample did not include sufficient individualists, and since Rwanda was not included due to unreliable ECO, standard MLR was performed with only collectivists from Jamaica and the U.S. *Structured style* was also excluded from the analysis due to unreliable Cronbach's alpha coefficient.

Summary

This chapter discussed the research methodology for the study. The research questions and hypotheses were presented. A description of the research design (the type of research design and rationale for its use), population and sample, instruments that were used, data collection procedures, and treatment of the data were outlined. The statistical techniques used to analyze the data for each research question were also discussed.

CHAPTER 4

RESULTS

Introduction

The purpose of this study was to examine the variations in protective factors that contribute to resilience among individualists and among collectivists in Jamaica, Rwanda, and the U.S. who endorsed having some experience of trauma in their lifetime. Participants were required to respond to all demographic items before the online survey program allowed them to proceed to other survey items. Participants' traumatic experiences were determined using the TLEQ (Kubany et al., 2000). All participants endorsed at least one of the items on the TLEQ.

The COS (Bierbrauer et al., 1994) was used to evaluate participants' normative and evaluative I/C cultural orientations. Normative cultural orientation refers to participants' perception about the frequency of the cultural values and behaviors in the country where they reside. The 7-point Likert-type normative scale ranges from the values/behaviors occur 1 = *not at all* to 7 = *always*. Evaluative cultural orientation refers to participants internalized beliefs about those cultural values and behaviors. The 7-point Likert-type evaluative scale ranges from the value/behavior is 1 = *very bad* to 7 = *very good*. The ECO variable will be the focus of hypothesis testing in this study.

For the purposes of I/C group comparison in this study, it was proposed that ECO values of 1 to 3.49 would represent EICO. Mean scores of 3.5 to 4.49 would represent

neither strong individualistic or collectivistic values and those participants were to be excluded from data analysis. Mean ECO values of 4.5 to 7 would represent ECCO. However, having obtained a smaller sample size than what was proposed and based on participants' item endorsement, the sample distribution across the ECO variable did not allow for separation of the participants into three groups. Therefore, the mean values for I/C grouping were redefined as follows: mean values of 1 to 4 represent individualism. Mean values of 4.01 to 7 represent collectivism. Higher means suggest higher collectivism. The cut-off value of 4 represents the near mid-point or "*sometimes*" / "*neither good nor bad*" value on the COS.

The full-scale COS demonstrated low/unacceptable Cronbach's alpha reliability estimates (below .70) for all three countries. The scale was adjusted by removing items with low item-total correlation (see Appendix F) to improve reliability. The remaining items are consistent with the conceptual definition of the I/C construct. The items assess characteristics of I/C such as, individual preferences versus solidarity to group norms/preferences (e.g., "How often do people in your country of residence listen to the advice of their parents or close relatives when choosing a career?") or, independence versus interdependence (e.g., "what do you think of children living with their parents until they get married?"). It was determined that the adjusted COS scale maintained its validity because the remaining items sampled/measured the intended cultural orientation construct. Additionally, expert judgement from the experienced methodologist for this study further confirmed that the adjusted COS maintained validity. Appendix F shows the COS and the item-total statistics that resulted in the adjusted COS. For all three countries, corresponding normative and evaluative items with low item-total correlations were

removed resulting in an adjusted COS with overall reliability estimates above .70 for all three countries, reliable normative and evaluative subscales for Jamaica and the U.S., but unreliable evaluative subscale for Rwanda. Normative items 4, 5, 6, 8, 13, and corresponding evaluative items 17, 18, 19, 21, 26 were removed. The cut-off item-total correlation value that was used to determine item removal was .2. This value was employed because items with values below .2 suggest that scores on that item do not clearly correspond with the scores on the other items. The score on such items is not a good indicator of the overall subscale score (Meyers et al., 2013). The adjusted COS reliability estimates are presented in the description of the sample from each country.

Resilience was defined and operationalized as “the process and outcome of successfully adapting to difficult or challenging life experiences” (VandenBos, 2015, p. 910). Resilience as a process was measured using the RSA (Friborg et al., 2003). The scale includes six protective factors: *perception of self, planned future, social competence, family cohesion, social resources, and structured style*. Resilience as an outcome was measured using the BRS (Smith et al., 2008). This is a unitary scale that operationalizes resilience as having the ability to bounce back from stress and adversity (Smith et al., 2008; Windle et al., 2011). Since the literature suggests that spirituality serves as a protective factor (Connor & Davidson, 2003; Contanzo et al., 2009; Portnoff et al., 2017; White et al., 2008), and since the RSA and BRS do not include items that measure spirituality, the spirituality factor on the CD-RISC-25 Scale (Connor & Davidson, 2003) was also included in the study.

The data set for each country was separately/individually screened and cleaned. Details regarding data screening and cleaning for each country’s data set are discussed

later in the chapter. As a rule of thumb, if fewer than 5% of the values on the total number of all survey items for the COS, RSA, BRS and CD-RISC-25 spirituality were missing, the values were considered to be MCAR (Meyers et al., 2013). Those missing values were imputed using IBM SPSS Statistics-25 multiple imputation procedure. The SPSS multiple imputation is considered to be a modern procedure to handling missing values. Instead of imputing missing values based on any mean of the distribution, SPSS uses an iterative imputation procedure that estimates and fills in missing values based on existing raw data in the data set. Statistical Package for the Social Sciences creates a final data set containing the imputed values that reflect estimated missing values (Meyers et al., 2013). Cases with missing values that were not MCAR (greater than 5%) were deleted from each country's data set as discussed later in this chapter. Extreme outliers (cases with values three or more standard deviations from the mean) were also deleted. Further details regarding data cleaning for each data set is provided later in this chapter.

Screeners questions required that participants be at least 18 years old; reside in Jamaica, Rwanda, or the U.S.; and had experienced a traumatic event. All participants who endorsed "no" to any of the screener questions were deleted from the data sets. Although the survey collector (Class Climate) automatically prevented participants who answered "no" to any of the screener questions from answering any other questions in the survey, Class Climate maintained a record of their endorsement on screener items. Those cases were included in the data set after completion of data collection. This required the researcher to manually delete those cases. Additionally, at the end of the survey, participants were also asked to answer "yes" or "no" to the following question: "I have completed the survey more than one time." This question was included as the

researcher's attempt to screen for multiple responses from the same individual given the remote, online survey research methodology. Participants who answered "yes" to the question were also deleted from the study as described later in the chapter. A total of 44 participants indicated that they completed the survey more than one time. Those cases were deleted from the data set.

For this study, non-natives (not born in the country in which they now reside) were removed from the data set from each country. Those participants are reserved for potential follow-up studies to investigate issues pertaining to shifts in cultural values due to migration. Removal of naturalized citizens from this study also helps with controlling for some possible confounding effects on the cultural orientation variable. For example, participants' perception of the values of their country of origin could influence their perception of the values of the country in which they resided at the time of data collection (particularly in instances where individuals resided in their country of origin for a number of formative years beyond birth). Likewise, the degree to which they internalize the values of their country of residence could also be influenced by values learned in their country of birth.

This rest of this chapter describes the demographics from each country (Jamaica, Rwanda, and the U.S.), the research variables, and compares demographic characteristics by research variables and reports the statistical results for the research questions/hypotheses. Data was analyzed using SPSS-25.

Description of the Jamaican Sample

The Sample

In Jamaica, the primary means of data collection was email invitations using snowball sampling. Participants were recruited from one university in the central region of the island, two commercial banks, one hospital, churches, via the listserv of the Jamaican Psychological Society, and via other individual email invitations extended by seed participants. Data was also collected via social media (Facebook and LinkedIn). A total of 186 cases comprised the data set of participants who met the criteria for participation.

Data Screening and Cleaning

The data was screened to determine that all participants met the criteria for participation. Twenty-one cases with participants whom the survey software prevented from further participation because they endorsed “no” to at least one of the screener questions were deleted. Six participants who endorsed “yes” to having completed the survey more than one time were deleted.

Some seed participants assisted with recruiting participants from both Jamaica and the U.S. It appears that the survey link for Jamaica might have been sent to participants in the U.S. and vice versa. Prior to adding and deleting cases, the country of residence was visually scanned. Five cases from the U.S. data set were added to the Jamaica data set because those participants endorsed Jamaica as place of residence. Seven participants in the Jamaica data set indicated that they resided in the U.S. Of the seven, one was added to the U.S. data set because that participant indicated that he/she was born in the U.S. The other six were deleted from the study because they were non-

natives of the countries used in this study (only natives from each country were included in this study). Another five participants who were naturalized Jamaicans (not born in Jamaica or any of the countries in the study) were deleted from the study. One hundred and seventy-three cases remained. The traumatic life events variable was also examined to verify that all participants endorsed at least one of the events. All participants met the requirement of lifetime experience of trauma.

Missing Values Cases

Statistical Package for the Social Sciences multiple imputation procedure was used to determine the percentage of missing values. Four cases were deleted because those participants had more than 5% missing values across survey items (COS, RSA, BRS, and CD-RISC-25 spirituality). This suggests that those missing values could not be accounted for as MCAR using the SPSS missing values analysis. All participants endorsed at least one TLEQ items. Responses to demographic questions were required in order for participants to proceed with the survey. All remaining cases and variables were observed to have less than 5% missing values suggesting that the missing values pattern was MCAR. Statistical Package for the Social Sciences multiple imputation procedure was used to impute the remaining missing values.

The data screening and cleaning process resulted in a final sample from Jamaica that comprised a total of 169 participants. This was 11 cases less than the minimum and 61 less than the maximum proposed. It was determined that 169 cases provided adequate power for at least a medium (.05) effect size given the proposed nine predictor variables in this study. This is based on the rule of thumb which suggests that (assuming a

medium-sized effect, that is at least .05), the sample size (N) should be $N > 104 + m$ where m is the number of predictor variables (Green, 1991).

Participants' Demographic Characteristics

The characteristics most frequently endorsed by Jamaican participants were: single (46.2%, $n = 78$); female (79.9%, $n = 135$); between 18 and 29 years old (37.3%, $n = 63$); residing in Jamaica between 18 and 29 years (37.3%, $n = 63$); residing in central Jamaica (65.7%, $n = 111$); having 20 or more years of education (38.5%, $n = 65$); and having moderate income/resources (80.5%, $n = 136$). Table 1 presents the demographic characteristics of the Jamaica sample.

Instruments' Reliability

Table 2 lists Cronbach's alpha (α) values for each instrument for the Jamaican sample. As a rule of thumb, α of .90 or higher is excellent, .8s are very good, .7s are acceptable, mid to high .6s are acceptable for research purposes, and .5s and below are questionable or not acceptable (Meyers et al., 2013). For measures of resilience, the overall RSA scale had excellent internal reliability ($\alpha = .903$), the RSA subscales were acceptable to very good except for the *structured style* subscale ($\alpha = .521$) which had questionable/unacceptable reliability, the BRS had very good reliability ($\alpha = .801$), and the CD-RISC-25 spirituality scale had questionable reliability ($\alpha = .618$). After removing items with low item-total correlations in this study, the overall revised COS scale ($\alpha = .733$) as well as the normative subscale ($\alpha = .713$) and the evaluative subscale ($\alpha = .710$) had acceptable reliability.

Table 1

Participants' Demographic Characteristics – Jamaica (N = 169)

Demographics	<i>n</i> (169)	%
Sex		
Male	34	20.1
Female	135	79.9
Marital Status		
Single – never married	78	46.2
Cohabiting/civil union	3	1.8
Married	69	40.8
Separated/divorced	15	8.9
Widowed	4	2.4
Age (Range:18 –72 years; mean age = 36; mode = 22)		
18 - 29	63	37.3
30 - 39	41	24.3
40 - 49	22	13.0
50 - 59	34	20.1
60 +	9	5.3
Years Residing in JA		
1 - 17	10	5.9
18 - 29	63	37.3
30 - 39	41	24.3
40 - 49	18	10.6
50 - 59	29	17.2
60 +	8	4.7
Region of Permanent Residence		
East (Surrey)	38	22.5
Central (Middlesex)	111	65.7
West (Cornwall)	20	11.8
Years of Education		
1 - 8	14	8.3
9 - 12	17	10.0
13 - 16	35	20.7
17 - 19	38	22.5
20+	65	38.5
Income/Resource		
Low income/resources	28	16.5
Moderate income/resource	136	80.5
High income/resources	5	3.0

Table 2

Instruments' Internal Reliability – Cronbach's Alpha – Jamaica

Instrument	Total α	Subscale α
Adjusted COS	.733	
Normative		.713
Evaluative		.710
RSA	.903	
Perception of self		.763
Planned future		.824
Social competence		.654
Family cohesion		.812
Social resources		.770
Structured style		.521
BRS	.801	
CD-RISC-25 Spirituality	.618	

Note. COS = Cultural Orientation Scale; COS normative items 4, 5, 6, 8, 13 and corresponding evaluative items 17, 18, 19, 21, 26 were deleted resulting in the adjusted COS; RSA = Resilience Scale for Adults; BRS = Brief Resilience Scale; CD-RISC-25 = Connor-Davidson Resilience Scale-25.

In this study, the TLEQ was used for descriptive purposes to establish the presence and type of risk. Endorsement of items represent participants' lifetime experience of trauma. In the case of the TLEQ, reliability was determined during test development using test-retest occurrence agreement of events between time one and time two using Kappa coefficients.

Due to the low reliability of the spirituality scale ($\alpha = .618$) for the Jamaican sample, the findings will be interpreted with caution. Only two items comprised the scale. Therefore, any potential adjustment of the scale to improve Cronbach's alpha values by way of removal of test items with low item-total correlation would not have been a

meaningful endeavor. Findings pertaining to the RSA *structured style* subscale ($\alpha = .521$) will not be interpreted for the Jamaican sample given unacceptably low reliability.

Variables Description: Jamaica

Traumatic Life Events

The traumatic life event most frequently endorsed by Jamaicans was natural disaster (97%, $n = 164$). The event that was least endorsed was the experience of having lived, worked or engaged in military service in a war zone (6.5%, $n = 11$). Events that were experienced by more than half the participants were sudden/unexpected death of a loved one (85.2%, $n = 144$) and other unwanted sexual attention (52.7%, $n = 89$). Events endorsed by more than one quarter to almost one-half of the participants were: physically punished growing up that inflicted bruises, burns, cuts, broken bones etc. (25.4%, $n = 43$), stalked (28.4%, $n = 48$), touched/fondled before age 13 by someone at least 5 years older (34.3%, $n = 58$), motor vehicle accident (36.7%, $n = 62$), seen a stranger attack and beat someone (39.6%, $n = 67$), saw/heard family violence growing up (40.8%, $n = 69$), robbed or present during a robbery (41.4%, $n = 70$), someone threatened to kill/cause serious harm (42%, $n = 71$), loved one survived life-threatening illness (47.3%, $n = 80$). Table 3 presents the frequencies and percentages of traumatic events endorsed.

Cultural Orientation

Item-endorsement on the COS determined participants' normative and evaluative I/C cultural orientation. Table 4 presents the overall means, standard deviations, skewness, and kurtosis of the normative and evaluative values endorsed by Jamaicans. The means of both the normative and evaluative variables were within normal limits for

skewness and kurtosis. Mean normative orientation was negatively skewed (-.133); kurtosis = .380. Mean evaluative orientation had skewness values of -.095; kurtosis was -.504. Based on the study's criteria for I/C cultural orientation as measured by the COS (1 to 4 = ICO and 4.01 to 7 = CCO), the overall NCO mean suggests that participants in Jamaica perceived the values of their culture as being very slightly more collectivistic than individualistic.

Table 3

Traumatic Life Events Endorsed by Jamaican Participants

Traumatic Events	<i>n</i> (169)	%
Natural disaster	164	97.0
Sudden/unexpected death of a loved one	144	85.2
Other unwanted sexual attention	89	52.7
Loved one survived life-threatening illness	80	47.3
Someone threatened to kill/cause serious harm	71	42.0
Robbed or present during robbery	70	41.4
Saw/heard family violence growing up	69	40.8
Seen stranger attack or beat someone	67	39.6
Motor vehicle accident	62	36.7
Touched/fondled before 13 (by someone 5 years older)	58	34.3
Stalked	48	28.4
Physically punished growing up (bruises, burns, cuts, broken bones etc.)	43	25.4
Physically hurt by spouse/intimate partner	41	24.3
Other kinds of accidents	38	22.5
Miscarriage	38	22.5
Abortion	36	21.3
Other event (e.g., lost, kidnapped, serious animal bite, violent death of a pet)	35	20.7
Had a life-threatening illness	30	17.8
Hit/beaten up/badly hurt by stranger	18	10.7
Lived/worked/military service in war zone	11	6.5

Participants in Jamaica reported even higher internalized collectivism than the perceived cultural values.

Table 4

Cultural Orientation Variable Means, Standard Deviations, Skewness and Kurtosis – Jamaica

Cultural Orientation Variable	Mean	SD	Skewness	Kurtosis
Normative Cultural Orientation	4.09	0.60	-.133	.380
Evaluative Cultural Orientation	5.39	0.67	-.095	-.504

Table 5 shows the within-group variations of cultural orientation in the Jamaica sample. Based on the revised criteria for grouping participants into cultural orientation groups (mean scores of 1 to 4 = NICO and EICO; 4.01 to 7 = NCCO and ECCO), 45.6% perceived the Jamaican culture to be individualistic (NICO) while 54.4% perceived the culture to be collectivistic (NCCO). On measures of ECO (that is, participants internalized beliefs about those cultural values), only 3% internalized individualistic values (EICO). The mean is observed to be just slightly below the scale's mid-point of 4 and the study's 4.0 I/C cut-off score. Most Jamaican participants (97%) internalized collectivistic values (ECCO).

Table 5

Frequency Statistics of Participants' Normative and Evaluative Cultural Orientation – Jamaica

Adjusted COS (16 Items)	<i>N</i> =169	%	<i>M</i>	<i>SD</i>	Minimum	Maximum
NICO	77	45.6	3.58	.39	2.50	4.00
NCCO	92	54.4	4.52	.37	4.13	5.75
EICO	5	3.0	3.97	.05	3.88	4.00
ECCO	164	97.0	5.43	.63	4.13	7.00

Note. Scale Range = 1 - 7; Normative items: 1, 2, 3, 7, 9, 10, 11, 12; evaluative items: 14, 15, 16, 20, 22, 23, 24, 25; COS values of 1 to 4.0 = ICO; COS values of 4.01 to 7 = CCO; NICO = normative individualistic cultural orientation, NCCO = normative collectivistic cultural orientation, EICO = evaluative individualistic cultural orientation, ECCO = evaluative collectivistic cultural orientation

Table 6 shows cultural orientation by demographic characteristics. In terms of ECO, demographic groups across sex, marital status (except the cohabiting group), age range, years residing (except those residing between 0 and 17 years), residential area, years of education, and income/resource level in Jamaica responded between mean values of 5 = *rather good* and 6 = *good* which is on the collectivistic end of the ECO subscale. The cohabiting subgroup and the subgroup that resided between zero and 17 years had mean scores in the 4 = *neither good nor bad* to 5 = *rather good* range which is still on the collectivistic end of the scale.

Resilience

Table 7 presents the means, standard deviations, skewness and kurtosis for the overall RSA (process) resilience, the six RSA protective factors, the BRS (outcome) resilience and CD-RISC-25 spirituality factor. Positive skewness suggests that the bulk of

Table 6

Cultural Orientation by Demographic Characteristics - Jamaica

Demographic			Normative Orientation		Evaluative Orientation	
	<i>n</i>	%	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Sex						
Male	34	20.1	4.12	.60	5.51	.59
Female	135	79.9	4.08	.61	5.36	.69
Marital Status						
Single-never married	78	46.2	4.07	.66	5.33	.68
Cohabiting	3	1.8	3.91	.47	4.58	.19
Married	69	40.8	4.11	.55	5.52	.64
Separated/divorced	15	8.9	4.09	.56	5.38	.68
Widowed	4	2.4	4.31	.74	5.15	.84
Age Range						
18 - 29	63	37.3	3.95	.68	5.31	.71
30 - 39	41	24.3	4.07	.61	5.31	.64
40 - 49	22	13.0	4.25	.59	5.58	.55
50 - 59	34	20.1	4.21	.42	5.54	.66
60 +	9	5.3	4.31	.43	5.33	.75
Years Residing						
0 - 17	10	5.9	4.11	.73	4.99	.59
18 - 29	63	37.3	3.94	.64	5.30	.71
30 - 39	41	24.3	4.10	.61	5.34	.60
40 - 49	18	10.6	4.28	.61	5.65	.57
50 - 59	29	17.2	4.24	.44	5.66	.62
60 +	8	4.7	4.28	.44	5.31	.80
Residence						
East	38	22.5	4.22	.53	5.33	.64
Central	111	65.7	4.04	.63	5.42	.69
West	20	11.8	4.11	.54	5.34	.66
Years of Education						
1 - 8	14	8.3	4.08	.65	5.25	.54
9 - 12	17	10.1	4.08	.57	5.24	.58
13 - 16	35	20.7	4.16	.55	5.70	.67
17 - 19	38	22.5	3.97	.56	5.30	.74
20 +	65	38.5	4.12	.66	5.35	.65
Income/Resource						
Low	28	16.6	3.95	.65	5.23	.55
Moderate	136	80.5	4.12	.60	5.44	.68
High	5	3.95	3.95	.30	5.02	.75

Table 7

Means, Standard Deviations, Skewness and Kurtosis of Resilience (Process & Outcome) and Spirituality for Jamaican Participants (N = 169)

Variable	Scale	Mean	SD	Skewness	Kurtosis
	Range				
Resilience: Process (RSA)	1-7	5.29	0.92	-.664	.824
Perception of self	1-7	5.17	1.32	-.740	.254
Planned future	1-7	5.52	1.50	-1.419	1.683
Social competence	1-7	4.99	1.18	-.283	-.442
Family cohesion	1-7	5.10	1.36	-.713	.334
Social resources	1-7	5.71	1.06	-.779	.271
Resilience: Outcome (BRS)	1-5	3.47	0.69	-.015	-.180
CD-RISC-25 Spirituality	0-4	3.47	0.70	-1.632	3.089

Note. RSA structured style not listed, $\alpha = .521$; CD-RISC-25 Spirituality $\alpha = .618$.

the scores are at the lower end of the distribution. Negative skewness suggests that the bulk of the scores are on the higher end of the distribution. A positive kurtosis (leptokurtic) suggests that the bulk of the scores are drawn toward the center of the distribution; negative kurtosis (platykurtic) suggest a more equal distribution of scores across the variable (Meyers et al., 2013).

Mean RSA resilience was within normal range for skewness and kurtosis using the ± 1 rule of thumb for test of normality (Meyers et al., 2013). The variable was negatively skewed (-.664) indicating individuals tended to rate themselves toward the resilient side of the scale. Kurtosis was positive (.824) indicating that scores were somewhat more concentrated toward the upper range of the distribution.

The factors (excluding *structured style*) that comprised the RSA (*perception of self, planned future, social competence, family cohesion, and social resources*) were also examined for normality. The skewness and kurtosis values were within normal ranges for

the following: *perception of self* (-.740, .254), *social competence* (-.283, -.442); *family cohesion* (-.713, .334); and *social resources* (-.779, .271). The skewness and kurtosis values for *planned future* (-1.419; 1.683) were above the ± 1 threshold but considered to be within acceptable range upon visual inspection of the distribution. The skewness and leptokurtosis values for *planned future* suggest that the bulk of participants' responses were concentrated together at the upper range of the distribution suggesting that nearly all participants strongly endorsed that it was possible to accomplish their goals, and that their futures looked promising. The RSA protective factor with the highest mean was *social resources*. *Social competence* had the lowest mean.

The negatively skewed, leptokurtic distribution and mean score suggest that Jamaican participants tended to be highly spiritual with very little variability in their level of spirituality.

As shown in Table 8, there were no sub-groups that scored less than 4 on the 7-point semantic differential RSA scale. The characteristics of participants with mean RSA scores between 4 and 5 on the scale included being 18-29 years old, residing in Jamaica for 18-29 years, having 1 to 8 years of education, and low income/resources. All other subgroups scored between 5 and 6 on the 7-point RSA semantic differential scale. BRS resilience scores ranged between 3 = *neutral* and 4 = *agree* on the 5-point Likert-type scale across all demographic characteristics.

Table 9 presents RSA protective factors and spirituality by demographic characteristics. Demographic characteristics of participants who scored between 6 and 7 on the 7-point semantic differential scale on the indicated subscale were: widowed, 50-59 age range, residing in Jamaica for 17 or less years (on *planned future* subscale); and

Table 8

Mean RSA and BRS Resilience by Demographic Characteristics - Jamaica

Demographic		<i>n</i>	RSA		BRS	
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Sex						
	Male	34	5.37	.80	3.73	0.64
	Female	135	5.28	.95	3.40	0.69
Marital Status						
	Single-never married	78	5.12	.91	3.31	.65
	Cohabiting	3	5.36	1.31	3.94	.41
	Married	69	5.51	.94	3.58	.73
	Separated/divorced	15	5.24	.60	3.69	.71
	Widowed	4	5.26	1.23	3.37	.55
Age Range						
	18 - 29	63	4.97	0.96	3.26	0.69
	30 - 39	41	5.46	0.74	3.50	0.66
	40 - 49	22	5.11	1.11	3.55	0.70
	50 - 59	34	5.74	0.72	3.71	0.73
	60 +	9	5.57	.78	3.68	0.30
Years Residing						
	1 - 17	10	5.53	1.34	3.93	0.69
	18 - 29	63	4.97	0.95	3.25	0.70
	30 - 39	41	5.41	0.74	3.42	0.59
	40 - 49	18	5.27	0.99	3.63	0.70
	50 - 59	29	5.69	0.72	3.68	0.76
	60 +	8	5.57	0.83	3.68	0.32
Residence						
	East	38	5.24	1.18	3.23	0.64
	Central	111	5.23	0.84	3.52	0.70
	West	20	5.72	0.73	3.61	0.70
Years of Education						
	1 - 8	14	4.93	1.18	3.37	0.68
	9 - 12	17	5.39	1.17	3.45	0.65
	13 - 16	35	5.34	0.80	3.49	0.66
	17 - 19	38	5.42	0.72	3.47	0.71
	20 +	65	5.25	0.96	3.49	0.74
Income/Resource						
	Low	28	4.81	0.91	3.28	0.66
	Moderate	136	5.38	0.90	3.50	0.71
	High	5	5.67	0.77	3.56	0.41

Note. RSA = Resilience Scale for Adults; BRS = Brief Resilience Scale

Table 9

RSA Protective Factors and Spirituality by Demographic Characteristics – Jamaica

Demographic	<i>n</i>	Perception of Self		Planned Future		Social Competence		Family Cohesion		Social Resources		Spirituality	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Sex													
Male	34	5.52	1.09	5.80	0.87	5.08	1.17	5.04	1.18	5.58	0.84	3.63	0.49
Female	135	5.08	1.36	5.45	1.62	4.96	1.19	5.11	1.41	5.75	1.11	3.43	0.73
Marital Status													
Single	78	4.92	1.32	5.43	1.60	4.85	1.13	4.87	1.35	5.62	1.06	3.42	0.81
Cohabiting	3	5.38	1.45	4.16	3.01	4.94	1.78	5.77	1.34	6.09	1.56	3.00	0.50
Married	69	5.35	1.36	5.73	1.31	5.14	1.22	5.42	1.30	5.84	1.06	3.56	0.56
Separated/divorced	15	5.37	.99	5.13	1.55	5.11	0.99	4.71	1.42	5.80	.71	3.33	0.72
Widowed	4	5.91	.86	6.18	0.62	4.56	1.81	4.91	1.81	4.78	1.74	3.87	0.25
Age Range													
18 - 29	63	4.71	1.41	5.21	1.74	4.80	1.25	4.78	1.41	5.47	1.11	3.42	0.76
30 - 39	41	5.47	1.05	5.75	1.38	4.89	1.04	5.31	1.16	5.79	1.01	3.52	0.79
40 - 49	22	5.16	1.39	5.02	1.62	4.66	1.24	4.82	1.53	5.53	1.33	3.27	0.62
50 - 59	34	5.64	1.18	6.03	0.95	5.53	1.01	5.50	1.36	6.14	0.75	3.63	0.51
60 +	9	5.27	1.19	5.91	1.03	5.51	1.19	5.55	0.96	5.92	0.92	3.55	0.52
Years Residing													
0 - 17	10	5.91	1.52	6.00	1.61	4.94	1.55	4.88	1.69	5.88	1.50	3.44	0.52
18 - 29	63	4.71	1.41	5.20	1.73	4.80	1.22	4.76	1.38	5.42	1.15	3.43	0.75
30 - 39	41	5.39	1.04	5.64	1.41	4.86	1.02	5.32	1.11	5.78	0.92	3.45	0.79
40 - 49	18	5.32	1.28	5.22	1.55	4.82	1.19	5.05	1.58	5.71	1.08	3.30	0.67
50 - 59	29	5.48	1.20	5.96	0.95	5.51	1.04	5.50	1.37	6.15	0.77	3.67	0.50
60 +	8	5.25	1.27	5.90	1.10	5.66	1.18	5.56	1.03	5.87	0.97	3.62	0.51

Table 9—Continued.

Demographic	<i>n</i>	Perception of Self		Planned Future		Social Competence		Family Cohesion		Social Resources		Spirituality	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Residence													
East	38	4.99	1.70	5.56	1.45	4.93	1.31	5.00	1.66	5.71	1.20	3.16	0.94
Central	111	5.15	1.19	5.44	1.53	4.92	1.18	5.04	1.28	5.66	1.04	3.55	0.58
West	20	5.62	1.08	5.90	1.47	5.49	0.76	5.62	1.12	6.01	0.94	3.65	0.60
Years of Education													
1 - 8	14	4.82	1.68	5.14	1.72	4.63	1.28	4.65	1.49	5.28	1.09	2.89	0.94
9 - 12	17	5.32	1.42	5.48	1.72	5.04	1.37	5.32	1.22	5.71	1.44	3.32	0.58
3 - 16	35	5.27	1.31	5.59	1.48	4.97	1.04	5.10	1.47	5.74	0.90	3.54	0.65
7 - 19	38	5.32	1.22	5.68	1.34	5.05	0.98	5.35	1.15	5.84	1.03	3.57	0.52
20 +	65	5.06	1.28	5.48	1.53	5.02	1.30	4.99	1.42	5.72	1.06	3.55	0.73
Income/Resource													
Low	28	4.63	1.45	5.05	1.76	4.58	1.04	4.57	1.21	5.37	1.16	3.35	0.79
Moderate	136	5.27	1.27	5.61	1.46	5.06	1.20	5.19	1.37	5.77	1.03	3.49	0.68
High	5	5.50	1.24	5.65	0.59	5.37	1.04	5.53	1.46	6.17	1.25	3.80	0.27

Note. Scale Ranges: RSA = 1 - 7; CD-RISC-25-Spirituality = 0 - 4; *structured style* not listed: $\alpha = .521$

cohabitating, 50-59 age range, residing in Jamaica for 50-59 years, residing in the West, and having high income/resources (on *social resources* subscale). All other demographic characteristic subgroups had mean RSA protective factor scores that ranged between 4 and a little less than 6 on the 7-point semantic differential scale.

On the CD-RISC-25 spirituality subscale, participants having 1 to 8 years of education scored between 2 = *sometimes true* and 3 = *often true* on the 5-point Likert-type scale. All other demographic characteristic subgroups scored between 3 = *often true* and 4 = *true nearly all the time* on the scale.

Description of the Rwandan Sample

The Sample

Participants were recruited using snowball sampling. An email invitation requesting survey participation was sent to one university in Kigali. One school administrator served as the sponsor and primary seed participant for data collection. The school administrator took the initiative to contact other administrators at other universities and solicited their participation (especially after the response rate at his institution remained low after several months). Those other universities agreed to assist/participate without any further request for any additional approval. The school official, researcher, and some participants forwarded the email survey link to workers and students at other universities in Rwanda. Snowball sampling efforts resulted in the survey being distributed to two other universities in Rwanda.

After more than 10 email reminders with the survey link were sent to the same prospective participants, and follow-up email contacts made with the sponsor and other seed participants, it was determined that the response rate was not likely to improve to

meet the proposed number of responses. The maximum 270 or minimum 220 proposed was not obtained. A total of 100 participants met the criteria to participate in the study. This number was what remained after 31 cases were deleted from the data set because they did not meet at least one of the screening criteria.

Data Screening and Cleaning

Thirty-two participants indicated that they completed the survey more than one time. Those cases were deleted from the data set. Data from 11 participants who indicated that they were not born in Rwanda were also deleted. Descriptive statistics determined that all remaining 57 participants satisfied the criteria of a lifetime experience of a traumatic life event.

Missing Values Cases

Statistical Package for the Social Sciences missing values analysis was performed on the cultural orientation, resilience and spirituality variables in the remaining data set. Three cases had more than 5% of items with missing values. Those cases were deleted since they could not be accounted for as MCAR. Statistical Package for the Social Sciences multiple imputation was used to impute missing values for cases missing fewer than 5% of the values. Two outlier cases were also deleted. Those cases had mean values on the evaluative orientation and spirituality variables that were more than four and three standard deviations from the mean respectively. A total of 52 participants comprised the final data set for Rwanda. This represents 23.6% of the minimum proposed 220. This suggests that adequate power was not achieved for the Rwanda sample. This will impact meaningful hypothesis testing and generalizability of the findings.

Participants' Demographic Characteristics

The characteristics (as seen in Table 10) most frequently endorsed by Rwandans were male (78.8%, $n = 41$), single (63.5%, $n = 33$), 18 to 29 age range (55.8 %, $n = 29$), residing in Rwanda between 18 and 29 years (55.8 %, $n = 29$), residing in the City of Kigali (73.1 %, $n = 38$), having between 17 and 19 years of education (40.4 %, $n = 21$),

Instruments' Reliability

Cronbach's alpha (α) for each instrument as used with the Rwandan sample is listed in Table 11. For measures of cultural orientation, the adjusted COS had acceptable reliability on the full scale ($\alpha = .711$) and the normative scale ($\alpha = .743$). However, the adjusted COS evaluative scale ($\alpha = .484$) had unacceptable reliability estimates even after evaluative items 17, 18, 19, 21, and 26, which had low item-total correlation, were removed from the original 26-item COS scale. For measures of resilience, the full RSA scale had excellent reliability ($\alpha = .907$). Subscale *perception of self* ($\alpha = .522$) was unacceptably low. *Structured style* ($\alpha = .664$) and *planned future* ($\alpha = .671$) were within the mid to high .6s range which is considered acceptable for research purposes (Meyers et al., 2013). The BRS reliability estimate was unacceptably low ($\alpha = .363$). Cronbach's α for spirituality ($\alpha = .663$) was within the range that is acceptable for research.

Based on the low/unacceptable reliability estimates of the adjusted COS ECO scale ($\alpha = .484$) and the BRS ($\alpha = .363$), the Rwandan sample was excluded from all statistical analyses that include the ECO independent and BRS dependent variables. Subscale *perception of self* ($\alpha = .522$) is also excluded from data analysis.

As discussed in Chapter 3, the BRS was found to have very good reliability estimates (α between .80 to .91) and is regarded as an appropriate measure of resilience

Table 10

Participants' Demographic Characteristics - Rwanda (N = 52)

Demographics	<i>n</i>	%
Sex		
Male	41	78.8
Female	11	21.2
Marital Status		
Single – never married	33	63.5
Cohabiting/civil union	1	1.9
Married	17	32.7
Separated/divorced	1	1.9
Age Range (19 - 41 years; mean age = 28; mode = 27)		
18 - 29	29	55.8
30 - 39	21	40.4
40 - 49	2	3.8
Years Residing in Rwanda		
0 - 17	3	5.8
18 - 29	29	55.8
30 - 39	18	34.6
40 - 49	2	3.8
Region of Permanent Residence		
Eastern	4	7.7
Western	4	7.7
Northern	1	1.9
Southern	5	9.6
City of Kigali	38	73.1
Years of Education		
1 - 8	3	5.8
9 - 12	6	11.5
13 - 16	17	32.7
17 - 19	21	40.4
20 +	5	9.6
Income/Resource		
Low income/resources	12	23.1
Moderate income/resources	38	73.1
High income/resources	2	3.8

Table 11

Instruments' Internal Reliability – Cronbach's Alpha – (Rwanda)

Instrument	Total α	Subscale α
Adjusted COS	.711	
Normative		.743
Evaluative		.484
RSA	.907	
Perception of self		.522
Planned future		.671
Social competence		.730
Family cohesion		.718
Social resources		.794
Structured style		.664
BRS		.363
CD-RISC-25 Spirituality		.663

Note. COS normative items 4, 5, 6, 8, 13 and corresponding evaluative items 17, 18, 19, 21, 26 were deleted, resulting in the adjusted COS; COS = Cultural Orientation Scale, RSA = Resilience Scale for Adults, BRS = Brief Resilience Scale, CD-RISC-25 = Connor-Davidson Resilience Scale-25

as an outcome (Windle et al., 2011). However, in the current study, the reliability estimate ($\alpha = .363$) indicates that the BRS would not be a reliable measure of resilience as an outcome for the Rwanda sample. Likewise, although the literature (Bierbrauer et al., 1994) indicated that the COS is a reliable measure of cultural orientation and was found to have a reliability estimate of $\alpha = .82$ in a previous study, the current study found the adjusted scale had acceptable overall reliability ($\alpha = .711$) and normative reliability ($\alpha = .743$) estimates for the Rwanda sample, but the ECO scale ($\alpha = .484$) was unacceptably low and would not be a reliable measure of ECO for Rwandan participants.

Variables Description

Traumatic Life Events

The traumatic life event most frequently endorsed by participants from Rwanda was the sudden/unexpected death of a loved one (92.3%, $n = 48$). The event least endorsed was being physically hurt by a spouse or intimate partner (1.9%, $n = 1$).

Traumatic events endorsed by more than half the participants were (Table 12): having a loved one survive a life-threatening illness (65.4%, $n = 34$), and seeing/hearing family violence growing up (51.9%, $n = 27$). More than one quarter to nearly one-half of the participants endorsed the following traumatic events: abortion (28.8%, $n = 15$), other kinds of accidents other than motor vehicle accidents (28.8%, $n = 15$), motor vehicle accident (30.8%, $n = 16$), natural disaster (32.7%, $n = 17$), stalked (34.6%, $n = 18$), someone threatened to kill/cause serious harm (36.5%, $n = 19$), had a life-threatening illness (36.5%, $n = 19$), lived/worked/military service in a war zone (42.3%, $n = 22$), and seen stranger attack or beat someone (46.2%, $n = 24$).

Cultural Orientation

The mean normative orientation variable was within normal limits for skewness (-.041) and kurtosis (-.654). Recall, that the reliability estimate for the ECO scale was unacceptably low hence the Rwanda sample was not included in further data analysis. Table 13 presents the mean and standard deviation of the overall normative items on the adjusted COS as endorsed by Rwandans ($N = 52$). The normative mean indicates that participants perceived their culture as being collectivistic.

Table 12

Traumatic Life Events Endorsed by Rwandan Participants

Traumatic Events	<i>n</i> (52)	%
Sudden/unexpected death of a loved one	48	92.3
Loved one survived life-threatening illness	34	65.4
Saw/heard family violence growing up	27	51.9
Seen stranger attack or beat someone	24	46.2
Live/worked/military service in war zone	22	42.3
Had a life-threatening illness	19	36.5
Someone threatened to kill/cause serious harm	19	36.5
Stalked	18	34.6
Natural disaster	17	32.7
Motor vehicle accident	16	30.8
Other kinds of accidents	15	28.8
Abortion	15	28.8
Hit/beaten up/badly hurt by stranger	12	23.1
Physically punished growing up (bruises, burns, cuts, broken bones, etc.)	11	21.2
Touched/fondled before 13 by someone 5 years older	11	21.2
Other event (e.g., lost, kidnapped, serious animal bite, violent death of a pet)	10	19.2
Miscarriage	9	17.3
Robbed or present during robbery	9	17.3
Other unwanted sexual attention	8	15.4
Physically hurt by spouse/intimate partner	1	1.9

Table 13

Cultural Orientation Variable Means, Standard Deviation, Skewness and Kurtosis – Rwanda

Cultural Orientation Variable	Mean	<i>SD</i>	Skewness	Kurtosis
Normative Cultural Orientation	4.39	0.85	-.041	-.654

Note. COS ECO not included; $\alpha = .484$

Table 14 shows the frequency, means, standard deviations, and minimum and maximum values of the NICO and NCCO subscales on the adjusted COS. A little over thirty percent of Rwandans (32.7%; $n = 17$) perceived their culture to be individualistic. More than sixty percent (67.3%; $n = 35$) perceived their culture to be collectivistic.

Table 14

Frequency Statistics of Participants' Normative Cultural Orientation – Rwanda

Adjusted COS (16 Items)	$N = 52$	%	M	SD	Minimum	Maximum
NICO	17	32.7	3.43	.40	2.75	4.00
NCCO	35	67.3	4.86	.56	4.13	6.25

Note. Scale Range (1 to 7); Normative items: 1, 2, 3, 7, 9, 10, 11, 12; COS values of 1 to 4.0 = NICO; COS values of 4.01 to 7 = NCCO; COS ECO not included; $\alpha = .484$; NICO = normative individualistic cultural orientation, NCCO = normative collectivistic cultural orientation.

Comparison of cultural orientation means by demographic characteristics is presented in Table 15. Since the reliability estimate of the evaluative scale which is the focus of this study, is unacceptable (ECO $\alpha = .484$), a description of the demographic characteristics by ECO is not presented. Instead, a description of NCO by demographic characteristics is presented for the Rwanda sample only. Based on this study's cut-off scores, the demographic characteristics of participants who perceived their culture as being individualistic were more frequently separated/divorced and more frequently resided in the Western province. Those subgroups scored between 3 = *rarely* and 4 = *sometimes* on the 7-point Likert-type COS. Participants who resided in the Eastern and

Table 15

Cultural Orientation by Demographic Characteristics – Rwanda

Demographic	<i>n</i>	<i>%</i>	Normative Orientation	
			<i>M</i>	<i>SD</i>
Sex				
Male	41	78.8	4.36	.89
Female	11	21.2	4.50	.67
Marital Status				
Single- never married	33	63.5	4.36	.78
Cohabiting/civil union	1	1.9	4.76	--
Married	17	32.7	4.47	1.01
Separated/divorced	1	1.9	3.62	--
Age Range				
18 - 29	29	55.8	4.54	.70
30 - 39	21	40.4	4.17	1.03
40 - 49	2	3.8	4.62	.35
Years Residing				
1 - 17	3	5.8	4.45	.95
18 - 29	29	55.8	4.51	.71
30 - 39	18	34.6	4.17	1.06
40 - 49	2	3.8	4.62	.35
Residence				
Eastern	4	7.7	5.00	.65
Western	4	7.7	3.78	.57
Northern	1	1.9	5.62	--
Southern	5	9.6	4.45	1.07
City of Kigali	38	73.1	4.35	.83
Years of Education				
1 - 8	3	5.8	4.83	.56
9 - 12	6	11.5	4.37	.72
13 - 16	17	32.7	4.49	.88
17 - 19	21	40.4	4.33	.86
20 +	5	9.6	4.07	1.09
Income/Resource				
Low	12	23.1	4.69	.58
Moderate	38	73.1	4.27	.91
High	2	3.8	4.87	.00

Note. Evaluative cultural orientation not included, $\alpha = .484$

Northern provinces scored between 5 = *often* and 6 = *very often*. All other subgroups scored between 4 = *sometimes* and a little less than 5 = *often* on the COS.

Resilience

Table 16 presents the scale ranges, means, standard deviations, skewness and kurtosis of the RSA resilience variable, the subscale protective factors and spirituality for the Rwanda sample. Resilience Scale for Adults resilience and the subscale protective factors were all within the normal range for skewness and kurtosis. For mean RSA, skewness was -0.243 and kurtosis was -0.455. The skewness and kurtosis values for the subscale protective factors were, respectively: *perception of self* (-0.87; -0.204), *planned future* (-0.479; -0.896), *social competence* (-0.312; -0.851), *family cohesion* (-0.319; -0.503), *social resources* (-0.689; -0.191), and *structured style* (-0.739; -0.102). The CD-RISC-25 spirituality factor was negatively skewed (-1.457) and leptokurtic (1.417). This

Table 16

Means, Standard Deviations, Skewness and Kurtosis of Resilience (Process) and Spirituality for Rwandan Participants

Variable	Scale Range	Mean	SD	Skewness	Kurtosis
Resilience: Process (RSA)	1-7	5.35	0.93	-.243	-.455
Planned future (PF)	1-7	5.50	1.31	-.479	-.896
Social competence (SC)	1-7	5.26	1.30	-.312	-.851
Family cohesion (FC)	1-7	5.29	1.16	-.319	-.503
Social resources (SR)	1-7	5.48	1.17	-.689	-.191
Structured style (SS)	1-7	5.51	1.30	-.739	-.102
CD-RISC-25 Spirituality	0-4	3.49	0.68	-1.457	1.417

Note. *Perception of self* ($\alpha = .522$) and BRS ($\alpha = .363$) not included; RSA = Resilience Scale for Adults; CD-RISC-25 = Connor-Davidson Resilience Scale-25

suggests that the sample endorsed items toward the higher end of the spirituality scale with the bulk of the responses clustered together at that end of the distribution. The Rwanda sample is likely to be more spiritual than not. However, since Rwanda is excluded from hypothesis testing due to unreliable ECO ($\alpha = .484$), further implications of the spirituality statistics are not addressed.

As shown in Table 17, demographic characteristics of subgroups who endorsed mean RSA resilience between 4 and 5 on the 7-point semantic differential RSA scale were most frequently females, residing in Rwanda for 1-17 years, and having high income/resources. All other demographic characteristics had mean resilience between 5 and 6 except one participant residing in the Northern Province who endorsed mean resilience between 6 and 7 on the RSA.

Table 18 presents RSA protective factors and spirituality by demographic characteristics. Demographic characteristics of participants whose mean scores were between 6 and 7 on the 7-point semantic differential scale were most frequently: married (*planned future* and *structured style*), separated/divorced (*planned future*), 40-49 age range (*planned future*, *social resources*, and *structured style*), residing in Rwanda for 40-49 years (*planned future*, *social resources* and *structured style*), residing in the Northern province (*planned future*, *family cohesion*, and *social resources*). The high income/resources subgroup tended to score between 3 and less than 4 on *planned future*, *social competence*, and *family cohesion*. All other demographic characteristic subgroups had mean RSA protective factor scores that ranged between 4 and a little less than 6 on the 7-point semantic differential scale.

Table 17

Mean RSA Resilience by Demographic Characteristics – Rwanda

Demographic	<i>n</i>	RSA	
		<i>M</i>	<i>SD</i>
Sex			
Male	41	5.45	0.95
Female	11	4.99	0.81
Marital Status			
Single- never married	33	5.10	.98
Cohabiting/civil union	1	5.72	--
Married	17	5.85	.66
Separated/divorced	1	5.03	--
Age Range			
18 - 29	29	5.21	0.91
30 - 39	21	5.54	1.00
40 - 49	2	5.46	0.32
Years Residing			
1 - 17	3	4.94	0.09
18 - 29	29	5.28	0.93
30 - 39	18	5.53	1.06
40 - 49	2	5.46	0.32
Residence			
East	4	5.72	0.88
Western	4	5.06	1.54
Northern	1	6.39	--
Southern	5	5.40	0.73
City of Kigali	38	5.31	0.91
Years of Education			
1 - 8	3	5.19	0.20
9 - 12	6	5.38	0.82
13 - 16	17	5.25	0.94
17 - 19	21	5.49	1.04
20 +	5	5.21	1.10
Income/Resources			
Low	12	5.05	1.07
Moderate	38	5.52	0.84
High	2	4.01	0.14

Note. RSA = Resilience Scale for Adults

Table 18

RSA Protective Factors and Spirituality by Demographic Characteristics – Rwanda

Demographic	<i>n</i>	Planned Future		Social Competence		Family Cohesion		Social Resources		Structured Style		CD-RISC-25 Spirituality	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Sex													
Male	41	5.60	1.32	5.30	1.37	5.45	1.15	5.62	1.11	5.51	1.34	3.51	0.65
Female	11	5.11	1.28	5.10	1.08	4.68	1.06	4.98	1.30	5.47	1.23	3.40	0.83
Marital Status													
Single	33	5.13	1.37	5.05	1.23	5.01	1.24	5.27	1.19	5.18	1.42	3.48	0.75
Cohabiting	1	4.50	---	5.83	---	5.66	---	6.42	---	6.00	---	2.00	---
Married	17	6.25	0.88	5.68	1.44	5.79	0.91	5.92	1.02	6.10	0.87	3.55	0.46
Separated/divorced	1	6.00	---	4.33	--	5.50	---	4.14	---	5.75	---	4.00	---
Age Range													
18 - 29	29	5.27	1.24	5.23	1.23	5.03	1.25	5.42	1.19	5.28	1.47	3.44	0.81
30 - 39	21	5.73	1.43	5.34	1.47	5.65	1.09	5.52	1.22	5.72	1.04	3.52	0.51
40 - 49	2	6.37	0.53	4.83	0.94	5.33	0.70	6.00	0.20	6.50	0.70	3.75	0.35
Years Residing													
0 - 17	3	4.58	1.28	5.82	1.29	4.77	0.85	4.61	0.59	4.83	0.80	2.66	1.25
18 - 29	29	5.43	1.21	5.16	1.18	5.17	1.24	5.51	1.19	5.36	1.50	3.58	0.70
30 - 39	18	5.66	1.51	5.37	1.57	5.56	1.13	5.53	1.26	5.75	1.00	3.44	0.51
40 - 49	2	6.37	0.53	4.83	0.94	5.33	0.70	6.00	0.20	6.50	0.70	3.75	0.35
Residence													
Eastern	4	5.68	0.89	5.87	1.11	5.66	0.95	5.60	1.16	5.68	0.94	3.87	0.25
Western	4	5.87	1.53	4.62	2.20	5.45	1.81	5.39	1.70	4.87	2.46	3.37	0.47
Northern	1	7.00	--	5.83	--	6.66	--	7.00	--	7	--	4.00	--
Southern	5	5.48	1.10	5.23	1.35	5.26	1.23	5.32	1.16	5.60	1.38	3.90	0.22
City of Kigali	38	5.40	1.38	5.25	1.25	5.20	1.14	5.46	1.15	5.50	1.21	3.39	0.75

Table 18—*Continued.*

		Planned Future		Social Competence		Family Cohesion		Social Resources		Structured Style		CD-RISC-25 Spirituality	
Demographic	<i>n</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Years of Education													
0 - 8	3	5.50	1.25	5.21	1.17	5.27	0.63	5.57	0.98	5.16	1.60	3.16	1.44
9 - 12	6	5.91	0.81	5.16	1.14	5.30	0.97	5.33	1.13	5.62	0.84	3.83	0.25
13 - 16	17	5.40	1.28	5.03	1.28	5.32	1.15	5.59	0.94	4.98	1.51	3.44	0.76
17 - 19	21	5.51	1.49	5.64	1.30	5.31	1.34	5.48	1.44	5.95	1.17	3.52	0.55
20 +	5	5.30	1.51	4.56	1.66	5.10	1.25	5.23	1.16	5.50	1.11	3.30	0.83
Income/Resource													
Low	12	5.18	1.14	4.77	1.23	5.01	1.26	5.38	1.30	5.16	1.69	3.62	0.56
Moderate	38	5.72	1.28	5.48	1.30	5.46	1.11	5.57	1.13	5.65	1.19	3.46	0.72
High	2	3.25	0.00	3.99	0.46	3.83	0.47	4.35	1.11	4.87	0.53	3.25	1.06

Note. RSA Scale Ranges: 1-7; CD-RISC-25-Spirituality: 0-4; RSA = Resilience Scale for Adults, CD-RISC-25 = Connor-Davidson Resilience Scale-25; *perception of self* not included ($\alpha = .522$).

On the CD-RISC-25 spirituality subscale, demographic characteristics of participants whose mean scores were between 2 = *sometimes true* and 3 = *often true* on the 5-point Likert-type scale were most frequently cohabitating and residing in Rwanda for 1-17 years. All other demographic subgroups had mean scores between 3 = *often true* and 4 = *true nearly all the time*.

Description of the U.S. Sample

The Sample

A total of 374 individuals consented to participate in the study. This was 14 more than the maximum proposed 360 responses. Email invitations were sent to participants from two universities and one college in the Midwest, one university in the West, and two universities in the South. Email invitations were also sent to users on the listserv of the National Psychology Training Consortium. The survey link was posted on the webpage of the Midwestern Association of School Psychologists. The survey link was also posted on the researcher's social media pages (Facebook and LinkedIn) and shared/redistributed by other social media users/seed participants.

Data Screening and Cleaning

One participant indicated age as 12 years old. This was regarded as an input error since they reported as having 18 years of education and resided in the U.S. for 35 years. Therefore, it was assumed that the participant was at least 35 years old. The age of 12 years was replaced with the number of years the participant resided in the U.S., which is 35 years. Participants who indicated that they were naturalized citizens (not born in the U.S., $n = 51$) were excluded from data analysis for this study. Another five participants

indicated that they resided in Jamaica. Those cases were removed from the U.S. data set and included in the data set for Jamaica. This may have occurred because some seed participants had contacts to prospective participants in both the U.S. and Jamaica and were sent the survey links for both countries. It appears that some participants in Jamaica clicked on the U.S. survey link. Likewise, one participant was removed from the Jamaica data set and added to the U.S. data set because the participant indicated that he/she resided in the U.S., was born there, and endorsed a region in the U.S. as their place of permanent residence. Six participants indicated they had taken the survey more than one time. They were deleted from the data set.

Thirty-nine individuals did not meet the study's criteria and were discontinued based on the discontinue criteria established in the survey collector – Class Climate. They selected “no” to at least one of the three screening items. Participants had to be at least 18 years old, reside in the U.S., and endorse a lifetime experience of trauma. Those discontinued cases were deleted from the data set. Among the 39 deleted cases, 80% ($n = 30$) indicated that they were not Americans living in America. The other nine indicated that they either did not meet the age requirement, had not experienced a traumatic life event, or a combination of two of the three screening questions.

Missing Values Cases

Three cases were deleted because of missing values on the cultural orientation and resilience measurement scales items. The percentages of missing values for those cases were 8%, 18.4%, and 100%. For the remaining cases, SPSS missing values and multiple imputation analyses were used to analyze and replace missing values for cases with fewer than 5% missing values. Those values were observed to be MCAR. A total of 273

participants comprised the final data set for the U.S. This final number was 37 less than the minimum 310 proposed.

Descriptive statistics were run on the traumatic life events variable (TLEQ) to determine that all of the remaining participants endorsed at least one of the events. The criterion was met for all 273 participants.

Participants' Demographic Characteristics

As shown in Table 19, the demographic characteristics most frequently endorsed by participants were female (73.6 %, $n = 201$), single (45.8%, $n = 125$), age 18-29 years old (46.2%, $n = 126$), residing in the U.S. for 18 - 29 years (37.7%, $n = 103$), residing in the Midwest (63%, $n = 172$), Caucasian American (62.6%, $n = 171$), having 13-16 years of education (36.6%, $n = 100$), and having moderate income/resources (73.6%, $n = 201$).

Instruments' Reliability

Table 20 lists Cronbach's alpha for each instrument as used with the U.S. sample. The adjusted COS, RSA (except *structured style* RSA subscale), BRS, and CD-RISC-25 spirituality had acceptable to excellent internal reliability. Meyers et al. (2013) suggested that as a rule of thumb, α of .90 or higher is excellent, .8s are very good, .7s are acceptable, and mid to high .6s are acceptable for research purposes. *Structured Style* ($\alpha = .589$) was unacceptably low. Therefore, associated results will not be considered as meaningful for reliable interpretation and will not be included in further analyses.

Table 19

Participants' Demographic Characteristics – U.S. (N = 273)

Demographics	N (273)	%
Sex		
Male	71	26.0
Female	201	73.6
Other	1	0.4
Marital Status		
Single – never married	125	45.8
Cohabiting/civil union	4	1.5
Married	113	41.4
Separated/divorced	26	9.5
Widowed	5	1.8
Age Range (18 – 75 years; mean age = 33; mode = 20)		
18 - 29	126	46.2
30 - 39	62	22.7
40 - 49	45	16.5
50 - 59	23	8.4
60+	17	6.2
Years Residing in the U.S.		
1 - 17	38	13.9
18 - 29	103	37.7
30 - 39	55	20.1
40 - 49	43	15.8
50 - 59	19	7.0
60+	15	5.5
Region of Permanent Residence		
Northeast	17	6.2
(CT, MA, ME, NH, NJ, NY, PA, RI, VT)		
Midwest	172	63.0
(IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI)		
South	41	15.0
(AL, AR, DC, DE, FL, GA, KY, LA, MD MS, NC, OK, SC, TN, TX, VA, WV)		
West	43	15.8
(AK, AZ, CA, CO, HI, ID, MT, NM, NV OR, UT, WA, WY)		

Table 19—*Continued.*

Demographics	<i>N</i> (273)	%
Ethnicity		
African American	23	8.4
Asian American	15	5.5
Caucasian American	171	62.6
Latino	24	8.8
Multi-racial	17	6.2
Native American	4	1.5
Pacific Islander	2	0.7
Other	11	4.0
Jamaican	6	2.2
Years of Education		
1 - 8	19	7
9 - 12	15	5.5
13 - 16	100	36.6
17 - 19	67	24.5
20+	72	26.4
Income/Resource Level		
Low income/resources	53	19.4
Moderate income/resources	201	73.6
High income/resources	19	7.0

Note. **Northeast** = Connecticut, Massachusetts, Maine, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont; **Midwest** = Iowa, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, North Dakota, Nebraska, Ohio, South Dakota, Wisconsin; **South** = Alabama, Arkansas, District of Columbia, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia; **West** = Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington, Wyoming.

Table 20

Instruments' Internal Reliability – Cronbach's Alpha (U.S.)

Instrument	Total α	Subscale α
Adjusted COS	.711	
Normative		.709
Evaluative		.747
RSA	.911	
Perception of self		.789
Planned future		.810
Social competence		.790
Family cohesion		.818
Social resources		.830
Structured style		.589
BRS	.904	
CD-RISC-25		.747
Spirituality		

Note. COS normative items 4, 5, 6, 8, 13 and corresponding evaluative items 17, 18, 19, 21, 26 were deleted resulting in the adjusted COS; COS = Cultural Orientation Scale, RSA = Resilience Scale for Adults; BRS = Brief Resilience Scale; CD-RISC-25 = Connor-Davidson Resilience Scale-25

Variables Description

Traumatic Life Events

Table 21 presents the frequency of traumatic events endorsed. Of the traumatic life events surveyed, the event that was most frequently endorsed by participants was the sudden and unexpected death of a loved (81.3%, $n = 222$). The event that was least endorsed was the experience of having lived, worked or engaged in military service in a war zone (4.4%, $n = 12$). About sixty percent endorsed that they have a loved one who survived a life-threatening illness (60.1%, $n = 164$). Nearly fifty percent (48%, $n = 131$) endorsed having experienced other unwanted sexual attention. More than one quarter to

Table 21

Traumatic Life Events Endorsed by U.S. Participants

Traumatic Events	<i>n</i>	%
Sudden/unexpected death of a loved one	222	81.3
Loved one survived life-threatening illness	164	60.1
Other unwanted sexual attention	131	48.0
Natural disaster	122	44.7
Motor vehicle accident	92	33.7
Someone threatened to kill/cause serious harm	79	28.9
Stalked	72	26.4
Other event (e.g., lost, kidnapped, serious animal bite, violent death of a pet)	68	24.9
Touched/fondled before 13 (by someone 5 years older	66	24.2
Saw/heard family violence growing up	61	22.3
Other kinds of accidents	56	20.5
Physically punished growing up (bruises, burns, cuts, broken bones etc.)	49	17.9
Physically hurt by spouse/intimate partner	47	17.2
Had a life-threatening illness	39	14.3
Miscarriage	39	14.3
Robbed or present during robbery	34	12.5
Seen stranger attack or beat someone	31	11.4
Abortion	26	9.5
Hit/beaten up/badly hurt by stranger	18	6.6
Live/worked/military service in war zone	12	4.4

about half of the participants endorsed the following events: stalked (26.4%, $n = 72$),

someone threatened to kill/cause serious harm (28.9%, $n = 79$), motor vehicle accidents

(33.7%, $n = 92$), natural disaster (44.7%, $n = 122$).

Cultural Orientation

Item endorsement on the COS determined participants' NCO and ECO. Table 22 presents the means, standard deviations, skewness and kurtosis for NCO and ECO for the

Table 22

Cultural Orientation Variable Means, Standard Deviations, Skewness and Kurtosis – U.S.

Cultural Orientation Variable	Mean	SD	Skewness	Kurtosis
Normative Cultural Orientation	4.06	0.57	.243	.901
Evaluative Cultural Orientation	5.29	0.66	-.016	-.411

U.S. sample. Both the mean normative and evaluative variables were within normal limits for skewness and kurtosis. Normative Cultural Orientation was positively skewed (0.243), kurtosis = 0.901. ECO was very slightly negatively skewed (-.016); kurtosis = -.411. Based on the study's criteria (1 to 4.0 = ICO; 4.01 to 7 = CCO), participants perceived the U.S. cultural values to be more collectivistic than individualistic. Mean NCO was slightly above the 4.0 cut-off score for individualism. United States participants endorsed even higher collectivism than the perceived cultural values.

As shown in Table 23, a little more than half the participants (52.7%, $n = 144$) perceived the cultural values in the U.S. to be more individualistic. A little less than half (47.3%, $n = 129$) perceived the U.S. cultural values to be more collectivistic. About 98% (97.6%, $n = 264$) internalized more collectivistic values. Only 2.4% ($n = 9$) internalized individualistic values.

Table 24 shows cultural orientation by demographic characteristics. In terms of ECO, all demographic subgroups (except cohabitating/civil union) ranged between 5 = *rather good* and 6 = *good* which is on the collectivistic end of the 7-point Likert-type ECO subscale. The cohabitating/civil union subgroup scored between 4 = *neither good nor bad* to 5 = *rather good* which was on the lower collectivistic end of the scale.

Table 23

Frequency Statistics of Participants' Normative and Evaluative Cultural Orientation – U.S.

Adjusted COS (16 Items)	<i>N</i> (273)	%	<i>M</i>	<i>SD</i>	Minimum	Maximum
NICO	144	52.7	3.64	.34	2.50	4.00
NCCO	129	47.3	4.52	.39	4.13	6.38
EICO	9	2.4	3.91	.22	3.33	4.00
ECCO	264	97.6	5.33	.61	4.13	7.00

Note. COS Scale Range (1-7); Normative items: 1, 2, 3, 7, 9, 10, 11, 12; Evaluative items: 14, 15, 16, 20, 22, 23, 24, 25; COS values of 1 to 4.0 = NICO and EICO; COS values of 4.01 to 7 = NCCO and ECCO; COS = Cultural Orientation Scale, NICO = normative individualistic cultural orientation, NCCO = normative collectivistic cultural orientation, EICO = evaluative individualistic cultural orientation, ECCO = evaluative collectivistic cultural orientation.

Resilience

Table 25 presents the scale ranges, means, standard deviations, skewness and kurtosis of the resilience variables for the U.S. sample. Resilience Scale for Adults resilience was negatively skewed (-.404) and leptokurtic (.285). The RSA subscale factors (*perception of self*, *planned future*, *social competence*, *family cohesion*, *social resources*, and *structured style*) were also examined for normality. The skewness and kurtosis values were within normal range for the following: *perception of self* (-.619; 0.373), *social competence* (-.210; -.431), and *family cohesion* (-.475; 0.232). The skewness and kurtosis values for *planned future* (-1.070; 1.111) and *social resources* (-1.143; 1.221) were slightly elevated above the ± 1 threshold. Brief Resilience Scale resilience was negatively skewed (-.251); kurtosis (-.386). Connor-Davidson Resilience

Table 24

Cultural Orientation by Demographic Characteristics – U.S.

Demographic	<i>n</i>	<i>%</i>	Normative Orientation		Evaluative Orientation	
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Sex						
Male	71	26.0	4.24	.60	5.40	.72
Female	201	73.6	4.00	.54	5.25	.63
Other	1	0.4	3.12	--	5.25	--
Marital Status						
Single – never married	125	45.8	4.03	.60	5.24	.65
Cohabiting/civil union	4	1.5	4.00	.73	4.81	.46
Married	113	41.4	4.06	.51	5.35	.66
Separated/divorced	26	9.5	4.18	.67	5.38	.69
Widowed	5	1.8	4.30	.40	5.15	.59
Age Range						
18 - 29	126	46.2	4.02	.58	5.27	.63
30 - 39	62	22.7	3.96	.55	5.08	.64
40 - 49	45	16.5	4.17	.59	5.39	.64
50 - 59	23	8.4	4.26	.41	5.46	.72
60 +	17	6.2	4.18	.58	5.68	.63
Ethnicity						
African American	23	8.4	4.17	.69	5.40	.72
Asian American	15	5.5	3.99	.66	5.37	.57
Caucasian American	171	62.6	4.10	.53	5.24	.66
Latino American	24	8.8	3.89	.56	5.39	.78
Multi-racial	17	6.2	4.01	.67	5.30	.46
Native American	4	1.5	4.00	.60	5.46	.69
Pacific Islander	2	0.7	3.50	.35	5.43	.79
Other	11	4.0	3.90	.72	5.19	.66
Jamaican	6	2.2	4.08	.32	5.56	.54
Years Residing						
1 - 17	21	13.9	3.89	.62	5.19	.75
18 - 29	120	37.7	4.02	.58	5.30	.61
30 - 39	55	20.1	4.01	.56	5.07	.65
40 - 49	43	15.8	4.12	.57	5.31	.67
50 - 59	19	7.0	4.32	.40	5.53	.69
60 +	15	5.5	4.28	.53	5.73	.60
Residence						
Northeast (CT, MA, ME, NH, NJ, NY, PA, RI, VT)	17	6.2	4.08	.70	5.04	.65
Midwest (IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI)	172	63.0	4.06	.56	5.30	.66

Table 24—*Continued.*

Demographic	<i>n</i>	<i>%</i>	Normative Orientation		Evaluative Orientation	
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Residence						
South (AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV)	41	15.0	3.94	.52	5.29	.71
West (AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY)	43	15.8	4.17	.57	5.32	.60
Years of Education						
1 - 8	19	7	4.10	.53	5.22	.78
9 - 12	15	5.5	4.13	.47	5.46	.49
13 - 16	100	36.6	4.01	.61	5.29	.66
17 - 19	67	24.5	4.02	.58	5.38	.69
20 +	72	26.4	4.15	.52	5.17	.60
Income/Resource						
Low	53	19.4	3.99	.57	5.45	.63
Moderate	201	73.6	4.06	.55	5.25	.67
High	19	7.0	4.24	.75	5.19	.55

Note. **Northeast** = Connecticut, Massachusetts, Maine, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont; **Midwest** = Iowa, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, North Dakota, Nebraska, Ohio, South Dakota, Wisconsin; **South** = Alabama, Arkansas, District of Columbia, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia; **West** = Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington, Wyoming.

Scale-25 spirituality was negatively skewed (-1.224) and also slightly above the ± 1 threshold; kurtosis (0.771). Visual inspection of the distribution indicated that scores were still within the normal range for skewness and kurtosis and also within the ± 3 less conservative normal range (Oliveira et al., 2016).

The RSA protective factor with the highest mean was *social resources*. *Social competence* had the lowest mean. Mean spirituality is closely equivalent to a value of

Table 25

Means, Standard Deviations, Skewness and Kurtosis of Resilience (Process & Outcome) and Spirituality for U.S. Participants

Variable	Scale Range	Mean	SD	Skewness	Kurtosis
Resilience: Process (RSA)	1-7	5.21	0.86	-.404	.285
Perception of self (PS)	1-7	4.92	1.24	-.619	.373
Planned future (PF)	1-7	5.51	1.25	-1.070	1.111
Social competence (SC)	1-7	4.86	1.27	-.210	-.431
Family cohesion (FC)	1-7	5.17	1.22	-.475	-.232
Social resources (SR)	1-7	5.77	1.02	-1.143	1.221
Resilience: Outcome (BRS)	1-5	3.34	0.84	-.251	-.386
CD-RISC-25-Spirituality	0-4	3.02	1.07	-1.224	.771

Note. Structured style not included ($\alpha = .589$); RSA = Resilience Scale for Adults, BRS = Brief Resilience Scale, CD-RISC-25 = Connor-Davidson Resilience Scale-25

often true on the CD-RISC-25 scale that ranges from 0 = *not at all true* to 4 = *true nearly all the time*. Mean BRS represents a value that is between 3 = *neutral* and 4 = *agree* on the scale that ranges from 1 = *strongly disagree* to 5 = *strongly agree*.

Table 26 presents mean RSA and BRS resilience by demographic characteristics. The characteristics of participants who scored between 4 and 5 on the RSA 7-point semantic differential scale tended to be *other* sex, cohabitating/civil union, widowed, *other* ethnicity, residing in the Northeast, having 9 to 12 years of education, and low income/resources. All other demographic subgroups tended to score between 5 and 6 on the RSA. Mean BRS ranged between 3 = *neutral* and 4 = *agree* on the 5-point Likert-type scale for all except the widowed demographic subgroup which tended to score a little less than 3 = *neutral* on the BRS.

Table 26

Mean RSA & BRS Resilience by Demographic Characteristics – U.S.

Demographic	<i>n</i>	RSA		BRS	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Sex					
Male	71	5.37	0.91	3.77	.75
Female	201	5.15	0.84	3.19	.81
Other	1	4.87	--	3.50	--
Marital Status					
Single – never married	125	5.18	0.87	3.25	0.83
Cohabiting/civil union	4	4.98	1.03	3.25	0.79
Married	113	5.27	0.88	3.45	0.81
Separated/divorced	26	5.20	0.79	3.42	0.98
Widowed	5	4.88	0.52	2.93	0.54
Age Range					
18 - 29	126	5.18	0.89	3.24	.80
30 - 39	62	5.23	0.94	3.23	.81
40 - 49	45	5.02	0.79	3.41	.90
50 - 59	23	5.38	0.66	3.62	.72
60 +	17	5.63	0.63	3.93	.87
Ethnicity					
African American	23	5.40	0.77	3.48	.87
Asian American	15	5.34	0.80	3.40	.78
Caucasian American	171	5.16	0.80	3.30	.85
Latino American	24	5.42	0.83	3.47	.47
Multi-racial	17	5.26	1.20	3.34	.97
Native American	4	5.12	0.97	4.00	1.13
Pacific Islander	2	5.06	0.86	3.39	.32
Other	11	4.92	0.72	3.07	.68
Jamaican	6	5.24	1.94	3.47	1.36
Years Residing					
1 – 17	21	5.03	1.03	3.39	.69
18 – 29	120	5.18	0.91	3.23	.85
30 – 39	55	5.24	0.86	3.30	.84
40 – 49	43	5.10	0.72	3.32	.85
50 – 59	19	5.42	0.69	3.78	.61
60 +	15	5.62	0.67	3.85	.89

Table 26—Continued.

Demographic	<i>n</i>	RSA		BRS	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Residence					
Northeast (CT, MA, ME, NH, NJ, NY, PA, RI, VT)	17	4.57	1.02	3.03	.87
Midwest (IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI)	172	5.23	0.85	3.36	.82
South (AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV)	41	5.35	0.82	3.36	.85
West (AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY)	43	5.24	0.78	3.39	.86
Years of Education					
1 – 8	19	5.34	0.97	3.30	.95
9 – 12	15	4.98	0.86	3.19	.85
13 – 16	100	5.17	0.96	3.34	.85
17 – 19	67	5.26	0.80	3.32	.80
20 +	72	5.24	0.73	3.40	.83
Income/Resource					
Low	53	4.81	0.97	3.21	.84
Moderate	201	5.27	0.79	3.36	.83
High	19	5.71	0.84	3.57	.82

Note. RSA = Resilience Scale for Adults, BRS = Brief Resilience Scale; **Northeast** = Connecticut, Massachusetts, Maine, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont; **Midwest** = Iowa, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, North Dakota, Nebraska, Ohio, South Dakota, Wisconsin; **South** = Alabama, Arkansas, District of Columbia, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia; **West** = Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington, Wyoming.

As shown in Table 27, demographic characteristics of participants with mean RSA protective factors between 6 and 7 on the 7-point semantic differential scale tended

Table 27

RSA Protective Factors and Spirituality by Demographic Characteristics – U.S.

Demographic	<i>n</i>	Perception of Self		Planned Future		Social Competence		Family Cohesion		Social Resources		Spirituality	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Sex													
Male	71	5.38	1.13	5.73	1.15	4.97	1.26	5.34	1.17	5.67	1.16	3.04	1.09
Female	201	4.75	1.24	5.44	1.28	4.82	1.28	5.07	1.24	5.81	0.98	3.01	1.07
Other	1	4.83	--	4.25	--	4.66	--	5.50	--	5.85	--	3.00	--
Marital Status													
Single-never married	125	4.80	1.26	5.48	1.25	4.83	1.30	5.20	1.32	5.77	1.07	3.25	0.83
Cohabiting	4	4.95	1.13	5.18	1.95	4.41	0.72	4.83	0.99	5.53	0.99	3.25	0.79
Married	113	4.97	1.26	5.57	1.21	4.87	1.27	5.25	1.14	5.82	0.99	3.45	0.81
Separated/divorced	26	5.22	1.16	5.45	1.48	5.06	1.24	4.85	1.15	5.68	1.04	3.42	0.98
Widowed	5	5.03	1.00	5.40	0.84	4.46	1.05	4.43	1.14	5.40	0.81	2.93	0.54
Age Range													
18 - 29	126	4.77	1.26	5.48	1.24	4.85	1.31	5.25	1.25	5.77	1.12	3.31	0.74
30 - 39	62	4.93	1.31	5.62	1.32	4.84	1.34	5.07	1.33	5.83	0.99	2.41	1.28
40 - 49	45	4.78	1.27	5.17	1.41	4.62	1.22	5.06	1.05	5.54	1.03	2.93	1.26
50 - 59	23	5.47	0.87	5.71	0.96	5.11	1.03	4.99	1.36	5.78	0.74	3.00	1.05
60 +	17	5.57	0.88	6.00	0.84	5.24	1.14	5.44	0.78	6.15	0.66	3.35	0.91
Ethnicity													
African American	23	5.43	1.01	5.65	1.67	4.65	1.05	5.26	1.17	5.90	0.86	3.36	0.67
Asian American	15	4.75	1.51	5.50	1.04	5.35	1.28	5.56	0.84	5.82	1.14	3.63	0.48
Caucasian	171	4.81	1.22	5.47	1.21	4.81	1.28	5.14	1.22	5.80	0.95	2.81	1.18
American													
Latino American	24	5.24	1.18	5.86	0.90	5.06	1.30	5.17	1.20	5.85	0.96	3.45	0.60
Multi-racial	17	4.92	1.51	5.45	1.55	5.06	1.30	5.20	1.46	5.71	1.32	3.14	0.82

Table 27—Continued.

		Perception of Self		Planned Future		Social Competence		Family Cohesion		Social Resources		Spirituality	
Demographic	<i>n</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Ethnicity													
Native American	4	5.58	0.44	6.00	1.83	4.25	1.26	5.25	1.26	5.32	1.50	3.62	0.47
Pacific Islander	2	5.00	0.94	4.82	0.45	3.83	1.17	6.00	1.17	5.85	1.01	4.00	0.00
Other	11	4.77	0.59	5.47	0.82	4.69	1.07	4.56	1.21	5.35	0.99	3.04	0.93
Jamaican	6	4.80	2.34	4.91	2.05	5.44	1.95	5.36	1.86	5.35	2.24	3.25	1.36
Years Residing													
0 - 17	21	5.10	1.08	5.32	1.37	4.65	1.34	4.91	1.42	5.34	1.18	3.00	1.08
18 - 29	120	4.71	1.31	5.44	1.31	4.84	1.35	5.29	1.21	5.79	1.12	3.29	0.74
30 - 39	55	4.99	1.21	5.66	1.21	4.81	1.33	5.04	1.29	5.88	0.90	2.43	1.31
40 - 49	43	4.79	1.28	5.26	1.34	4.81	1.08	5.12	1.09	5.65	0.99	2.89	1.27
50 - 59	19	5.60	0.80	5.89	0.81	5.09	0.99	4.93	1.45	5.81	0.79	3.07	1.05
60 +	15	5.56	0.93	6.01	0.83	5.24	1.20	5.41	0.81	6.10	0.69	3.36	0.93
Residence													
Northeast	17	4.21	1.37	4.82	1.36	4.13	1.28	4.82	1.32	5.01	1.51	2.73	1.33
Midwest	172	4.95	1.21	5.60	1.23	4.88	1.25	5.18	1.22	5.73	1.01	2.93	1.08
South	41	5.12	1.23	5.56	1.32	4.96	1.24	5.07	1.23	6.05	0.86	3.43	0.79
West	43	4.89	1.26	5.37	1.18	4.94	1.32	5.32	1.21	5.96	0.88	3.11	1.09

Table 27—Continued.

Demographic	<i>n</i>	Perception of Self		Planned Future		Social Competence		Family Cohesion		Social Resources		Spirituality	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Years of Education													
0 - 8	19	5.09	1.43	5.73	1.23	4.84	1.31	5.26	1.38	6.06	0.93	3.36	0.83
9 - 12	15	4.31	1.18	5.16	1.54	4.47	1.28	5.35	1.17	5.70	0.99	3.43	0.90
13 - 16	100	4.96	1.39	5.36	1.36	4.86	1.33	5.29	1.31	5.66	1.22	3.19	0.94
17 - 19	67	4.92	1.17	5.58	1.26	4.98	1.33	4.99	1.21	5.84	0.95	3.10	0.94
20 +	72	4.94	1.04	5.66	1.01	4.81	1.12	5.09	1.07	5.80	0.82	2.54	1.29
Income/Resources													
Low	53	4.45	1.38	5.05	1.49	4.60	1.49	4.74	1.34	5.30	1.29	3.21	0.93
Moderate	201	5.00	1.16	5.62	1.16	4.87	1.19	5.23	1.16	5.83	0.93	2.97	1.09
High	19	5.33	1.43	5.68	1.33	5.41	1.33	5.68	1.27	6.43	0.66	3.00	1.21

Note. RSA Scale Range: 1 - 7; CD-RISC-25 Spirituality: 0 - 4; *structured style* not included ($\alpha = .589$).

to be 60 years or older, have resided in the U.S. for 60 or more years (*planned future* and *social resources* for both), be Native American (*planned future*) or Pacific Islander (*family cohesion*), live in the South (*social resources*), have 0 to 8 years of education (*social resources*) and have high income/resources (*social resources*). All other demographic subgroups (except Pacific Islanders) tended to range between 4 and a little less than 6 on the 7-point semantic differential scale. Pacific Islanders tended to score between 3 and 4 on *social competence*.

On the CD-RISC-25 spirituality subscale, demographic characteristics of participants who scored between 2 = *sometimes true* and 3 = *often true* on the 5-point Likert-type scale tended to be widowed, 30 to 39 and 40 to 49 age ranges, Caucasian American, residing in the U.S. between 30 to 39 and 40 to 49 years, residing in the Northeast and Mid-west, having twenty or more years of education, and moderate income/resources. All other demographic subgroups tended to score between 3 = *often true* and 4 = *true nearly all the time*.

Summary of Demographic Characteristics of the Overall Sample

Table 28 shows the demographic characteristics of the overall sample comprised of all three countries ($N = 494$). The Jamaica and U.S. samples were comprised of more females than males whereas the Rwandan sample was comprised of more males than females. The ages of participants from Jamaica and the U.S. ranged from 18 to 60 and above whereas the ages of participants from Rwanda ranged from 18 to under 50 years old. The ethnicity demographic category only pertained to participants from the U.S. The number of years of education completed by participants from all three countries ranged

Table 28

Summary of Participants' Demographic Characteristics - Overall Sample (N = 494)

Variables		Jamaica (N = 169)		Rwanda (N = 52)		U.S. (N = 273)	
		n	%	n	%	n	%
Sex							
	Male	34	20.1	41	78.8	71	26.0
	Female	135	79.9	11	21.2	201	73.6
	Other	0	0	0	0	1	0.4
Marital Status							
	Single-never married	78	46.2	33	63.5	125	45.8
	Cohabiting/civil union	3	1.8	1	1.9	4	1.5
	Married	69	40.8	17	32.7	113	41.4
	Separated/divorced	15	8.9	1	1.9	26	9.5
	Widowed	4	2.4	0	0	5	1.8
Age Range							
	18 - 29	63	37.3	29	55.8	126	46.2
	30 - 39	41	24.3	21	40.4	62	22.7
	40 - 49	22	13.0	2	3.8	45	16.5
	50 - 59	34	20.1	0	0	23	8.4
	60 +	9	5.3	0	0	17	6.2
Years Residing							
	0 - 17	10	5.9	3	5.8	38	13.9
	18 - 29	63	37.3	29	55.8	103	37.7
	30 - 39	41	24.3	18	34.6	55	20.1
	40 - 49	18	10.6	2	3.8	43	15.8
	50 - 59	29	17.2	0	0	19	7.0
	60 +	8	4.7	0	0	15	5.5
Region of Permanent Residence							
Jamaica: East (Surrey)		38	22.5				
Central (Middlesex)		111	65.7				
West (Cornwall)		20	11.8				
Rwanda: Eastern				4	7.7		
Western				4	7.7		
Northern				1	1.9		
Southern				5	9.6		
City of Kigali				38	73.1		
U.S. Northeast						17	6.2
Midwest						172	63.0
South						41	15.0
West						43	15.8

Table 28—*Continued.*

Variables	Jamaica (<i>N</i> = 169)		Rwanda (<i>N</i> = 52)		U.S. (<i>N</i> = 273)	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Ethnicity (U.S. Only)						
African American					23	8.4
Asian American					15	5.5
Caucasian American					171	62.6
Latino					24	8.8
Multi-racial					17	6.2
Native American					4	1.5
Pacific Islander					2	0.7
Other					11	4.0
Jamaican					6	2.2
Years of Education						
1 - 8	14	8.3	3	5.8	19	7.0
9 - 12	17	10.0	6	11.5	15	5.5
13 - 16	35	20.7	17	32.7	100	36.6
17 - 19	38	22.5	21	40.4	67	24.5
20 +	65	38.5	5	9.6	72	26.4
Income/Resources						
Low income/resources	28	16.5	12	23.1	53	19.4
Moderate income/resource	136	80.5	38	73.1	201	73.6
High income/resources	5	3.0	2	3.8	19	7.0

from 1 to over 20 years, however, the sample from Jamaica had the highest percentage of participants with 20 or more years of education. The U.S. sample had the highest percentage of participants who endorsed high income/resources while Rwanda had the highest percentage of participants who endorsed low income/resources. The differences in demographic characteristics from each country may likely influence the data analysis results for each country. Recommendations are provided later in this chapter to include demographic characteristics in follow-up studies.

Summary of Traumatic Life Events of the Overall Sample

Table 29 shows the traumatic life events endorsed by participants from all three countries. The sudden/unexpected death of a loved was commonly endorsed by at least 80% of the participants from each of the three countries. Natural disaster was most commonly endorsed by participants from Jamaica (97%). There was a higher percentage of Rwandans who endorsed that they lived/worked or had military service in a war zone (42.3%) compared to Jamaicans (6.5%), and U.S. participants (4.4%).

Summary of Research Variables for the Overall Sample

Table 30 summarizes the variable means and standard deviations for each country for cultural orientation and resilience. The overall mean NCO scores showed that participants from all three countries perceived the norms and values of their culture to be on the collectivistic end of the scale. Scores ranged between 4 = *sometimes* and 5 = *often* on the 7-point COS. Evaluative Cultural Orientation values for Rwanda were not reported due to low reliability. The mean ECO and ECCO values for participants from Jamaica and the U.S. were between 5 = *rather good* and 6 = *good* on the COS suggesting that they internalized even higher collectivistic values than the normative values. Evaluative Individualistic Cultural Orientation means were a little less than 4 = *neither good nor bad* for the five participants from Jamaica and nine participants from the U.S. who internalized individualistic values. Resilience Scale for Adults and RSA protective factors mean values ranged between 5 and 6 on the 7-point semantic differential scale except *social competence* (for the Jamaica sample) and *perception of self* and *social competence* for the U.S. sample. Those protective factor mean values ranged between 4

Table 29

Summary of Traumatic Life Events - Overall Sample (N = 494)

Events	Jamaica (n = 169)		Rwanda (n = 52)		U.S. (n = 273)	
	n	%	n	%	n	%
Natural disaster	164	97.0	17	32.7	122	44.7
Sudden/unexpected death of a loved one	144	85.2	48	92.3	222	81.3
Other unwanted sexual attention	89	52.7	8	15.4	131	48.0
Loved one survived life-threatening illness	80	47.3	34	65.4	164	60.1
Someone threatened to kill/cause serious harm	71	42.0	19	36.5	79	28.9
Robbed or present during robbery	70	41.4	9	17.3	34	12.5
Saw/heard family violence growing up	69	40.8	27	51.9	61	22.3
Seen stranger attack or beat someone	67	39.6	24	46.2	31	11.4
Motor vehicle accident	62	36.7	16	30.8	92	33.7
Touched/fondled before 13 (by someone 5 years older)	58	34.3	11	21.2	66	24.2
Stalked	48	28.4	18	34.6	72	26.4
Physically punished growing up (bruises, burns, broken bones etc.)	43	25.4	11	21.2	49	17.9
Physically hurt by spouse/intimate partner	41	24.3	1	1.9	47	17.2
Other kinds of accidents	38	22.5	15	28.8	56	20.5
Miscarriage	38	22.5	9	17.3	39	14.3
Abortion	36	21.3	15	28.8	26	9.5
Other event (e.g., lost, kidnapped, serious animal bite, violent death of a pet)	35	20.7	10	19.2	68	24.9
Had a life-threatening illness	30	17.8	19	36.5	39	14.3
Hit/beaten up/badly hurt by stranger	18	10.7	12	23.1	18	6.6
Lived/worked/military service in war zone	11	6.5	22	42.3	12	4.4

Table 30

Summary of Variable Means and Standard Deviations - Overall Sample (N = 494)

Variables	Jamaica (n = 169)			Rwanda (n = 52)			U.S. (n = 273)		
	n	M	SD	n	M	SD	n	M	SD
COS									
NCO		4.09	0.60		4.39	0.85		4.06	0.57
NICO	77	3.58	0.39	17	3.43	0.40	144	3.64	0.34
NCCO	92	4.52	0.37	35	4.86	0.56	129	4.52	0.39
ECO		5.39	0.67		n/a	n/a		5.29	0.66
EICO	5	3.97	0.05	n/a	n/a	n/a	9	3.91	0.22
ECCO	164	5.43	0.63	n/a	n/a	n/a	264	5.33	0.61
RSA		5.29	0.92		5.35	0.93		5.21	0.86
Perception of self		5.17	1.32		n/a	n/a		4.92	1.24
Planned future		5.52	1.50		5.50	1.31		5.51	1.25
Social Competence		4.99	1.18		5.26	1.30		4.86	1.27
Family Cohesion		5.10	1.36		5.29	1.16		5.17	1.22
Social Resources		5.71	1.06		5.48	1.17		5.77	1.02
Structured Style		n/a	n/a		5.51	1.30		n/a	n/a
Spirituality		3.47	0.69		3.49	0.68		3.02	1.07
BRS		3.47	0.70		n/a	n/a		3.34	0.84

Note. NCO = normative cultural orientation; NICO = normative individualistic cultural orientation; ECO = evaluative cultural orientation; EICO = evaluative individualistic cultural orientation; ECCO = evaluative collectivistic cultural orientation; RSA = Resilience Scale for Adults; BRS = Brief Resilience Scale; Not included: Jamaica *Structured style* ($\alpha = .521$); Rwanda ECO ($\alpha = .484$), *perception of self* ($\alpha = .522$), BRS ($\alpha = .363$); U.S.: *structured style* ($\alpha = .589$).

and 5 on the scale. Those mean values suggest that participants from each country were more resilient than not. For all three countries, mean spirituality ranged between 3 = *sometimes true* and 4 = *often true* on the 5-point CD-RISC-25 subscale suggesting that participants tended to be more spiritual than not. For Jamaica and the U.S., mean BRS ranged between 3 = *neutral* and 4 = *agree* on the 5-point BRS scale. Rwanda had low BRS reliability and was not reported.

Research Questions

This section presents data analysis results and hypothesis testing. Recall that NCO refers to individuals' perceptions about the presence and frequency of certain cultural values and behaviors in the country where they reside. Evaluative Cultural Orientation refers to participants' internalized beliefs about those values and behaviors (Bierbrauer et al., 1994). This study focuses on investigating the relationship between resilience and internalized cultural orientation (EICO and ECCO).

Descriptive Research Question One

What is (a) the level of resilience as measured by the RSA (*perception of self, planned future, structured style, social competence, family cohesion, social resources*) and, spirituality, and (b) the level of resilience as measured by the BRS among individualistic and among collectivistic participants from Jamaica, Rwanda, and the U.S.?

Table 31 presents mean RSA resilience (resilience as process), means of the protective factors that comprise the RSA (*perception of self, planned future, social competence, family cohesion, social resources*), mean BRS (outcome resilience), and mean spirituality (CD-RISC-25 spirituality factor). The RSA *structured style* subscale had unacceptable reliability estimates for both Jamaica ($\alpha = .521$) and the U.S. ($\alpha = .589$) and therefore is not analyzed. Additionally, the ECO subscale had unacceptable reliability estimates for Rwanda ($\alpha = .484$), therefore the results are not reported.

Because of the very low number of participants who endorsed EICO, the discussion of means below merely follows-through on the descriptive report of means proposed by Research Question one. The findings do not represent significant differences. Given the low n for the EICO group, it is impossible to know whether any

Table 31

Resilience Means and Standard Deviations and Means of Protective Factors Among Participants by Evaluative Cultural Orientation Grouping in Jamaica and the U.S.

Variable	RSA					BRS		Spirituality
		<i>PS</i>	<i>PF</i>	<i>SC</i>	<i>FC</i>	<i>SR</i>		
Jamaica (<i>n</i> = 169):								
EICO (<i>n</i> = 5)								
Mean	4.77	4.73	5.65	4.40	4.43	4.41	3.46	3.20
SD	1.03	1.43	0.87	0.92	1.18	1.55	0.54	0.75
ECCO (<i>n</i> = 164)								
Mean	5.31	5.18	5.52	5.01	5.12	5.75	3.47	3.48
SD	0.92	1.31	1.52	1.19	1.37	1.03	0.70	0.69
U.S. (<i>n</i> = 273)								
EICO (<i>n</i> = 9)								
Mean	5.06	5.14	5.27	4.70	4.77	5.41	3.48	3.11
SD	0.75	1.14	1.09	0.94	1.34	1.34	0.58	0.96
ECCO (<i>n</i> = 264)								
Mean	5.21	4.91	5.52	4.86	5.18	5.78	3.34	3.02
SD	0.86	1.25	1.26	1.28	1.22	1.01	0.84	1.08

Note. Scale ranges – RSA: 1-7, BRS: 1-5, CD-RISC-25 Spirituality: 0-4; Jamaica: spirituality ($\alpha = .618$), RSA = Resilience Scale for Adults, PS = perception of self, PF = planned future, SC = social competence, FC = family cohesion, SR = social resources, BRS = Brief Resilience Scale, EICO = evaluative individualistic cultural orientation, ECCO = evaluative collectivistic cultural orientation.

apparent differences between groups would remain if a larger number of individualist participants were to respond.

Results revealed that among Jamaican participants, only five (3%) endorsed EICO; 164 endorsed ECCO. Among Jamaicans, individualists' mean RSA score was between 4 and 5 on the 7-point Likert-type scale. Collectivists' mean RSA was between 5 and 6 on the scale. On measures of protective factors, individualists' mean scores were between 4 and 5 on the 7-point Likert-type RSA scale for *perception of self, social competence, family cohesion, and social resources. Planned future* was between 5 and 6

on the scale. For collectivists, all protective factors mean scores were between 5 and 6 on the 7-point Likert-type RSA scale. Recall that the *structured style* subscale had unacceptable reliability estimates ($\alpha = .521$) and was not reported. Mean BRS (outcome) resilience was essentially the same (EICO mean = 3.46, ECCO mean = 3.47). Mean spirituality was between 3 and 4 on the 5-point Likert-type scale for both individualists and collectivists.

Among U.S. participants, only nine (3.3%) endorsed EICO while 264 endorsed ECCO. Individualists and collectivists scored between 5 and 6 on the 7-point Likert-type RSA scale. On measures of protective factors, individualists' mean scores were between 4 and 5 for *social competence* and *family cohesion* on the 7-point Likert-type RSA scale. *Perception of self*, *planned future* and *social resources* mean scores were between 5 and 6 on the scale. For collectivists, protective factor mean scores were between 4 and 5 on the 7-point Likert-type RSA scale for *perception of self* and *social competence*. Mean scores for *planned future*, *family cohesion*, and *social resources* were between 5 and 6 on the scale. Recall that the *structured style* subscale for the U.S. was not analyzed due to unacceptable reliability estimates ($\alpha = .589$). Mean BRS (outcome) resilience was between 3 and 4 on the 5-point Likert-type scale for both groups. Mean spirituality was between 3 and 4 on the 5-point Likert-type scale.

Hypotheses Testing of Questions Two to Seven

Test of Assumptions

Prior to performing data analyses, all variables were screened for normality. Normality means that the distribution of variables should fit approximately within a bell-shaped curve (Meyers et al., 2013). Descriptive statistics, plots, and histograms were

inspected. Based on skewness and kurtosis statistics as well as visual inspection of the distribution curve for the variables, all variables included in hypothesis testing were found to have acceptable levels of skewness and kurtosis and were within acceptable ranges on the normal distribution curve. Tests of multicollinearity were performed using Pearson correlations. As a general rule of thumb, correlations greater than 0.2 but less than 0.9 indicate that variables are related but not multicollinear (Grande, 2015). Other tests of assumptions for multivariate analysis such as homogeneity of variance were also performed and are described within the responses to each hypothesis.

Following are the hypotheses and data analysis results.

Null Hypothesis One

There is no significant difference between individualistic and collectivistic participants from Jamaica, Rwanda, and the U.S on the linear combination of protective factors (*perception of self, planned future, structured style, social competence, family cohesion, social resources, and spirituality*) that contribute to resilience as process.

Participants' endorsement of evaluative items on the COS resulted in a sample from each country that had a significantly higher number of participants who endorsed ECCO than EICO. Additionally, Rwanda was excluded from data analysis due to low reliability estimates on the evaluative COS scale ($\alpha = .484$). Table 30 shows that less than 10 participants from any country endorsed having an internalized individualistic cultural orientation (EICO). This distribution of participants did not allow for meaningful between-group comparisons for Jamaica and the U.S. Therefore, the proposed MANOVA was not performed to test Hypothesis One.

Although evaluating the data set for group differences was not possible, a bivariate correlational analysis was done in order to still analyze the relationship between the variables of interest (ECO and resilience). Pearson correlation (r) shows the extent to which a linear relationship exists between ECO, RSA protective factors and spirituality. This procedure shows the degree to which the independent variable (ECO) is related to the dependent variables (RSA protective factors and spirituality).

Table 32 shows the Pearson r results. For the Jamaica sample, Pearson r results revealed that ECO was significantly positively related to spirituality and *social resources* ($p \leq .01$). Evaluative Cultural Orientation accounted for 15.8% of the variance in spirituality and 4.9% of the variance in *social resources*. Recall that spirituality had low reliability estimates ($\alpha = .618$) therefore the findings should be interpreted with caution.

Evaluative Cultural Orientation was significantly positively related to *perception of self* and *social competence* ($p \leq .05$) with ECO accounting for a little more than 3% of the variance in each of those two protective factors.

For the U.S. sample, Pearson r results revealed that ECO was significantly positively related to spirituality and *family cohesion* ($p \leq .01$). Evaluative Cultural Orientation accounted for 9.1% of the variance in spirituality and 4.1% of the variance in *family cohesion*.

Evaluative Cultural Orientation was significantly positively related to *social competence* and *social resources* ($p \leq .05$). Evaluative Cultural Orientation accounted for 2.2% of the variance in *social competence* and 1.5% of the variance in *social resources*.

Table 32

Means, Standard Deviations, and Correlations of Evaluative Cultural Orientation and Protective Factors Including Spirituality

Pearson <i>r</i>										
	Variable	<i>M</i>	<i>SD</i>	PS	PF	SC	FC	SR	Spirituality	ECO
Jamaica <i>n</i> = 169	PS	5.17	1.32		.565**	.459**	.447**	.529**	.364**	.184*
	PF	5.52	1.50			.461**	.313**	.347**	.292**	.113
	SC	4.99	1.18				.338**	.461**	.300**	.178*
	FC	5.10	1.36					.590**	.299**	.115
	SR	5.71	1.06						.279**	.222**
	Spirituality	3.47	0.70							.398**
	ECO	5.39	0.67							
U.S. <i>n</i> = 273	PS	4.92	1.24		.599**	.485**	.314**	.416**	.152*	.055
	PF	5.51	1.25			.415**	.311**	.418**	.161**	.041
	SC	4.85	1.27				.407**	.560**	.253**	.151*
	FC	5.17	1.22					.626**	.275**	.204**
	SR	5.77	1.03						.210**	.125*
	Spirituality	3.02	1.07							.303**
	ECO	5.29	0.66							

Note. *Correlation is significant at the .05 level (2-tailed); **Correlation is significant at the .01 level (2-tailed); ECO = evaluative cultural orientation; PS = perception of self, PF = planned future, SC = social competence, FC = family cohesion, SR = social resources; *structured style not included* (Jamaica *structured style* $\alpha = .521$; U.S.: *structured style* $\alpha = .589$).

Null Hypothesis Two

There is no significant difference between Jamaica, Rwanda, and the U.S. on the linear combination of protective factors (*perception of self, planned future, structured style, social competence, family cohesion, social resources, and spirituality*) that contribute to resilience as a process.

Rwanda was excluded from data analysis due to low reliability estimates on the evaluative COS scale ($\alpha = .484$). *Structured style* was excluded due to low reliability (Jamaica *Structured style* $\alpha = .521$; U.S.: *Structured style* $\alpha = .589$).

Two separate one-way MANOVAs were conducted to examine whether there was a significant difference between Jamaica and the U.S. on the linear combination of protective factors (with and without spirituality) that contribute to resilience.

Box's M test of equality of covariance matrices was violated when only the RSA protective factors were included in the MANOVA analysis ($p = .015$). Box's M was also violated when spirituality was included along with the RSA protective factors ($p \leq .001$). The observed variance-covariance matrices of the dependent variable (protective factors) was not equal across groups (country of residence). Therefore, Pillai's Trace was used to assess the multivariate effect. Levene's test of equality of error variance also revealed that the homogeneity of variance assumption was violated for spirituality ($p \leq .001$) but was upheld for the RSA protective factors. Levene's test p values for the RSA protective factors ranged from .100 to .334.

Using Pillai's Trace as the criterion, multivariate tests revealed that there was no statistically significant difference between Jamaica and the U.S. on the linear combination of the five RSA protective factors that contribute to resilience, Pillai's Trace

= .021, $F(5, 436) = 1.893$, $p = .094$, $\eta_p^2 = .021$. However, there was a statistically significant difference between Jamaica and the U.S. on the linear combination of protective factors when spirituality was included in the analysis, Pillai's Trace = .073, $F(6, 435) = 5.672$, $p < .001$, $\eta_p^2 = .073$. MANOVA results revealed that 7.3% of the variance in outcome resilience among the participants from the two countries can be explained by five RSA protective factors and spirituality.

ANOVA tests of between-subjects effects indicated that *perception of self* ($p = .045$) and spirituality ($p \leq .001$) were significantly different between groups. The means and standard deviations of the protective factors are shown in Table 32. On the linear combination of protective factors, *perception of self* was significantly higher among Jamaican participants ($M = 5.17$) than among U.S. participants ($M = 4.92$). Spirituality was also significantly higher among Jamaicans ($M = 3.47$) than among U.S. participants ($M = 3.02$). Reliability estimates for the spirituality scale were low for the Jamaican sample ($\alpha = .618$) so the difference in spirituality between Jamaica and U.S. participants should be interpreted with caution.

The null hypothesis was rejected since MANOVA results showed a statistically significant difference between Jamaica and the U.S. when spirituality was included in the linear combination of protective factors that contribute to resilience.

Null Hypothesis Three

There is no interaction between I/C cultural orientation and country of residence (Jamaica, Rwanda, and the U.S.) on the linear combination of protective factors that contribute to resilience as a process.

Again, the distribution of participants endorsing EICO and ECCO did not allow for meaningful or methodologically sound between-group comparisons for Jamaica and the U.S. Therefore, the proposed MANOVA was not performed. Table 33 shows the means and standard deviations of the RSA protective factors by country and cultural orientation but given the low *n* for the EICO groups, the means are unlikely to be valid population estimates of RSA factors for the EICO groups.

Table 33

Means and Standard Deviations of Protective Factors by Cultural Orientation and Country of Residence – Jamaica and the U.S.

Jamaica				U.S.		
EICO = 5				EICO = 9		
ECCO = 164				ECCO = 264		
Variable	Group	<i>M</i>	<i>SD</i>	Group	<i>M</i>	<i>SD</i>
PS	EICO	4.73	1.43	EICO	5.14	1.14
	ECCO	5.18	1.31	ECCO	4.91	1.25
PF	EICO	5.65	0.87	EICO	5.27	1.09
	ECCO	5.52	1.52	ECCO	5.52	1.26
SC	EICO	4.40	0.92	EICO	4.70	0.94
	ECCO	5.01	1.19	ECCO	4.86	1.28
FC	EICO	4.43	1.18	EICO	4.77	1.34
	ECCO	5.12	1.37	ECCO	5.18	1.22
SR	EICO	4.41	1.55	EICO	5.41	1.34
	ECCO	5.75	1.03	ECCO	5.78	1.01
Spirituality	EICO	3.20	0.75	EICO	3.11	0.96
	ECCO	3.48	0.69	ECCO	3.02	1.08

Note. EICO = evaluative individualistic collectivistic orientation; ECCO = evaluative collectivistic cultural orientation; PS = perception of self, PF = planned future, SC = social competence, FC = family cohesion, SR = social resources.

Since the sample distribution did not allow for analysis of the interaction between I/C cultural orientation and country of residence, a canonical correlation analysis was

used to explore the relationship between the set of protective factors and ECO, country of residence, and ECO*country of residence. An interaction variable (ECO*reside) was created in order to determine its relationship to the protective factors. The set of predictors (independent variables) were: ECO, country of residence, and ECO*reside. The set of dependent variables were the six protective factors (five RSA plus spirituality; *structured style* was excluded due to unacceptable reliability estimates).

Table 34 shows the Pearson correlation coefficients in the canonical correlation analysis. The correlation coefficients in Table 34 indicates that the correlation between the interaction variable (ECO*Reside) and the protective factors are near zero (-.006 to -.125). However, there was a small, positive correlation between spirituality and ECO suggesting that higher spirituality was associated with higher collectivism among Jamaicans.

Table 34

Canonical Correlations Analysis - Pearson r

Variable	Pearson r								
	PS	PF	SC	FC	SR	Spirituality	Reside	ECO	Inter
PS		.581	.476	.366	.467	.225	-.095	.113	-.070
PF			.430	.311	.386	.191	-.003	.072	.012
SC				.377	.520	.267	-.052	.164	-.006
FC					.611	.261	.026	.165	.076
SR						.213	.027	.160	.064
Spirituality							-.226	.332	-.125
Reside								-.076	.954
ECO									.203
Inter									

Note. PS = perception of self, PF = planned future, SC = social competence, FC = family cohesion, SR = social resources, ECO = evaluative cultural orientation, Inter = evaluative cultural orientation*country of residence

When the five RSA protective factors and spirituality were included in the canonical correlations analysis, the relationship between the sets of variates was statistically significant, Wilks' Lambda = .806, Approximate $F(18, 1225.194) = 5.393$, $p < .001$. Table 35 shows the canonical correlations, eigenvalues, and percentages of variance explained for each function. Of the three functions extracted, only the first function was statistically significant. Approximately 81.90% of the shared variance was attributable to the first function. The second function accounted for 12.07% and the third function accounted for 6.03%. Table 35 also shows that the first function has a canonical correlation of .400. This indicates that for the first function the predictor variate explains 16% of the variance of the dependent variate as indexed by the squared canonical correlation.

Table 35

Canonical Correlations, Eigenvalues and Percent Variance Explained for Each Canonical Function

Function	Correlations	Eigenvalue	% Variance Explained
1	.400	.190	81.90
2	.166	.028	12.07
3	.117	.014	6.03

The standardized canonical correlation coefficients and canonical loadings are shown in Table 36. The correlation coefficients indicate that the first predictor function is associated with moderate collectivism among Jamaicans. Taken together, the first function and the canonical correlation coefficients indicate that there was a positive

Table 36

Standardized Canonical Correlation Coefficients and Canonical Loadings for the First Function

Function	Correlations Coefficient	Canonical Loadings
Predictor Variables		
Reside	-.940	-.587
ECO	.693	.850
Inter (ECO*Reside)	.425	-.331
Dependent Variables:		
Perception of self	.184	.347
Planned future	-.206	.144
Social competence	.151	.400
Family cohesion	.000	.304
Social resources	.003	.284
Spirituality	.930	.973

Note. ECO = evaluative cultural orientation

relationship between ECO and spirituality among participants who resided in Jamaica (higher collectivism is associated with higher spirituality). However, there was no significant relationship between the interaction variable (ECO *Reside) and the set of protective factors. As shown in Table 36, the structure coefficient for the interaction variable is .425 (less than half of the coefficient for Reside). Also, the canonical loadings for the interaction variable is -.33 (the least important of the three predictor variables). These results suggest that the interaction between residence and cultural orientation (i.e., the effect of cultural orientation depends on which country they reside) may not be important in explaining protective factors.

Although the I/C distribution in the sample did not allow for the proposed null hypothesis to be tested, the substitute hypothesis showed that the interaction between

ECO and country of residence was not significant in explaining the importance of the set of protective factors.

Null Hypothesis Four

There is no significant difference between individualistic compared to collectivistic participants from Jamaica, Rwanda, and the U.S. in outcome resilience as measured by the BRS.

The distribution of EICO (Jamaica $n = 5$; U.S. $n = 9$) and ECCO (Jamaica $n = 164$; U.S. $n = 264$) in each country, did not allow for hypothesis testing or for meaningful or methodologically sound comparisons. Therefore, the proposed ANOVA was not performed to analyze differences in outcome resilience (BRS) between EICO and ECCO groups in each country. However, bivariate correlational analysis was conducted to analyze the relationship between ECO and outcome resilience (BRS). Pearson correlation (r) shows the extent to which a linear relationship exists between ECO and BRS resilience. This procedure shows the degree to which the independent variable (ECO) is related to the dependent variables (BRS). Table 37 shows the Pearson r results. Evaluative Cultural Orientation was not significantly related to outcome resilience (BRS) for either the Jamaica or the U.S. sample. The correlation between ECO and BRS was less than 0.1 for each country.

Null Hypothesis Five

There is no significant difference between participants from Jamaica, Rwanda, and the U.S. in resilience as measured by the BRS.

With Rwanda excluded from the analysis due to low BRS reliability estimates (α

Table 37

Means, Standard Deviations, and Correlations of Evaluative Cultural Orientation and BRS Resilience by Country (N = 442)

		Pearson <i>r</i>		ECO	BRS
	Variable	<i>M</i>	<i>SD</i>		
Jamaica					
<i>n</i> = 169	ECO	5.39	0.67		.083
	BRS	3.47	0.69	.083	
U.S.					
<i>n</i> = 273	ECO	5.29	0.66		.049
	BRS	3.34	0.84	.049	

Note. ECO = evaluative cultural orientation; BRS = Brief Resilience Scale

= .363), ANOVA was not needed to test the hypothesis. Instead, an IST was performed to examine differences in BRS (outcome resilience) between participants from Jamaica and the U.S. Levene's test of equality of variance assumption was not met ($p = .004$) indicating that the error variance of the dependent variable (BRS) was unequal across the groups (country of residence).

Table 38 presents IST results. With equal variance not assumed, results of the IST revealed that there was no significant difference between participants from Jamaica compared to participants from the U.S. in BRS (outcome) resilience ($t = 1.700, p = .090, d = 0.169$). Mean BRS scores for both Jamaica and the U.S. were between the 3 = *neutral* to 4 = *agree range*. Recall that a mean value of 3 on the BRS represents *neutral* on a 5-point Likert-type scale with 1 = *strongly disagree*, and 5 = *strongly agree*.

Based on the findings, the null hypothesis is retained indicating that there is no significant difference between participants from Jamaica and the U.S. in resilience as measured by the BRS. Recall that Rwanda was not included due to unreliable ECO.

Table 38

Independent Sample Test of Differences in Mean BRS Between Participants from Jamaica & U.S.

	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	Cohen's <i>d</i>	<i>CI</i>	
								Lower	Upper
BRS - Jamaica	169	3.47	0.69						
				1.700	403.637	.090	0.169	-.01972	.27139
BRS - U.S.	273	3.34	0.84						

Note. BRS = Brief Resilience Scale

Hypotheses Six and Seven

Null Hypothesis Six

Perception of self, planned future, structured style, social competence, family cohesion, and social resources are not significant predictors of resilience as measured by the BRS among individualistic and collectivistic participants from Jamaica, Rwanda, and the U.S.

Null Hypothesis Seven

Perception of self, planned future, structured style, social competence, family cohesion, and social resources, and spirituality are not significant predictors of resilience as measured by the BRS among individualistic and collectivistic participants from Jamaica, Rwanda, and the U.S.

Test of Assumptions

Prior to testing hypotheses six and seven, tests of assumptions were conducted to determine whether or not all variables met criteria for regression analysis. Based on

visual inspection of the SPSS Q-Q plots as well as skewness and kurtosis statistics described earlier in the chapter, all variables met the assumption of normality with the exception of *social resources* for the U.S. (skewness = -1.143; kurtosis = 1.221), *planned future* for Jamaica (skewness = -1.419; kurtosis = 1.683) and the U.S. (skewness = -1.070; kurtosis = 1.111), and spirituality for Jamaica (skewness = -1.632; kurtosis = 3.089) and the U.S. (skewness = -1.224). These skewness and kurtosis values may impact the interpretation of the results. However, since visual inspection of the regression standardized residual normality plots indicated that residual data points were well within the normal distribution curve, it was determined that those skewed and leptokurtic predictor unit values did not compromise the multiple regression model.

Visual inspection of the matrix scatter plots showed that a linear relationship can be established between the variables. The scatter plots showed that the relationship between the dependent variable and predictors can be represented by a straight line within the plots. Visual inspection of the regression standardized residual scatter plot graphs also showed that the points were randomly dispersed around the horizontal axis indicating that the linearity assumption was met.

Multicollinearity was assessed by examining the correlation between variables as well as the tolerance and variance inflation factor (VIF). As a general rule of thumb, correlations greater than 0.2 but less than 0.9 indicate that variables are related but not multicollinear (Grande, 2015). As shown in Table 39 bivariate correlations indicated that all variables had correlation values that were below the .9 threshold indicating that variables were not multicollinear.

Table 39

Means, Standard Deviations, and Correlations of BRS and Protective Factors Including Spirituality Among ECCO Participants - Jamaica and the U.S.

Pearson <i>r</i>									
	Variable	Mean	<i>SD</i>	PS	PF	SC	FC	SR	Spirituality
Jamaica (<i>N</i> = 164)	BRS	3.47	0.70	.623	.361	.389	.269	.377	.247
	PS	5.18	1.31		.573	.452	.433	.513	.356
	PF	5.52	1.52			.472	.314	.368	.296
	SC	5.01	1.19				.328	.451	.286
	FC	5.12	1.37					.582	.287
	SR	5.75	1.03						.267
	Spirituality	3.48	0.69						
U.S. (<i>N</i> = 264)	BRS	3.34	0.84	.672	.389	.387	.260	.216	.167
	PS	4.91	1.25		.597	.485	.329	.428	.149
	PF	5.52	1.26			.410	.311	.416	.158
	SC	4.86	1.28				.416	.573	.256
	FC	5.18	1.22					.621	.275
	SR	5.78	1.01						.205
	Spirituality	3.02	1.08						

Note. Structured style not included (Jamaica structured style $\alpha = .521$; U.S.: structured style $\alpha = .589$); BRS = Brief Resilience Scale; PS = perception of self, PF = planned future, SC = social competence, FC = family cohesion, SR = social resources.

Additionally, tolerance and VIF were inspected to further examine collinearity. Tolerance is the amount of a predictor's variance that is not accounted for by other predictors ($1 - R^2$). Lower tolerance values indicate stronger relationships between predictors and a greater chance of obtaining multicollinearity. Tolerance values below .40 are worthy of concern or are problematic (Meyers et al., 2013). Variance inflation factor is calculated as 1 divided by tolerance: $1/(1 - R^2)$ and indicates the extent to which the relation among the predictor variables inflates the standard error of the regression coefficient. In other words, as the name suggests, it provides an indication of the degree to which the variance is inflated. An increased standard error potentially reduces the chance of obtaining a significant regression coefficient. A VIF of 2.50 is associated with a tolerance of .40 and a VIF of 10 is associated with a tolerance of .10. As a general rule of thumb: Variance inflation factors greater than 4 are questionable or warrant further investigation into the relationship between the predictors while VIFs greater than 10 indicates major multicollinearity issues (Myers et al., 2013). Based on the tolerance and VIF criteria, all variables were within acceptable levels of collinearity. The standard regression output show that tolerance ranged from .476 to .675 and VIF ranged from 1.481 to 2.101. When spirituality was included as a predictor, tolerance ranged from .531 to .833 and VIF ranged from 1.113 to 2.103.

Results

For Hypotheses six and seven, Rwanda was excluded from the analysis because the BRS had unacceptably low reliability estimates ($\alpha = .363$) and could not be considered a reliable measure of outcome resilience for the Rwanda sample.

Additionally, EICO was excluded from the regression analysis for Jamaica and the U.S.

because there were only five EICO participants in the Jamaica sample and nine in the U.S. sample. Those EICO numbers did not provide adequate power (at least 20 cases per predictor) for meaningful data analysis, therefore the regression model was produced only for collectivists (ECCO) from Jamaica and the U.S. *Structured style* was also excluded from the analysis due to low reliability estimates for Jamaica ($\alpha = .521$) and the U.S. ($\alpha = .589$).

Null Hypothesis Six

Perception of self, planned future, structured style, social competence, family cohesion, and social resources are not significant predictors of resilience as measured by the BRS among individualistic and collectivistic participants from Jamaica, Rwanda, and the U.S.

Table 39 shows the means, standard deviations and bivariate correlations of the variables in the regression analysis. For the Jamaica sample, there was a small to moderate positive correlation between BRS (outcome) resilience and all predictor variables. Resilience Scale for Adults predictor correlations ranged from .269 to .623. For the U.S. sample, there was also a small to moderate positive correlation between BRS (outcome) resilience and all predictor variables. Resilience Scale for Adults predictor correlations ranged from .216 to .672.

Table 40 shows the regression model summary for each country. When the five RSA predictor variables (*structured style* excluded; $\alpha = .589$) were used in two separate standard regression models to predict BRS (outcome) resilience among collectivists from Jamaica and the U.S., each regression model was statistically significant. For participants from Jamaica, the prediction model was statistically significant, $F(5, 158) = 21.655$, $p <$

Table 40

Regression Model Summary – Jamaica and the U.S. ^a

	Model	<i>R</i>	<i>R</i> Square	Adjusted <i>R</i> Square	F Change	<i>df</i> 1	<i>df</i> 2	<i>p</i>
Jamaica	1	.638 ^b	.407	.388	21.655	5	158	.000
U.S.	1	.693 ^c	.481	.471	47.788	5	258	.000

Note. a. Dependent variable: mean BRS; b. Predictors (Constant), social resources, planned future, social competence, family cohesion, perception of self; c. Predictors (Constant), social resources, planned future, social competence, family cohesion, perception of self.

.001, $R^2 = .407$. The set of 5 RSA predictors accounted for 40.7% of the variance in BRS (outcome) resilience.

Table 41 shows the standard regression results for each country. *Perception of self* ($\beta = .572$) was the only significant predictor in the model for the Jamaica sample. The unique variance explained by *perception of self*, as indexed by the squared semi-partial (part) correlations (sr^2) was 0.178. This indicates that 17.8% of the variance in BRS (outcome) resilience for the Jamaica sample can be explained by *perception of self*. The structure coefficient (Pearson r divided by multiple r [square root of multiple R]) explains the unique correlation between a single predictor and the variate or outcome variable. Structure r ($r_s = 0.97$) associated with *perception of self* suggests that there is a very high correlation between *perception of self* alone and the latent variable “bouncing back” as represented by BRS (outcome) resilience. Higher *perception of self* among collectivists in Jamaica strongly contributes to higher BRS (outcome) resilience. Note also that, as shown in Table 41 β -value of .572 suggests that when included with the set

Table 41

Standard Regression Results with 5 RSA Factors as Predictors for Collectivist (ECCO) Participants - (Jamaica and the U.S.)

Model	B	SE	Beta (β)	<i>t</i>	<i>p</i>	Partial correlation	Part correlations	CI (95%)		Tolerance	VIF
								Lower	Upper		
Jamaica											
Constant	1.458	.263		5.546	.000			.939	1.977		
PS	.305	.044	.572	6.885	.000	.480	.422	.218	.393	.544	1.837
PF	-.019	.036	-.040	-.512	.609	-.041	-.031	-.090	.053	.613	1.631
SC	.081	.044	.137	1.832	.069	.144	.112	-.006	.168	.675	1.481
FC	-.025	.040	-.048	-.621	.535	-.049	-.038	-.103	.054	.636	1.574
SR	.044	.057	.065	.778	.438	.062	.048	-.068	.156	.544	1.837
U.S.											
Constant	1.343	.238		5.650	.000			.875	1.811		
PS	.450	.040	.663	11.124	.000	.569	.499	.370	.529	.566	1.765
PF	-.009	.039	-.013	-.224	.823	-.014	-.010	-.085	.067	.608	1.646
SC	.097	.038	.147	2.528	.012	.155	.113	.021	.172	.595	1.681
FC	.085	.040	.123	2.138	.033	.132	.096	.007	.164	.607	1.649
SR	-.186	.054	-.223	-3.433	.001	-.209	-.154	-.293	-.079	.476	2.101

Note. Jamaica: $R^2 = .407$, $F(5, 158) = 21.655$, $p < .001$; U.S.: $R^2 = .481$, $F(5, 258) = 47.788$, $p < .001$

of five predictors, moderate (not high) changes/increase in *perception of self* were associated with moderate increases in BRS (outcome) resilience.

In the case of the U.S. sample, Table 40 also shows that for collectivists from the U.S., the prediction model was statistically significant, $F(5, 258) = 47.788$, $p < .001$, $R^2 = .481$. This indicates that the set of five RSA predictors accounted for 48.1% of the variance in BRS (outcome) resilience. As shown in the standard regression results in Table 41, *Perception of self* was also a significant predictor of BRS (outcome) resilience among U.S. collectivists ($\beta = .663$). The squared semi-partial correlations ($sr^2 = .249$) shows that *perception of self* accounts for 24.9% of the variance in BRS (outcome) resilience. Similar to the findings pertaining to the Jamaica sample, *perception of self* for the U.S. sample also has a structure r of 0.97 suggesting that, among U.S. collectivists, there is a very high positive correlation between *perception of self* alone and the underlying variate represented by BRS (outcome) resilience. Higher *perception of self* contributes to higher BRS (outcome) resilience. However, Table 41 shows that when included with the set of five predictors, *perception of self* ($\beta = .663$; slightly higher than β - value of .572 for Jamaica) was also moderately (and not highly) correlated to BRS (outcome) resilience.

Unlike for Jamaica, Table 41 also shows that other significant predictors of BRS (outcome) resilience were found among U.S. collectivists: *social resources* which accounts for 2.37% of the variance in BRS (outcome) resilience, *social competence* which accounts for 1.28% of the variance, and *family cohesion* which accounts for less than 1% of the variance ($sr^2 = .009$). Together, the four significant predictors accounted for 29.47% of the variance in BRS (outcome resilience). As a single predictor, *social*

resources ($r_s = 0.31$) has a small positive correlation to BRS (outcome) resilience. By itself, a small increase in *social resources* is associated with a small increase in BRS (outcome) resilience. However, when included with the set of five RSA predictors, lower *social resources* ($\beta = -.223$) is associated with higher BRS (outcome) resilience. Small to moderate increases in *social competence* ($\beta = .147$, $r = .387$, $r_s = .55$) were associated with small to moderate increase in BRS (outcome resilience). Small increases in *family cohesion* ($\beta = .123$, $r = .260$, $r_s = .37$) were associated with small increases in BRS. *Planned future* was not a significant predictor of BRS (outcome) resilience.

The standard regression equation for Jamaica is:

$$\text{ECCO BRS (outcome) Resilience} = (1.458) (\text{constant}) + (.305) (\text{PS}) + (.081) (\text{SC}) + (.044) (\text{SR}) - (.025) (\text{FC}) - (.019) (\text{PF})$$

The standard regression equation for the U.S. is:

$$\text{ECCO BRS (outcome) Resilience} = (1.343) (\text{constant}) + (.450) (\text{PS}) - (.186) (\text{SR}) + (.097) (\text{SC}) + (.085) (\text{FC}) - (.009) (\text{PF})$$

Based on the disparity in the distribution of EICO and ECCO in the sample, the study did not test the null hypothesis that the set of RSA predictors are not significant predictors of resilience as measured by the BRS among individualistic and collectivistic groups. Rather, the null hypothesis was tested among collectivists alone. The findings indicate that some RSA protective factors are significant predictors of bouncing back as measured by BRS (outcome) resilience among collectivists in Jamaica as well as in the U.S.

Null Hypothesis Seven

Perception of self, planned future, structured style, social competence, family cohesion, social resources, and spirituality are not significant predictors of resilience as measured by the BRS among individualistic and collectivistic participants from Jamaica, Rwanda, and the U.S.

As previously shown in Table 39, Pearson r results revealed that for the Jamaica and the U.S. sample, there were small to moderate positive correlations between BRS (outcome) resilience and all predictor variables including spirituality. For Jamaica, the correlation between spirituality and BRS (outcome) resilience was .247; for the U.S., the correlation was .167.

Table 42 shows the regression model summary for each country. When the five RSA predictors and spirituality were included in two separate standard multiple regression analyses to predict BRS (outcome) resilience among ECCO participants (collectivists) from Jamaica and the U.S., both prediction models were statistically significant at $p < .001$.

Table 42

Regression Model Summary – Jamaica and the U.S (5 RSA Factors and Spirituality)^a

	Model	R	R Square	Adjusted R Square	F Change	df1	df2	p
Jamaica	1	.638 ^b	.407	.384	17.946	6	157	.000
U.S.	1	.695 ^c	.483	.471	40.027	6	257	.000

Note. a. Dependent variable: mean BRS; b. Predictors (Constant), spirituality, social resources, planned future, social competence, family cohesion, perception of self; c. Predictors (Constant), spirituality, perception of self, family cohesion, social competence, planned future, social resources.

For collectivists from Jamaica, $F(6, 157) = 17.946$, $p < .001$ with an R^2 of .407 indicates that the set of five RSA protective factors plus spirituality accounted for 40.7% of the variance in BRS (outcome) resilience. So, there was no change in the percentage of variance explained when spirituality was added as a predictor. Table 43 shows the standard regression results. As indexed by the squared semi-partial correlations, *perception of self* was the only significant predictor accounting for 17.22% of the variance in BRS (outcome) resilience. Structure r ($r_s = .97$) which represents the unique correlation between *perception of self* and the latent variate suggests that there is a very high correlation between *perception of self* alone and (BRS) outcome resilience. Higher *perception of self* explains higher BRS (outcome) resilience among collectivists in Jamaica. When included with the set of six predictors, moderate increases in *perception of self* ($\beta = .551$; $p < .001$) are associated with moderate increases in BRS (outcome) resilience.

Table 42 also shows that for collectivists from the U.S., $F(6, 257) = 40.027$, $p < .001$ with an R^2 of .483 indicates that the set of five RSA protective factors plus spirituality accounted for 48.3% of the variance in BRS (outcome) resilience. The inclusion of spirituality contributed only a 0.2% increase in the variance explained. Standard regression results presented in Table 43 show that *perception of self* ($\beta = .664$, $p < .001$) was the strongest predictor. Together with the set of predictors, moderate increases in *perception of self* are associated with moderate increases in BRS (outcome) resilience. The squared semi-partial correlations show that *perception of self* alone accounts for 25% of the unique variance in BRS (outcome) resilience. Structure coefficient ($r_s = .97$) shows that higher *perception of self* is correlated with higher

Table 43

Standard Regression Results with 5 RSA Factors and Spirituality as Predictors for Collectivist (ECCO) Participants (Jamaica and the U.S.)

			Beta			Partial	Part	CI (95%)		Tolerance	VIF
Model	B	SE	(β)	t	p	correlation	correlations	Lower	Upper		
Jamaica											
Constant	1.426	.297		4.796	.000			.839	2.014		
PS	.304	.045	.569	6.746	.000	.474	.415	.215	.393	.531	1.883
PF	-.019	.036	-.041	-.526	.599	-.042	-.032	-.091	.053	.610	1.640
SC	.080	.044	.135	1.795	.075	.142	.110	-.008	.167	.669	1.495
FC	-.026	.040	-.050	-.642	.522	-.051	-.039	-.104	.053	.627	1.595
SR	.044	.057	.065	.775	.440	.062	.048	-.068	.157	.544	1.837
Spirituality	.016	.068	.015	.229	.820	.018	.014	-.119	.150	.833	1.201
U.S.											
Constant	1.287	.243		5.287	.000			.808	1.766		
PS	.450	.040	.664	11.141	.000	.571	.500	.371	.530	.566	1.766
PF	-.010	.039	-.015	-.264	.792	-.016	-.012	-.086	.066	.607	1.648
SC	.091	.039	.138	2.347	.020	.145	.105	.015	.167	.582	1.717
FC	.078	.041	.112	1.916	.056	.119	.086	-.002	.157	.587	1.703
SR	-.184	.054	-.221	-3.396	.001	-.207	-.152	-.291	-.077	.476	2.103
Spirituality	.039	.037	.050	1.057	.292	.066	.047	-.034	.112	.898	1.113

Note. Jamaica: $R^2 = .407$, $F(6, 157) = 17.946$, $p < .001$; U.S. $R^2 = .483$, $F(6, 257) = 40.027$, $p < .001$

measures on the latent variate “bouncing back” as represented by BRS (outcome) resilience.

Social competence ($\beta = .138, r = .387, r_s = .55, p = .020$), which accounted for 1.10% of the variance, and *social resources* ($\beta = -.221, r = .216, r_s = .31, p = .001$), which accounted for 2.31% of the variance were also significant predictors of BRS (outcome) resilience when spirituality was included as a predictor. The unique correlation ($r_s = .55$) between *social competence* and BRS (outcome) resilience suggest that a moderate increase in *social competence* was associated with a moderate increase in BRS (outcome) resilience. However, the weight of the predictor ($\beta = .138$) was reduced when included in the set of six predictors. This suggests that in the linear combination of predictors, a small increase in *social competence* was associated with a small increase in BRS (outcome) resilience. Likewise, the unique correlation between *social resources* ($r_s = .31$) and BRS (outcome) resilience suggests that small changes in *social resources* were associated with small changes in BRS (outcome) resilience. Beta weight ($\beta = -.222$) suggests that there was a change in the direction of how *social resources* was associated with BRS resilience when included in the linear combination of predictors. Small decreases in *social resources* are associated with small increases in BRS (outcome) resilience.

Taken together, the set of three significant predictors accounted for 28.41% of the variance in BRS (outcome) resilience. When spirituality was included in the standard regression analysis, *Family cohesion* ($\beta = .112, r = .260, p = .058$) was no longer a significant predictor.

The standard regression equation for ECCO participants (collectivists) in Jamaica is:

$$\text{BRS (outcome) Resilience} = (1.426) (\text{constant}) + (.304) (\text{PS}) + (.080) (\text{SC}) + (.044) (\text{SR}) \\ - (.026) (\text{FC}) - (.019) (\text{PF}) + (.016) \text{Spirituality}$$

The standard regression equation for ECCO participants (collectivists) in the U.S. is:

$$\text{BRS (outcome) Resilience} = (1.287) (\text{constant}) + (.450) (\text{PS}) - (.184) (\text{SR}) + (.091) (\text{SC}) \\ + (.078) (\text{FC}) + (.039) \text{spirituality} - (.010) (\text{PF})$$

Summary

The major findings are summarized below in bullet points for ease of reference.

Summary of Demographic Characteristics

- Characteristics most frequently endorsed by Jamaicans were single (46.2%), female (79.9%), between 18 and 29 years old (37.3%), residing in Jamaica between 18 and 29 years (37.3%), residing in central Jamaica (65.7%), having 20 or more years of education (38.5%), and having moderate income/resources (80.5%).
- Characteristics most frequently endorsed by Rwandans were single (63.5%), male (78.8%), between 18 and 29 years old (55.8%), residing in Rwanda between 18 and 29 years (55.8%), residing in the City of Kigali (73.1%), having between 17 and 19 years of education (40.4%), and having moderate income/resources (73.1%).
- Characteristics most frequently endorsed by Americans were single (45.8%), female (73.6%), between 18 and 29 years old (46.2%), residing in the U.S. for 18 to 29 years (37.7%), Caucasian American (62.6%), residing in the Midwest (63.0%), having 13 to 16 years of education (36.6%), and having moderate income/resources (73.6%).

Summary of Traumatic Life Events

- Among Jamaican participants, natural disaster was most frequently endorsed (97%). More than half the participants experienced the sudden/unexpected death of a loved one (85.2%), and unwanted sexual attention (52.7%) other than child sexual abuse.
- Among Rwandan participants, the sudden/unexpected death of a loved one was most frequently endorsed (92.3%). More than half the participants endorsed having a loved one survive a life-threatening illness (65.4%) and saw/heard family violence growing up (51.9%).
- Among U.S. participants, the sudden and unexpected death of a loved one was most frequently endorsed (81.3%). More than half endorsed that they have a loved one who survived a life-threatening illness (60.1%). Forty-eight percent endorsed having experienced unwanted sexual attention other than child sexual abuse.

Summary of Normative and Evaluative Cultural Orientation

- Based on the adjusted COS normative means and the cut-off scores employed in the current study (1 to 4 = ICO and 4.01 to 7 = CCO), about a third to about half of the participants in each of the countries perceived their culture to be individualistic:

Jamaica: ICO, $n = 77$, 45.6%; CCO, $n = 92$, 54.4%

Rwanda: ICO, $n = 17$, 32.7%; CCO, $n = 35$, 67.3%

U.S.: ICO, $n = 144$, 52.7%; CCO, $n = 129$, 47.3%.

- Low Cronbach's alpha reliability estimates even on the adjusted COS ECO scale ($\alpha = .484$) resulted in Rwanda being excluded from all hypothesis testing since ECO was the cultural orientation variable of interest in this study.

- For Jamaica and also for the U.S., nearly all participants endorsed internalized collectivistic values:

Jamaica: EICO $n = 5$, 3%; ECCO $n = 164$, 97%

U.S.: EICO $n = 9$, 2.4%; ECCO $n = 264$, 97.6%.

Summary of Resilience

- Mean values for RSA and RSA protective factors ranged between 5 and 6 on the 7-point semantic differential scale except *social competence* (for the Jamaica sample) and *perception of self* and *social competence* for the U.S. sample. The mean for those factors ranged between 4 and 5 on the scale. Cronbach alpha reliability estimates for *structured style* was unacceptably low for Jamaica ($\alpha = .521$) and the U.S. ($\alpha = .589$). The subscale was excluded from hypothesis testing.

- For each of the three countries, spirituality ranged between 3 = *sometimes true* and 4 = *often true* on the 5-point CD-RISC-25 subscale.

- For Jamaica and the U.S., BRS ranged between 3 = *neutral* and 4 = *agree* on the 5-point BRS scale. Brief Resilience Scale means for Rwanda were not reported due to unacceptably low reliability estimates ($\alpha = .363$). The BRS was not considered a reliable measure of outcome resilience among the Rwanda sample. Therefore, the Rwanda sample was excluded from all hypothesis testing that involved the BRS.

Summary of Hypothesis Testing

- Hypothesis One: The considerably unequal distribution of EICO and ECCO in the Jamaica and U.S. sample did not allow for meaningful or methodologically sound MANOVA analyses of differences between EICO and ECCO in the RSA protective

factors and spirituality that contribute to resilience as a process. Instead, Pearson r was used to examine the relationship between ECO in general and protective factors. Results revealed a mix of significant ($p < .01$ and $p < .05$) and nonsignificant correlations that ranged from .113 to .398 for Jamaica and from .041 to .303 for the U.S. The predictors and their values are shown in Table 32.

- Hypothesis Two: There was no statistically significant difference between Jamaica and the U.S. when only the five RSA protective factors were included in the MANOVA analysis: Pillai's Trace = .021, $F(5, 436) = 1.893$, $p = .094$, $\eta_p^2 = .021$. However, when spirituality was added as a factor, there was a statistically significant difference between Jamaica and the U.S. on the linear combination of protective factors (five RSA and spirituality) that contributed to resilience, Pillai's Trace = .073, $F(6, 435) = 5.672$, $p < .001$, $\eta_p^2 = .073$. The results indicate that 7.3% of the variance in BRS scores between the two countries can be explained by five protective RSA factors and spirituality. Therefore, the null hypothesis was rejected.

- Hypothesis Three: The wide disparity in the distribution of EICO and ECCO in Jamaica and the U.S. samples did not allow for meaningful or methodologically sound MANOVA analyses to determine whether there was a significant interaction between I/C cultural orientation and country of residence on the linear combination of protective factors that contribute to resilience as a process. Instead a canonical correlation analysis was used to examine the relationship between the set of protective factors and ECO in general. Results revealed that the relationship between the sets of variates was statistically significant, Wilks' Lambda = .806, Approximate $F(18, 1225.194) = 5.393$, p

< .001. The predictor variate (ECO, country of residence and ECO * country residence) explained 16% of the variance in the dependent variate (BRS [outcome] resilience).

- Hypothesis Four: The wide disparity in the distribution of EICO and ECCO in each country did not allow for meaningful or methodologically sound comparisons of differences in BRS means between EICO and ECCO from Jamaica and the U.S. The overall means were reported in Table 32 but the EICO means are unlikely to be valid population estimates of BRS for the EICO groups given the low *ns* for the EICO groups. Alternate Pearson correlation analysis was conducted. The results showed that ECO was not significantly related to outcome resilience (BRS) for Jamaica or the U.S. sample.

- Hypothesis Five: Independent samples *t* test results revealed that there was no significant difference between participants from Jamaica compared to the U.S. in the level of BRS (outcome) resilience ($t = 1.700, p = .090, d = 0.169$).

- Hypothesis Six: Standard multiple regression analysis results showed that *perception of self* was the only significant predictor among Jamaican participants, $F(5, 158) = 21.655, p < .001, R^2 = .407$. The model explained 40.7% of the variance in BRS (outcome) resilience. *Perception of self, social competence, social resources, and family cohesion* were significant predictors among U.S. participants, $F(5, 258) = 47.788, p < .001, R^2 = .481$. The model explained about 48.1% of the variance in outcome resilience.

- Hypothesis Seven: *Perception of self* remained a significant predictor among Jamaican participants when spirituality was added to the regression analysis, $F(6, 157) = 17.946, p < .001$ with an R^2 of .407, but spirituality's inclusion resulted in no increase in variance explained by the overall model. Among U.S. participants, *perception of self, social competence* and *social resources* remained significant predictors but with no

discernable increase in variance explained by the overall model when spirituality was added as a predictor, $F(6, 257) = 40.027$, $p < .001$ with an R^2 of .483. R^2 increased by 0.2%. *Family cohesion* was no longer a significant predictor when spirituality was added to the U.S. model. Additionally, spirituality was not a significant predictor of BRS (outcome) resilience among ECCO in either the Jamaica or the U.S. samples.

Results for Hypotheses Six and Seven indicate that we can reject the revised null hypotheses and conclude that some RSA protective factors are significant predictors of BRS (outcome) resilience among collectivists in Jamaica and the U.S. (Note that EICO was excluded from the analyses for Hypotheses six and seven due to low numbers of EICO [individualists] participants [<10] from each country).

Chapter 5 will discuss implications of the findings in light of the extant literature. Recommendations for clinical practice and future research are also presented.

CHAPTER 5

SUMMARY, DISCUSSION, AND IMPLICATIONS

Introduction

Chapter 5 summarizes the information presented in the previous chapters, including the purpose of the study, summary of the literature review and methodology. The main findings of the study will be discussed in light of extant literature. Contributions of the study, limitations, implications of the findings for intervention efforts and clinical settings, and recommendations for future research are presented.

Purpose of the Study

The purpose of the study was to present culturally relevant findings that clarify some specific protective factors that are most influential in promoting resilience among individualists and among collectivists in Jamaica, Rwanda, and the U.S. It was expected that the factors that are protective for individualists would differ from those that are protective for collectivists. It was also expected that those factors would further differ depending on the country. The researcher sought to achieve this purpose by way of extensive literature review, establishing the presence of risk using the TLEQ, identifying participants' cultural orientations using the COS, and investigating protective factors (resilience as a process) using the RSA and CD-RISC-25 spirituality factor that contribute to bouncing back (resilience as outcome) using the BRS. Chapters 1 and 2 discussed the importance of a contextual understanding of resilience. The findings should

prove useful for informing future resilience research efforts as well as prevention and intervention efforts.

Summary of the Literature Review

Resilience is defined as “the process and outcome of successfully adapting to difficult or challenging life experiences” (VandenBos, 2015, p. 910). It has to do with bouncing back from difficult circumstances (APA, 2017a; Smith et al., 2010) and overcoming risk or adversity (Masten, 2001). It is a dynamic process that fluctuates over time and situations (Luthar et al., 2000). Resilience is marked by “good outcome” despite potential threat to development (Masten, 2001, p. 228) or despite the experience of events that put individuals at risk for developing psychopathology (Rutter, 1999).

A review of the literature revealed a shift in resilience focus from investigating the factors that contribute to pathology such as poverty or mothers with schizophrenia, to examining protective factors that contribute to resilience. The study of children on the Isle of Wight (Rutter, 1979), the study of the children of Kauai (Werner & Smith, 1982), and Project Competence (Garmezy et al., 1984) are three landmark studies that provided examples of that shift. Those studies revealed that individual-, family-, and community-level factors are important in mitigating risk.

Resilience has been operationalized in the literature as a trait, a process, and an outcome. Consistent with the definition put forth by the *APA Dictionary of Psychology*, the current study operationalized resilience as a process and an outcome (VandenBos, 2015). This was achieved by using the RSA and CD-RISC-25 spirituality factor to measure resilience as a process. Examining resilience as a process involves investigation of the multi-level protective factors (individual-, family- and social-level factors) that

mitigate the negative effects of risk (Friborg et al., 2003; Garmezy, 1991; Rutter, 1985; Vanderbilt-Adriance & Shaw, 2008; Werner, 1989; White et al., 2008).

Individual-level protective factors are attributes of the individual that are associated with positive outcome. Individual-level protective factors assessed in the current study were *perception of self*, *planned future*, *structured style*, *social competence* (measured by the RSA), and spirituality (measured by the CD-RISC-25). Family-level protective factors include family-level interactions such as acceptance, nurturance, and appropriate emotional regulation (Zautra et al., 2010). Family-level protective factors were assessed using the *family cohesion* variable from the RSA. Community-level protective factors include aspects such as social support, educational, and vocational opportunities (Zautra et al., 2010). The current study assessed the social support aspect of community-level factors using the *social resources* variable on the RSA.

The BRS measured resilience as an outcome. The outcome measure assessed participants' capacity to bounce back after adversity. The term 'bouncing back' represents the most basic and original meaning of the word. It refers to the act of losing one's state of equilibrium and regaining homeostasis. It involves returning to a previous state of functioning. An individual might experience some instability during adversity but will regain normal levels of functioning. Bouncing back may or may not involve functioning above the norm (Smith et al., 2010).

The study of resilience implies the experience of risk/adversity (e.g., Kolar, 2011; Liebenberg & Ungar, 2009; Luthar et al., 2000; Masten, 2001). Risk is the likelihood of experiencing loss or harm associated with an event or the likelihood that a disease or disorder will occur (Kolar, 2011). In the current study, risk was operationalized as

traumatic life events. The broad term *traumatic life events* reflects one domain used by mental health professionals to refer to different kinds of events such as natural disasters, violence, abuse, accidents, among others that have potentially negative impact (Barad et al., 2007).

In the study of trauma and resilience some researchers (e.g., Khanlou & Wray, 2014; Kolar, 2011; Masten, 2001; Ungar, 2004, 2007) have suggested that further studies should explore culturally specific protective factors that contribute to resilience. Exploration of protective factors in a cultural context includes considering the dynamic interplay between the individual and his/her environment to assess how those interactions influence resilience.

Culture is defined as the distinctive customs, values, beliefs, knowledge, attitudes, and behaviors of a society or community or of a particular group within society (VandenBos, 2015). A review of the literature suggested that the use of Hofstede's IDV for nations as a whole is inadequate for classifying individual-level cultural orientation (Ailon, 2008; Hofstede, 2001). Therefore, the current study employed the constructs of I/C to operationalize and examine resilience within cultural contexts. The I/C constructs refer to differences in interpersonal dynamics. Some authors (e.g., Khanlou & Wray, 2014; Kolar, 2011; Liebenberg & Ungar, 2015; Ungar, 2011, 2013) posited that the dynamic social interactions in the lives of individuals play various roles in determining what factors protect them during times of adversity. Therefore, the researcher posited that differences in the interpersonal dynamics indicated by the I/C constructs are likely to influence differences in the protective factors that contribute to resilience.

Individualistic orientation broadly refers to individuals' preferences for autonomy and independence. Individualists place strong emphasis on values such as individual initiative, pleasure seeking, right to privacy, emotional independence, freedom of choice, and the right to define and determine their own goals. Collectivistic orientation broadly refers to individuals' preferences for group goals and interdependence. Characteristics and values that are emphasized among collectivists include emotional dependence; sharing and group decision-making; a deep, unquestioning sense of loyalty and obligation to the in-group; and solidarity (Hofstede, 2001; Kim et al., 1994; Triandis, 1994). Individualism implies a decontextualized reasoning style; collectivism implies that individuals' perceptions and causal reasoning are influenced by the social context, situation, and social roles (Oyserman et al., 2002). Kagitcibasi (1994) posited that differences in I/C values and behaviors have implications for differences in other psychological processes, which allows predictions to be made about a variety of behaviors. The I/C constructs show individual-level differences within culture and are useful for explaining individual and group differences in various psychological constructs (Kagitcibasi, 1994).

Three methods of measuring the I/C constructs were identified and discussed: Hofstede's approach, the priming approach, and the rating scales approach. Hofstede's IDV was developed from his study of IBM workers. Their expressed values were used to determine the individualistic or collectivistic ranking of the countries he studied. The priming approach uses questions and rating scales in an experimental design to prompt I/C cultural values before measuring responses to a dependent variable. Experimental and control groups are compared to see differences in responses when I/C values were

primed. The rating scales approach uses an I/C measure to assess individual-level I/C cultural orientation. The rating scales approach addressed concerns in the literature that country-level cultural values assigned by Hofstede are not applicable for individual-level analysis since they do not necessarily represent the values of each individual in that country. The rating scales approach eliminates the element of manipulation present in the priming approach. The approach is suitable for non-experimental designs such as the one employed in the current study. This study uses Hofstede's country-level IDV ranking to determine the I/C status of Jamaica, Rwanda and the U.S. It then uses the COS (Bierbrauer et al., 1994) to measure I/C at the individual level.

Methodology

The current study employed a descriptive, non-experimental, correlational, online survey research methodology to collect quantitative data. Data was collected via snowball sampling from Jamaica, Rwanda, and the U.S. According to Hofstede's (1980) country-level cultural orientation ratings, the U.S. is highly individualistic, Jamaica is less individualistic (more collectivistic than the U.S.) and Rwanda is likely to be most collectivistic of the three countries under study.

Email invitation was the primary means of data collection. The survey link was also posted on the researcher's Facebook and LinkedIn pages. The sample consisted of adults 18 years and older, who resided in Jamaica, Rwanda, or the U.S., and endorsed a lifetime experience of a traumatic event. Participants were recruited from universities, one college, business entities, one hospital, churches, and via list serves from two professional organizations. Other participants responded to the survey via social media.

Participants provided self-reports on surveys that measured the research variables. Lifetime experience of trauma was measured using the TLEQ. Normative cultural orientation and ECO was measured using the COS. Normative cultural orientation pertained to participants' perceptions of the frequency of certain social behaviors and cultural values in their country of residence. Evaluative cultural orientation pertained to participants' internalized beliefs about those social behaviors/cultural values. Resilience as a process (assessing multi-level protective factors) was measured using the RSA and CD-RISC-25 spirituality subscale. Resilience as an outcome (bouncing back) was measured using the BRS.

Discussion and Recommendations: Demographic Characteristics and Incidence of Trauma

Demographic characteristics of the sample and incidence of trauma are discussed below.

Jamaica

Demographic Characteristics: Implications and Recommendations

A total of 169 individuals comprised the sample from Jamaica. Participants ranged in age from 18 to 72 years old. About thirty-seven percent (37.3%) were between 18 and 29 years old. Mean age was 36 years. The percentage of females in the study (79.9%) was higher than that of Jamaica's general population (50.25%; World Population Review, 2017). This suggests that while females were sufficiently represented in the study, males were under-represented (20.1% in the sample compared to 49.75% in the general population). The 2016 Jamaica population census indicated that 64.81% of the

population were between 15 and 64 years old and 8.02% were 65 years and older. In the current study more than 95% of the sample were within the 18 to 64 age range.

Participants under 18 were not represented in this study. Although the age distribution in the study suggests that the sample appears to be sufficiently broad in terms of age, over-representation of the 18 to 64 age range may also impact the generalizability of the findings.

About two-thirds of the participants (65.7%) resided in the central region of the island. Additionally, there were fewer participants from East and West Jamaica. According to the Statistical Institute of Jamaica (2017) about 46% of the general population reside in Central Jamaica, therefore the sample over-represents people who reside in Central Jamaica. The majority of the participants (80.5%) had moderate income/resources, although participants with low income/resources (16.6%) and high income/resources (3%) also participated. Data from the World Bank Group (2016) suggest that Jamaica is an upper-middle income country. The income/resource levels of the participants appear to be representative of the population and the data from the 2016 World Bank Group. Therefore, the findings are likely to be representative of the moderate income-level of Jamaicans but not necessarily those of low and high income/resources. Data from the United Nations Development Program 2018 Statistical Update suggest that the mean years of schooling in Jamaica is 9.8 years. The expected year of schooling is 13.1 years which is generally the number of years of education required to complete secondary or high school, and at least a diploma, associates degree, or vocational training. In this study, 38.5% of the sample reported having 20 or more years of education. These statistics indicate that the number of years of education attained

by participants in this study exceeds the country's mean and expected years of schooling in the Jamaican population. The findings from this study are likely to be more representative of Jamaicans with more years of education.

To secure a sample that is more representative of the population in Jamaica, future researchers should consider more deliberate efforts to recruit participants from the Eastern and Western regions that were under-represented in this study, and from diverse entities including but not limited to universities, colleges, vocational schools, community youth groups, sports clubs, and church organizations. Such a strategy could serve to improve the generalizability of the findings. Future researchers should also consider that an online data collection methodology might not yield the desired response rate, so a research strategy that includes electronic as well as paper-pencil data collection is likely to be helpful.

Incidence of Trauma: Implications and Recommendations

The high endorsement of natural disaster among Jamaicans (97%) is consistent with information presented in Chapter 3 indicating that based on its geology and geography, Jamaica is prone to natural disasters (particularly hurricanes) that can negatively impact the lives of individuals. This finding begs the question of whether the frequency of natural disasters results in a "steeling effect" as discussed in Chapter 2. Therefore, future research could explore the relationship between type and frequency of trauma and impact on resilience outcomes.

**Survey Response Pattern: Implications
and Recommendations**

Although the informed consent stated that responses were anonymous and confidential, the number of participants from Rwanda who discontinued participation at one of the required demographic items (more than 20 compared to no one from Jamaica or the U.S.) suggests that some Rwandan participants may have been uncertain about the anonymity of their responses and about the potential implications of participation in the research.

When compared to six participants from Jamaica, and six from the U.S., the number of participants from Rwanda (32) who indicated that they had completed the survey more than one time was noticeably higher. If those 32 participants had in fact completed the survey more than one time, since they were deleted from the study it can be said that the strategy implemented by the researcher to attempt to address duplicate responses performed as expected. If those 32 participants had not actually completed the survey more than one time, the researcher suspects that the sentence structure of the screener question (“I completed the survey more than one time”), or less careful attention to the final question in the survey may have contributed to the number of participants positively endorsing this item. One university personnel in Rwanda, in consultation with other university workers stated that it would be difficult to be certain about the reasons for the response pattern. However, it was suggested that the conjecture presented in this study appear valid (I. Zirimwabagabo, personal communication, December 2018).

The item endorsement might have been different if the final screener item was worded as a question (e.g. “How many times did you complete this survey? (a) 1 time,

(b) more than 1 time”). Future researchers should consider avoiding questions that could potentially cause confusion about how participants are to respond. This is especially true if the research is being conducted in English, using an online research methodology (with no opportunity for the researcher to provide clarification) and distributed to participants whose first language is not English. Additionally, it might be helpful for future researchers to consider conducting a pilot study with their electronic survey to identify and correct potential pitfalls. However, the low response rate after a 6-month data collection period for this study should inform future researchers to expect delays for any pilot study approach.

Likewise, the low response rate for this study after a 6-month data collection period suggests that an online survey research methodology with the researcher being remote, might not be most effective in securing the desired number of responses from Rwandans. Future researchers should consider taking the time to form alliances and partnership with educators and researchers in Rwanda who already know and understand the people and the culture and who would be willing to actively participate in recruiting participants and overseeing the data collection process. Data collection might be more effective if it includes electronic as well as paper-pencil format for those who might find it more convenient to complete a paper-pencil survey. Researchers who have adequate funding and are interested in longer term research projects are also likely to benefit from traveling to Rwanda to conduct research there so long as the necessary research protocols are observed as outlined by the Ministry of Education in Rwanda. This will allow the researcher to be personally present to build trust, explain the research agenda, clarify concerns, and respond to questions to help allay possible fears about implications for

participation and the use of research findings. These strategies should contribute to a better response rate and more reliable data.

Demographic Characteristics: Implications and Recommendations

The Rwanda sample was not sufficiently broad in terms of age range (participants were between 19 and 41 years old). The mean age was 28. The percentage of females in the study (21.2%) was lower than that of the general population (51.8%: National Institute of Statistics of Rwanda, 2018b) in Rwanda. Males comprised 48.2% of the population (National Institute of Statistics of Rwanda, 2018b) and were over-represented in this study (78.8%). This suggests that the findings are more representative of Rwandans in the 19 to 41 age range and males than females. The gender distribution in this sample is largely due to the survey being distributed at a university in which the group of students to whom it was distributed was comprised of more males than females. Although the sample included participants from all five provinces, 73.1% resided in the City of Kigali. This suggests that the findings are likely to more closely represent people who reside in the City of Kigali than the general population of Rwanda. Rwanda is ranked as a low-income level country (The World Bank Group, 2016). However, participants having low income/resources (23.1%) were under-represented in the study. About 73% of the participants had moderate income/resources; 3.8% had high income/resources. Therefore, the findings are more representative of Rwandans with

moderate income/resources than the majority of the Rwandan population that have low income/resources.

Future researchers must first form alliances with residents of Rwanda; for example, university administrators and ministry officials who can provide guidance and assistance on research strategies that can help to secure a representative sample. It would be helpful for future researchers to extend the reach of their study outside the capital, Kigali to secure a sample that is more representative of other provinces in Rwanda. As it pertains to addressing the male:female ratio, future researchers can consider data collection in other private institutions since, due to multiple social factors, females generally outnumber males in private universities (as compared to public universities) in Rwanda (Tusiime, Otara, Kaleeba, Kaviira, & Tsinda, 2017). These strategies can help diversify the demographic characteristics of future studies toward improving the generalizability of research findings.

Incidence of Trauma: Implications and Recommendations

About 92% endorsed having experienced the sudden/unexpected death of a loved one. Although death is a universal human experience, this percentage likely includes participants' loss of loved ones during the 1994 genocide where an estimated 800,000 million Tutsis were killed (Jansen et al., 2015). Future researchers can explore whether there is a difference in the protective factors that contribute to resilience among participants who lost loved ones during the genocide and participants who experienced the loss of a loved one by other means, or participants who experienced other kinds of trauma. This kind of research can expand the trauma and resilience literature by shedding

light on whether there are differences in the factors that are protective when there is a collective traumatic experience, such as genocide, compared to other kinds of trauma that are less universally experienced.

United States

Demographic Characteristics: Implications and Recommendations

The U.S. sample comprised 273 participants between 18 to 75 years old. The mean age was 33. The age ranges represented included more than the college-age population that often comprises many social science research studies. Data from the U.S. Census Bureau Annual Social and Economic Supplement, 2016, indicates that less than 21% of the population were within the 18 to 29 age range, compared to 46% in this study's sample; 13.1% were within the 30 to 39 age range compared to 22.7% in this sample; 12.7% in the 40 to 49 age range compared to 16.5% in this sample; 13.7% within the 50 to 59 age range compared to 8.4% in this sample; and 21% over sixty years old compared to 6.2% in this sample. This indicates that the study under-represented the 50 and older population and over-represented the age ranges between 18 and 49 years old. Therefore, the findings may most closely represent people in the U.S. between 18 and 49 years old. However, the findings may not be generalizable to individuals who are 50 and older.

According to the United States Census Bureau 2010 census, 49.2% of the population were male; 50.8% were female. In the current study, 26% were male, 73.6% were female and 0.4% identified as other. This means that males were under-represented in the study while females were over-represented. Therefore, the results are likely to be

more representative of females than males. In terms of geographic regions, the 2010 census indicated that 18% resided in the Northeast compared to 6.2% in this study's sample, 22% in the Midwest compared to 63% in this sample, 37% in the South compared to 15% in this sample, and 23% in the West compared to 15.8% in this sample. The Midwest was over-represented in the study while the other three regions were under-represented. This suggests that the findings are likely to be more representative of people who reside in the Midwest than the other U.S. geographic regions.

Future researchers can expand the study by recruiting participants from the under-represented geographic regions. They can also recruit participants beyond colleges and universities to help secure a sample that is more broadly representative. These strategies should help improve the representativeness of some demographic characteristics that were under-represented due to resources available and the time-limited scope of this study.

Incidence of Trauma: Implications and Recommendations

The traumatic event most frequently endorsed was the sudden/unexpected death of a loved one (81.3%). This data likely reflects the universality of the experience of death. This data also implies a high likelihood that mental health professionals will be faced with the need to provide intervention for issues pertaining to grief/loss. Therefore, it is strongly recommended that further research be conducted to explore how individualists and collectivists differ as it pertains to the protective factors that contribute to resilience when dealing with a universal experience such as death of a loved one. Allen and Smith (2015) cautioned that interventions may prove to be ineffective if clinicians

apply interventions that are more relevant for one cultural orientation (e.g., individualism) when working with individuals from another cultural orientation (e.g., collectivism). Culturally mismatched treatment approaches could result in individuals either remaining traumatized or even being further traumatized.

Discussion of Major Findings: Cultural Orientation

Normative Cultural Orientation

The overall mean NCO scores (participant's perception of the presence and frequency of certain social behaviors/cultural values in their country of residence) for each country tended to range between 4 = *sometimes* and 5 = *often*. This suggests that contrary to Hofstede's (1980, 2001) findings, this study showed that, with mean NCO scores being closer to the *sometimes* range, neither of the three countries were perceived as having distinctly individualistic (the U.S.) or distinctly collectivistic (Jamaica and Rwanda) values as Hofstede postulated. In fact, based on the COS 7-point Likert-type scale (higher scores equal higher collectivism) and the I/C grouping criteria for this study, all three countries were perceived as having cultural values that tended to be toward the lower end of collectivism.

Not to be overlooked however, is that when the overall NCO scores were separated into NICO (COS values of 1 to 4) and NCCO (COS values of 4.01 to 7) it was observed that a little more than half of the U.S. participants (52.7%), less than half of the Jamaicans (45.6%), and only 32.7% of Rwandans perceived that the cultural values of their country of residence were toward the individualistic end of the scale. So, although the overall NCO mean scores showed little I/C cultural distinction (with tendency toward collectivism) and was inconsistent with Hofstede's findings, it can be said that more of

the participants from each country (although not an overwhelming majority for the U.S. and Jamaica) perceived that the values of their country of residence were in the direction of, or consistent with the findings posited by Hofstede. Therefore, in addition to drawing conclusions from the overall mean of the sample, it might be helpful for researchers who use self-report surveys (e.g., the COS) and cut-off scores to study culture to also visually inspect the frequencies and means of different participants' I/C sub-groups based on any pre-determined cut-off score criteria (e.g. NICO and NCCO) to also observe noteworthy trends and possible implications. This information can help inform researchers about whether the majority of participants endorsed cultural orientation consistent with Hofstede's findings even though the overall mean might suggest otherwise.

Evaluative Cultural Orientation

The ECO scores for Rwanda were not interpreted due to low reliability estimates ($\alpha = .484$). The low reliability estimate suggested that ECO findings could not be considered as a reliable representation of Rwandan's internalized cultural values. Therefore, only the sample from Jamaica and the U.S. were included in hypothesis testing while Rwanda was excluded from hypothesis testing. Further implications of the unreliability of ECO for the Rwanda sample will be discussed later in this chapter.

An important finding of this study was that although about one-half of the participants from Jamaica (45.6%) and the U.S. (52.7%) indicated that they perceived the cultural values of their country of residence to be more individualistic (NICO) than collectivistic (NCCO), EICO mean scores showed that only about 3% of participants from Jamaica and the U.S. internalized individualistic values. This outcome was different than the anticipated individualistic and collectivistic groups within each of the three

countries. Below are some possible explanations for the lack of individualistic groups in this study.

The U.S. is considered to be highly individualistic (Hofstede, 1980, 2001; Oyserman et al., 2002). However, in the current study, the ECCO mean scores showed that 97.6% of participants internalized collectivistic values. This finding demonstrates the fallacy of presupposing that individuals from a presumed individualistic society will have corresponding individualistic values and behaviors themselves (Kagitcibasi, 1994). As discussed in the next two paragraphs, there are factors other than simply belonging to a culture that influence people's I/C cultural orientation.

From a socio-economic and political perspective, Bianchi (2016) examined the relationship between changes in the economic climate in the U.S. and shifts in levels of I/C among Americans. The author found that individualism in America was influenced by fluctuation in the U.S. economy. During times of economic downturn, Americans placed less emphasis on individualistic values such as autonomy and independence and were more attuned to collectivistic values such as interdependence and relational values. Furthermore, the author suggested that this shift in I/C values during times of economic turmoil, uncertainty, and unpredictability emerges even when people themselves do not experience economic turmoil. Bianchi's (2016) findings suggest that the current socio-economic and political climate of uncertainty and unpredictability is possibly giving rise to higher collectivism in the U.S.

Additionally, Vandello and Cohen (1999) suggested that minority groups in the U.S. tend to be more collectivistic. In the current study, minorities (except *other*) had higher collectivism than Caucasian Americans (see Table 24), although statistical

analyses were not run. Additionally, the level of collectivism among Caucasian Americans ($M = 5.24$) in this sample was also well above the 4.0 cut-off I/C score. Oyserman et al. (2002) found that European Americans were found to have high levels of collectivism when feelings of belonging and satisfaction with being part of a group were sampled versus having a sense of duty or obligation to the group. Several items on the COS appear to have sampled feelings of belonging. For example, some items asked about feeling insulted when a family member was insulted, feeling lonely when not with family members, sharing ideas with loved ones, and consulting with family before making an important decision.

Additionally, the convenience snowball sampling data collection method may also have been a contributing factor. The CCO of the researcher of this study may have contributed to recruitment of collectivistic seed participants and subsequent collectivistic research participants via snowball sampling. Also, the bulk of research participants from both the U.S. and Jamaica were drawn from private Christian institutions. The literature shows that there is a significant positive correlation between spirituality, religiosity, and collectivism (Cem, De Guzman, & Carlo, 2004; Jha & Singh, 2014; Zarzycka, Tychmanowicz, & Gozdiewicz-Rostankowska, 2016). Implications for future research are discussed later in this chapter.

Finally, based on Vandello and Cohen's (1999) classification of regional differences in I/C and rankings of U.S. collectivism by state, the current study did not sample participants from more individualistic states such as Montana, Oregon, Nebraska, Wyoming, Colorado, North and South Dakota, among others. The universities from which many of the participants were drawn are located in more collectivistic states such

as Tennessee, Maryland, and Michigan. Seed participants were also located in more collectivistic states such as New York, New Jersey, Texas, Michigan, and Indiana.

Pertaining to the distribution of EICO and ECCO for the Jamaica sample, this study found that there were very few individualists in the sample ($n = 5$ of 169). However, in a cross-cultural study, Gooden and Preziosi (2011) surveyed Masters in business administration (MBA) students in the U.S. ($n = 105$), Jamaica ($n = 62$), and the Bahamas ($n = 68$) using Hofstede's 1994 Values Survey (HVS) and found a significant shift from Hofstede's findings with Jamaicans being high on individualism instead of the expected collectivism posited by Hofstede. Among other potential factors, the variability in these two research findings is possibly due to different I/C values sampled by items on the HVS versus the COS and differences in the demographic characteristics of the sample in each study (all participants surveyed by Gooden and Preziosi were Master of Business Administration students who held leadership positions in their places of employment). As recommended later in this chapter, the variability in these research findings suggests further exploration of I/C cultural orientation among Jamaicans is needed so that future researchers can have greater clarity about how best to adequately access both I/C cultural groups.

Evaluative Cultural Orientation: Rwanda

Since reliability was unacceptably low for the Rwandans on the ECO scale, the Rwandan participants were excluded from all hypotheses testing. According to Crouch, Mack, Wilson and Kwan (2017), several factors influence Cronbach's alpha reliability. Some factors include, but are not limited to test characteristics, characteristics of the sample (sample heterogeneity, differences in cultural views), and subsequent variability

in responses to test items. Pertaining to test characteristic, the COS is a self-report measure that relies on subjectivity of participants' responses. The COS evaluative items asked participants to indicate their approval or disapproval of certain social behaviors/cultural values. As an example, one COS normative item asked: "How often do people in your country of residence listen to the advice of their parents or close relatives when choosing a career?" The response options were: 1 = *not at all*, 2 = *very rarely*, 3 = *rarely*, 4 = *sometimes*, 5 = *often*, 6 = *very often*, 7 = *always*. The corresponding COS evaluative items required participants to indicate how they assessed those social behaviors and to indicate their degree of approval or disapproval. The response options were: 1 = *very bad*, 2 = *bad*, 3 = *rather bad*, 4 = *neither good nor bad*, 5 = *rather good*, 6 = *good*, 7 = *very good*. Pertaining to the characteristics of the sample, Rwandans reside in a post-genocide society. Following the violence of the 1994 genocide, Rwanda's social and political narratives have been closely monitored by the reigning government (Loyle, 2016).

Based on the above factors, it is likely that Rwandans may have been uncertain about the implications of their approval or disapproval of cultural values, particularly that the study was conducted by a foreign researcher but which was also approved by the Government. So, potential lack of trust in the researcher's agenda and uncertainty about possible implications of their approval or disapproval of cultural values may have contributed to variability in responses to test items and subsequent unreliable alpha coefficient. Although the researcher began the study aware of potential trust issues and took some steps to overcome the potential mistrust of outsiders (e.g., providing links to the researcher's social media, obtaining sponsorship from the local university, securing

the required approval of the country's government, and emails sent from the university's office), the efforts appeared to have been less successful than expected. Fujii's (2010) discussion of meta-data provides guidance on how researchers can make sense of data collected in settings such as Rwanda that have been affected by large-scale conflict and violence. Fujii's (2010) description of meta-data relevant to this study are the unspoken thoughts and feelings that participants may not articulate but which emerge in other ways such as denials and evasions. It is possible that in this study, Rwandan participants may have exhibited inconstant denial, evasion, or silence as they responded to test items which likely contributed to unreliable data.

Implications of ECO Distribution for Hypothesis Testing

Based on the distribution of EICO and ECCO in the samples from each country, meaningful and methodologically sound data analysis using EICO was not possible. Essentially, there was an insufficient number of individualists in the sample. Consequently:

- For Hypothesis One, the proposed MANOVA was not performed to test whether there was a significant difference between EICO and ECCO groups on the linear combination of RSA protective factors and spirituality that contribute to resilience as a process in each country because EICO groups could not be formed. Instead, Pearson correlation was performed to examine the relationship between ECO total scores and protective factors.
- For Hypothesis Two, since Rwanda was excluded from hypothesis testing, the proposed MANOVA was performed to examine differences only between Jamaica and

the U.S. on the linear combination of protective factors (with and without spirituality) that contribute to resilience as a process.

- For Hypothesis Three, the proposed MANOVA was not performed to examine if there was a significant interaction between EICO and ECCO groups by country of residence on the linear combination of protective factors (RSA and spirituality) that contribute to resilience as a process. Instead, canonical correlation analysis was used to explore the relationship between the set of six protective factors and the predictors which were ECO, country of residence, and ECO*country of residence.

- For Hypothesis Four, the proposed ANOVA was not performed to determine if there was a significant difference between EICO and ECCO in each country in the level of outcome resilience as measured by the BRS since an EICO group could not be identified. Instead, Pearson correlation (r) was used to analyze the extent to which a linear relationship exists between ECO total scores and BRS resilience.

- For Hypothesis Five, since Rwanda was excluded from the study, the proposed ANOVA was not performed to test differences between participants from Jamaica, Rwanda, and the U.S. in outcome resilience as measured by the BRS. Instead, an IST was used to examine differences in BRS (outcome resilience) between participants from only Jamaica and the U.S.

- For hypotheses six and seven, since Rwanda was excluded, and the sample from Jamaica and the U.S. contained an inadequate number of individualists, standard multiple regression analysis was performed using only the collectivist participants from Jamaica and the U.S. to determine whether the linear combination of protective factors were significant predictors of BRS (outcome) resilience.

Recommendations: Cultural Orientation

Following are recommendations based on the cultural orientation distribution in this study:

1. Although the literature suggests that the culture in the U.S. reflects prototypical individualism (Hofstede 1980, 2001; Oyserman et al., 2002), the geographic regions in the U.S. show variations on the I/C dimension (Vandello & Cohen, 1999). In this study, only nine individualists (3.3%) were identified in the U.S. Therefore, future researchers who desire to obtain a sample of both individualists and collectivists should seek to intentionally recruit participants from the regions that are known to show measurable variations (Vandello & Cohen, 1999) in I/C cultural orientation in order to increase the chances of successfully completing any research agenda that involves I/C comparison.
2. Since this study found only five individualists (3%) in Jamaica using the COS, yet Gooden and Preziosi (2011) used the HVS and found that their sample from Jamaica ($n = 62$) were highly individualistic, it is recommended that further research be conducted among diverse groups of participants across a wider stratum of the Jamaican society. This should help to expand the existing literature (e.g., Hofstede, 1998, 2001) regarding the I/C cultural values there. Specifically, such studies can shed light on whether samples may differ on the I/C dimension depending on various demographic characteristics. The findings can help guide I/C cross-cultural researchers in their recruitment/data collection strategies.
 - a. The researcher further recommends that future studies explore whether there are specific regions in Jamaica and Rwanda where residents are

likely to be higher or lower on the I/C dimension (similar to Vandello & Cohen's 1999 study for the U.S.). To date, no such studies have been identified in the literature, yet the existence of such studies would be valuable to future researchers to guide recruitment/data collection strategies in Jamaica and Rwanda, and provide context and clarity regarding I/C distribution in future research findings.

3. Since religion is known to positively correlate with collectivism, researchers should expect that recruiting participants with religious affiliations will likely yield a collectivistic sample. Therefore, recruiting non-religious participants might increase the chances of securing a sample that includes individualists.
4. Regarding survey hypotheses, this researcher recommends that researchers who seek to compare individualists and collectivists from different countries should approach their study with proposed substitute research agenda and hypotheses in the event that a meaningful sample of both groups is not obtained. Additionally, it might be helpful to first engage in an exploratory research agenda such as recommended in 2 and 2a above to determine that one has a reasonable methodology for involving both individualist and collectivist participants prior to pursuing a comparative research agenda.
 - a. Additionally, future researchers who seek to test similar hypotheses and further expand the I/C comparative agenda of this study should plan for a longer period of data collection (possibly beyond 6 months), plan to collect data in person (on-site), and plan to spend a lengthy period

developing personal trust and positive relationships in international locations.

5. Regarding Rwanda, future researchers who seek to collect data that involve Rwandans' evaluation of the values of their culture should strongly consider establishing more trusting relationships with Rwandans, invest time in understanding the nuances of the cultural context, assure participants of the anonymity of their responses, and explain the research agenda and how the findings will be used. These strategies can potentially help to increase the trust level between Rwandans and outside researchers, improve reliability of responses, and increase the participation of Rwandans in psychological research as they help to further the psychological research agenda of different cross-cultural phenomena.
 - a. Additionally, future researchers should strongly consider the benefits of on-site data collection in Rwanda instead of a remote, online data strategy. Fujii (2010) advised that it is important that researchers be available to respond to participants' fears and also provide assurance of safety after the researcher leaves.
6. Researchers who use surveys to collect data in Rwanda should collaborate with Rwandans to ensure that test items are unambiguous and that the appropriate choice of language (English versus Kinyarwanda) is considered.

Discussion of Major Findings: Hypotheses Testing

Note: As a reminder, the small number of individualists in the sample (Jamaica EICO $n = 5$; U.S. EICO $n = 9$) did not allow for methodically sound comparison of

individualists and collectivists. Therefore, where I/C comparative hypothesis testing was proposed, substitute data analysis was performed. Additionally, Rwanda was excluded from hypotheses testing due to unreliable ECO and BRS. Therefore, only collectivists from Jamaica and the U.S. were included in all hypotheses testing. *Structured style* RSA was excluded from hypothesis testing due to low reliability estimates (Jamaica *structured style* $\alpha = .521$; U.S. *structured style* $\alpha = .589$).

Hypothesis One

As a substitute to the proposed hypothesis to test differences in I/C on the linear combination of protective factors that contribute to process resilience, the relationship between ECO and protective factors was examined using Pearson correlation. For both Jamaica and the U.S., significant, but small positive correlations between ECO and some protective factors were found in the expected direction.

For both Jamaica and the U.S., the protective factor that was most significantly related to ECO was spirituality. This finding is consistent with the literature which suggests that spirituality and religion are associated with higher collectivism (Cem et al., 2004; Jha & Singh, 2014; Vandello & Cohen, 1999; Zarzycka et al., 2016).

Social competence and *social resources* also had small but significant positive correlations with ECO. Despite these relatively small significant correlations, the findings are also consistent with the established notion that there is a positive relationship between collectivism and social resources (Hofstede, 1980; Hui & Triandis, 1986; Oyserman et al., 2002; Triandis, 1995) where an increase in collectivism is associated with an increase in social support and interdependence. Furthermore, the results are consistent with the extant literature (e.g., Oyserman et al., 2002; Triandis, 1995), and the proposed

theoretical framework of this study as discussed in chapter one, which suggests that the I/C cultural construct provides a framework for understanding that social interactions and resources may differ across I/C cultural orientations. Higher collectivism was associated with higher *social competence* and *social resources*. In general, the small, yet significant correlation between some protective factors and ECO support the proposed theoretical framework for this study which suggests that differences along the I/C dimension are likely to influence differences in protective factors.

Since all correlations were small, cultural orientation alone could not be identified as accounting for all of the differences in protective factors in this sample of largely collectivistic participants. However, it is noteworthy that the correlations were still significant in spite of the restricted range of ECOs represented. That significance was identified under such a severely restricted sample suggests that protective factors do indeed vary based on individual cultural orientation. Thus, with a sample that is more broadly representative of individualists as well as collectivists, this avenue of research is potentially rich for informing psychologists about what factors are most relevant for individuals with different worldviews.

There was essentially no relationship between ECO and some protective factors such as *planned future* and *family cohesion* for Jamaicans and *perception of self* and *planned future* for U.S. participants. One factor that could account for the non-significant correlation between ECO and *planned future* is that individuals' perceptions about the certainty of their future or the ease of accomplishment of their plans may occur regardless of whether their cultural orientation is individualistic or collectivistic. Whereas some collectivists might have members of their in-group, such as family members, influence

some decisions about the future, individualists are also likely to exercise their sense of autonomy and freedom of choice to develop a sense of certainty about accomplishing their plans, and about their future—thus, both arriving at a similar degree of *planned future* yet by different paths.

Regarding *family cohesion*, an increase in collectivism is associated with an increase in cohesiveness among family members for U.S. participants. On the contrary, although 97% of the sample from Jamaica internalized collectivistic values, the relationship between ECO and *family cohesion* was not significant. As discussed in chapter two, Jamaica has the fifth highest murder rate in the world (World Atlas, 2016). The high crime rate, unemployment, and poverty (Guzder, Paisley, Robertson-Hickling, & Hickling, 2013) are some factors that contribute to a high migration rate among Jamaicans. This leads to a disruption in the family structure when one or more family members migrate to a foreign country to seek better employment opportunities in the hope of being able to remit financial support to family members who remain on the island. In addition, early pregnancies and/or absentee fathers also contribute to single parent families being common in Jamaica with a large percentage of families consisting of women as the primary caregivers (Dole, 2014; Guzder et al, 2013). The consequences/implications of these scenarios should help to contextualize the non-significant correlation between ECO and family cohesion in Jamaica.

The small percentage of variance accounted for by ECO and protective factors indicates that there are probably multiple other variables at the individual level and within the cultural milieu that are also significantly related to differences in protective factors but which were not the focus of this study. Some of those factors are likely to

include, level of intelligence (Kolar, 2011), age (Hawkley et al., 2005), sex, ethnicity, and socio-economic status (Dole, 2014; Eisman et al., 2015), level of education (Ungar, 2006), the ability of individuals to self-advocate/negotiate for health-promoting resources (Ungar, 2006), “steeling effect” (Rutter, 1999, 2006), the socio-political context, access to community resources, and experiences of social justice (Ungar, 2006, 2007). Yet, before pursuing these factors to the exclusion of ECO, a broader sample that includes individualists should be obtained to better ascertain the effect size associated with personal cultural orientation.

Hypothesis Two

As a substitute to the proposed hypothesis to test for differences between Jamaica, Rwanda, and the U.S. on the linear combination of protective factors that contribute to resilience as a process, the hypothesis examined differences between participants from Jamaica and participants from the U.S. on the linear combination of protective factors (both with and without spirituality) that contribute to resilience as a process.

The findings regarding the significance of *perception of self* among Jamaicans is consistent with the findings from a study conducted by Dole (2014) who found that a strong personal identity that includes a strong sense of perseverance, focus on one’s future goals, and belief in oneself were some factors that were paramount to the resilience of 24 Jamaican women who were academically successful despite risk factors of poverty, physical and sexual abuse, and harsh corporal punishment. *Perception of self* pertains to one’s ability to find solutions, trusting one’s judgement and decisions, belief in oneself as a means of getting through difficult times, finding positives in the midst of difficult circumstances, and coming to terms with the events in one’s life that one cannot

influence. *Perception of self* in this study seems to be consistent with what Dole (2014) characterized as a strong personal identity among the Jamaicans she surveyed.

The following facts help provide context for the findings in this study regarding the level of spirituality among Jamaicans. According to *Encyclopedia Britannica, Inc* (2011), more than 75% of Jamaicans belong to one of the multiple religious denominations on the island. Christianity is an integral part of the society with more than 60% identifying as practicing Christians. Phillips (2016) stated that, since the period of slavery until present time, Christianity has laid the foundation for Jamaican's national identity. He further stated that, as an ideology, "religion, Christianity, or Christ-consciousness" is the ideology that led to African slaves becoming "citizens and owners of Jamaica" (Phillips, 2016, p. 26).

Ambiguity of test items in the spirituality subscale (e.g., reference to belief in fate or God as a source of help) could have resulted in a less definitive response pattern among participants. They may have regarded fate as being contradictory to their belief in God, hence the low reliability estimates for the spirituality subscale ($\alpha = .618$). It is possible that the strength of the findings for Jamaica could be further enhanced with the use of a more comprehensive measure of spirituality other than the two-item CD-RISC-25 subscale that was employed in this study.

The importance/significance of *perception of self* and spirituality among Jamaicans has implications for clinicians and future researchers. A discussion is provided in the recommendations section of this chapter.

Hypothesis Three

Instead of performing the proposed MANOVA to examine significant interaction between EICO and ECCO groups by country of residence on the linear combination of protective factors, canonical correlation analysis was used to explore the relationship between ECO, country of residence, and ECO*country of residence and the set of protective factors.

The findings indicated that the interaction between country of residence and cultural orientation (i.e., the impact of cultural orientation depends on which country participants reside) may not be important in explaining protective factors—that is, the impact of cultural orientation does not differ based on the country in which one resides. Whereas, canonical correlation coefficients showed a positive relationship between ECO and spirituality (higher collectivism is associated with higher spirituality), and country of residence and spirituality (higher spirituality among Jamaicans), the interaction between ECO and country of residence was not important in explaining protective factors. So, in this study, considering that cultural orientation is dependent on which country participants reside and looking at how that interaction influences protective factors did not improve the research findings. It is also possible that the interaction effect between ECO and country of residence is non-significant since the sample from both Jamaica and the U.S. were comprised of mostly collectivists.

Therefore, in a practical sense, the findings seem to suggest that when clinicians seek to understand how cultural factors influence resilience, it might be more useful or clinically relevant to consider how I/C cultural orientation, and how factors (e.g., socio-economic/political climate) in one's country of residence influence protective factors that

contribute to resilience. Thinking that cultural orientation is dependent on country of residence and attempting to determine how that interaction influences protective factors might not be clinically relevant. Additionally, researchers who seek to investigate the interaction between I/C cultural orientation and two or more countries should consider that if their sample from each country is comprised of participants who mostly endorse one cultural orientation, then any interaction effect might be non-significant.

Hypothesis Four

Instead of the proposed ANOVA to examine significant differences between EICO and ECCO in each country in outcome resilience as measured by the BRS, Pearson correlation (r) was used to analyze the extent to which a linear relationship exists between ECO and BRS resilience for Jamaica and the U.S. Rwanda was excluded due to low ECO reliability estimate.

Whereas small correlations were observed between ECO and some protective factors (resilience as process) in Hypothesis One, the non-significant correlation found in Hypothesis Four between ECO and BRS for both Jamaica and the U.S. suggests that outcome resilience as measured by the BRS (bouncing back from adversity) is not influenced by whether one is more individualistic or more collectivistic. The BRS is a narrowly defined, unitary measure that assesses participants' perception of their ability to bounce back from adversity (Smith et al., 2010). So, based on these findings, participants who are more collectivistic perceive themselves as neither more nor less able to cope with adversity and bounce back from trauma than those who are more individualistic. According to Smith et al. (2010), some variables that are salient when examining resilience as bouncing back from stress are optimism, social support, spirituality, purpose

in life and aspects of emotional intelligence. Although this study found ECO (internalized beliefs about one's culture) had a small but significant correlation to some of those salient factors such as social support and spirituality (see Hypothesis One), there was no correlation between participants' internalized cultural beliefs and their perceptions of their ability to bounce back from adversity.

Hypothesis Five

As a substitute to the proposed ANOVA to test for differences between participants from Jamaica, Rwanda, and the U.S. in the level of outcome resilience as measured by the BRS, an IST was performed including only Jamaica and the U.S. Independent sample t-test results revealed that participants from Jamaica were no different from those from the U.S. when it comes to their ability to bounce back. Participants from Jamaica and the U.S. endorsed being somewhere between "neutral" and "agree" in their ability to bounce back from adversity.

Collective trauma that have long-lasting impact can have a negative psychological toll (Raveis, VanDevanter, Kovner, & Gershon, 2017). The Rwandan genocide would have been an issue for consideration in exploring differences in outcome resilience if they could have been included in the study as proposed. As discussed in Chapter 2, Jamaica has the fifth highest murder rate in the world (*World Atlas*, 2016). Additionally, in this study, 97% of Jamaicans endorsed having experienced a natural disaster such as a hurricane. Therefore, this research question was proposed against the background of whether the level of resilience (bouncing back) among individuals who experienced collective trauma differed from those who did not.

However, the results of this study show no significant difference in participant's perceptions of their ability to bounce back in spite of one group reporting a collective trauma. One possible explanation for this finding is that participants from both Jamaica and the U.S. perceive themselves as having a positive *perception of self* (see Hypotheses Six and Seven) which is closely related to their perception of their ability to bounce back after adversity. Similar to Hypothesis Four, the findings from this hypothesis also illustrate the difference between examining resilience as a process versus as an outcome as discussed in Chapter 2. The outcome approach does not clarify the factors that contribute to participants' resilience leaving researchers to postulate about the possible contributing factors.

Hypothesis Six

As a substitute to the proposed hypothesis to examine whether *perception of self, planned future, structured style, social competence, family cohesion, and social resources* are significant predictors of BRS resilience among individualists and collectivists from Jamaica, Rwanda, and the U.S. the regression analysis was performed only for collectivists from Jamaica and the U.S.

The findings revealed that *perception of self* was the only significant predictor of bouncing back among collectivistic participants from Jamaica accounting for 17.8% of the variance explained in BRS (outcome resilience). This finding is different than the expected results where classic collectivistic features such as family cohesion, social resources/social support were expected to be influential. However, this finding probably begs the question of whether *perception of self* among collectivists from Jamaica represents the "we-ness" that is characteristic of collectivism (Hofstede, 1980). It is

possible that collectivists in Jamaica perceive the self as an interdependent self/entity that is part of a whole, or in-group. As such, their sense of hope, determination, and self-efficacy may be highly influenced by, or derived from their sense of connectedness with others in that culture – even if those others (e.g., family, relatives and friends) are not themselves salient predictors of bouncing back.

The significance of *perception of self* is also consistent with studies conducted by Dole (2014). The author found that a strong personal identity that includes a strong sense of perseverance, focus on one's future goals, and belief in oneself were paramount to the resilience and academic success of 24 Jamaican women who experienced risk factors such as poverty, physical and sexual abuse, and harsh corporal punishment. Interestingly, although Garmezy's (1991) triadic model of resilience and findings from other researchers (e.g., Friborg et al., 2009; Olsson et al., 2003; Zimmerman & Brenner, 2010) support multi-level protective factors, only *perception of self*—an individual-level factor—was significant when it came to bouncing back as an outcome measure of resilience among collectivistic Jamaicans. Higher *perception of self* is associated with higher capacity to bounce back for collectivistic Jamaicans.

Another plausible explanation for the significance of *perception of self* is probably consistent with the findings of researchers (e.g., Dole, 2014; Kinkead-Clark, 2017) who found that resilience among educated Jamaicans, beginning as early as the primary school level, is associated with emotion regulation, a strong sense of perseverance, and belief in one's ability to overcome adversity. So, although bivariate correlations show non-significant relationships between years of education itself, and protective factors (see Appendix E), the individual traits such as emotion regulation,

perseverance, and belief in one's ability are likely to be present among the educated Jamaican sample. In general, the majority of participants from Jamaica were those with higher levels of education, many of whom were recruited from a university in central Jamaica. More than 90% of the sample (91.7%) had 9 or more years of education.

The socio-economic climate in Jamaica often requires individuals to exert self-discipline and perseverance to overcome obstacles such as childhood poverty; family disruption caused by migration, alcoholism, and death; early pregnancies; harsh discipline including corporal punishment; and failure on the Common Entrance Examination or Caribbean Examination Council in order to access the resources they need to achieve their goals (Dole, 2014; Guzder et al, 2013; Kinkead-Clark, 2017). The pervasiveness of economic hardship on the island possibly explains why only *perception of self* and none of the more collectivistic factors such as *family cohesion*, *social resources* and *social competence* were significantly related to resilience.

It is likely that although Jamaicans may have a strong sense of “we-ness” and believe that more collectivistic values are good (as evidenced by 97% endorsing collectivistic orientation), when it comes to bouncing back, the pervasive economic hardship on the island may result in the understanding that family members and friends may not have the financial or emotional resources needed to provide support. In an article published online by the Jamaica Information Service News (2009), head of Psychiatry at the University of the West Indies, Dr. Wendel Abel, mentioned that Jamaicans are noted for being able to survive hard economic times. He further stated that in order to survive hard economic times, Jamaicans must think positively, take care of themselves, and reinvent themselves (e.g., seek out new opportunities, engage a different approach, think

and act outside the box). Although Dr. Abel's comments were made primarily in response to surviving a financial crisis, he focused solely on personal agency instead of leaning on family or social support as a means of surviving difficult economic times. The idea of survival and bouncing back as primarily a personal responsibility (even in the context of a strong sense of "we-ness") is common among Jamaicans (Dole, 2014; Guzder et al, 2013; Kinkead-Clark, 2017).

For the U.S., *perception of self*, *social competence*, and *family cohesion* were significant positive predictors of bouncing back among collectivists. The results for the U.S. are consistent with Garmezy's (1991) triadic model and other authors (e.g., Friborg et al., 2003; Friborg et al., 2009; Kim et al., 1994) who posit that individual-, family-, and social/community-level protective factors all contribute to resilience (bouncing back). Taken together, when it comes to bouncing back, relatively small changes in *perception of self* and relatively larger changes in *social competence* and *family cohesion* contributed to increased ability to bounce back among collectivist in the U.S.

Perception of self (an individual-level factor) contributed 24.9% of the variance in bouncing back. This is consistent with Smith et al. (2013) who found that some personal resources had a stronger positive correlation with the BRS than social resources.

The four significant predictors together accounted for 29.47% of the variance explained in BRS resilience. However, lower *social resources* was associated with a small increase in collectivists' ability to bounce back. So, in this study, when collectivists from the U.S. are faced with adversity, lower *social resources* contribute to small increases in bouncing back in the presence of other protective factors such as *perception of self*, *family cohesion*, and *social competence*.

The inverse relationship between *social resources* and bouncing back among collectivists in the U.S. was surprising and may appear puzzling since accessing social resources is a typical characteristic of collectivists (Kim et al., 1994; Markus & Kitayama, 1991; Oyserman et al., 2002; Triandis & Gelfand, 1998). *Social resources* significantly diminishes outcome resilience. It is likely that, in the presence of a cohesive family and in the context of individuals' sense of being socially competent, the social support from friends and relatives has a reducing effect on outcome resilience. So, when it comes to bouncing back, collectivists in the U.S. appear to access external support from friends and relatives significantly less when they are part of a cohesive family, and when they possess good communication skills and feel skilled and capable to initiate activities. The *diffusion of responsibility* social psychology theory (Darley & Latane, 1968) may provide probable explanation for the inverse relationship between *social resources* and bouncing back in the presence of *family cohesion* and *social competence*.

One implication of this finding is that, factors that are generally associated with collectivism, contribute to bouncing back in varying degrees, and, in the context of other protective factors, some may play an inverse role. So, for U.S. participants, the role that *family cohesion* and *social competence* plays take priority over the role that *social resources* play in building/increasing outcome resilience. In fact, among collectivists from the U.S., high social resources reduces outcome resilience while low social resources increases outcome resilience. Therefore, clinicians and researchers should avoid making assumptions about the role that certain protective factors that are often associated with individualism (e.g., perception of self) and collectivism (e.g., social support) play among collectivists' as it pertains to their ability to bounce back. Instead,

researchers and clinicians should measure/assess protective factors to ascertain which ones are more influential for the participants they study or the people to whom they provide clinical interventions. Additionally, within a clinical setting, specifically inquiring about the extent to which each resilience resource is meeting the individual's expectations for helping them cope with the trauma might provide important information about needed interventions (e.g., helping to mobilize resources that are not as salient as expected). Further recommendations are provided later in the chapter.

Additionally, it is important to note that the structure coefficient statistics shows that, as a single predictor, *social resources* ($r_s = 0.31$) has a small positive correlation to bouncing back. By itself, a small increase in *social resources* contributes to a small increase in bouncing back. So, in the absence of other protective factors such as a strong perception of self, social competence or a cohesive family, *social resources* do have a small positive influence on bouncing back. However, when included with other protective factors, the direction of its contribution changes to an inverse relationship with bouncing back.

Pertaining to both collectivists from Jamaica and collectivists from the U.S., the findings also reveal that collectivistic cultures are not homogeneous. Factors that are salient and protective among collectivists in one country may not be salient and protective among collectivists in another country. This further highlights the need for researchers and clinicians to avoid assumptions about the general usefulness of resilience-promoting resources across cultures.

Hypothesis Seven

This hypothesis added spirituality to the regression analysis and examined whether *perception of self, planned future, structured style, social competence, family cohesion, social resources, and spirituality* were significant predictors of BRS resilience among individualists and collectivists in each country. However, since EICO groups were of insufficient size, only collectivists in each country were examined, and because of low ECO and BRS reliability, Rwanda was not included in the analysis.

When *spirituality* was added to the regression analysis, there was no change in the ability to predict outcome resilience for Jamaicans and only a small change (0.2% increase) in the ability to predict outcome resilience for U.S. participants. The addition of spirituality as a predictor of bouncing back from adversity did not increase the ability to predict resilience in the collectivistic U.S. and Jamaican samples as had been expected. The CD-RISC-25 did not ask about prayer and the item that addressed belief in God also asked about belief in fate. Belief in God and belief in fate might have been contradictory for some participants resulting in ambiguity and thereby making it a limited measure of spirituality. When compared to other spirituality measures such as the 12-item Spiritual Support Scale (Ai, 2005 as cited in Monod et al., 2011), or the 20-item Spiritual Well-Being Scale (Ellison, 1983 as cited in Monod et al., 2011), the two-item CD-RISC-25 spirituality subscale did not measure other markers of spirituality such as prayer/meditation and participation in religious services. Assessing those markers could have provided participants with a broader measure of their spirituality that was not assessed by the CD-RISC-25 spirituality factor.

The extant literature has also presented mixed findings regarding spirituality as a predictor of resilience. Some authors have found spirituality to be a significant predictor (Connor & Davidson, 2003; Costanzo et al., 2009; Portnoff et al., 2017) whereas others have found it to be less or not at all significant (Smith et al., 2013). Smith et al. (2013) found that whereas spirituality may be broadly important in some health-related outcomes, it was not specifically salient to bouncing back as measured by the BRS.

Additionally, *family cohesion* was no longer a significant predictor among U.S. participants. It was observed that although the contribution of *family cohesion* was reduced when spirituality was introduced as a predictor, the strength of the contribution made by *family cohesion* to bouncing back was stronger than that made by spirituality. This seems to suggest that spirituality, which had a higher correlation to *family cohesion* ($r = .275$) than to BRS outcome resilience ($r = .167$), functioned as a suppressor variable. So, in a practical sense, when it comes to bouncing back, collectivists in the U.S. who do not endorse spiritual values are likely to benefit from strong, supportive and loyal family bonds (*family cohesion*). However, believing that fate or God helps, or having a belief that things happen for a reason will likely reduce one's reliance on loyalty from family members. Recommendations for clinical intervention and future research are presented later in this chapter.

Contributions of the Study

The study responds to criticism in the literature that using nations as a whole is inadequate to study differences in individual-level psychological phenomena (Ailon, 2008; Hofstede, 2001; Oyserman et al., 2002). The researcher examined resilience in a cultural context by using the COS (Bierbrauer et al., 1994) to measure I/C. Results

showed that there were individualists and collectivists in each country regardless of the perceived cultural orientation of the nation as a whole. This finding is consistent with authors (e.g., Hofstede, 1980) who indicated that there are individualists and collectivists in each country. Additionally, a remarkable finding was that whereas the U.S. is regarded as being highly individualistic (Hofstede, 1980, 2001), 97% ($n = 264$) of participants in this study reported internalized collectivistic values.

The findings showed that classic features of collectivism (e.g., family cohesion, social support, and social resources) that are generally regarded as salient protective mechanisms for collectivists, are not necessarily useful and salient as expected among all collectivists. This is evidenced in the findings pertaining to resilience as bouncing back among Jamaicans. Only *perception of self* was a significant protective factor, while *family cohesion*, *social support* and *social resources* were not significant protective factors as had been expected.

The findings provide a strong indication that making assumptions about individuals' cultural orientation based on their country of origin/residence or ethnicity is a mistaken approach to cross-cultural research efforts. In fact, the results of this study would have been quite erroneous at the individual level if Hofstede's country rankings had been used to classify all U.S. participants as individualists. Studies that have classified participants as individualists or collectivists based on country rankings could, therefore, be erroneous in their conclusions.

The I/C cultural framework employed in this study provides an individual-level cultural framework that can guide future studies that seek to investigate the protective factors that contribute to good outcome. Although the sample did not have a sufficient

number of individualists compared to collectivists, the difficulties experienced in obtaining a representative sample also contributes to the literature by demonstrating that an even split of I/C groups may require additional resources and approaches to tap a broad spectrum of worldviews. Recommendations were provided in the previous section entitled “Major Finding: Cultural Orientation” on how future researchers can attempt to secure the needed I/C groups.

This study responds to the caution in the literature that researchers should avoid further confusion in the field by stating whether their study operationalizes resilience as a trait, process, or outcome, and clearly identify the outcome criterion (Luthar et al., 2000; Zautra et al., 2010; Zimmerman & Brenner, 2010). The current study explicitly operationalized resilience as an outcome and also as a process. The outcome criterion was “bouncing back” as measured by the BRS. Resilience as a process was assessed using the RSA to measure multi-level protective factors. This approach helped clarify what protective factors are most related to the resilience outcome measure (bouncing back). The simultaneous assessment of the process and outcome of resilience using the RSA and BRS has not been conducted by any other known studies to date.

Limitations

Limitations Pertaining to Research Design

The study employed a non-experimental research design. Therefore, this design does not allow cause-and-effect conclusions about the findings. The researcher was interested in investigating participants’ cultural orientations as they occurred naturally in their country of residence without any manipulation of variables.

The online survey methodology only allowed individuals who had access to the internet and an electronic device such as a smart phone or computer to participate in the study. Individuals who have access to the internet may have a different set of resilience resources (e.g., more financial resources that allows them to pay for internet subscription) or different value systems (e.g., valuing real-time access to information) from those who do not use the internet. Additionally, the snowball sampling data collection procedure resulted in recruitment of participants that were within the sphere of influence of the researcher and her seed participants. This resulted in a sample from each country that was comprised of individuals who appeared to mirror some characteristics of the researcher such as CCO and higher level of education. Therefore, the generalizability of the findings is more limited than it would have been with a broader sample. Recommendations for future research are provided later in this chapter.

The remote location of the researcher in relation to Jamaica and Rwanda where the researcher was not physically present to build trust (especially since the researcher is an outsider to Rwandans), answer questions regarding the research agenda, and personally oversee the recruitment and data collection processes served as a limitation. Recruiting participants from Jamaica and Rwanda extended over 6 months (compared to less than 3 months for the U.S.). Discussion and recommendations are presented in the previous sections entitled: “Demographic Characteristics: Implications and Recommendations” and “Recommendations: Cultural Orientation.”

By focusing only on the evaluative orientation of participants, the study minimized the potential relationship between participants’ normative evaluation of their culture (how they perceived the values of others around them) and resilience. Zou et al.

(2009) suggested that individuals' normative perception of their cultural values also influence various psychological phenomenon. This presents as an area for further research study to shed light on how individuals' perceptions of the values of others around them influence resilience. Recommendations for future research are provided later in this chapter.

The cut-off scores employed in the current study to conveniently categorize individualists (COS scores of 1 to 4) and collectivists (COS scores of 4.01 to 7) may have limited representation of I/C. Individualism/Collectivism is considered to exist on a continuum (Hofstede, 1998, 2001) and to varying degrees in all of us depending on the cultural context (Triandis, 1994). Employing a correlational analysis with just the ECO variable would have been an alternative (as performed with Hypothesis Two and Four). However, that option would not allow for group comparisons. Regardless of the use of an alternative to cut-off scores, the use of surveys in general prevents capturing the nuances and complexities of culture which is further discussed in the next section entitled, "Limitations Pertaining to Instrumentation."

The study was by no means an exhaustive exploration of all the multi-level protective factors. There are other factors that have been found to be significant predictors of resilience but which were not included in this study. For example, some individual-level factors such as level of intelligence (Kolar, 2011), age (Hawkley et al., 2005), sex, ethnicity, and income (Dole, 2014; Eisman et al., 2015; Li, Xu, He, & Wu, 2012) and social-level factors such as access to community resources and experience of social justice (Ungar, 2006, 2007) were not explored. Recommendations for future research are provided later in this chapter.

Limitations Pertaining to Instrumentation

The use of self-report rating scales assumes participants' responses to the self-report measures are true and accurate. The study is based on the assumption that the degree or strength of meanings or quantifiers assigned to how participants "strongly agree" or rate statements as being "very important" reflects their true sentiments and that participants had similar interpretations of the meanings of statements and rating anchors. Therefore, the strength and clinical applicability of the findings are dependent on the subjective feedback from respondents. It was also assumed that the strength of meanings or quantifiers assigned are similar across cultures and across participants.

There was the assumption that the questions included on the rating scales adequately captured and represented the I/C cultural framework across cultures (Oyserman et al., 2002). Culture represents a multi-dimensional system of nuanced beliefs, values, attitudes, and practices that cannot be entirely captured by a set of items on a survey (Ailon, 2008). Some I/C areas in which people differ might not have been comprehensively captured (Oyserman et al., 2002). For example, people's views about dealing with grief/loss (private grieving with family versus communal mourning) was not assessed in this study. Hofstede (2001) suggested that the use of surveys to assess how I/C influences various phenomena is a viable measurement option and that surveys are better than nothing. Hofstede (2001) also suggested that the use of surveys to measure I/C is reasonable so long as researchers employ an individual-level analysis instead of using the IDV results from his seminal study to make assumptions about individuals. The literature abounds with researchers (e.g., Cialdini, Wosinska, Barrett, Butner, & Gornik-Durose, 2001; Friedlmeier, Schäfermeier, Vasconcellos, & Trommsdorff, 2008;

Hofstede, 1980, 2001; Singelis et al., 1995; Triandis, 1995; Triandis & Gelfand, 1998) who used surveys to study cultural orientation. Although limited in its capacity to capture all aspects of I/C, this study is consistent with the approach employed in the extant literature. Future researchers can consider including a qualitative component in their cross-cultural studies to enhance research findings.

The COS is only one measure of cultural orientation; therefore, the findings must be interpreted within the context of the culturally relevant items that the instrument sampled. The COS sampled items that pertained primarily to social and family interactions/dynamics. Another measure of cultural orientation (e.g., HVS) primarily samples work values. Unfortunately, there are no standardized instruments that measures I/C in general (Oyserman et al., 2002) and different measures of culture may yield different results (Cozma, 2011; Oyserman et al., 2002). This suggests that researchers are tasked with the responsibility to carefully choose the instrument that operationalizes I/C in a manner that is consistent with their research agenda. This study aimed to investigate how dynamic social interactions, operationalized as I/C and not limited to work values, influenced protective factors. The COS was selected as most suitable to measure I/C since it assessed frequency of social behaviors and participants' approval or disapproval of those interactions. Selection of another instrument such as the HVS would indicate that all participants are employed. That was not a criteria for this study.

Likewise, the use of the RSA to capture protective factors does not provide evidence that those same protective factors are what will contribute to bouncing back during specific kinds of adversity. For example, although *perception of self* was a significant predictor of bouncing back among participants from Jamaica and the U.S.,

there is no evidence that this will remain as a useful protective factor in instances where there is trauma such as verbal, physical or sexual abuse that challenges one's sense of self. This kind of evidence is most often achieved in longitudinal studies, or assessment of the factors in the immediate period following a traumatic event. Additionally, although the RSA assesses multi-level protective factors, it does not capture the wide array of protective factors or variations in how those protective factors exist in the broadest sense in various cultural contexts. For example, the RSA does not assess the actual availability of community resources such as vocational opportunities that can influence resilience outcome.

Similarly, the use of the BRS to measure participants' capacity to bounce back from adversity does not necessarily indicate that participants will bounce back in the face of every adversity. Olsson et al. (2003) suggested that resilience is also influenced by other key factors such as timing of the traumatic event, the degree of impact of trauma, and the presence and impact of protective factors. They further stated that over-exposure to risk can compromise resilience.

The use of the TLEQ may have elicited negative emotions associate with participants' experience of trauma. The informed consent used in this study strongly recommended that if participants experienced any negative emotions, they should contact a mental health professional, pastor, or other trusted individual. The informed consent also provided 911 and 112 emergency numbers. However, a face-to-face administration of the TLEQ with a mental health professional available to provide clinical inquiry and clinical follow up, where necessary, is ideal.

Language appears to have been a barrier to data collection in Rwanda. The survey instruments were approved by the sponsoring university administrator as well as the official at the Ministry of Education in Rwanda. Rwandans living in the U.S. at the time of the research proposal reviewed the surveys and provided verbal feedback that the structure of test items appeared suitable and that administering the survey in English to that population was appropriate (I. Zirimwabagabo, personal communication, January 2017). However, during data collection, email correspondence received from one contact person in Rwanda stated that some participants had difficulty understanding and responding to survey items in English.

The two items that comprise the CD-RISC-25 spirituality factor did not reliably represent spiritual values among Jamaicans ($\alpha = .618$). For example, the item: “when there are no clear solutions to my problems, sometimes fate or God can help” may have been equivocal and contributed to conflicted responses. The item sampled both “fate” and “God.” This might have contributed to inconsistent response patterns with some participants being unsure if they were endorsing fate or God. Some may have had difficulty associating fate with their spiritual values seeing fate as a contradiction to belief in God. Likewise, the item pertaining to most things happening for a reason whether those things are good or bad could have presented as a conflicting item. The item made no direct reference to God or any other cosmic or supernatural force. This may have resulted in participants feeling conflicted about whether the item implied a God-ordained purpose for all things good or bad, or whether good/bad events occurred because of some other cosmic reason. Recommendations for future studies are provided later in this chapter.

Limitations Pertaining to Findings

The demographic characteristics of the sample from each country indicate that there are limitations to the generalizability of the findings. Implications and recommendations were provided in the “Implications and Recommendations” section of this chapter.

The wide disparity in the number of EICO and ECCO participants in the sample did not allow for the proposed I/C comparative analysis which was the major component of the research agenda. As a result, the findings only pertain to collectivists. Discussion, implications and recommendations for future research are provided in the previous section in this chapter entitled “Discussion of Major Findings: Cultural Orientation.”

The findings show that participants tended toward being resilient and highlights the protective factors that predict bouncing back. However, a visual scan of participants’ responses to the open-ended question about some things that participants and other people in their country do to deal with trauma showed other ways of dealing with trauma that are typically unhealthful such as suppression, denial, “suck it up and move on” and the use of drugs and alcohol. So, a quantitative study that focuses on protective factors alone does not highlight other presumably less healthful ways people deal with trauma and which would benefit from focused/strategic interventions. Such interventions might include starting support groups to deal with drug and alcohol use or hosting anti-stigma campaigns to encourage more people to seek professional help.

Finally, Rwanda was not included in hypothesis testing and cross-cultural comparison due to unreliable ECO. Discussion and recommendations are presented in the

section of this chapter entitled “Evaluative Cultural Orientation: Rwanda,” and “Recommendations: Cultural Orientation.”

Recommendations

Following are recommendations relevant for clinical practice/intervention efforts, and future research.

Recommendations for Clinical Practice/Interventions Efforts

1. Clinicians should strongly consider including a cultural orientation screener (e.g., the COS; Bierbrauer et al., 1994) as part of their initial assessment tools to help clarify clients’ internalized I/C values. This practice can help clinicians provide intervention strategies that are consistent with clients’ cultural values instead of misguided interventions that are assumed to be relevant and appropriate based on clients’ country of residence.
2. Clinicians should consider taking an inventory of clients’ individual-, family- and social-level protective factors to identify the ones that are present in clients’ lives and that they find most useful. This practice is especially important in light of the findings in the current study which showed that only *perception of self* was a significant predictor of bouncing back among collectivists in Jamaica whereas *perception of self, family cohesion, social resources, and social competence* were significant among U.S. collectivists. Assuming, for example, that *family cohesion* is a salient protective factor among Jamaicans simply because they endorse collectivistic values could thwart intervention efforts and cause unintended harm to clients.

3. In light of the significant relationship between *perception of self* and bouncing back among collectivists from Jamaica and the U.S., it might be helpful for clinicians who work with clients who have experienced trauma to focus on clients' strong sense of agency and belief in their ability to get them through difficult times. A Positive Psychology approach that focuses on strengths should be helpful. Administration of a strengths-based inventory such as the Strengths Quest can help to clarify clients' personal strengths. Additionally, engaging a narrative approach, while focusing on some specific skills or strategies that clients engaged to bounce back during difficult times in the past, and identifying how those skills/strategies can be used in their present difficult circumstances could be helpful.

a. It might also be helpful for mental health professionals to consider that a strong perception of self among Jamaicans who have experienced trauma could possibly contribute to Jamaicans believing in their personal ability to solve their own problems and subsequent unwillingness to seek professional support. Therefore, mental health professionals should consider delivering interventions in the form of outreach such as community-based psychoeducational presentations and workshops. This strategy can help deliver needed interventions to individuals in their own communities instead of reliance on them accessing care by way of the typical in-office visits.

b. When working with collectivists from Jamaica, it might also be helpful to explore to what extent a sense of "we-ness," or identification with their culture constitute their perception of self and possible implications for their presenting concerns and intervention efforts.

4. In light of the significant relationship between *social competence* and resilience among U.S. collectivists, clinicians should explore clients' perceptions of their ability to fulfill their social obligations, such as flexibility in social settings, or being able to successfully navigate relationships in the larger society. Teaching distress tolerance skills and engaging strategies such as role play to teach effective communication strategies may be helpful if it is determined that social competence is compromised.

5. In light of the significant inverse relationship between *social resources* and bouncing back among collectivists in the U.S., clinicians should expect that when other protective factors (such as a positive sense of self, a cohesive family, and social competence) are present, interventions that include access to external support from friends might not be useful. So, when clients are dealing with trauma, instead of focusing on reliance on social support, clinicians should consider focusing on clients' self-efficacy, building and affirming personal strengths, building close family bonds and promoting skills such as effective/assertive communication to improve social adeptness. However, if only social resources are accessible, it is expedient that clinicians explore ways that collectivists can benefit from their sense of being part of a valued community/social group. Authors (e.g., Gabert-Quillen et al., 2012; Kaniasty, 2012) asserted that potential negative effects of trauma are suppressed or counteracted in the presence of an active social support network. When social support is mobilized, it provides individuals with a sense that their social world is caring, reliable, and predictable. Some interventions may include support groups/group therapy, and engaging a collaborative treatment approach that links clients with social support services in the community. Social support can act as a springboard for the discovery of other protective

factors. For example, in their study of collectivistic Spanish women, Lopez-Fuentes and Calvete (2015) found that when women who experienced intimate partner violence (where perception of self, social competence, and family cohesion may be compromised) participated in support groups, they were able to form friendships, engage in sports activities, and affirm and mobilize positive personal attributes such as perseverance which enhance the resilience process.

6. In light of the suppressor effect of spirituality on the significance of *family cohesion* among collectivists in the U.S., it might be helpful for clinicians to consider that collectivists' spirituality might reduce the relevance of support from family members. Therefore, exploration of other relevant protective factors such as *perception of self* and *social competence* might be expedient.

7. Given that trauma significantly impacts mental health (Kessler et al., 1995; Kira, 2001; Mancini & Bonanno, 2010; Masten & Wright, 2010; Platt & Freyd, 2011) clinicians should strongly consider screening for trauma as a part of providing culturally competent care. The RESPECTFUL model of counseling and development (D'Andrea & Daniels, 1999; 2001 as cited by OnlineCounselingPrograms.com) that includes a trauma and other multicultural competency components is one guide that may be employed by clinicians. Some trauma screening tools include the TLEQ (Kubany et al., 2000) or the Traumatic Stress Schedule (Norris, 1992).

8. The sample from Jamaica and the U.S. showed that individuals who are 50 and older and have moderate to high income/resources generally tend to be resilient (having the ability to bounce back). Health professionals in those countries should consider partnering with other stakeholders to develop or expand mentoring programs

that pair/match older individuals having moderate to high income/resources with youth and other individuals who have fewer resources to enhance resilience for at-risk individuals.

Recommendations for Future Research

1. Future research that includes a much larger sample and therefore greater power should help to further clarify cross cultural differences in the protective factors that contribute to resilience. Obtaining a much larger sample might allow the researcher to employ the I/C grouping initially proposed in this study where, using the COS, mean ECO scores of 1 to 3.49 would represent individualistic cultural orientation, mean scores of 3.5 to 4.49 would represent neither strong individualistic or collectivistic values, and mean scores of 4.5 to 7 would represent CCO. This grouping should yield findings that represent factors that are more distinctly associated with individualists and with collectivists.

2. Researchers who conduct studies in developing countries such as Jamaica and Rwanda and who desire to recruit a larger sample that is more diverse than the one included in this study should consider increasing participation by making available a paper-pencil format of the survey so as to include those who either do not have access to the internet, computer or a smart phone device or who have limited internet access or a restrictive data plan.

a. Additionally, if an online/electronic data collection methodology must be employed, the researcher should consider forging strong alliances with individuals who can actively recruit participants and be on-hand to provide clarification and answer questions. It is even more ideal for the researcher to be physically present to

help build trust by explaining the purpose of the research, implications for participation, and answering questions about the research agenda. These strategies can increase response rate and recruit a more diverse sample, thereby improving the generalizability of the findings.

3. Future research should investigate the relationship between normative cultural orientation and resilience (process and outcome). Zou et al. (2009) suggested that individuals' perceptions of their cultures' values (normative cultural orientation) also influence the development of psychological resources. The authors posited that individuals are likely to think and behave in culturally typical ways when they perceive that the views held by others around them are consensual. Further research that uses the *normative social influence* social psychology theory (Fournier, 2018) can shed light into how conformity to cultural values (even if an individual does not necessarily believe or has not internalized those values) influences the factors that protect individuals during adversity and subsequent resilience outcome.

4. In this study, an individual-level measure of outcome resilience (as measured by the BRS) showed that an individual-level protective factor (*perception of self*) was most salient. Therefore, in operationalizing resilience outcome, future researchers might observe that, if their outcome measure of resilience is based solely on individual-, family-, or social-level criteria then the protective factor that would probably be most significant might be consistent at the individual, family, or social level. This should help guide researchers in their selection of independent and dependent variables and provide some context for the percentage variance of the dependent variable that is explained by the independent variable in their research findings.

5. This study engaged an etic approach to the exploration of protective factors in their cultural context. This means that the researcher was an outsider looking in, seeking to understand the variables as they exist in their environment/culture and comparing that culture with others (Lee, 1984). Additionally, the boundaries of this study were limited to the selected protective factors (*perception of self, planned future, social competence, social resources, family cohesion, [structured style* was excluded due to low Cronbach's alpha), and spirituality). Given the etic view of culture, other variables (e.g., demographic variables) that also influence resilience were not controlled for. However, data collected indicate that demographic variables had small, significant correlations with some of the protective factors, and BRS (outcome) resilience. Those demographic correlations, when included, could possibly increase or decrease the variance explained by the selected protective factors and outcome resilience. Therefore, future researchers should include demographic variables as a more central focus of future research projects.

- a) Additionally, as a follow-up to this study, future research should include *perception of self* together with other individual-level protective factors such as age, gender, education, and SES to further explore how these individual-level protective factors contribute to bouncing back as measured by the BRS.

6. In order to further minimize confusion in the literature, researchers who study resilience should conceptualize the construct as both a process and an outcome. They should clearly identify their process (independent) variables and empirically demonstrate how their process variables contribute to their outcome (dependent) variable(s).

Conceptualizing resilience as a process and an outcome is consistent with the definition

put forth by the APA (see VandenBos, 2015). Any other approach provides an incomplete picture of resilience.

7. Use of the TLEQ allowed the researcher to capture additional information pertaining to the frequency of each traumatic event experienced and whether participants experienced intense fear, helplessness, or horror. Future research can expand the current study to examine whether the frequency and type of trauma influence protective factors and resilience outcome. Future research can also examine the relationship between frequency of trauma and individuals' experience of fear, hopeless, and horror. The findings should contribute to the trauma and resilience literature by shedding further light on the relationship between frequency of trauma and experience of fear, helpless, or horror.

8. Researchers should expand existing literature to clarify *what* constitutes the latent RSA protective factors as well as *how* those protective factors contribute to resilience. A mixed-method, or qualitative approach adds depth to the contextual understanding of protective factors that contribute to resilience. For example, *perception of self* was found to be a significant predictor of bouncing back among participants from Jamaica and the U.S., however, the study did not shed light on the interpersonal dynamics (familial, social, or societal) and the multiple other factors such as socio-economic climate and access to resources that contribute to individuals developing a positive sense of self. Additionally, a qualitative approach captures participants' narratives about their efforts to access community resources and their experiences with issues such as racism, classism, and other social justice issues that are not comprehensively captured by responding to items on a survey.

a. As a follow-up to this study, the researcher can conduct follow-up analysis of the responses provided to the one open-ended question included in this study that asked participants: “What are some things that you and most people in your country do to deal with, and overcome the effects of trauma.” The findings may shed further light into additional ways people deal with trauma and bounce back.

9. To clarify potential differences in the sense of “we-ness” among collectivists in Jamaica and collectivists in the U.S., future researchers can engage an experimental design to explore how these two different collectivistic groups from Jamaica and the U.S. view the concept of the self in relation to others. Bueno (2012) provides some examples of experiments that might be conducted to clarify differences in perception, mental schemas, and cultural thought patterns.

10. Future studies can help clarify the role and significance of spirituality on resilience outcome criteria. This is especially important in light of the non-significant relationship between spirituality and BRS outcome resilience in this study and consistent with findings by Smith et al. (2013). Yet other studies have found a positive relationship between spirituality and resilience (Connor & Davidson, 2003; Costanzo et al., 2009; Portnoff et al., 2017). Using other measures of spirituality such as the 12-item Spiritual Support Scale (Ai, 2005 as cited in Monod et al., 2011), or the 20-item Spiritual Well-Being Scale (Ellison, 1983 as cited in Monod et al., 2011), it might be helpful for future researchers to examine the relationship between spirituality and more than one outcome criterion of resilience (e.g., bouncing back as measured by the BRS, and complicated grief as measured by Prigerson et al., 1995: Inventory of Complicated Grief) in the same

study. This approach can help to further clarify the relationship between spirituality and different psychological phenomena as they play out in the lives of individuals.

11. Participants who indicated that they resided in the U.S. but were born in Jamaica were excluded from this study. As a follow-up to this research, future studies can explore differences in the protective factors that contribute to resilience for Jamaicans living in Jamaica versus Jamaicans living in the U.S. This kind of research can help shed further light on other potential variables (e.g., acculturation) that influence protective factors that contribute to resilience.

Conclusion

In the current research, I posited that the study of resilience should involve a process and outcome approach and that resilience should be studied in a cultural context. The study employed a process and outcome approach and discussed significant findings in light of extant literature.

The distribution of individualists and collectivists, based on ECO means, showed that nearly all participants from Jamaica (97%) and the U.S. (97.6%) internalized collectivistic values. Since the I/C distribution did not allow for methodologically sound comparisons by cultural orientation, data analysis was performed on only collectivists. Rwanda was not included in statistical analyses because the COS did not reliably measure ECO among Rwandans. Based on measures of resilience (RSA and BRS) the sample from each country tended to be toward the resilient end of each scale. The sample was also more spiritual than not.

Major research findings pertaining to Jamaica and the U.S. showed that there was a small but significant relationship between ECO and some protective factors. Spirituality

had the strongest correlation. However, ECO was not significantly related to outcome resilience (BRS). Spirituality and *perception of self* were higher among participants from Jamaica than the U.S. Spirituality, *social competence*, *perception of self*, *family cohesion*, and *social resources* were most relevant in the canonical relationship between the independent variables (ECO, country of residence and ECO*country of residence) and protective factors. There was no difference between Jamaican and U.S. participants in resilience as measured by the BRS. As it pertains to the protective factors that predict bouncing back (BRS outcome resilience), *perception of self* was the only significant predictor among participants from Jamaica. *Perception of self*, *social competence*, *social resources* (inversely related), and *family cohesion* were significant among U.S. participants. The inclusion of spirituality did not result in a change in the protective factors that contributed to bouncing back among Jamaican participants, however, *family cohesion* was no longer a significant predictor when spirituality was included in the standard regression analysis.

This study's simultaneous exploration of resilience from a process and an outcome perspective helped shed further light on potential best-practice for clinical interventions and future resilience research. The study highlighted that cultural orientation (collectivism in the case of this study) and associated protective factors are not homogeneous across different countries. The findings also indicated that making assumptions about individuals' cultural orientations based on their countries of residence could lead to erroneous and potentially harmful clinical interventions and research practices. Several clinically relevant recommendations and recommendations for future research were presented. Limitations of the study were discussed.

The role of spirituality presents as an area for further research. Investigating the relationship between normative cultural orientation and resilience presents as a next-step in the exploration of the relationship between I/C and resilience. Additionally, the researcher intends to conduct follow-up analysis of the open-ended responses to shed further light on the strategies people employ to deal with trauma.

APPENDIX A

VARIABLES TABLE

Variables	Conceptual Definition (What is it?)	Instrumental Definition or Intervention (How to Observe it?)	Operational Definition (How to measure it?)
Traumatic Life Events Experienced (TLEQ)	Adverse, harmful or potentially damaging events or risk experienced by respondents	<p>Questions on the 24-item Traumatic Life Events measurement tool (TLEQ; Kubany, 1995): (coded TLEQ1 through TLEQ24)</p> <p>“Have you ever had a life-threatening illness?”. If yes, how often: <i>One time_, two times_, 3 times_, 4 times_, 5 times_, more than 5 times_</i> If this happened: Did you experience intense fear helplessness, or horror when it happened? Yes / no”</p>	<p>The variable is used to establish the presence of risk. SPSS used to compute frequency/percentage.</p> <p>The variable is ratio variable</p>
Resilience as process (RSA Protective Factors and CD-RISC-25 spirituality scale)	Processes that ameliorate the negative effects of traumatic life events (Rutter, 1985) as measured by perception of self, planned future, social competence, family cohesion, social resources, and structured style (Hjemdal, 2007) and spirituality (Connor & Davidson, 2003).	<p>Question on the 33-item/6 factors measurement tool – Resilience Scale for Adults (RSA: Friborg et al., 2003).</p> <p>“Please think of how you usually are, how you think and feel about yourself, and about important people surrounding you. Please check the option box that is closest to the end statement that describes you best. (Item not listed verbatim)</p> <p>Something unforeseen happening: <i>Feel bewildered</i> ☐ ☐ ☐ ☐ ☐ ☐ <i>Find a solution</i></p>	<p>The 33 items will be recoded into the 6 factors. For most items, the scale places positive responses at the right of the scale. Items marked * will be reversed e.g., for item #7, a response of 1 will be changed to 7, 2 to 6, 3 to 5, etc.). Each item response is valued 1 to 7. The 6 factors are:</p> <p>Factor 1 - Perception of self – 6 items (1, 7*, 13, 19*, 25, 29*)</p> <p>Factor 2 - Planned Future – 4 items (2, 8*, 14*, 20)</p> <p>Factor 3 - Social competence – 6 items (3*, 9, 15*, 21, 26*, 30)</p> <p>Factor 4 - Family Cohesion – 6 items (4, 10*, 16, 22*, 27, 31*)</p>

Variables	Conceptual Definition (What is it?)	Instrumental Definition or Intervention (How to Observe it?)	Operational Definition (How to measure it?)
Resilience as process (RSA Protective Factors and scale) – <i>Continued</i>	Processes that ameliorate the negative effects of traumatic life events (Rutter, 1985) as measured by perception of self, planned future, social competence, family cohesion, social resources, and structured style (Hjemdal, 2007) and spirituality (Connor & Davidson, 2003).		<p>Factor 5 - Social Resources – 7 items (5, 11*, 17, 23*, 28*, 32, 33*)</p> <p>Factor 6 - Structured Style – 4 items (6*, 12, 18*, 24)</p> <p>The variable is an interval variable. The mean for each factor will be calculated using SPSS (summing the responses and dividing by the number of items in each factor to obtain a mean frequency).</p> <p>Higher mean scores will indicate higher resilience as measured by the protective factors on the RSA</p> <p>Each RSA factor is an interval variable</p>
CD-RISC-25 spirituality		<p>Questions on the 2-item CD-RISC-25 (Connor & Davidson, 2003) spirituality factor measures spirituality.</p> <p>Please indicate how much you agree with the following statements as they apply over the last month.</p> <p>“Good or bad, I believe that most things happen for a reason”</p> <p><i>0 = not true at all, 1 = rarely true, 2 = sometimes true, 3 = often true, 4 = true nearly all the time</i></p>	<p>Higher score indicates higher spirituality. A mean score is obtained by summing the responses and dividing by the number of items (SPSS).</p> <p>The spirituality variable is an interval variable</p>

Variables	Conceptual Definition (<i>What is it?</i>)	Instrumental Definition or Intervention (<i>How to Observe it?</i>)	Operational Definition (<i>How to measure it?</i>)
Resilience as outcome (BRS - bouncing)	Having the ability to bounce back (Luthar, 2003; Metzel, 2009; Smith et al, 2010).	<p>The 6-item Brief Resilience Scale (BRS: Smith et al., 2010) conceptualize resilience as the ability to bounce back from stress and adversity.</p> <p>Questions on the 6-item BRS will be used to measure resilience as the ability to bounce.</p> <p>Circle one number for each statement to indicate how much you disagree or agree with each statement.</p> <p>“I tend to bounce back quickly after hard times</p> <p><i>1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree</i></p>	<p>Higher scores on the 6-item BRS indicate higher level of resilience as the ability to bounce back</p> <p>A mean score is obtained summing the responses to each item and dividing by the number of items (SPSS)</p> <p>The variable is an interval variable</p> <p>Items 2, 4, and 6 are reverse scored</p>

Variables	Conceptual Definition (What is it?)	Instrumental Definition or Intervention (How to Observe it?)	Operational Definition (How to measure it?)
Individualistic cultural orientation (NICO and EICO)	Individuals who have a strong sense of autonomy, individual initiative and emotional independence. They value freedom of choice and define their own goals (Hofstede, 2001; Kim, et al. 1994).	Questions on the 26-item Cultural Orientation Scale (COS; Bierbrauer, et al., 1994) Please estimate the frequency of these social behaviors in your country of residence. “How often do teenagers in your country of residence listen to their parents’ advice on dating?” <i>1 – not at all, 2 - very rarely, 3 – rarely, 4 – sometimes, 5 – often, 6 – very often, 7– always</i>	Mean NICO and NCCO are computed by summing items 1 to 13 on the COS and dividing by the number of items. Mean EICO and ECCO are computed by summing items 13 to 26 on the COS and dividing by the number of items. Items 6, 8, 19, and 21 are reverse scored.
Collectivistic cultural orientation (NCCO and ECCO)	Individuals who have a strong sense of duty, loyalty, emotional interdependence and solidarity to a group. They value shared decision making and integration among group members (Hofstede, 1980; Hui & Triandis, 1986; Triandis, 1994).	Please indicate your degree of approval or disapproval of certain social behaviors. “What do you think of teenagers listening to their parents’ advice on dating?” <i>I think this is:</i> <i>1 – very bad, 2 – bad, 3 – rather bad, 4 – neither good nor bad, 5 – rather good, 6 – good, 7 – very good</i>	The higher the number the higher the degree of collectivism The variables are interval variables
Demographic variables	Demographic characteristics of participants	Questions on demographic questionnaire designed by the researcher. “Please choose the options that best describe you.” e.g., Age “How old are you?” Sex Marital status Reside (country of permanent residence) Region (region residing in country) Years reside (years residing in country) Ethnicity Years of education Income/resource level	Demographic questionnaire items Interval variable Nominal variable Nominal variable Nominal variable Nominal variable Interval variable Nominal variable Interval variable Ordinal variable

APPENDIX B

APPROVAL LETTERS

Traumatic Life Events Questionnaire (TLEQ)

4 attachments

4SNicely_TLEQ_cert.pdf; noreprint_appendices_generic_2016.pdf; WPS Receipt (Administrative Fee).pdf; WPS Receipt (Licensing Fees).pdf;

From: Arianna De Lara <adelara@wpspublish.com>

Sent: Friday, May 26, 2017 7:34 PM

To: Stacey Nicely

Cc: rights

Subject: Wrapping up licensing for the online/adapted use of the TLEQ

Hello Stacey,

It is now my pleasure on behalf of WPS to wrap-up your licensing arrangements for the use of the TLEQ within your registered project. This email confirms WPS's receipt of your licensed prepayment for 500 adapted/online uses of the TLEQ within your scholarly project.

Attached you'll now find our reprint authorization for the indicated use, including the copyright notice that must appear on each reprint/viewing of the TLEQ. Your payment was processed, and your paid-in-full receipts are attached. To source the administration instructions, item content, and scoring guidelines needed for your customized application, please refer to the TLEQ Manual.

If the project requires you to make additional uses of the TLEQ beyond those licensed, please contact me directly, with your license number (WPS-000740), to make the supplemental licensing arrangements and receive a quote for the additional per-use fees.

Also, looking ahead to the end of your study, see the attached document for our policy on the inclusion of test material within research papers, reports, and articles. All best wishes in launching the project, and thank you again for your interest in the TLEQ. On behalf of WPS, I appreciate your interest in using this instrument as part of your research investigation, and look forward to learning in due course about the results of the study.

Have a wonderful day!

[Arianna de Lara](#)

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Cultural Orientation Scale (COS)

1 attachment

COSE.doc;

From: Petra Lehmeyer <petra.lehmeyer@osnanet.de>
Sent: Tuesday, November 15, 2016 2:16 PM
To: Stacey Nicely
Cc: g.bierbrauer@yahoo.de
Subject: AW: SPN Profile Message: Interest in Using the Cultural Orientation Scale

Dear Stacey A. Nicely,

Professor Bierbrauer requested me to send you the English version of the Cultural Orientation Scale (COS).

Please note that meanwhile two items have been slightly altered thus altering their polarity as well. These changes pertain only to the phrasing of the items, as to content they remain consistent.

The footnote at the end of the scale will provide you with information on how to code the responses to the items.

Professor Bierbrauer is pleased to provide you with his permission to use this instrument and to copy it for your purposes.

Kind regards,

Petra Lehmeyer

Brief Resilience Scale (BRS)

5 attachments

Brief Resilience Scale Questionnaire English Version.pdf; Brief Resilience Scale Spanish Validation Article.pdf; BW Smith Brief Resilience Scale Cutoffs on Page 177.pdf; BW Smith Brief Resilience Scale Predicts Outcomes.pdf; BW Smith Brief Resilience Scale Validation Article.pdf;

From: Bruce Smith <bws0513@gmail.com>
Sent: Saturday, November 26, 2016 1:38 PM
To: Stacey Nicely
Subject: Re: Permission to Use Brief Resilience Scale in Dissertation

Hi Stacey,

Thanks for your interest in the Brief Resilience Scale. You are welcome to use it free of charge and for as much as you like. I have attached the original validation article, a copy of the scale as it usually appears in questionnaires, a chapter with suggested cut-offs for high and low resilience which also has data on predictors of resilience, an article with a validated Spanish version of the scale, and an article on the relationship between the BRS and various outcomes. Please let me know what you find when you can. I wish you the best in your research.

Kind Regards,

Bruce

Connor-Davidson Resilience Scale-25 (CD-RISC-25)

Attachments:

aRISC Manual 06-01-17 F.pdf; aCD-RISC-25 01-01-17.pdf

From: Jonathan Davidson, M.D. <jonathan.davidson@duke.edu>

Sent: Monday, June 12, 2017 4:29 PM

To: Stacey Nicely

Subject: Re: Contact Form submitted

Hello Stacey:

Thank you for your mail and payment. I have pleasure to enclose the scale and manual. Please let me know if I can be of further assistance.

With good wishes for the success of your study,

Jonathan Davidson

From: Stacey Nicely <nicely@andrews.edu>

Sent: Thursday, June 8, 2017 4:22 PM

To: Jonathan Davidson, M.D.

Cc: 'staceynicely2@gmail.com'

Subject: RE: Contact Form submitted

Hello Dr Davidson:

I just got a chance to send along the \$10.00. It's in the form of a Western Union money order (it was much cheaper than remitting the funds directly). You should receive that in the mail in a few days. Please confirm as soon as you have received same.

Thank you so much for your kind assistance.

Regards,

Stacey Nicely, NCC, LPC.

Resilience Scale for Adults (RSA)

1 attachment

RSA 33 items English 7box lines.pdf;

Thank you for the confirmation

I have attached the RSA and you may use it for the project described below.

Best regards,
Odin Hjemdal

From: Stacey Nicely [mailto:nicely@andrews.edu]
Sent: 10. juni 2015 16:00
To: Odin Hjemdal
Cc: Ron Coffen; Carole Woolford-Hunt; Jimmy Kijai
Subject: RSA

Hello Dr Hjemdal:

I am following up on my last email. Since then, I have received confirmation from all members of my committee indicating that they understand and are prepared to work with your request to not include the instrument in any printed or web version. The committee members (copied in this email) know that to be a standard procedure where copyright instruments are concerned or where there is a special request from the author.

In light of the foregoing, will you be able to send us the RSA for use with my dissertation as soon as possible? Also, we would appreciate you sending us any document you have that clearly outlines the specific guidelines for using the RSA.

We thank you so much for your willingness to work with us and for allowing us to use the RSA. We look forward to hearing from you soon.

Sincerely,

Stacey Nicely, NCC, LPC
Testing Coordinator
Andrews University
Counseling & Testing Center
Bell Hall Suite 123
Berrien Springs, MI 49104
Tel: 269-471-3470; Fax: 269-471-3417

From: Odin Hjemdal <odin.hjemdal@svt.ntnu.no>
Sent: Wednesday, June 3, 2015 7:21 AM
To: Stacey Nicely
Subject: RE: Resilience Scale for Adults

Dear Stacey Nicely,

Thank you for your clarifications.

- 1) Perfect
- 2) A Survey Monkey is ok, but not an open web site where it is published
- 3) I know the requirements of a PhD dissertation are similar in Norway. We have already had a difficulty regarding this. A PhD candidate did an unauthorized translation, it was published, and now other research groups have picked up this unauthorized translation and started using it. That is a big problem for many different scales. And essentially if two different groups use two different translations of the same scale, they cannot compare results. It is very unfortunate. Do you see our challenge? We have used 15 years assuring the quality of the RSA and a few poor unauthorized translations may undermine years of work. Do you see the dilemma?

I do understand that the committee that evaluates the PhD needs to see the scales that were used in the studies. Would it be a solution if the committee has a printed copy of the scales? Or do you have other suggestions to how to solve this challenge?

Best,
Odin Hjemdal

From: Odin Hjemdal <odin.hjemdal@svt.ntnu.no>
Sent: Thursday, May 21, 2015 6:25 AM
To: Stacey Nicely
Subject: RE: Resilience Scale for Adults

Dear Stacey,

Thank you for your email and interest.

Could you describe your project in some more detail? Like which research questions are you interested in? What is the age-range and sample size you are planning to include?

The condition for using the RSA is that it and the individual items cannot be published in journal papers nor on the web. We have had some challenges related to keeping the quality of translations high. If the scales were openly accessible we would lose control of the quality control of the translations. The RSA is copyright protected. And we have spent more than 15 years developing our resilience scales as well as testing their qualities. We hope that you understand and find the conditions acceptable.

Best regards,
Odin Hjemdal

Professor
Department of Psychology

July 13, 2017

Stacey A. Nicely
Tel. 269-252-8565
Email: nicely@andrews.edu

RE: APPLICATION FOR APPROVAL OF RESEARCH INVOLVING HUMAN SUBJECTS
IRB Protocol #: 17-100 **Application Type:** Original **Dept.:** Graduate Psychology & Counseling
Review Category: Exempt **Action Taken:** Approved **Advisor:** Ron Coffen
Title: Variations in individualistic and collectivistic cultural orientation and the protective factors that contribute to resilience: Comparisons from Jamaica, Rwanda, and the United States.

Your IRB application for approval of research involving human subjects entitled: *"Variations in individualistic and collectivistic cultural orientation and the protective factors that contribute to resilience: Comparisons from Jamaica, Rwanda, and the United States"* IRB protocol # 17-100 has been evaluated and determined Exempt from IRB review under regulation 46.101 (b) (2). You may now proceed with your research.

Please note that any future changes (see IRB Handbook pages 11-12) made to the study design and/or informed consent form require prior approval from the IRB before such changes can be implemented. In case you need to make changes please use the attached report form.

While there appears to be no more than minimum risks with your study, should an incidence occur that results in a research-related adverse reaction and/or physical injury, (see IRB Handbook pages 12) this must be reported immediately in writing to the IRB. Any research-related physical injury must also be reported immediately to the University Physician, Dr. Katherine, by calling (269) 473-2222.

We ask that you reference the protocol number in any future correspondence regarding this study for easy retrieval of information.

Best wishes in your research.

Sincerely,

Mordekai Ongo
Research Integrity and Compliance Officer

Institutional Review Board - 4150 Administration Dr Room 322 - Berrien Springs, MI 49104-0355
Tel: (269) 471-6361 Fax: (269) 471-6543 E-mail: irb@andrews.edu

NORTHERN CARIBBEAN UNIVERSITY

A Seventh-day Adventist Institution

MAIN CAMPUS

Manchester Rd. Mandeville P.O. , Manchester, Jamaica, W.I.

Office of Research & Grants

Telephone: (876) 963-7416/7480

Email: research@ncu.edu.jm

DATE: May 29, 2017

TO: Ms Stacey Nicely
8871 Maplewood Drive
Berrien Springs, MI 49103

FROM: Samson Omoregie, PhD
Interim Director of Research - Office of Research & Grants

SUBJECT: **IRB Application: Variations in Individualistic and Collectivistic Cultural Orientations and the Protective Factors that Contribute to Resilience: Comparisons from Jamaica, Rwanda, and the United States**

The Institutional Review Board (IRB) of Northern Caribbean University (NCU) has reviewed your application for consent to collect data via an online/ web-based survey research methodology at Northern Caribbean University (NCU), Jamaica. We are pleased to inform you that approval has been granted for a period of one year from the signing of this letter.

The Office of Graduate Studies and Research will facilitate your request by forwarding the survey link and any other relevant details to NCU Corporate Communications. You may send the link to the Associate Vice President at vivienne.quarrie@ncu.edu.jm; copy to the Interim Director of Research at samson.omoregie@ncu.edu.jm and the Dissertation Secretary at dissertationsecretary@ncu.edu.jm.

We wish you all the best in your future endeavours, and trust that your research will advance knowledge in your discipline.

Kingston Campus: 63 Half Way Tree Rd., Kingston 10 | Montego Bay Campus: Harrison Memorial High School, Mt. Salem, Montego Bay | Salem Runaway Bay Campus: Main Street, Salem, St. Ann

Tel: (876)-962-2204 • Website: www.ncu.edu.jm • Fax: 876-962-0075

REPUBLIC OF RWANDA
KIGALI INDEPENDENT UNIVERSITY ULK

P.O. Box 2280 KIGALI

Cell phone: (+250) 0788304084; 0788303670; 0788304086; 0788304081; 0788302644; 0788302348

E-mail: info@ulk.ac.rw

Website: www.ulk.ac.rw

Kigali, June 9, 2017

Ref: 29/ULK/DPRS/2017

From: Dr RUTUNGWA Eugene

Director of Post Graduate Studies and Research

To: Institutional Review Board

Andrews University

4150 Administrative Drive, Room 322

Berrien Springs, MI 49104-0355

RE: INSTITUTIONAL CONSENT LETTER

Dear members of Institutional Review Board,

This is to inform you that STACEY A. NICELY said that she is conducting a comparative research from JAMAICA, RWANDA, AND THE UNITED STATES and she wants Kigali Independent University ULK to allow her to collect data via online self-report survey research methodology.

Her topic is "Variations in individualistic and collectivistic cultural orientation and the protective factors that contribute to resilience: comparisons from Jamaica, Rwanda and the United States".

Kigali Independent University ULK is allowing her to collect data and request her to submit to ULK a copy of her final research.

Sincerely,

Dr RUTUNGWA Eugene

Director of Post Graduate Studies Research and Consultancy

REPUBLIC OF RWANDA

Kigali, 29.10.6.2017
N° 1442/12.00/2017

MINISTRY OF EDUCATION
P.O.BOX 622 KIGALI

Ms. Stacey Ann Nicely

PhD student in Counseling Psychology

Andrews University

Email: nicely@andrews.edu

MICHIGAN, USA

Dear Ms. Stacey Ann Nicely,

RE: Approval to Conduct Research in Rwanda under the Project Title: "Variations in Individualistic and Collectivistic Cultural Orientation and Protective Factors that Contribute to the Resilience, Comparisons from Jamaica, Rwanda and the United States"

I am pleased to attach a copy of research clearance, which has been granted to you to conduct research on the above title.

I wish to remind you that the research clearance number should be cited in your final research report. The research will be carried out under affiliation of the Kigali Independent University-ULK under supervision of **Dr. Rutungwa Eugene**, Director of Postgraduate Studies, Research and Consultancy, ULK.

You are requested to submit the progress report after six months and final report after completion of your research activities to the Ministry of Education of Rwanda.

I wish you success in your research.

Yours sincerely,

Marie-Christine GASINGERWA, Ph.D

Director General of Science, Technology and Research

Cc.

- Hon. Minister of Education
- Hon. Minister of State in Charge of TVET
- Hon. Minister of State in Charge of Primary and Secondary Education
- Permanent Secretary, Ministry of Education
- Dr. Rutungwa Eugene, Director of Postgraduate Studies, Research and Consultancy, ULK.

REPUBLIC OF RWANDA

Kigali, 29/06/2017
N° 1443/12.00/2017

MINISTRY OF EDUCATION
P.O.BOX 622 KIGALI

Re: Permission to Carry out Research in Rwanda - No: MINEDUC/S&T/453/2017

The Permission is hereby granted to **Ms. Stacey Ann Nicely**, PhD student in Counseling Psychology at Andrews University, Michigan, USA, to carry out research on: **“Variations in Individualistic and Collectivistic Cultural Orientation and Protective Factors that Contribute to the Resilience, Comparisons from Jamaica, Rwanda and the United States”**

The research will be carried out in Kigali Independent University and Adventist University of Central Africa. The researcher will be collecting data via an online by using web-based survey research methodology. All research activities will be monitored and coordinated by the Kigali Independent University of Kigali.

The period of research is from **1st July, 2017 to 30th June, 2018**. It may be renewed if necessary, in which case a new permission will be sought by the researcher.

Please allow the **above mentioned researcher**, any help and support she might require to conduct this research.

Yours sincerely,

29/6/2017

A blue circular stamp of the Ministry of Education, featuring a central emblem and the text 'MINISTRE DE L'EDUCATION'. To the left of the stamp is a handwritten signature in blue ink.

Marie-Christine GASINGIRWA, Ph.D
Director General of Science, Technology and Research

APPENDIX C

EMAIL REQUESTING PARTICIPATION

Hello:

I am surveying individuals who have experienced one or more traumatic events at some point during the course of their lives, for example, death of a loved one, natural disaster, motor vehicle accident, life threatening illness, robbery, physical abuse, sexual abuse, or other situations in which danger seemed likely. Participants must be either an American living in America, a Jamaican living in Jamaica, or a Rwandese living in Rwanda, be at least 18 years old, have experienced a traumatic event, and agree to complete the survey only one time. All participants have the chance to win one of six US\$50.00 gift check awards.

The survey should take approximately 25 minutes to complete.

The study has been approved by the Institutional Review Board at Andrews University. They may be contacted at: 269-471-6361 or irb@andrews.edu

To participate, **please be sure to click the survey link that applies to you:**

Americans living in America:

Jamaicans living in Jamaica:

Rwandese living in Rwanda:

Thank you for your participation!

Sincerely,

Principal Researcher, Stacey A. Nicely
PhD Candidate
Graduate Department of Psychology and Counseling
Andrews University
Berrien Springs, MI 49104
Email: nicely@andrews.edu

Dissertation Chair: Dr. Ron Coffen
Professor
Graduate Department of Psychology and Counseling
Andrews University
Berrien Springs, MI 49104
Email: coffen@andrews.edu

APPENDIX D

INFORMED CONSENT

Dear Participant:

Thank you for taking the time to participate in my research study. In order to participate, you must be a citizen of either Jamaica, Rwanda, or the United States, be at least 18 years old, and have experienced a traumatic event such as death of a loved one, natural disaster, motor vehicle accident, life threatening illness, robbery, physical abuse, sexual abuse, or other situations in which you feared danger. Your participation in the study is voluntary. You may exit the survey at any time with no negative consequences if you wish to discontinue. Your responses will be anonymous and strictly confidential. It should take about 25 minutes to complete the survey. Carefully review the information below to be sure you are aware of your rights as a participant as well as any potential benefits or risks involved.

Purpose

The purpose of the study is to investigate differences in the protective factors that are most influential in contributing to resilience in individualists and collectivists in Jamaica, Rwanda, and the United States. Results from the study may inform professionals in the field of psychology who engage in prevention and intervention strategies for individuals who have experienced a traumatic event.

Benefits, Compensation, and Risks

Your participation will make an invaluable contribution to advancing the understanding of cross-cultural differences in the protective factors that contribute to resilience. In addition, all participants have the chance to win one of six US\$50.00 gift check awards. If you wish to participate in the drawing, at the end of the survey you will be asked to enter your email address at a separate web site. This will help maintain anonymity by keeping your email contact separate from your survey responses. The dissertation chair will manage the website for the drawing. To participate in the drawing, please follow the instructions provided at the end of the survey.

Since the survey collects data about traumatic events you have experienced, you might experience discomfort or re-experience some negative emotions associated with the event. If this occurs, please do not hesitate to go to an emergency room near you, or contact a local mental health professional, or trusted supportive individual such as a pastor, family member, or friend who can help you work through those emotions. You may also contact one of the following emergency numbers:

112 or 911 (for emergency services in Jamaica)

112 (for emergency services in Rwanda)

911 (for emergency services in the United States)

Contact Information

If you have questions about this study, please contact the principal researcher, Stacey A. Nicely, or the dissertation committee chair, Dr. Ron Coffen, whose contact information appears below:

Principal Researcher

Stacey A. Nicely
PhD Candidate
Andrews University
Graduate Department of Psychology and Counseling
Berrien Springs, MI 49104
Email: nicely@andrews.edu

Dissertation Chair

Ron Coffen, PhD
Professor
Andrews University
Graduate Department of Psychology and Counseling
Berrien Springs, MI 49104
Office: 269-471-491; email: coffen@andrews.edu

Research involving human participants is carried out under the oversight of Andrews University's Institutional Review Board (IRB). If you have questions or concerns about your rights as a research participant, or if any other problems arise that you do not feel you can discuss with the researcher or the committee chair, please contact the Office of Research & Creative Scholarship, Institutional Review Board, Andrews University, Berrien Springs, MI 49104-0355; Telephone: (269) 471-6361; email: irb@andrews.edu.

Consent

I have read and I understand the information provided. I understand that my participation is voluntary, and that I am free to discontinue the survey at any time without negative consequences. I agree that I will contact a local mental health professional if I experience any discomfort or re-experience any negative emotions associated with any traumatic events that I have experienced. I also agree that I will complete the survey only once. I understand that by selecting "yes" I consent to participate in the research.

APPENDIX E

DEMOGRAPHIC VARIABLES

In this section, you will provide demographic information about yourself. Please choose the options that best describe you.

1. How old are you?

2. What is your sex?

☐ Male ☐ Female ☐ Transsexual ☐ Other

3. What is your marital status?

☐ Single – never married
☐ Cohabiting or civil union
☐ Married
☐ Separated or divorced
☐ Widowed

4. Where do you reside now?

☐ Jamaica ☐ Rwanda ☐ United States

a. **If Jamaica:** What Region?

☐ Cornwall (West) ☐ Middlesex (Central) ☐ Surrey (East)

b. **If Rwanda:** What Province?

☐ Eastern ☐ Western ☐ Northern ☐ Southern ☐ City of Kigali

c. **If UNITED STATES** What Region?

☐ Northeast (CT, ME, MA, NH, RI, VT, NJ, NY, PA)

☐ Midwest (IL, IN, MI, OH, WI, IA, KS, MN, MO, NE, ND, SD)

☐ South (DE, FL, GA, MD, NC, SC, VA, DC, WV, AL, KY, MS, TN, AR, LA, OK, TX)

☐ West (AZ, CO, ID, MT, NV, NM, UT, WY, AK, CA, HI, OR, WA)

5. How many years have you resided in the country you indicated in item # 4?

6. Were you born in the country where you now reside? ☐ Yes ☐ No

a. **If “No” to #6,** then “In which country were you born? _____ then item #7

b. **If “YES to #6”** (survey software prompts participant to answer item # 8

7. Did you attain citizenship in the country where you now reside? ☐ Yes ☐ No

8. Which ethnic group do you most identify with?

☐ Jamaican	☐ Rwandan	☐ Caucasian American
☐ African American	☐ Latino American	☐ Asian American
☐ Native American	☐ Multi-racial	☐ Pacific Islander ☐ Other _____

9. How many years of education have you completed? _____

10. What is the income/resources level of your household when compared to others in the country where you reside?

- ☐ Low income/resources
- ☐ Moderate income/resources
- ☐ High income/resources

Zero-Order Correlations for Some Demographic Variables with Protective Factors (RSA and Spirituality)
and BRS (Outcome) Resilience

Pearson r								
	Variable	PS	PF	SC	FC	SR	Spirituality	BRS
Jamaica (N = 169)	Age	.219**	.137	.215**	.172*	.197*	.060	.255**
	Sex	-.134	-.093	-.039	.022	.063	-.111	-.189*
	Marital Status	.178*	.059	.085	.096	.037	.074	.180*
	Education	-.031	.001	.056	.034	.050	.224**	.034
	Income/Resources	.180*	.129	.159*	.175*	.155*	.099	.114
U.S. (N = 273)	Age	.178**	.061	.058	-.043	.032	-.074	.220**
	Sex	.213**	-.115	-.052	-.118	.057	-.009	-.289**
	Marital Status	.093	.012	.025	-.055	-.016	-.173**	.081
	Education	.017	.066	.029	-.075	.000	-.245**	.039
	Income/Resources	.193**	.161**	.140*	.193**	.267**	-.073	.099

Note. *correlation is significant at the 0.05 level; **correlation is significant at the 0.01 level; PS = perception of self, PF = planned future, SC = social competence, FC = family cohesion, SR = social resources, BRS = Brief Resilience Scale (outcome resilience – bouncing back); Sex coded as: 1 = male, 2 = female, 3 = transsexual, 4 = other; Marital Status coded as: 1 = single-never married, 2 = cohabitating/civil union, 3 = married, 4 = separated/divorced, 5 = widowed; Income/Resources coded as: 1 = low, 2 = moderate, 3 = high.

APPENDIX F

SURVEYS

Cultural Orientation Scale
Item-Total Statistics Resulting in Adjusted COS

COS Item	Corrected Item-Total Correlation		
	Jamaica	Rwanda	U.S.
Normative Items			
COS1	.354	.332	.372
COS2	.459	.680	.365
COS3	.380	.603	.513
COS4	.238	.475	.231
COS5	.255	.139	.228
COS6	-.199	-.278	-.150
COS7	.347	.264	.249
COS8	.022	.300	.063
COS9	.305	.439	.355
COS10	.348	.628	.493
COS11	.525	.634	.443
COS12	.252	.078	.309
COS13	.101	.239	.225
Cronbach's Alpha	.601	.722	.631
Cronbach's Alpha (after items deletion)	.713	.743	.709
Evaluative Items			
COS14	.428	.212	.495
COS15	.375	.200	.454
COS16	.471	.452	.538
COS17	.166	.067	.085
COS18	.175	.542	.065
COS19	.066	.086	.002
COS20	.232	.087	.295
COS21	-.053	.130	.031
COS22	.219	.220	.293
COS23	.482	.017	.526
COS24	.445	.280	.478
COS25	.385	.162	.285
COS26	.290	.152	.174
Cronbach's Alpha	.627	.506	.626
Cronbach's Alpha (after items deletion)	.710	.484	.747

Note. Normative items 4, 5, 6, 8, 13 and evaluative items 17, 18, 19, 21, 26 are in boldface and were deleted from the COS resulting in the adjusted COS. Items 6, 8, 19, and 21 were reverse scored prior to deletion.

Open-ended Question for Mixed-method Follow-up Data Analysis

Developed by Principal Researcher

What are some things that you and most people in your country do to deal with, and overcome the effects of trauma?

REFERENCE LIST

REFERENCE LIST

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