HOST COMMUNITY RESIDENT STRESS AND COPING WITH TOURISM DEVELOPMENT

By

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ABSTRACT

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This dissertation utilizes stress and coping theory from the psychology discipline as a framework from which to examine host community resident responses to tourism development. Stress is one element of individuals' overall quality of life that may be impacted by the development and operation of tourism in host communities. The stress and coping framework allows examination of emotional and behavioral responses that represent an important step forward from using attitudes toward or support for tourism development as measures of resident responses to tourism development. Stress is experienced through *daily hassles*, which, with long term exposure, can result in negative outcomes like high-blood pressure, decrease in cognitive function, accelerated aging, and loss of sleep. Factors such as personality, social support, stress appraisal, and coping play a role in how stress affects individuals. A paper survey instrument composed of short answer and scale-based questions about the stress and coping process was administered face to face to 363 residents of Falmouth, Jamaica in February and March, 2013. A new cruise port was recently developed in Falmouth that serves some of the largest cruise ships in the world several days per week. Thematic analysis of stressors experienced by survey participants; confirmatory factor analysis of latent constructs of personality, social support, stress appraisal, and coping within the stress and coping process; and structural equation models examining relationships within the stress and coping process were conducted.

Seventy-eight percent (78%) of surveyed Falmouth residents experienced stress from the development and operation of the new cruise port. Residents indicated unmet expectations,

overtaxed infrastructure/crowding, increased cost of living, pollution, and police harassment were major causes of stress. Stressors were inter-related with each other and exacerbated *daily hassles* already faced by Falmouth residents. Confirmatory factor analysis supported construct validity for measurements of social support, secondary stress appraisal, and coping with some modification. Construct validity of measurements of personality and primary stress appraisal were not supported. Two structural equation models revealed social support and the appraisal of stress controllability each predicted coping responses. Individuals who perceived they had social support available to discuss important personal issues were likely to utilize seek social support as a coping response. Individuals who appraised stress as controllable by oneself were likely to utilize problem-focused coping, keep a positive focus, and were less likely to employ wishful thinking (emotion-focused coping). Individuals who appraised stress as being controlled by others were likely to seek out social support.

Research findings indicate stress and coping is a suitable framework from which to examine how individuals respond to tourism development. Researchers and practitioners can utilize research findings to promote organization of pre and post-development activities to help foster resident perceptions of social support and stress controllability, which predict coping responses have been found to be more effective at mitigating stress and negative physical and mental health outcomes. Future research should utilize a variety of frameworks from diverse disciplines to further understand possible impacts of and responses to tourism development. Further testing of the stress and coping framework is necessary to continue its use in the tourism development context and eventually, tourism specific measurements of stress and coping should be developed.

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CHAPTER 1: INTRODUCTION

A great deal of research has explored the ways tourism development affects individuals within host communities and their responses. While some frameworks like Doxey's Irridex (1975) predict residents of host communities will respond in increasingly negative ways as tourism development grows within a community, little empirical evidence has substantiated this theory (Sharpley, 2014). Other frameworks like social exchange theory, power theory, and identity theory have all been extensively utilized as a basis for research examining tourism developments' impacts on host community residents (Nunkoo & Gursoy, 2012; Nunkoo & Ramkissoon, 2012; Ward & Berno, 2011). Research utilizing these frameworks generally use attitudes toward or support for tourism development as measures of resident responses. While attitudes toward and support for tourism development are no doubt useful, this vein of research has largely ignored how individuals emotionally and behaviorally experience and respond to the myriad impacts of tourism development.

Tourism specific development usually leads to increased tourist visits that can lead to additional positive and negative impacts. Tourism development is used throughout this research to describe both the physical development of tourism resources but also the resulting increased visitation by tourists that is brought about by physical development. Some tourism specific impacts that occur include more recreation and park opportunities (McCool & Martin, 1994), substance abuse among workers in the tourism industry (Belhassen & Shani, 2013), and crowding of public spaces and facilities (Lindberg, Andersson, & Dellaert, 2001). Some tourism impacts like the demonstration effect (a phenomenon where residents of host communities try to copy the behavioral patterns of tourists) are especially prevalent in areas where locals have fewer socioeconomic resources than tourists who visit (Fisher, 2004). Whether through physical

development or increased tourist visits, there is little doubt tourism brings about a variety of positive and negative impacts (Sharpley, 2014).

Problem Statement

This study utilizes stress and coping theory from the psychology discipline as a framework from which to examine host community resident responses to tourism development. Stress is defined as anything that causes an individual psychological distress. "Psychological distress is a negative psychological response…and can include a variety of affective and cognitive states, such as anxiety, sadness, frustration, the sense of being overwhelmed, or helpless" (Kemeny, 2003, p. 124). Coping is defined as "cognitive and behavioral strategies used to manage stressful situations" (Shaw, Brown, & Dunn, 2013, p. 243). Impacts of tourism development have rarely been cited as causing stress within the tourism literature. Using the definition "anything that causes an individual psychological distress," a great deal of the negative impacts brought about by tourism development can be considered stress. Stress and its affect on individuals play an important role in individuals emotional and psychological well being and overall quality of life (QOL) (Schalock, 1997).

The stress and coping framework utilized in this research is situated within the greater tourism and QOL research paradigm, an area of research making important steps forward from measuring attitudes and support to measuring how the lives of host community residents are affected by tourism development (Andereck & Nyaupane, 2011). This is not the first time a stress and coping framework has been utilized in the greater tourism and leisure body of literature, as a handful of studies have examined stress and coping responses of recreationists negotiating constraints and hassles (Schneider & Hammitt, 1995; Schneider & Stanis, 2007; Schuster, Hammitt, Moore, & Schneider, 2006; Schuster, Hammitt, & Moore, 2003, 2006).

However, this research marks the first time a stress and coping framework has been used to examine host community residents stress and coping with impacts of tourism development.

Research Purpose

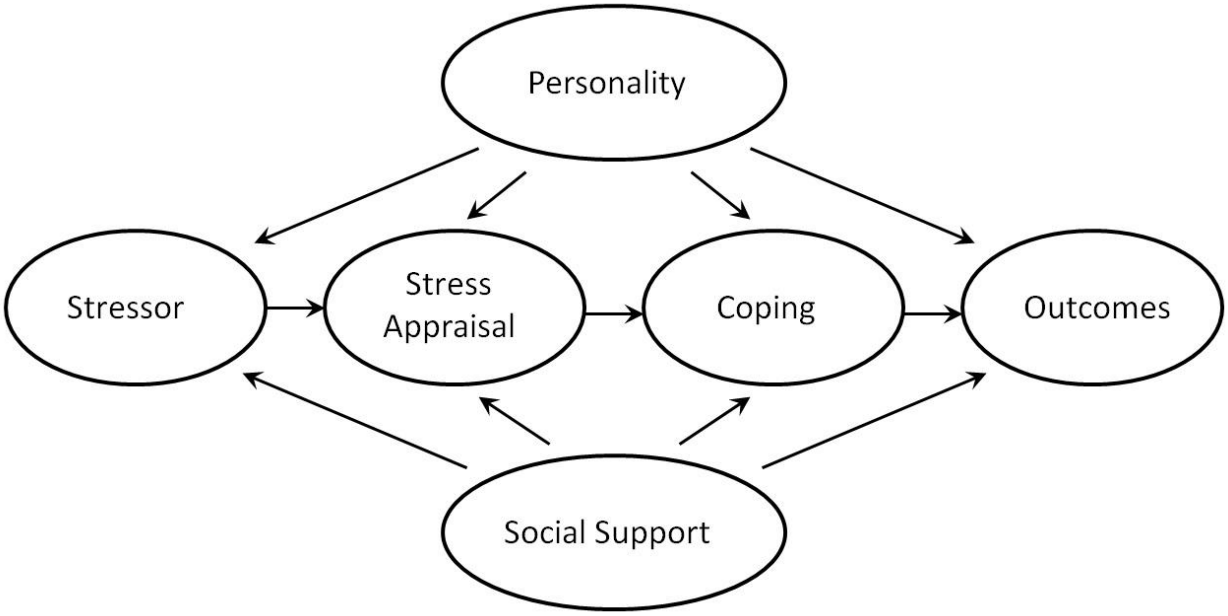
While a great deal is understood about tourism impacts, little is known about how residents of host communities respond to those impacts emotionally or behaviorally. The purpose of this research is to understand individual psychological stress and coping responses when large developments that benefit primarily tourists and developers (outsiders) are introduced in a local community setting. Large developments in attractive destinations are becoming more common and range from new airports, new cruise docking facilities, new resort developments, or shopping malls for tourists. Sometimes local residents are taxed for these tourism developments, other times investment comes from outside the country or by a central government. Often promises are made about the positive impacts that locals can expect, like job creation, new shopping opportunities, and increased quality of life. Physical development and non-delivery of promised positive impacts (or the negative impacts that may not have been explained or anticipated) can cause stress in a local area. This is the first step toward building a body of research that ultimately seeks to mitigate stress for tourism host community residents either by preventing its occurrence through sustainable development practices or, in instances of stress that are not preventable, determining coping responses and influencing factors that mitigate stress and negative health outcomes.

Conceptual Framework and Definitions

The modern concept of stress dates to the 17th century, when engineers sought to understand the maximum physical stress under which their man-made structures would function (Hinkle, 1974). This concept provided the basis from which theorists have derived their

definitions of stress throughout the last century. In the early 1900s, neurologists adapted engineer's definition of stress to the brain. Soldiers returning from the trenches of World War I were thought to have suffered from physical brain damage as a result of 'shell shock' from exploding artillery shells (Myers, 1915). In the second half of the 20th century, stress began to be perceived as a cognitive psychological phenomenon rather than neurological issue, and this paradigm as persisted until today (Lazarus, 1993). The experience of psychological stress leads to the release of the hormone cortisol from the hypothalamic pituitary adrenal axis, which prepares individuals to address their stressor (Kemeny, 2003). In many instances, the experience of stress is a positive reaction (i.e., fight or flight) to potentially harmful situations (Sapolsky, 2000). When stress and the resultant hormone release is experienced over a long period of time in response to situations that don't merit a full response, a variety of negative health (i.e., increased blood pressure) and psychological (i.e., cognitive impairment) outcomes can occur. Stress is by nature a subjective phenomenon, as an event may cause stress for one individual and not another. Researchers have determined several important elements within the stress process that affect if and how individuals are affected by stress (Figure 1) (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986).

Figure 1- Stress and coping process conceptual framework (Adapted from Folkman et al., 1986)



Stress Appraisal

Appraisal is defined as a process through which individuals evaluates if and how a stressful event is relevant to their well being (Folkman, Lazarus, Dunkel-Schetter, DeLongis, et al., 1986). Individuals utilize primary and secondary appraisal in their evaluation of stress. Primary appraisal is utilized to determine the importance of the stressor to the well being of the individual under stress (Newton & McIntosh, 2010). Secondary appraisal is utilized to determine the level of controllability the individual has over the stressor (Edward J. Peacock & Wong, 1990) There are three types of primary appraisal (threat, challenge, and centrality) and three types of secondary appraisal (controllable by self, controllable by other, and uncontrollable) developed on the framework of cognitive relational theory. Threat refers to the potential for harm or loss to the individual. Challenge refers to the possibility of growth from the interaction with stress. Centrality refers to the perceived importance or "stake" of the individual in a particular stressor or stressful situation. Stressors that are controllable by self are appraised to be something

that the individual has the power to change (i.e., addiction). Stressors that are controllable by others are within someone else's power to change (i.e., a spouse asking for a divorce). Stressors that are uncontrollable are within nobody's power to change (i.e., a tornado). Primary and secondary appraisal are not necessarily undertaken in chronological order as the names imply, and individuals often reappraise stressors as circumstances change (Endler, Speer, Johnson, & Flett, 2000).

Personality

Personality is defined as "the dynamic organization within the person of the psychological and physical systems that underlie that person's patters of actions, thoughts, and feelings" (Allport, 1961; Carver & Connor-Smith, 2010, p. 680). The five factor model of personality traits commonly known as The Big Five has emerged as the most prominent model of personality in the psychology domain (Digman, 1990). The Big Five personality factors are Extraversion (E), Neuroticism (N), Agreeableness (A), Conscientiousness (C), and Openness to Experience (O). Extraversion is exemplified by several types of behavior, usually assertiveness, confidence, and dominance (Carver & Connor-Smith, 2010; Depue & Collins, 1999). It is unclear whether sociability is a core element of extraversion or rather a byproduct of it (Cohen, Doyle, Turner, Alper, & Skoner, 2003; Lucas, Diener, Grob, Suh, & Shao, 2000). Neuroticism is exemplified by a moodiness, depression, anxiety, and a propensity for becoming upset or distressed (Carver & Connor-Smith, 2010). Agreeableness is exemplified by friendliness, cooperativeness, empathy, and the ability to avoid interpersonal conflict (Graziano, Habashi, Sheese, & Tobin, 2007; Graziano, Jensen-Campbell, & Hair, 1996; Parks & Guay, 2009). Conscientiousness can vary greatly between measurements, but typical conscientious behaviors include responsibility, impulse control, or taking future contingencies into account (Carver &

Connor-Smith, 2010). Finally, Openness to Experience is exemplified by vivid fantasy, depth of feeling, behavioral flexibility, curiosity, and unconventional attitudes (McCrae, 1996).

Social Support

Social support is defined as "an exchange of resources between two individuals perceived by the provider or the recipient to be intended to enhance the well being of the recipient" (Shumaker & Brownell, 1984, p. 11). This research utilizes a three part conceptualization social support that includes appraisal, belonging, and tangible support (Langford, Bowsher, Maloney, & Lillis, 1997a). Appraisal support is the perceived availability of similar individuals that can discuss important personal issues (Cohen & Hoberman, 1983). Belonging support is the perception that a peer group exists that an individual can identify and socialize with (Brookings & Bolton, 1988). Tangible support is the perceived availability of direct aid or services through various resources, monetary or otherwise (Schaefer, Coyne, & Lazarus, 1981). While similar, the small variations in types of social support allow for a comprehensive understanding of individuals' perception of the availability of several types of social resources (Gottlieb & Bergen, 2010).

Coping

Coping is defined as "cognitive and behavioral strategies used to manage stressful situations" (Shaw et al., 2013, p. 243). Lazarus (1966) shifted the focus of coping research from early ego-psychology conceptualizations of coping as unconscious processes that individuals utilized to defend themselves from stress to a continually changing cognitive process (Folkman & Moskowitz, 2004; Vaillant, 1995). Although there are many ways of classifying coping responses (see Skinner, Edge, Altman, & Sherwood, 2003 for a review), perhaps the most widely utilized and recognized are Folkman and Lazarus' (1980) meta-categories of problem-focused

and emotion-focused coping. "Problem-focused coping included efforts to manage the stressor and change the person-environment relationship causing the stress, while emotion-focused coping was found to regulate emotional distress caused by stressors" (Folkman & Lazarus, 1980, p. 223). Those coping with stressful situations almost always utilize both problem and emotion-focused coping, as they not only cope with that situation but their own emotional response. Problem focused coping has generally been found to be more effective at mitigating stress and resultant negative health and psychological outcomes (Penley, Tomaka, & Wiebe, 2002).

Coping responses to stress play an important role in if or how individuals are affected by health and psychological outcomes that stress produces. Researchers have generally found problem-focused coping to be more effective at mitigating stress and negative outcomes than emotion-focused coping (Penley et al., 2002). The congruence of coping response and appraisal are of particular importance, as individuals who utilized problem focused coping to address stressors appraised as uncontrollable experienced increased instances of negative health and psychological outcomes (Endler et al., 2000; Forsythe & Compas, 1987). Similarly, those who utilize emotion-focused coping to respond to stressors that are appraised as controllable tend to experience greater instances of negative outcomes like depression (Vitaliano, DeWolfe, Maiuro, Russo, & Katon, 1990). Perhaps most importantly, coping responses that are found to be successful at mitigating particular stressors and outcomes can be taught to individuals under stress, and stress management/coping workshops have been found to help individuals cope effectively and mitigate negative outcomes like work burnout (Rowe, 1999).

Research Questions

Three research questions were crafted to address the problem and purpose of this research.

Research question 1: How do residents of a host community experience stress from cruise tourism development?

Research question 2: How do established measures of elements within the stress and coping process (personality, social support, stress appraisal, and coping) perform in the context of cruise tourism development in a Caribbean island nation?

Research question 3: What are the relationships between social support, stress appraisal, and coping responses by residents of a community developed for cruise tourism?

Research Beneficiaries

This research will benefit residents of communities developed for tourism, organizations devoted to maintaining individuals' quality of life, tourism development agencies, tour operators, governmental organizations focused on individual welfare, and the academic community. Understanding stress and coping responses to tourism development can help inform and shape future development activities in a way that minimizes stress. For community organizations, understanding stress and coping responses to tourism development can help inform the design of social programs aiding individuals in their coping processes and helping to mitigate the stresses brought about by tourism development and already existing tourism activities.

De-Limitations

This research was delimited to the study of cruise tourism as a form of tourism development. Only international tourism was studied, as domestic tourists are not likely to be on a cruise ship in the country studied. Data were collected during a peak time of the tourism season, not across an entire year of tourism demand. Only those residents who self-identified as experiencing stress caused by cruise tourism were included in this study. This research did not seek to measure any variables related to the tourist or the developer. There were no elements of

attitudes or support for tourism development included in this research. Appraisal and coping is just one way to conceptualize and measure responses to impacts of tourism development. Coping responses were measured at the individual level rather than the community level.

Limitations

This was a cross sectional study, and as such was unable to measure the transactional nature of the stress process as individuals navigate their stressors on a day-to-day basis. This research represents the stress and coping process that individuals were engaging in on the particular day they answered the survey, rather than a long-term process. This research did not explore characteristics of individuals who do not experience stress. Physical and mental health outcomes of individuals under stress were not measured. Any individuals who may have moved away from the community to escape tourism development were not surveyed. Individuals who may have worked in the community but did not live there were also not surveyed and may be different than those surveyed. Each element of the stress and coping process was measured through self-reports, meaning certain responses may be under or over represented. Individuals may have used coping responses that were not included in the scale-based measurement. Some stresses discussed by survey participants were likely already present within the community prior to tourism development. Some survey participants had difficulty understanding the language used in survey instruments.

Outline of Chapters

This dissertation follows a three article format, with each article addressing a portion of the problem statement and research questions. The first article (Chapter 2) examines the notion of stress brought about by tourism development and how residents experienced stress (Submitted to *Journal of Sustainable Tourism* September 3, 2013; revise and resubmit decision received

November 4, 2013; revisions pending). The second article (Chapter 3) outlines the conceptualization of the stress and coping process and examines the construct validity of each scale used to measure constructs within the process (Submitted to *Tourism Management* February 7, 2014). The third article (Chapter 4) examines the relationships between social support, appraisal, and coping with stressors brought about by tourism development (Formatted for submission to *Annals of Tourism Research*). Chapter 5 discusses the findings of all three articles holistically and provides conclusions, implications, and recommendations for future research.

CHAPTER 2: HOST COMMUNITY RESIDENTS' NOTIONS OF STRESS BROUGHT ABOUT BY CRUISE TOURISM DEVELOPMENT

Introduction

The host community is an integral component of the sustainable tourism system, and community residents are equally as important as hotels, attractions, tourists, and transportation (Cole, 2006; Saufi, O'Brien, & Wilkins, 2014). While some frameworks like Doxey's Irridex (1975) predict negative impacts of tourism development will create conflict between residents of host communities and tourists, little empirical evidence has substantiated this theory (Sharpley, 2014). A variety of other frameworks like social exchange theory, power theory, and identity theory have been utilized as a basis for research examining the impacts of tourism development on host community residents (Nunkoo & Gursoy, 2012; Nunkoo & Ramkissoon, 2012; Ward & Berno, 2011). Research utilizing these theoretical frameworks tends to explore a wide range of perceived impacts and resident responses through attitudes toward or support for tourism development. Despite the wealth of research exploring the impacts of tourism and its affect on resident attitudes toward and support for tourism development, little is understood about emotional and psychological effects of tourism development (Berno & Ward, 2005).

Tourism development is used throughout this research to describe both the physical development of tourism resources and the resulting increased visitation by tourists that is brought about by physical development. Tourism development can create positive and negative economic, sociocultural, and environmental impacts. Some tourism specific impacts that occur include increased sense of cultural heritage (Wang & Bramwell, 2012), substance abuse among workers in the tourism industry (Belhassen & Shani, 2013), and crowding of public spaces and facilities (Lindberg et al., 2001). Some tourism impacts like the demonstration effect are especially

prevalent in areas where locals have fewer socioeconomic resources than tourists who visit (Fisher, 2004). Cruise tourism brings about a variety of unique impacts, such as the a decline in overnight stays in cruise tourism destinations (Bresson & Logossah, 2011), short term people pollution, when large quantities of tourists enter a small area for a short period of time (Klein, 2011), discharge of waste into waterways (Johnson, 2002), and leakage of a significant portion of cruise passenger spending back to cruise companies and other external organizations (Marsh, 2012).

This study utilizes stress theory from the psychology discipline as a framework from which to examine how residents of Falmouth, Jamaica, recently the site of a major cruise port development, are emotionally and psychologically affected by tourism development. Stress is defined as anything that causes an individual psychological distress. "Psychological distress is a negative psychological response to such threats and can include a variety of affective and cognitive states, such as anxiety, sadness, frustration, the sense of being overwhelmed, or helpless" (Kemeny, 2003, p. 124). Using this definition, a great deal of the negative impacts previously examined in research examining tourism development can be considered stressors. In addition to these impacts, the stress framework expands the nomological network of tourism impacts to include states of affect that have not previously been considered as impacts of tourism or tourism development.

Stress and its affect on individuals play an important role in individuals emotional and psychological well being and overall quality of life (QOL) (Schalock, 1997). The stress framework utilized in this research is situated within the greater tourism and QOL research paradigm, an area of research making important steps forward in measuring how the daily lives of host community residents are affected by tourism development (Andereck & Nyaupane, 2011).

This is not the first time a stress framework has been utilized in the greater tourism and leisure body of literature (see Iwasaki & Schneider, 2003; Schneider & Hammitt, 1995; Schneider & Stanis, 2007; Schuster, Hammitt, Moore, et al., 2006; Schuster et al., 2003; Schuster, Hammitt, & Moore, 2006), however, this is the first time such a framework has been utilized to examine residents of a tourism host community.

Stress has been ubiquitous in the everyday lives of humans since our genesis as a species. In the not so distant past, stressful events like an attack from a predator elicited a fight or flight response that could mean the difference between life and death. Today, stress is more likely to come from a struggle to meet basic needs like food, water, or shelter, from difficulty with personal relationships, or from ever increasing demands in the workplace. The experience of stress leads to the release of the hormone cortisol, which physiologically prepares individuals to respond to their stressor(s) (Kemeny, 2003). In many instances, the experience of stress is a positive reaction (i.e., fight or flight) to potentially harmful situations (Sapolsky, 2000). When stress and the resultant hormone release is experienced over a long period of time in response to situations that don't merit a full response (i.e., being stuck in a traffic jam), a variety of negative health (i.e., increased blood pressure) and psychological (i.e., cognitive impairment) outcomes can occur (Fraser et al., 1999; Hanson & Chen, 2010; Thoits, 2010).

The purpose of this research is to understand how individuals experience psychological stress when a large-scale tourism development is introduced in a small community setting. Large-scale developments in small but attractive destinations are becoming increasingly common, and range from cruise docking facilities to resorts or shopping malls for tourists. Sometimes local residents are taxed for these tourism developments, other times investment comes from outside the country or by a central government. Promises are often made about the positive

impacts that local residents can expect, like job creation, new shopping opportunities, and increased quality of life. Physical development and lack of promised positive impacts (or negative impacts that may not have been explained or anticipated) can cause stress in a local area. This is the first step toward building a body of research that ultimately seeks to mitigate stress for tourism host community residents either by preventing its occurrence through sustainable development practices or, in instances of stress that are not preventable, exploring coping responses and influencing factors that mitigate stress and negative health outcomes.

Literature Review

Impacts of tourism development have historically been placed into three categories: economic, sociocultural, and environmental (Pearce, 1995). In concert with a variety of other factors, each type of tourism impact and the interplay between them plays an important role in host community residents' quality of life (K. Kim, Uysal, & Sirgy, 2013; Klein, 2013). Tourism development in the Caribbean has resulted in a unique combination of impacts based on a variety of factors like the history of development in the Caribbean, the nature of small island states, and the type of tourism that has been developed (Bishop, 2010; Duval, 2004). While there is a dearth of research examining the cruise industry, researchers have identified several important issues within the cruise tourism segment that could create additional strains for residents of communities hosting commercial cruise ships (Papathanassis & Beckmann, 2011). Cruise tourism is unique in that it represents four separate aspects of the tourism industry: transportation, accommodation, foodservice, and attractions (Dwyer & Forsyth, 1998), and there is potential for cruise tourism development to have distinct impacts on host communities due to the increasing size and number of ships sailing, their often short duration of stay, and seasonal nature (Chase & McKee, 2003).

Economic Impacts

On the national level, tourism development has long been an attractive option for stimulating economic growth in both developing and developed nations. While there is evidence of a positive relationship between tourism development and GDP growth in both developed countries and less developed countries, the economic impacts of tourism development are often more pronounced in less developed countries (Lee & Chang, 2008). In the Caribbean, much of the tourism infrastructure has been developed through foreign investment encouraged by government incentives and lack of regulation (Dann & Potter, 2001). Physical development of cruise ports, especially to accommodate more and larger cruise vessels, may not reap economic benefits equal to the cost of port development for local or national governments (Nowak & Sahli, 2007). Investment and development by private external organizations in the Caribbean has undertones of neo-colonialism and dependency for the region (Duval, 2004). The ownership of Caribbean resources and businesses by foreign nationals or companies with greater resources than many local individuals or organizations serves to shape Caribbean identity and preclude local participation in tourism and other economic activities, thus minimizing economic options for many Caribbean community residents (Smith, 2013).

At the community level, even cases where tourism development is designed to be locally focused and sustainable, research has shown distributional inequalities in economic benefits between local residents, local elites, and foreign tourism businesses (Lee, Hampton, & Jeyacheya, 2014; Walpole & Goodwin, 2000). Power structures within communities in developing nations are such that tourism development ultimately benefits a select few individuals, while the remaining economic gains leak out of the community, region, and nation (Jamal & Camargo, 2014). Despite the recent growth of tourism in the Caribbean, many families within Jamaica

struggle to meet basic needs and receive little help from the federal government, which has prioritized provisioning larger tourism developments over aiding its citizenry (Dodman, 2009).

While the majority of major cruise companies operating in the Caribbean are based in the United States (and owned by a small cabal of parent companies), most ships are registered and flagged in countries with lax labor laws, essentially eliminating the bulk of labor rights for cruise ship based employees, many of whom come from Caribbean communities (Chin, 2008; Wood, 2000). In spatial terms, tourists tend not to stray far from their cruise ship 'bubble' of comfort, generally either booking excursions from the ship itself or venturing only into a tightly controlled area surrounding the port where there is less risk of becoming lost, language barriers, and fear of crime (Jaakson, 2004). As a result, tourists generally spend their money either on the cruise ship itself or on businesses that are economically tied to cruise companies, resulting in significant economic leakage away from communities hosting cruise tourism (Nicely & Palakurthi, 2012). Those individuals who are involved in selling merchandise and craft goods to cruise passengers in Jamaica, cultural differences prevent many from success; the often outgoing and sometimes aggressive nature of many Jamaican vendors decreases the likelihood that cruise passengers (especially individuals traveling alone) will purchase their goods (Henthorne, George, & Smith, 2013; Henthorne, 2000).

Sociocultural Impacts

Sociocultural impacts of tourism development are often measured in the form of attitudes or perceptions rather than change in GDP or job creation. In any given community, there are likely to be individuals who perceive they are negatively affected and individuals who perceive they have been positively affected by tourism development. A vast array of positive social impacts of tourism development like increased participation in community decision making

activities (Hwang, Stewart, & Ko, 2012), increased sense of cultural heritage (Wang & Bramwell, 2012), more recreation and park opportunities (Kuvan & Akan, 2012), and improved community services (Andereck, Valentine, Knopf, & Vogt, 2005) have been examined extensively. Similarly, negative social impacts of tourism development like increased crime rates (Brunt & Courtney, 1999), loss of resident identity and culture(M. Park & Stokowski, 2011), degradation of morality (Mok, Slater, & Cheung, 1991), substance abuse among workers in the tourism industry (Belhassen & Shani, 2013), and crowding of public spaces and facilities (Woosnam, Norman, & Ying, 2009) are frequent topics of inquiry.

The nature of tourism in small island states like many Caribbean nations tends to magnify sociocultural impacts (i.e. the demonstration effect or privatization of previously public spaces) of tourism on the quality of life of island residents (Kerstetter & Bricker, 2012). Though Jamaican tourism has been marketed extensively to the international community, industry and government officials have not marketed tourism to Jamaican residents, leading many to resent tourists in their community as consumers of Jamaican resources without bothering to learn anything about the culture or people (Stupart & Shipley, 2012). The massive growth of all-inclusive, cruise, and other types of 'enclave' tourism by multinational corporations in Jamaica and throughout the Caribbean has served to exacerbate the resentment of tourism and tourists, as such products isolate tourists from local residents and possible acculturative activities (Harrison, Jayawardena, & Clayton, 2003). A great deal of research has found residents and tourists alike have expectations and assumptions of what tourism will be like in a given location, and in many instances those assumptions and expectations are unsubstantiated (Deery, Jago, & Fredline, 2012; Johnson, Snepenger, & Akis, 1994).

Cruise tourism has had a unique social impact on many Caribbean islands through the propagation of Caribbean fantasyland that mirrors works of fiction like Disney's Pirates of the Caribbean more closely than reality (Klein, 2011; Wood, 2000). This marginalization of real local culture and fabrication of a fantasy culture enables the promotion of the ship and port facilities as the cruise destination, rather than the port host community (Lester & Weeden, 2004). Other sociocultural impacts of cruise tourism include crowding of public spaces and strain on social services, particularly in cases where small communities host large cruise ships (Klein, 2013). Research indicates local residents tend to avoid areas used by cruise ships and excursions when cruise ships are in town, and the road, water, and sewage systems often are unable to cope with the additional stress brought about by a significant increase in users (Brida & Zapata, 2009).

Environmental Impacts

Just as with economic and sociocultural impacts, both positive and negative environmental impacts can result from tourism development. Development of an area for tourism purposes can lead to increased protection of local natural resources (Mbaiwa, 2011). In some cases, tourism development can even lead to restoration and preservation of natural areas that had either been neglected or degraded by other industries (Liu et al., 1999). Over taxation of resources (Briassoulis, 2002), pollution (Buckley & Pannell, 1990), and destruction of wildlife habitats are also not uncommon at development sites. After physical development, the presence of tourists and operation of tourism businesses like ports, resorts, and attractions can create an array of environmental problems if not conducted sustainably (Williams & Ponsford, 2009). Many tourists express their commitment to consume environmentally sustainable tourism products and services, but their behaviors suggest otherwise (Budeanu, 2007).

Tourism activities are often based upon the very resources they protect or degrade; one of the most important attractions for Caribbean islands are their sparkling blue water, white sand beaches, and coral reefs (Cater, 1993). The small island states of the Caribbean often have unique ecosystem, and insularity makes them particularly vulnerable to changing seasonality and rising sea levels brought about by climate change (Amelung, Nicholls, & Viner, 2007; Scott, Simpson, & Sim, 2012). The large scale developments recently conducted by multinational corporations in many Caribbean nations have created unique environmental issues – Not only are the geographic footprints of such development often vast, but they consume a great deal of resources and import what cannot be generated locally (Dodman, 2009; Timms, 2006).

As with many other types of tourism, cruise tourism can affect the natural environment both during and after physical development of port facilities. The environmental regulations in many less developed countries where new cruise ports are often built do not necessarily require the completion of environmental impact assessments prior to construction, and many private organizations choose not to conduct such assessments if they are not required (Zubair, Bowen, & Elwin, 2011). In many instances, dredging of harbors to accommodate massive new ships can create sedimentation and turbidity, affecting coral reefs, reef based fisheries, and in turn the fisherman who depend on them for their livelihoods (Erftemeijer, Riegl, Hoeksema, & Todd, 2012). The operation of cruise ships, generally powered by large diesel engines, and cruise ship tourism creates high levels of greenhouse gasses that affect local, regional and global environmental sustainability (Eijgelaar, Thaper, & Peeters, 2010). Although the management of waste from ships has recently improved, illegal dumping of hazardous waste remains a problem. There have recently been a variety of legal actions brought against cruise companies for the

illegal dumping of garbage and hazardous wastewater, some resulting in fines of more than $100 million (Brida & Zapata, 2009; Dickinson & Vladimir, 2008).

Tourism Planning and Stakeholder Engagement

Tourism planning and stakeholder engagement generally increases the likelihood that the positive impacts of tourism development will be evenly distributed across stakeholder groups and helps address possible negative impacts before they become an issue (Nunkoo & Ramkissoon, 2011). Planning for tourism is one method of proactively seeking input from community stakeholders and gaining support of local residents, business owners, government agencies, and non-governmental organizations, and ultimately creating a more sustainable system in any given community. A recent positive movement toward self regulation has resulted in many tourism development and operation organizations undertaking sustainable practices and planning exercises that actively seek input from local individuals and organizations (Ayuso, 2007; Rivera, 2002). Despite this positive movement, internal standards and regulations are generally not enforceable by external organizations if they are not met (Bramwell & Lane, 2010).

There are a variety of barriers to cruise tourism planning, and as such, a great deal of development occurs with little input from varying stakeholder groups (Lester & Weeden, 2004). None of the major cruise companies operating in the Caribbean are owned by Caribbean residents or companies (Dickinson & Vladimir, 2008; Garin, 2005). Power relationships between cruise companies, Caribbean governments, and communities are often such that the cruise companies can dictate development terms or simply relocate development elsewhere, mirroring cruise development power relationships elsewhere in the world (Brida & Zapata, 2010; Jordan, Vogt, Kruger, & Grewe, 2013; Pattullo, 1996). Even when planning for cruise tourism does take place, opposing stakeholder groups can slow the process and ultimately create additional

tensions within planning processes and communities (Jordan et al., 2013; Jordan, 2014). In most cases, undertaking tourism planning with meaningful stakeholder input and avenues of recourse through legal action is preferable to tourism development with little or no input from local community stakeholders. However, tourism development with the Caribbean is more often than not conducted with little planning or stakeholder engagement.

Stress

The various impacts of cruise tourism development can create stress for individuals living in host communities, especially in instances where there is little chance for resident and other stakeholder input into the development process through tourism planning. The modern concept of stress dates to the 17th century, when engineers sought to understand the maximum physical stress under which their man-made structures would function (Hinkle, 1974). In the early 1900s, neurologists adapted engineer's definition of stress to the brain. Soldiers returning from the trenches of World War I were thought to have suffered from physical brain damage as a result of 'shell shock' from exploding artillery shells (Myers, 1915). In the second half of the 20th century, stress began to be perceived as a cognitive psychological phenomenon rather than neurological issue, and this paradigm has persisted until today (Lazarus, 1993). In this way, stress can be considered the emotional or psychological load on an individuals' cognitive processes; if the load exceeds an individuals' capacity, breakdowns can occur in a variety of ways (Thoits, 2010).

There are two types of stressors that have received a great deal of attention in stress research: *daily hassles* and *major life events. Daily hassles* are the every day irritants that are experienced as inconvenient or harassing (Kohn, Hay, & Legere, 1994; McIntosh, Gillanders, & Rodgers, 2010). *Major life events* are occurrences that require significant change or readjustment, and are experienced subjectively by the individual (Holmes & Rahe, 1967;

McIntosh et al., 2010). An increasing body of evidence suggests that *daily hassles* exhibit the strongest relationship with negative health outcomes, and researchers have posited that the stress from *major life events* are experienced as *daily hassles* (Eckenrode, 1984; Kanner, Coyne, Schaefer, & Lazarus, 1981). The *daily hassles* experienced by individuals lead to the detrimental overload of the physiological system and causes a variety of mental and physical health symptoms like increased blood pressure, decreased immune system function, impaired memory function, or increased aggression (DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982; Het, Ramlow, & Wolf, 2005; Platje et al., 2013; Rainforth et al., 2007; Segerstrom & Miller, 2004). The experience of daily hassles and negative health outcomes can create additional stressors for individuals. For example, if an individual avoids the downtown area of their community on a busy tourism day, they may be unable to pick up groceries for the family, leading to an argument with a spouse and creating an additional stressor.

The experience of stress is subjective, and what may act as a stressor for one individual can have no effect on another (Ljungberg & Neely, 2007). While one individual may find crowding of their community by tourists stressful, another may see it as an opportunity to interact with individuals of differing cultural backgrounds or make money by providing goods or services to tourists. Similarly, two individuals who find crowding by tourists stressful may experience stress in different ways. One individual may avoid town areas on crowded days, while another may drive into town, only to sit in tour bus traffic. In both instances, the quality of life of the individual under stress will likely decrease at least for the short period of time when they are experiencing a *daily hassle*. Emotional and psychological well being is only one element of an individual's overall quality of life, however, and some individuals may experience a net

gain in quality of life from other benefits of tourism development (i.e. a new job) despite experiencing stress (Andereck, Valentine, Vogt, & Knopf, 2007; Kim et al., 2013).

Based on this literature, three questions were crafted to address the research problem:

Research Question 1: To what extent did the development and operation of a new cruise port bring about stress within the community of Falmouth?

Research Question 2: What were the major sources of stress for Falmouth residents?

Research Question3: How did residents experience stress?

Method

Study Site Background

Falmouth, Jamaica was chosen as a study site for this first exploration of stress resulting from tourism development for several reasons. First, the community had little experience with tourism prior to the development of a new cruise port. Second, the scale of tourism development was very large in relation to the size of the community, increasingly the likelihood that most community residents were aware of development. Third, the development of a new cruise port occurred recently, increasing the likelihood that residents could recall their individual and community functions prior to development, and were likely aware of the changes that happened during and after development.

Falmouth is a Trelawny parish community on the northern coast of Jamaica with a population of almost 9,000 people. The community is approximately the midpoint between the two larger communities of Ocho Rios and Montego Bay, two areas known to be popular tourism destinations. Prior to the development of a cruise pier, Falmouth had seen little in the way of tourists aside from a handful of visitors who stopped to see its classic Georgian Architecture. Historically, Falmouth played a major role as a British port. From the late 18th century to the

early 19th century, sugar from more than 80 plantations worked by an estimated 30,000 slaves flowed through Falmouth, making Jamaica the world's largest sugar producer and exporter at that time (Patterson, 1969; Tortello, 2003). The port in Falmouth fell out of favor in the late 19th century due to the combination of declining world sugar prices and increasing popularity of deep drafted steam powered ships that the Falmouth harbor could not accommodate, leading to a slow economic decline that persists today.

The rest of Jamaica has not fared much better than Falmouth in the 20th century; job losses in the sugar and banana industries were not replaced entirely by the new tourism based service economy, leading many Jamaicans to emigrate elsewhere. Over the course of the 20th century, remittances from abroad accounted for an increasing percentage of Jamaican GDP; in 2009, more than 15 percent of Jamaica's GDP was remittances (World Bank, 2011). The downturn in the global economy has caused a drop in remittances since 2009, and many Jamaicans have been searching for other income sources (Morrison, 2011). The Jamaican government has attempted to compensate for a slow economy and drop in remittances through several large scale infrastructure projects (such as the development of the cruise port in Falmouth) aimed at creating jobs (Morrison, 2011; Planning Institute of Jamaica, 2010).

According to the Social Development Commission (SDC) of Jamaica, "on November 7, 2008, Prime Minister Bruce Golding signed a $224 million contract with [A major cruise company] to modernize the cruise shipping pier in Falmouth, Jamaica….In his presentation, Bruce Golding commented that the project is a part of a larger strategic development to expand tourism" (Social Development Commission, 2011). The majority of the money invested by the Jamaican government was spent on dredging the harbor to accommodate deep drafted cruise ships. The port was constructed on land reclaimed in the harbor through dredging and imported

soil, meaning [A major cruise company] owns both the new port facilities and the land it was built on. To facilitate the construction of the port, a small seaside neighborhood called 'Dump' was relocated several miles outside of Falmouth proper in a neighborhood called 'Hague.' Small homes were promised to residents who were moved, many of which were still under construction at the time of research.

There was little opportunity for input from local stakeholder groups prior to the development agreement. The few town hall meetings held prior to the agreement were largely unidirectional information sessions with cruise company and government officials presenting information about the port to residents who attended. A great deal of promotional literature about the proposed port and the positive impacts it would have on the community of Falmouth and Jamaica at large was distributed to stakeholder groups.

Upon agreement to build the new cruise port in Falmouth, the city of Falmouth undertook a series of infrastructure projects aimed at sustaining the increased vehicle and pedestrian traffic that would result from construction and operation of the new cruise port (Urban Development Corporation & Trelawny Parish Council, 2011). A traffic pattern with an increased number of one was streets were created to handle the increase in traffic volume from tour busses, taxis, and other vehicles serving the port. A pedestrian only town square was created a short distance from the port to accommodate tourists disembarking from cruise ships. The creation of a pedestrian square necessitated the relocation of taxi stands (the form of transportation used by most Falmouth residents) to an area outside the city center. Additionally, the cruise port was linked into the Falmouth municipal water system to allow ships to refill water tanks during their time in port.

According to the Jamaican Tourist Board, the port of Falmouth serviced 135 cruise ships carrying 586,578 passengers, or 44.4% of total cruise passengers arriving in Jamaica, in 2012 (Jamaica Tourist Board, 2012). Falmouth is the busiest cruise port by volume in Jamaica, servicing in excess of 100,000 more passengers than the either of the other two major ports, Ocho Rios (393,445 passengers) and Montego Bay (338,972 passengers). The winter months are busiest for the port of Falmouth, with more than 60,000 passengers arriving each month from December – March in 2011/2012. Many of the ships that dock in Falmouth had previously docked in Ocho Rios, with passenger arrivals at that port decreasing by more than 40% upon the opening of the new Falmouth port.

Procedure

Data for this research were collected in a cross-sectional study of residents of Falmouth from February to March 2013. A paper survey instrument was administered face-to-face to a systematic random sample of 363 Falmouth residents over the age of eighteen. To ensure sample randomness, each Falmouth residence was counted and mapped by the research team in the two weeks prior to data collection. Researchers counted a total of 3,515 households in Falmouth proper and surrounding neighborhoods. According to SDC estimates, an average of three individuals live in each household, 66% of whom are over eighteen years of age (Silvera & Johnson, 2010). These estimates put the over eighteen population of Falmouth at 7,424 individuals, resulting in a sample size of approximately five percent (5%). Over a period of four weeks, researchers approached 599 individuals to administer a paper survey. Eighty nine (89) residents declined to participate in the study, and 102 residents indicated they experienced no stress from the new cruise port, resulting in an overall response rate of 60%. In many cases, researchers aided survey participants in the completion of the survey.

The survey instrument consisted of open-ended questions about stress and batteries of seven point likert-scale questions about personality, social support, stress appraisal, and coping. To allow survey participants an opportunity to express stressors as they experienced them, they were first asked the question: "Have you experienced stress as a result of the development or operation of the new cruise port?" If the survey participant answered yes, they were asked to explain what stresses they had experienced. Participants were allowed space to describe as many or as few stressors as they wished. The survey instrument was distributed to the research coordinator for the SDC in Falmouth prior to use to ensure questions would be understood, culturally sensitive, and to allow for change or addition to wording on questions.

Basic descriptive statistics were estimated using the SPSS statistical analysis package. Open-ended responses to the question, "List the situation(s) in which the development or operation of the new cruise port in Falmouth has caused you stress," were thematically analyzed using the NVivo10 software suite. Statements were initially coded using a word frequency query. A single researcher coded statements including ambiguous keywords individually. Stressors were allowed to be coded into more than one theme. After the initial thematic coding process, each stressor coding was reviewed by a second researcher to ensure accuracy and consistency. A brief content analysis of materials distributed to the community of Falmouth prior to port construction was also conducted.

Results

Survey Participant Profile

Forty-three (43%) percent of study participants were male and 57% were female. The mean age of participants was 40 years old. Three percent (3%) of participants reported having either quite a bit or a great deal of contact with cruise passengers, 4% reported having some

contact with cruise passengers, and 93% reported having very little or no contact with cruise passengers. Two percent of study participants reported they personally benefitted from cruise tourism quite a bit or a great deal, 2% reported benefitting some, 9% reported benefitting a little bit, and 86% reported no benefit from cruise tourism. Five percent (5%) of study participants reported they were currently employed in the cruise tourism industry, 8% reported being employed in other areas of the tourism industry, 33% were not currently employed in the tourism industry but had been previously, and 54% indicated they had never worked in the tourism industry. Self- reported monthly incomes of survey participants are reported in Table 1.

Table 1 - Self reported monthly income of survey participants

	n	%
No formal income	105	29%
Less than 16,280 JMD ($164 USD)	21	6%
16,281-32,499 JMD ($164-$328 USD)	28	8%
32,500-43,499 JMD ($328-$439 USD)	24	7%
$43,500-$86,499 JMD ($439-$872 USD)	27	8%
$86,500 JMD or more ($872 USD or more)	15	4%
Prefer not to answer	140	38%

When asked what the highest level of education they had attained, the largest portion (32%) of survey participants reported having completed secondary school (Grade 11 – The equivalent of high school in the United States). Two percent (2%) of participants reported having completed pre-primary school (kindergarten), 3% reported having completed primary school (grades 1-6), and 12% reported having completed all age/junior high (grades 7-9). An additional 2% of survey participants reported having completed elementary school (up to grade 11 in the old Jamaican education system), 18% reported attending vocational school (often training for work in the tourism sector), and 1% reported attaining a post-secondary certificate (to help gain entrance to university or college). Finally, 13% of survey participants reported attending other

tertiary institutions (i.e. teachers college or other colleges offering associates degrees) and 18% reported attending a university.

Stressors

Overall, 78% of Falmouth residents who agreed to participate in this study indicated they had experienced stress as a result of the development and operation of the new cruise port. The maximum number of stressors listed by any individual was three. Forty-four percent (44%) of survey respondents listed one stressor, 35% of respondents listed two stressors, and 21% of respondents listed three stressors.

Five major themes of stressors emerged from thematic analysis of stressors listed by study participants, they were: (1) unmet expectations, (2) overtaxed infrastructure/crowding, (3) increased cost of living, (4) pollution (air, water, noise, etc), and (5) police harassment. The frequency of instances in which survey participants indicated each of these stressors occurred is listed in Table 2.

Table 2 - Stressor themes and frequencies

Stressor	n	%
Unmet expectations	292	80%
Overtaxed infrastructure/crowding	162	44%
Increase in cost of living	40	11%
Pollution (air, water, noise, etc.	25	7%
Police harassment	19	5%

***Open ended question, multiple responses allowed**

Aside from 'unmet expectations', this appears to be a simple list of impacts commonly found in locations that have undergone tourism development. Upon closer examination, the way these impacts were discussed by study participants expands their understanding, giving researchers a deeper understanding of how and why each of these elements caused stress. While some stressors likely existed in the community long before tourism development occurred, it is possible that tourism either increased their frequency or intensified their effects. In many

instances, study participants revealed the 'impacts' of tourism caused *daily hassles* or exacerbated other common daily stresses, creating a level of stress that could be difficult for residents to cope with.

The *unmet expectations* theme is comprised of several elements that reveal a gap between the expectations of Falmouth residents and the reality of the operation of the new cruise port in their community. Eighty percent (80%) of survey participants indicated that *unmet expectations* about the development or operation of the new cruise port caused them stress. The overall sense from many survey participants was that promises were made to the community prior to the construction and operation of the port, and those promises were not being upheld. The lack of benefits perceived by residents led to stress that compounded *daily hassles* that likely already existed for Falmouth residents. Survey participants said:

"[The cruise company] said there would be benefits from the port and we're not seeing them."

"People have to be paying rent and we are not benefitting from the port."

There were four sub-themes of unmet expectations: *no tourists, no jobs, no money,* and *no access*. The first, *no tourists*, emphasizes that, despite cruise ships disembarking several thousand passengers three to four days per week, tourists were not visiting the town of Falmouth. Just over 45% survey participants indicated that the lack of cruise passengers actually entering the town of Falmouth caused them stress. Many survey participants held the belief that passengers were being booked on excursions outside the town before they disembarked the ship, leaving little chance that they would enter Falmouth on their own. Survey participants said:

"Tourists are not traveling to Falmouth, they are being booked from the ship."

"The tourists are being taken out of Falmouth to Montego Bay or Ocho Rios."

These quotes reveal that Falmouth residents were perhaps not blaming the tourists themselves for their lack of interest or entrance into the community. Their stress resulted more from their perception that excursion companies were pre-booking passengers either on the ship itself or on the port once they disembarked. This stress was compounded by local residents having *no access* to the port, leaving them unable to access not only the amenities on the port, but, more importantly, the cruise passengers and possibility that contact with them could result in financial gain. A brief content analysis of materials distributed to Falmouth residents prior to port construction revealed resident access to port amenities was a point of emphasis. At the time of data collection, researchers required special permission from port officials to access the port, and local individuals were only able to access port if they were employed there. Five percent (5%) of survey participants mentioned a lack of access to the port caused them stress, and some thought poorer individuals in particular lacked access. Participants indicated:

"Locals need to be granted more access to the port."

"The poorer classes don't have access to the port or tourists."

The lack of tourists in the community and lack of access to the port were stressful to a great deal of survey participants, but many thought the lack of tourists in the community was a supply problem or reflection of conditions in Falmouth rather than a lack of demand from tourists or fault of excursion companies. Just over 10% of survey participants said there were a lack of attractions and entertainment in Falmouth, and an additional 3% of participants said the town needed to be cleaned up in order to be attractive to tourists disembarking from cruise ships. Participants said:

"[We] need more attractions in town in order to get the tourists to stay here."

"The business sector is not doing enough to attract tourists."

"The town is too dirty for tourists to come here."

One of the major implications of the lack of tourists in Falmouth is the second sub-category of *unmet expectations* stressors, *no jobs.* Despite a small number of locals gaining employment on the port, 21% of survey participants commented that their inability to get a job on or around the port caused them stress. Some residents were concerned that jobs at the port were taken by individuals not from Falmouth. Participants mentioned:

"The port provides no employment for persons in Falmouth."

"[I] can't get a job on the port, no matter how qualified."

"People from outside Falmouth are getting jobs on the port."

The final subcategory of the *unmet expectations* stressor theme is the logical next step from the series of stressors resulting from a lack of tourists visiting the community of Falmouth. *No tourists* in the community and *no access* to the new port meant *no jobs* for residents and, as a result, *no money* from tourists and jobs that residents expected to come from the new cruise port. Eleven percent (11%) of survey participants indicated their lack of financial gain from the port caused them stress. Survey participants discussed how not making any money from the port exacerbated other stressors that already existed in their lives. Survey participants said:

"I can't get a job on the port so I've got no money."

"There is hardly any profit made in Falmouth because the tourists are not getting the chance to spend money in town."

"[We are] not making any money to feed our children"

The *unmet expectations* thematic group of stressors was the most experienced type of stressor by study participants, likely because it was comprised of so many elements. Those

stressors were a result of intangible elements within the cruise port development context. An unmet expectation or disappointment is not easily measured and often difficult to describe. There were, however, more tangible changes in the community that caused stress for Falmouth residents. Stress from o*vertaxed infrastructure/crowding* was a result of the many physical changes that Falmouth underwent during and after construction of the cruise port. Forty-four percent (44%) of survey participants indicated *overtaxed infrastructure/crowding* as a result of the development or operation of the new cruise port caused them stress.

The system of one-way streets implemented to contend with increased traffic on ship days created a complex routing system that many residents found stressful. Changes made to the routing system resulted in a shift in areas where parking was allowed free of charge. Many residents were unsure of where they were able to drive and park safely, especially on days when cruise ships were in town and an increased number of tour busses, taxis, and foot traffic flooded the streets of Falmouth. Fourteen percent (14%) of survey participants indicated new traffic patterns and change in parking systems caused them stress. Survey respondents said:

"[There are] a lot of one way streets, which causes confusion."

"Need better routing - no more one ways."

"People have to pay for parking now and if you don't your vehicle gets towed."

Despite the change in traffic patterns, 11% of survey participants indicated traffic congestion on days ships were in Falmouth caused them stress. Traffic congestion from tour busses taking the tourists out of Falmouth likely had a compounding effect on the stress of *no tourists* visiting the community. Residents had to contend with not only the stress of tourists not visiting Falmouth or spending any money there, but also with the stress resulting from traffic that was taking those tourists out of the community on a daily basis. Falmouth residents were also

concerned that the increase in traffic was causing deterioration of infrastructure and creating unsanitary conditions in their community. Survey participants said:

"Traffic piles up – we can't use streets when ships are in port."

"Tour busses blocking traffic."

"Increase in traffic, which causes a lot of dust and deterioration in the roads."

Falmouth residents were also concerned with other basic resources like water and electricity. Five percent (5%) of survey participants indicated unavailability of basic utilities caused them stress. Residents who were relocated to facilitate construction of the port reported electricity was still unavailable in their new neighborhood. The connection of cruise ships to the Falmouth municipal water supply also created shortages on heavy usage days. In some cases, water from taps in the community of Falmouth simply ceased to flow on days when cruise ships were in port. Survey participants mentioned:

"Basic resources like electricity are unavailable since we were moved to build the port."

"Low water pressure on cruise days."

"No water on cruise days."

Stress was not the only cost of making the infrastructure changes that took place in Falmouth – the money used to make those changes comes from a variety of places, some of which includes taxes paid by local residents. Falmouth residents felt the squeeze from both taxes and the increase in consumer good prices that often comes with major development. Eleven percent (11%) of survey participants indicated an *increase in the cost of living* caused them stress. Individuals in Falmouth were likely to be sensitive to price fluctuations, as the SDC estimated that 28% of household heads were unemployed and 29% of survey respondents reported having

no formal income. The stress of increased consumer good prices exacerbates the stress brought about by Falmouth residents not making financial gains from the new cruise port (Consider the quotes presented previously: *"[We are] not making any money to feed our children,"* and *"People have to be paying rent and we are not benefitting from the port.")*. Survey participants said:

"Food prices have gone up."

"Price of goods is going up."

"Price increase on land and properties."

While increasing prices of consumer goods, land, and housing was causing stress for some Falmouth residents, others expressed concerns over the decreasing environmental quality in their community. Seven percent (7%) of survey participants indicated pollution resulting from the development and operation of the new cruise port caused them stress. Pollution, in this case, is not limited to the physical environment; survey participants said there was an unpleasant odor that came from the ships' wastewater. Survey participants also said they experienced stress when the ships blew their horns during their arrival and departure, which could be early in the morning or late in the evening. Survey participants mentioned:

"The new port is destroying the beach."

"The horn is disturbing/annoying."

"The smell from the port waste water is terrible."

The final theme of stressors was *police harassment*. Five percent of survey respondents indicated *police harassment* caused them stress. Prior to the construction and operation of the new cruise port in Falmouth, there was an informal sales system throughout the community, which allowed those with no formal employment to meet their basic needs. In an effort to make

the community of Falmouth more appealing to tourists arriving on cruise ships, the community cracked down on the informal sales of goods, especially in the immediate vicinity of the cruise port. This is another case of one stressor compounding another, as many Falmouth residents lost their informal sources of income due to the police enforcement, and were not able to gain employment at any legitimate tourism businesses serving the cruise passengers.

> *"When the cruise port opened I was in town selling some things and the mayor and police ran me off the road. Anywhere I go they don't want me to sell on the street."*
>
> *"Metropolitan police are harassing street vendors when tourists try to buy any of their crafts."*
>
> *"Cruise passengers who come into town to buy crafts from locals are being harassed by metropolitan police."*

Each stressor theme is important in understanding how residents experienced stress as a result of the development and operation of a cruise port in Falmouth, Jamaica. The stresses Falmouth residents indicated were caused by the presence of a new cruise port were interconnected with each other and, in many cases, other *daily hassles* stressors.

Discussion and Conclusions

This study utilized stress theory from the psychology discipline as a framework from which to examine how residents of Falmouth, Jamaica were affected by tourism development. An open-ended question was used to explore the psychological notion of stress brought about by the development and operation of a new cruise port as it was experienced by community residents. Understanding how tourism development impacts emotional and psychological well

being through stress is important to the greater understanding of the affect tourism development has on individuals' quality of life.

Research Question 1 asked, "To what extent did tourism development and operation bring about stress within the community?" Stress was experienced by more than three-quarters of the Falmouth residents who agreed to participate in this research, and more than half of research participants listed multiple ways in which the development or operation of the new cruise port caused them stress. Research on stress does not often address populations which may or may not be experiencing stress (research on stress brought about by a cancer diagnosis, for example, does not often encounter individuals who say their diagnoses did not cause them stress), and the high rate of tourism development induced stress in this community is indicative of the scope of the problem. It is also important to mention that individuals who discussed stresses brought about by the cruise port may or may not have been supportive of tourism development in their community; stress should not be considered as a vote against tourism or tourism development. Research Question 2 asked "What were the major sources of stress for Falmouth residents?" Major stressor themes were *unmet expectations, overtaxed infrastructure, increased cost of living, pollution, and police harassment.*

Research question 3 asked, "How did residents experience stress?" The language used by survey participants in describing stressors revealed both the interconnectedness of stressors and their relationship with other everyday stressors that may have existed prior to cruise tourism development. Consistent with previous stress research, the stressor groups that emerged through thematic analysis revealed stressors made everyday life difficult through an increase in *daily hassles.* The pride of Falmouth residents at being an important shipping hub in the Caribbean only served to increase expectations about the impacts the port would have on the community.

Results revealed those high expectations were not met, and *unmet expectations*, largely in the economic arena, were the stressors most experienced by Falmouth residents. Falmouth residents clearly expected tourists to be flooding into their community, creating jobs, new businesses, and generating income for community members. In reality, most tourists were disembarking their cruise ships and getting directly onto excursion busses that took them outside of Falmouth for the day. Most survey participants indicating they had little or no contact with cruise tourists in their day-to-day lives corroborate this finding. The *unmet expectations* in the economic realm were likely aggravated by the *overtaxed infrastructure/crowding*, *increased cost of living, pollution, and police harassment.*

Findings indicate stress theory is a suitable framework from which to examine how individuals are emotionally and psychologically affected by tourism development. Emotional and psychological well being falls within the greater umbrella of quality of life studies, which is moving the tourism impacts research paradigm away from measuring attitudes toward and support of tourism development toward the examining the real changes to everyday lives of individuals in host communities caused by tourism development and their emotional and behavioral responses (Andereck & Nyaupane, 2011). The stress framework is useful in examining both the tangible and intangible stressors brought about by tourism development. It is possible that direct observations of community events like church services and events, local government meetings, or other organizational meetings could help inform and confirm the context of the stress at the individual and community level.

The widespread nature of stress in Falmouth indicates the importance of this issue for communities. Stress is one of many possible positive and negative impacts of tourism development that can affect quality of life for host community residents. Although this research

and other studies have found tourism development to affect host community resident quality of life, tourism remains an attractive development option for many areas, especially Caribbean nations with naturally occurring tourism attractions like sand, sea and sun. Stressors discussed by research participants indicate the process and type of tourism development played a role in causing stress, and overtones of neo-colonialism and dependency were present in many resident quotes. The expectations of benefits by Falmouth residents far outstripped the reality of tourism development in their community. Regardless of whether developers and government agents created those high expectations or Falmouth residents created them independently, a lack of bi-directional communication between residents and those responsible for development likely exacerbated the problem.

For private tourism organizations and government agencies attempting to promote tourism development to local residents, there exists a paradox. Without the perception that tourism development will somehow benefit them, host community residents are unlikely to support development and, in areas where residents have a strong voice in decision-making, may seek to block development all together. This is especially true in areas where tax dollars are used in development activities. However, when host community residents *do* perceive that tourism will be beneficial to them and those perceptions do not align with reality, stress can result. One solution to this problem is clear and truthful bi-directional communication between residents and those responsible for development about exactly how development and operation of the tourism industry will occur prior to development. Clear communication between developers and those in the community to be developed can help prepare both parties for what to expect from each other. This solution is only useful if power structures within the community place both groups on equal footing, as communication without compromise will likely result additional stressors as observed

in this research. The inclusion of an independent mediator in tourism planning and development processes could help ensure equity between parties.

There were several limitations to this study. Stress was only one part of the overall research project, and research participants were given limited space to describe their stressors, likely resulting in brief answers. Each type of tourism development is different, and stress resulting from the development of a cruise pier is likely different than stress from development of other tourism activities or attractions. This research took place in a small coastal Jamaican town, and results are not likely to be generalizable to other communities, as each community is unique. Finally, it is difficult to determine exactly what expectations Falmouth residents held prior to development of the cruise port, as no data were collected at that time; while some expectations can be inferred by stress statements, a measurement prior to development would have been helpful.

This research is the beginning of a body of research that attempts to understand the phenomenon of resident stress in the tourism context. Far too little is understood about psychological and behavioral changes that occur in host communities as a result of tourism development. Future research should focus on learning more about how stress and other psychological phenomena are experienced at an individual and community level, what constructs are related to stress, and how individuals and communities cope with stress brought about by tourism development.

CHAPTER 3: CONCEPTUALIZATION AND MEASUREMENT OF A STRESS AND COPING FRAMEWORK FOR UNDERSTANDING RESIDENTS' RESPONSE TO CRUISE TOURISM DEVELOPMENT

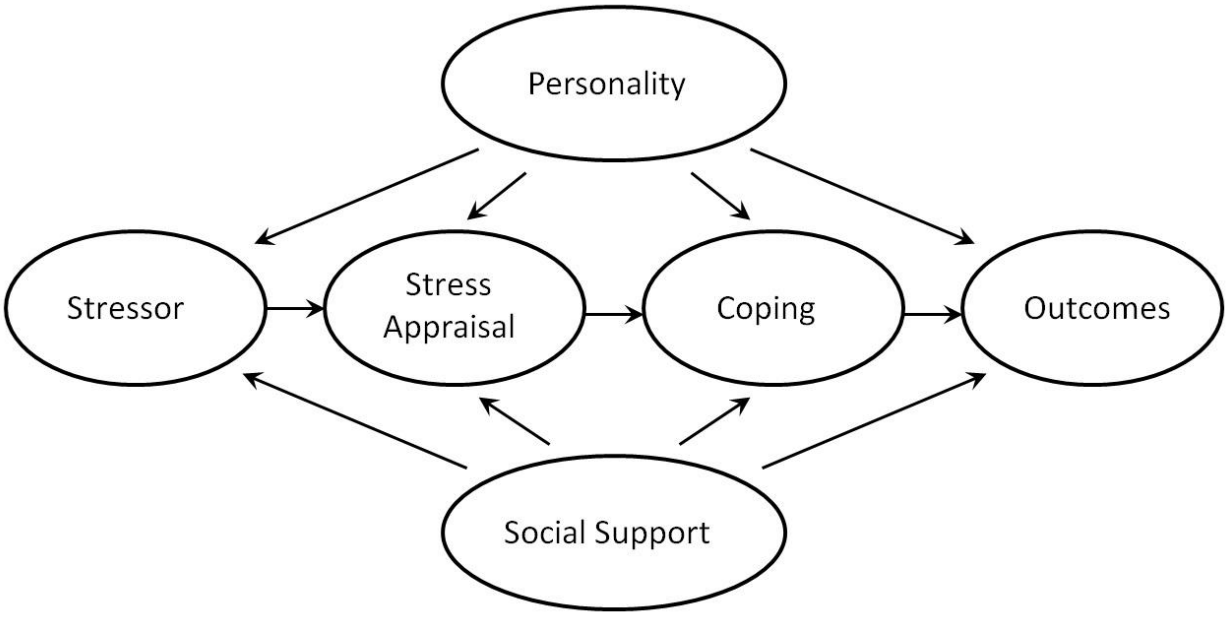
Introduction

Ideally, residents of host communities would experience minimal negative and maximal positive impacts from tourism development. Tourism development is not always conducted under ideal conditions, however, and a variety of negative impacts like traffic, crowding, or a price increase on local goods and services can occur (Sharpley, 2014). Frameworks like social exchange theory, power theory, and identity theory have been utilized to examine resident perceptions of, support for, and responses to tourism development (Nunkoo & Gursoy, 2012; Nunkoo & Ramkissoon, 2012). These frameworks have helped tourism scholars understand a great deal about how tourism development affects individuals living in host communities; however, the emotional and psychological well being of host community residents has been largely overlooked (Berno & Ward, 2005). Emotional and psychological well being is an important part of individuals' overall quality of life (QOL) (Schalock, 1997). There is a growing body of QOL literature within the tourism discipline making important strides toward understanding how individuals' lives are affected beyond attitudes toward and support for tourism development (Andereck & Nyaupane, 2011; Kim et al., 2013)

This research explores the suitability of a stress and coping framework (Figure 2) for examining psychological impacts of and behavioral and emotional responses to tourism development. Through discussion of relevant literature on the stress and coping process and linkages to similar concepts within tourism research, the theoretical framework is situated for use in the tourism discipline. Psychometric testing of stress and coping measurement tools

administered to residents of Falmouth, Jamaica, a community that was recently the development site for a new cruise port, provides a basis for future research examining stress and coping in a tourism context. This research provides a framework from which future research can build understanding of how tourism development affects one element of host community residents' quality of life and explore their behavioral and emotional responses.

Figure 2 - Stress and coping framework (Adapted from Folkman, et al., 1986)



Residents in areas undergoing development can experience stresses resulting from *daily hassles* caused or exacerbated by negative impacts of tourism development, especially when there are expectations of positive impacts prior to development. Individuals are affected by stress differently as a result of their personality (Connor-Smith & Flachsbart, 2007), social support (Thoits, 1995), appraisal of stress (Jones, Rowe, & Becker, 2009), and coping actions (Thoits, 2010). Stress is defined as anything that causes an individual psychological distress. "Psychological distress is a negative psychological response to such threats and can include a variety of affective and cognitive states, such as anxiety, sadness, frustration, the sense of being overwhelmed, or helpless" (Kemeny, 2003, p. 124). Stress is the root cause of myriad

psychosomatic illnesses (i.e., high blood pressure, behavioral disorders, or sleep loss), and individuals who successfully cope with stress are generally affected to a lesser extent (Antonovsky, 1981; Thoits, 2010). Stress can also disrupt personal relationships, perpetuating itself by creating additional stressors for afflicted individuals (Lee, Keough, & Sexton, 2002). Negative health outcomes for those under stress affect both the individual and their public health systems, driving up the cost of care and decreasing overall service quality (van der Klink, Blonk, Schene, & van Dijk, 2001).

Using the definition of "anything that causes an individual psychological distress," a variety of tourism's negative impacts can be considered stressors. Cruise tourism development in the Caribbean likely creates unique stressors for community residents that other types of tourism development would not generate. Economic leakage from cruise tourism development where local individuals have little power over external investment is a major problem, especially in the Caribbean where external ownership of many resources creates neo-colonial or dependency concerns for many (Dann & Potter, 2001; Jamal & Camargo, 2014; Lee et al., 2014). Cruise tourism in the Caribbean often uses themes like "Pirates of the Caribbean" on their ships and in ports, serving to marginalize actual host culture and prevent bi-directional acculturative actions that could prove beneficial to both hosts and guests. In addition, these themes serve to promote the cruise ship and port as the travel destination rather than the port host community (Klein, 2011; Lester & Weeden, 2004; Wood, 2000). The development of physical cruise tourism resources like port facilities can create sedimentation and turbidity, affecting coral reefs, reef based fisheries, and the fishermen who depend on them (Erftemeijer et al., 2012). Finally, the development and operation of cruise tourism in the Caribbean can overtax local resources like public spaces, water systems, and waste treatment facilities (Brida & Zapata, 2010).

Individual personality and social support play a significant role in how individuals experience and appraise stress, as well as the coping strategies at their disposal (DeLongis & Holtzman, 2005). The 'Big Five' personality dimensions of neuroticism, extraversion, openness, agreeableness, and conscientiousness, have been linked to the likelihood an event will bring stress to an individual (Bolger & Zuckerman, 1995), exposure to stress (Vollrath, 2001), appraisal of an event as stressful (Suls & Martin, 2005), and the success or failure of coping strategies (Gunthert, Cohen, & Armeli, 1999). Social support affects coping through social referencing (Bandura, 1986), availability and employment of coping strategies (Thoits, 1995), and post stress health outcomes (Lee, Suchday, & Wylie-Rosett, 2012). Though the interrelationships within the stress appraisal and coping process are important, this research focuses on individual elements in the process, examining their conceptualization and measurement within in the tourism context.

The purpose of this research is to situate stress and coping theory within the tourism literature and establish the validity of measurement instruments of personality, social support, stress appraisal, and coping from the psychology discipline. Conceptualization and measurement of the stress and coping process will allow future research to confidently establish relationships between these latent constructs. Understanding stress and coping actions that effectively mitigate stress and the role that personality and social support play in the process will provide a basis from which stress causing development practices can be modified to limit stress, or, in cases where stress is unavoidable, tourism practitioners can promote successful coping strategies to residents of tourism host communities in which stress occurs.

Though uncommon, measurement of the stress and coping process are not entirely foreign to the tourism and leisure discipline. In a departure from early efforts examining leisure

and tourism as a form of coping with every day stressors (Coleman & Iso-Ahola, 1993), Schneider and Hammit (1995) sought to understand visitor responses to on-site recreation conflict by utilizing Folkman and Lazarus' (1980) conceptualization of stress and coping as a theoretical framework. In a series of articles, researchers tested models including modified appraisal and coping scales administered to outdoor recreationists (Schuster, Hammitt, Moore, et al., 2006; Schuster et al., 2003; Schuster, Hammitt, & Moore, 2006). Their conceptualization and psychometric evaluation of modified scales provided a starting point from which this research expands.

Literature Review

Stress

The presence of stress and physiological response has been critical to survival of humans for thousands of years. In the not so distant past, many stressors (i.e., an attack by a predator) required a full physiological "fight or flight" response to avoid serious harm (Sapolsky, 2000). When humans experience stress in their everyday interactions (i.e., a looming work deadline or a fight with a spouse), the benefit derived from the release of stress hormones is heavily outweighed by their affect on the mind and body. Negative health outcomes caused by stress vary by individual and can range from minimally impactful issues to serious health conditions. Stress related illnesses are particularly difficult to overcome as the presence of a physical or mental health issue can often be self perpetuating; the health issue becomes another stressor for the individual already under stress (Park & Folkman, 1997).

The physical manifestations of stress occur as a result of the release of the steroid hormone cortisol from the adrenal gland in the hypothalamic pituitary adrenal axis (Sturge-Apple, Davies, Cicchetti, & Manning, 2012). Long term exposure to cortisol can cause a variety of

detrimental physical and mental health outcomes such as loss of cognitive ability (McEwen, 1998), impaired memory function (Het et al., 2005), elevation of blood pressure (Schnall, Schwartz, Landsbergis, Warren, & Pickering, 1992), and decreased immune system function (Segerstrom & Miller, 2004). Elevated cortisol levels have also been linked to behavioral changes such as acting outside of social norms (Platje et al., 2013) and overeating (Newman, O'Connor, & Conner, 2007).

Researchers have recently focused their attention on two types of stressors: *major life events* and *daily hassles*. *Major life events* are subjectively experienced and generally require a significant change or readjustment by the stressed individual (McIntosh et al., 2010). *Daily hassles* are experienced during every day life, and cause individuals irritation or inconvenience (Kohn et al., 1994). Recent research suggests the mechanism by which *major life events* affects individuals is through an increase in the presence of *daily hassles* in their lives (Kanner et al., 1981). *Daily hassles* have been strongly linked to negative health outcomes caused by the detrimental overload of the physiological system by stress hormones (DeLongis et al., 1982).

Despite the prevalence of stress in the human experience and vast array of detrimental outcomes, stress has rarely been considered as an impact of tourism development (Berno & Ward, 2005). In the tourism discipline, impacts are generally considered social, economic, or environmental (Pearce, 1995). While psychological impacts like stress likely fall under the umbrella of social impacts, tourism researchers have generally measured specific impacts (i.e. crowding) and their relationship with attitudes toward or support for tourism development (Buckley, 2012). Doğan (1989) devised a psychologically leaning social impacts model in his research on socio-cultural consequences of tourism development and host community resident responses. Doğan posited that tourism development weakens host community cultural traditions,

disrupts interpersonal relationships, and commercializes personal interactions, all of which contribute toward resentment of tourism by community residents. There is a small body of literature within the tourism discipline examining stress from the perspective of tourism employees (Houge Mackenzie & Kerr, 2013; Law, Pearce, & Woods, 1995), but little research has examined stress on tourism host communities at large.

Personality

Personality is a characteristic that is notoriously difficult to define and understand due to the complexity and variety of possible personality elements. Personality is defined in this research as "the dynamic organization within the person of the psychological and physical systems that underlie that person's patters of actions, thoughts, and feelings" (Allport, 1961; Carver & Connor-Smith, 2010, p. 680). Personality psychology is built upon a structure of two seemingly conflicting truths: individuals are simultaneously the same at a very basic level and yet exhibit complex differences (Carver & Connor-Smith, 2010). While these two principles may seem to oppose each other, they are what make up the intricate system that determines an individual's personality. The sameness between individuals is 'human nature,' meaning the overwhelming majority of human beings have the same biological make-up, are social in nature, can learn, have the urge to procreate, etc. At the same time, no human being is exactly like another; people exhibit myriad individual differences.

There are two prominent viewpoints taken on human nature that are particularly salient to the stress appraisal and coping process: biological and goal based (Carver & Connor-Smith, 2010). Biological models of human nature are based on three principles: individuals tend to approach things they desire, individuals tend to avoid things that are dangerous, and individuals have the ability to regulate their approach and avoidance behaviors (Caspi & Shiner, 2007). Goal

based models are similar to biological models in that individuals move toward positive goals and stay away from threats (Higgins, Shah, & Friedman, 1997). However, goal based models allow for possibility that individuals may give up or scale back on a goal that may be unrealistic or unattainable (Wrosch, Scheier, Miller, Schulz, & Carver, 2003), although the process of giving up or scaling back may result in negative emotions or depression (Nesse, 2000). These two models of human nature are complementary rather than contradictory, and help explain the underlying structure upon which individual differences in personality are built.

The five factor model of personality traits commonly known as The Big Five has emerged as the most prominent model of personality in the psychology domain (Digman, 1990). The Big Five personality factors are Extraversion (E), Neuroticism (N), Agreeableness (A), Conscientiousness (C), and Openness to Experience (O) (Also known as Imagination (I)). While other three-factor, five-factor, and even six-factor personality models have been proposed (Ashton et al., 2004; Zuckerman, Michael, Joireman, Teta, & Kraft, 1993), none have been tested to a greater extent than The Big Five. The five factor structure has been found to be reliable across age groups and cultures, making it suitable for measurement of personality in new areas of inquiry (Connor-Smith & Flachsbart, 2007; Hendriks et al., 2003; McCrae, Costa, del Pilar, Rolland, & Parker, 1998).

Extraversion is exemplified by several types of behavior, usually assertiveness, confidence, and dominance (Carver & Connor-Smith, 2010; Depue & Collins, 1999). It is unclear whether sociability is a core element of extraversion or rather a byproduct of it (Cohen et al., 2003; Lucas et al., 2000). Neuroticism is exemplified by a moodiness, depression, anxiety, and a propensity for becoming upset or distressed (Carver & Connor-Smith, 2010). Agreeableness is exemplified by friendliness, cooperativeness, empathy, and the ability to avoid

interpersonal conflict (Graziano et al., 2007, 1996; Parks & Guay, 2009). Conscientiousness can vary greatly between measurements, but typical conscientious behaviors include responsibility, impulse control, or taking future contingencies into account (Carver & Connor-Smith, 2010). Finally, Openness to experience (aka Imagination) is exemplified by vivid fantasy, depth of feeling, behavioral flexibility, curiosity, and unconventional attitudes (McCrae, 1996). Each element of an individual's personality plays a role not only in how stress is experienced but also the perception of social support and availability of coping.

Researchers in the tourism discipline have focused primarily on how the personality of tourists affects destination choice, motivation, consumer behaviors, and tourist behavior *in situ* (Frew & Shaw, 1999; Lepp & Gibson, 2008; Leung & Law, 2010; Plog, 2001). This is, of course, discounting the substantial body of research examining destination brand personality (Usakli & Baloglu, 2011), which is applicable to destinations as a whole rather than individual human beings. Personality of host community residents have been examined to a lesser extent, although there is a small body of literature examining tourism and hospitality worker personalities and their relationship with work stress, satisfaction, and burnout (Kim, Shin, & Umbreit, 2007; Ross, 1995).

Social Support

Social support is defined as "information from others that one is loved and cared for, esteemed and valued, and part of a network of communication and mutual obligations" (Kim, Sherman, & Taylor, 2008, p. 518). Social support plays a role in whether individuals experience stress, the health outcomes of their stressful experiences, and the availability of coping options for dealing with stressors (Thoits, 1995). The manifestation of social support can range from something as simple as the number of friends an individual has to turn to in a crisis to the more

elusive perception of the adequacy of those friends at addressing an individual's concerns (Zimet, Dahlem, Zimet, & Farley, 1988). The distinction between perceived and actual social support has perhaps not received enough attention, as the interaction between the two can result in positive or negative experiences for individuals (Holtzman, Newth, & Delongis, 2004). In most cases the perception or receipt of social support is positive for the individual; however, when there is a gap between the social support an individual perceives and the actual support they receive in a time of need, the individual in need of support can be negatively affected psychologically and physically (Griffin, Friend, Kaell, & Bennett, 2001).

The positive impacts of social support on individuals are many. For those experiencing stress, social support can reduce the manifestations of psychological distress such as depression or anxiety (Cohen & Wills, 1985). Physically, the availability of social support positively affects adjustment to stressful illnesses like cardiac disease or cancer (Helgeson & Cohen, 1996; Holahan, Moos, Holahan, & Brennan, 1997). Social support has also been found to reduce not only the probability of becoming ill, but also the amount of time an individual takes to recover from illnesses when they do occur (Ouellette Kobasa, Maddi, Puccetti, & Zola, 1985). In addition, social support positively affect mortality rates of those diagnosed with serious diseases (Cohen, 1988). In contrast, a lack of social support can increase the physical and psychological symptoms of needy individuals, such as those with serious illnesses (Orth-Gomér, Rosengren, & Wilhelmsen, 1993).

The nature of social support requires that it take place in a cultural context, and social norms vary greatly between geographic location and culture. The availability and usage of social support can be at least partly attributed to where an individual's cultural background and surroundings fall along the individualist-collectivist continuum (Kim et al., 2008). In nations like

the United States where an individualist cultural mindset prevails, individuals are often expected to seek out the resources they need to achieve their own individualistic goals (Earley, 1989). In more collectivist nations like many in the Caribbean, individuals tend to view their role within society with greater importance, placing greater emphasis on interpersonal relationships that arise from cultural norms rather than those sought for a specific purpose (Triandis, Bontempo, Villareal, Asai, & Lucca, 1988). While individuals from collectivist cultural backgrounds likely have a solid social support foundation, empirical research has indicated those in collectivist cultures tend to seek social support to a *lesser* extent than those in individualistic cultures (Taylor et al., 2004). Research examining coping with daily stressors through leisure activities have placed a great deal of emphasis on social support (Iso-Ahola & Park, 1996). Social support has also been examined in the context of leisure constraints, attempting to understand how social support facilitates or inhibits participation in leisure activities (Brown, Brown, Miller, & Hansen, 2001).

Stress Appraisal

Stress appraisal is an evaluative process that enables individuals to determine and categorize the significance and controllability of stressful events (Lazarus, 1966; Peacock & Wong, 1990). Individuals under stress generally engage in both primary and secondary appraisal. Primary appraisal involves an assessment of how important a stressful event is to an individual's well being (Dewe, 1993). Secondary appraisal involves an individual determining what can be done about the stressful event (Folkman, 1984). As defined by Peacock and Wong (1990) there are three types of primary appraisal (threat, challenge, and centrality) and three types of secondary appraisal (controllable by self, controllable by other, and uncontrollable). The three types of primary appraisal all relate to how individuals anticipate a particular stressor will affect

them. Threat refers to the potential for harm or loss to the individual. Challenge refers to the possibility of growth from the interaction with stress. Centrality refers to the perceived importance or "stake" of the individual in a particular stressor or stressful situation. The three types of secondary appraisal all relate to how an individual perceives the controllability of stress. Stress is viewed as controllable by self (i.e., addiction), others (i.e., a spouse asking for a divorce), or no one (i.e., natural disaster or act of god).

The manner in which an individual appraises a stressor plays an important role in their coping responses and resultant health outcomes. When there is a disconnect between stress appraisal and coping response (i.e., attempting to control a stressor appraised as uncontrollable), individuals generally experience greater negative health outcomes (Forsythe & Compas, 1987). Individuals who appraise stress as 'challenging,' or presenting an opportunity to grow, are more likely to directly confront the stressor, while individuals who appraise stress as 'threatening,' or potentially harmful, are more likely to attempt to control their own emotional response (Skinner et al., 2003). Similarly, individuals who appraise stress as controllable by themselves are more likely to attempt to control the stress, while individuals who appraise stressors as uncontrollable generally do not (Bouchard, Guillemette, & Landry-Léger, 2004). Examination of stress appraisal in the tourism and leisure discipline has been limited the recent work by Schneider and Stanis (2007) and Schuster et al. (2003). Their conceptualizations have essentially been based upon the psychological framework of stress appraisal and modified slightly for application to recreation conflict and constraint negotiation.

Coping

Early coping conceptualizations tended to take an ego-psychology approach to understanding the evaluation of unconscious processes individuals utilized to defend themselves

against stress (Folkman & Moskowitz, 2004; Vaillant, 1995). The seminal work by Lazarus (1966) shifted the focus of coping research from defensive reactions to cognitive processes. Today, the vast majority of coping research still examines coping as a cognitive process including a variety of behavioral and emotional processes. Folkman and Lazarus (1980) posited two rationally derived, theory based coping meta-categories called problem-focused coping and emotion-focused coping. "Problem-focused coping included efforts to manage the stressor and change the person-environment relationship causing the stress, while emotion-focused coping was found to regulate emotional distress caused by stressors" (Folkman & Lazarus, 1980, p. 223). Those coping with stressful situations almost always utilize both problem and emotion-focused coping, as they cope with both the stressor and their own emotional response. The distinction between problem and emotion-focused coping is certainly not the only conceptualization of cognitive coping responses to stress (Skinner et al., 2003); however, it is the most utilized model by a wide margin. Similar to stress appraisal, the conceptualization of coping in the tourism and leisure discipline has largely been based on the framework built in the psychological discipline (Iwasaki & Schneider, 2003; Schuster et al., 2003).

Folkman et al. (1986) derived eight coping factors comprised of a mix of problem and emotion focused coping actions aimed at addressing stressors. Each type of problem-focused coping generally involves actions aimed at changing the interaction between the individual and the stressor. Two factors (confrontive coping and planful problem-solving) were generally comprised of all problem-focused coping actions. Five factors (distancing, self-controlling, accepting responsibility, escape-avoidance, and positive reappraisal) were generally comprised of all emotion-focused coping actions. One factor (seeking social support) was comprised of actions that are a mix of problem and emotion-focused coping actions. Confrontive coping

involves behaviors addressing the stressor head on to modify the stressor itself (i.e. express anger at the person(s) who caused the problem). Planful problem solving involves creating a strategy to address the stressor and acting on it (i.e., I made a plan of action and followed it). Distancing involves mentally eliminating the importance of the stressor (i.e., Made light of the situation; refused to get to serious about it). Self controlling involves keeping the individual's emotional reaction to stress from interfering in their everyday lives (i.e., I tried to keep my feelings to myself). Accepting responsibility involves internalizing the stressor as something that was created by the individual under stress (i.e., Realized I brought the problem on myself). Escape avoidance involves mentally escaping the stressful situation through thoughts, behaviors, or substances (i.e., Tried to make myself feel better by eating, drinking, smoking, using drugs or medication). Positive reappraisal involves determining that the stressor may actually be positive and seeking growth from it (i.e., Rediscovered what is important in life). Finally, seeking social support involves seeking out help or information from others who may be able to address the stressor directly (i.e., Talked to someone who could do something concrete about the problem). Despite or perhaps because it has been utilized in myriad contexts in a variety of stressful scenarios, the factor structure of the WoC has been found to be inconsistent, as the coping responses utilized by individuals differ by context (Parker, Endler, & Bagby, 1993).

Based on this literature, two research questions were constructed to address the research problem:

Research Question 1: Are psychologically based measurements of personality, social support, and stress appraisal valid in a tourism host community context?

Research Question 2: What is the structure of coping by individuals responding to stress brought about by tourism development?

Method

Study site background

Falmouth, Jamaica was chosen as a study site due to the timing, size, and scope of new cruise port development, the collective nature of its society and the relationship researchers were able to build with the local Social Development Commission (SDC; an organization devoted to local social welfare). Falmouth is community on the northern coast of Jamaica with a population of almost 9,000 people. The community is approximately the midpoint between the larger communities of Ocho Rios and Montego Bay, two areas known to be popular tourist destinations. Prior to the development of the cruise port, Falmouth had seen little in the way of tourists aside from the handful of visitors who stopped to see its classic Georgian Architecture. According to the SDC, "On November 7, 2008, Prime Minister Bruce Golding signed a $224 million contract with [A major cruise company] to modernize the cruise shipping port in Falmouth, Jamaica." Work on the new cruise port started in 2009. The development of the port offered the opportunity for many construction related jobs. When the construction was finished in March 2011, the construction jobs it provided disappeared and cruise ships started making calls in Falmouth.

The port was designed to service a new class of mega cruise ships that can carry in excess of 6,000 passengers and nearly 2,000 staff. When the new ships arrive in port, their total population is almost the same as the town of Falmouth. According to the Jamaican Tourist Board, in 2012 the port of Falmouth serviced 135 cruise ships carrying 586,578 passengers, or 44.4% of total cruise passengers arriving in Jamaica (Jamaica Tourist Board, 2012). Falmouth is the busiest cruise port by volume in Jamaica, servicing in excess of 100,000 more passengers than the either of the other two major ports, Ocho Rios (393,445 passengers) and Montego Bay

(338,972 passengers). The winter months are busiest for the port of Falmouth, with more than 60,000 passengers arriving each month from December to March in 2011/2012. Many of the ships that dock in Falmouth had previously docked in Ocho Rios, with passenger arrivals at that port decreasing by more than 40% upon the opening of the new Falmouth port.

Procedure

Data for this research were collected in a cross-sectional study of residents of Falmouth, Jamaica from February to March 2013. An eleven page, 138-question paper survey was administered face-to-face to a systematic random sample of 363 Falmouth residents over the age of eighteen. To ensure sample randomness, each Falmouth residence was counted and mapped by the research team in the two weeks prior to data collection. Researchers counted a total of 3,515 households in Falmouth proper and surrounding neighborhoods. According to SDC estimates, an average of three individuals live in each household, 66% of whom are over eighteen years of age (Silvera & Johnson, 2010). These estimates put the over eighteen population of Falmouth at 7,424 individuals, resulting in a sample size of approximately five percent (5%). Over a period of four weeks, researchers attempted a survey at every tenth house, approaching a total of 599 individuals to administer the paper survey. Eighty-nine (89) residents declined to participate in the study, and 102 residents indicated they experienced no stress from the new cruise port, resulting in an overall response rate of 60%. In many cases, researchers aided survey participants in the completion of the survey. Surveys that were not completely filled out were not used in this analysis, resulting in a total of 363 completed surveys containing no missing data.

Population

In 2010, the SDC conducted a citywide survey in an effort to construct a community profile, compiling data on demographic, social, economic, spatial, environmental, and governance in Falmouth (Silvera & Johnson, 2010). The SDC estimated that the population of Falmouth had increased to 8,912 residents living in 2,724 dwellings in 2010. The SDC community profile focused on surveying household heads, and the date reported here reflect that population. Fifty-four percent (54%) of household heads were male and 46% were female. Just over 35% of Falmouth household heads had attained secondary (high school) education, and 25% had attained higher-level education (including post-secondary, other tertiary, and vocational training). Only 8% of household heads had received a college diploma, and 7% had received a vocational certification. While specific literacy rates for Falmouth were not available, UNICEF estimates that 87% of Jamaicans are literate. The SDC Falmouth community profile estimated that approximately 72% of household heads in Falmouth were employed, a significant portion of which were employed in service industries (25%). Finally, though English is the official language in Jamaica, most Jamaicans speak a Patois dialect in which the pronunciation and vocabulary is often distinctly different than American or British English.

Participant profile

Forty-three (43%) percent of study participants were male and 57% were female. The mean age of participants was 40 years old. Three percent (3%) of participants reported having either quite a bit or a great deal of contact with cruise passengers, 4% reported having some contact with cruise passengers, and 93% reported having very little or no contact with cruise passengers. Two percent of study participants reported they personally benefitted from cruise tourism quite a bit or a great deal, 2% reported benefitting some, 9% reported benefitting a little

bit, and 86% reported no benefit from cruise tourism. Five percent (5%) of study participants reported they were currently employed in the cruise tourism industry, 8% reported being employed in other areas of the tourism industry, 33% were not currently employed in the tourism industry but had been previously, and 54% indicated they had never worked in the tourism industry. Self- reported monthly incomes of survey participants are reported in Table 3.

Table 3 - Self reported monthly income of survey participants

	n	%
No formal income	105	29%
Less than 16,280 JMD ($164 USD)	21	6%
16,281-32,499 JMD ($164-$328 USD)	28	8%
32,500-43,499 JMD ($328-$439 USD)	24	7%
$43,500-$86,499 JMD ($439-$872 USD)	27	8%
$86,500 JMD or more ($872 USD or more)	15	4%
Prefer not to answer	140	38%

The largest portion (32%) of survey participants reported having completed secondary school (grade 11 – the equivalent of high school in the United States). Two percent (2%) of participants reported having completed pre-primary school (kindergarten), 3% reported having completed primary school (grades 1-6), and 12% reported having completed all age/junior high (grades 7-9). An additional 2% of survey participants reported having completed elementary school (up to grade 11 in the old Jamaican education system), 18% reported attending vocational school (often training for work in the tourism sector), and 1% reported attaining a post-secondary certificate (to help gain entrance to university or college). Finally, 13% of survey participants reported attending other tertiary institutions (i.e. teachers college or other colleges offering associates degrees) and 18% reported attending a university.

Instruments

Personality was measured using the *Mini-International Personality Item Pool (Mini-IPIP)*, a 20-item short form of the traditional 50-item International Personality Item Pool – Five

Factor Model (Donnellan, Oswald, Baird, & Lucas, 2006). The Mini-IPIP is a recently derived personality scale useful for measuring the established five-factor model of personality in conjunction with other long scale based measurements, as long questionnaires can produce transient (i.e. fatigue related) measurement errors (Schmidt, Le, & Ilies, 2003). The Mini-IPIP has been found to be a valid measure of the big five personality factors, although in some instances cross loading of indicator variables has been observed (Cooper, Smillie, & Corr, 2010). Participants responded to statements on a five-point scale ranging from 1 (very inaccurate) to 5 (very accurate) indicating how accurate each statement was in describing themselves. Eleven (11) items within the Mini-IPIP were asked in the negative (e.g., "Don't have a good imagination") and reverse coded.

Social support was measured using the *Interpersonal Support Evaluation List 12- item version (ISEL),* which measures three factors: appraisal support, belonging support, and tangible support (Cohen & Hoberman, 1983). A shortened version of an established measure of social support was utilized to minimize the risk of transient measurement error (Schmidt et al., 2003). The ISEL (12-item version) has been found to be a psychometrically sound measurement tool (Hawkley, Masi, Berry, & Cacioppo, 2006). Participants responded to statements on a five-point scale ranging from 1 (definitely false) to 5 (definitely true) indicating how accurate each statement was in describing themselves. Six (6) items within the ISEL were asked in the negative (e.g., "I don't often get invited to do things with others") and reverse coded.

Stress appraisal was measured using the *Stress Appraisal Measure (SAM)*, a 27-item instrument which measures three primary appraisal factors (threat, challenge, and centrality) and three secondary appraisal factors (controllable by self, controllable by others, and uncontrollable) (Edward J. Peacock & Wong, 1990). The SAM has been found to be internally reliable and valid

in a variety of study areas (Jones et al., 2009; C. L. Park, Fenster, Suresh, & Bliss, 2006). Participants were asked to describe a stressful situation resulting from the development or operation of the new cruise port in Falmouth, then to respond to statements about how they viewed the stressful situation they described *right now* (e.g., Does this situation have important consequences for me?) on a five-point scale ranging from 1 (not at all) to 5 (extremely).

Coping was measured using the *Ways of Coping Questionnaire - Revised (WoC)*, a 66-item instrument which measures seven coping factors (i.e., confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape avoidance, planful problem solving, and positive reappraisal) of coping (Folkman, Lazarus, Dunkel-Schetter, Gruen, et al., 1986). The WoC has been utilized to measure coping with countless stressors in a wide variety of contexts; though there has been some disagreement about the factor structure of the WoC (Parker et al., 1993), many empirical studies have found it to be a reliable and valid measure of coping (Jean, Paul, & Beatty, 1999; Lundqvist & Ahlström, 2006). Participants were asked to indicate the frequency with which they utilized coping behaviors (e.g., I tried to analyze the problem in order to understand it better) in response to the stressful situation they described for the SAM portion of the survey. Participants responded on a five-point scale ranging from 1 (not used at all) to 5 (used a great deal).

Data analysis

A series of CFAs were conducted to test the construct validity of each measurement in of the stress, appraisal, and coping process. Each CFA was conducted using the Lavaan package (Rosseel, 2012) in the R software environment for statistical computing and graphics. All CFA models were estimated using maximum likelihood estimation of the sample covariance matrix. Model fit was determined based upon a battery of widely used indices of model fit including

mean-adjusted minimum fit chi-square (χ^2), comparative fit index (CFI), Tucker-Lewis Index (TLI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR) (McDonald & Ho, 2002). The χ^2 value is presented despite its sensitivity to sample sizes greater than 200. Cutoff criteria used to determine 'good fit' were: CFI > .9, TLI >.95, RMSEA <.06, and SRMR <.08 to minimize the risk of Type I and Type II error (Hu & Bentler, 1999). Tests of data normality were conducted to meet assumptions required for conducting CFA; cutoff values for 2.0 and 7.0 for skewness and kurtosis were used respectively (Curran, West, & Finch, 1996). Cronbach's alpha was estimated for each factor to determine internal reliability. A cutoff value of .7 was utilized to determine 'good' reliability.

Results

Personality

Descriptive statistics for the Mini-IPIP scale are presented in Table 4. Cronbach's alpha for each personality scale were below acceptable levels; contentiousness and neuroticism were particularly low. Test of skewness and kurtosis indicate univariate normality. Mean scores for negatively worded items were substantially higher than those reported by Donnellan et al. (2006) and Cooper et al. (2010).

Table 4 - Descriptive statistics for the Mini International Personality Item Pool (Mini-IPIP)

Items	Descriptives			
Extraversion (α=.561)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
1. Am the life of the party	2.72	1.49	.188	-1.39
6. Don't talk a lot*	3.06	1.40	.002	-1.23
11. Talk to a lot of different people at parties	2.77	1.54	.173	-1.47
16. Keep in the background*	3.15	1.35	-.044	-1.12
Agreeableness (α=.453)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
2. Sympathize with other's feelings	4.37	.774	-.863	.364
7. Am not interested in others' problems*	3.55	1.41	-.533	-1.02
12. Feel others' emotions	4.10	1.02	-1.33	1.54
17. Am not really interested in others*	4.02	1.299	-1.10	-.049
Conscientiousness (α=.269)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
3. Get chores done right away	3.96	1.04	-1.46	3.10
8. Often forget to put things back in their proper place*	3.74	1.28	-.624	-.781
13. Like order	4.28	1.14	-1.67	1.84
18. Make a mess of things*	4.47	.884	-1.49	1.01
Neuroticism (α=.030)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
4. Have frequent mood swings	2.91	1.39	.042	-1.20
9. Am relaxed most of the time*	2.68	1.37	.461	-1.00
14. Get upset easily	2.72	1.37	.280	-1.09
19. Seldom feel blue*	3.31	1.27	-.164	-.982
Imagination (α=.453)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
5. Have a vivid imagination	4.20	1.15	-1.45	1.20
10. Am not interested in abstract ideas*	3.67	1.39	-.650	-.884
15. Have difficulty understanding abstract ideas*	4.07	1.20	-1.07	.037
20. Do not have a good imagination*	4.18	1.28	-1.44	.762

* = Negatively worded

CFA of the five-factor MINI-IPIP produced a poor fitting model (Table 5). During the survey process, researchers noted that negatively worded variables were particularly difficult for participants to understand. Negatively worded variables have been noted as a common source of method bias in behavioral research, especially when colloquialisms that may not be familiar to research participants are used (Podsakoff, MacKenzie, Jeong-Yeon Lee, & Podsakoff, 2003). This possible method bias was addressed by estimating a bi-factor model, where negatively worded variables within each personality trait were loaded onto an additional latent variable. Fit statistics indicate the bi-factor model produced poor to adequate fit, with CFI and TLI scores falling outside desired ranges.

Table 5 - Fit statistics of CFA models of the Mini International Personality Item Pool (Mini-IPIP)

	Fit Statistics					
Model	χ^2	*df*	CFI	TLI	RMSEA	SRMR
MINI-IPIP	424.07	160	.676	.616	.067	.074
MINI-IPIP Bi-factor model	273.90	149	.847	.805	.048	.056

Social Support

Descriptive statistics for the ISEL are presented in Table 6. Cronbach's alpha for each type of social support were below acceptable levels, and appraisal support was particularly low. Tests of skewness and kurtosis indicate univariate normality. Confirmatory factor analysis of the three-factor ISEL produced a poor fitting model (Table 7). Similar to negatively worded variables in the MINI-IPIP scales, researchers noted survey participants struggled to understand negatively worded items. Once again, this issue was addressed by estimating a bi-factor model that loaded negatively worded variables within each social support factor on an additional latent variable (Figure 3). The bi-factor model produced good fit, with only TLI falling slightly outside the desired range. Each indicator variable loaded significantly onto its latent construct with the exception of question 7, which stated "I don't often get invited to do things with others." All latent variables were significantly correlated with each other.

Table 6 - Descriptive statistics for the Interpersonal Support Evaluation List (ISEL)

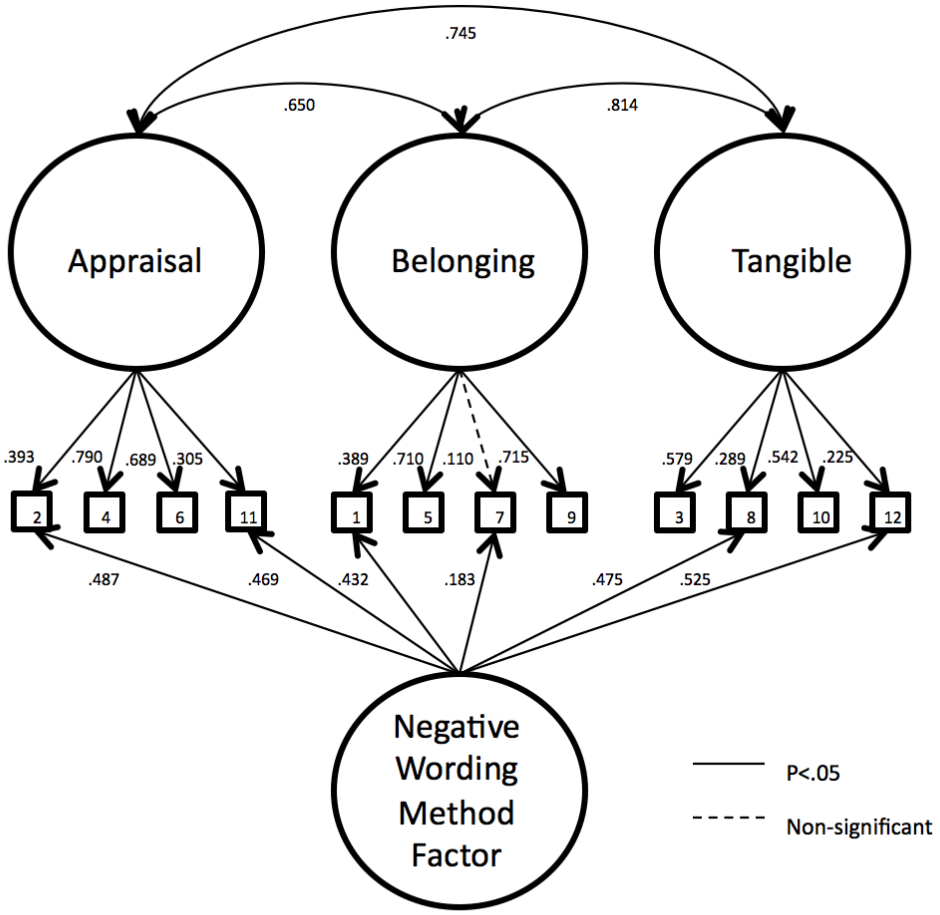
Item	Descriptives			
Appraisal (α=.594)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
2. I feel that there is no one I can share my most private worries and fears with*	2.05	.93	-1.88	3.32
4. There is someone I can turn to for advice about handling problems with my family	4.40	.97	-1.85	2.98
6. When I need suggestions on how to deal with a personal problem, I know someone I can turn to	3.96	1.41	1.04	-.359
11. If a family crisis arose, it would be difficult to find someone who could give me good advice about how to handle it*	3.88	1.50	-.955	-.687
Belonging (α=.529)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
1. If I wanted to go on a trip for a day, I would have a hard time finding someone to go with me*	4.15	1.30	-1.32	.445
5. If I decide one afternoon that I would like to go out that evening, I could easily find someone to go with me	4.31	1.11	-1.74	2.25
7. I don't often get invited to do things with others*	4.38	1.00	-1.87	3.060
9. If I wanted to have lunch with someone, I could easily find someone to join me	3.81	1.39	-.844	-.649
Tangible (α=.514)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
3. If I were sick, I could easily find someone to help me with my daily chores	4.28	1.01	-1.53	1.90
8. If I had to go out of town for a few weeks, it would be difficult to find someone who would look after my house or apartment (the plants, pets, garden, etc.)*	3.89	1.42	-.913	-.628
10. If I was stranded 10 miles from home, there is someone I could call who could come and get me	4.50	.933	-1.91	4.55
12. If I needed some help in moving to a new house or apartment, I would have a hard time finding someone to help me*	4.14	1.34	-1.36	.440

* = Negatively worded

Table 7 - Fit statistics of CFA models of the Interpersonal Support Evaluation List (ISEL)

	Fit Statistics					
Model	χ^2	*df*	CFI	TLI	RMSEA	SRMR
ISEL	218.88	51	.796	.736	.095	.075
ISEL Bi-factor model	78.26	45	.960	.942	.045	.044

Figure 3 - Completely standardized CFA of the Interpersonal Support Evaluation List (ISEL)



X^2=78.26 *df*=45 CFI=.960 TLI=.942 RMSEA=.045 SRMR=.044

Stress Appraisal

Descriptive statistics for the SAM are presented in Table 8. Cronbach's alpha for centrality, controllable by self, controllable by other, and uncontrollable are acceptable, while Cronbach's alpha for threat and challenge are below acceptable levels. Tests of skewness and kurtosis indicate univariate normality.

Table 8 - Descriptive statistics for the Stress Appraisal Measure (SAM)

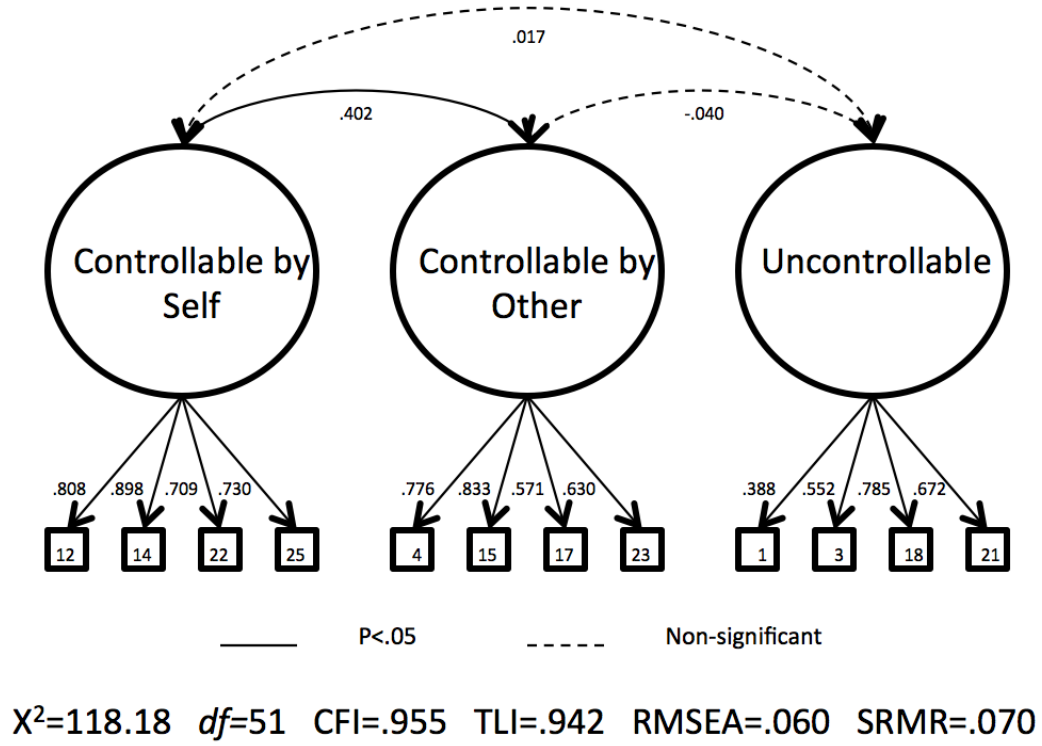
Primary Appraisal				
Threat (α=.403)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
5. Does this situation make me feel anxious?	3.20	1.48	-.303	-1.35
11. Will the outcome of this situation be negative?	2.20	1.47	.781	-.875
20. How threatening is this situation?	3.62	1.33	-.681	-.707
28. Is this going to have a negative impact on me?	2.58	1.54	.353	-1.39
Challenge (α=.290)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
7. Is this going to have a positive impact on me?	2.62	1.59	.320	-1.48
8. How eager am I to tackle this problem?	3.98	1.24	-1.07	.099
10. To what extent can I become a stronger person because of this?	2.60	1.42	.285	-1.29
19. To what extent am I excited thinking about the outcome of this situation?	3.37	1.32	-.424	-.972
Centrality (α=.773)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
6. Does this situation have important consequences for me?	3.18	1.39	-.232	-1.28
9. How much will I be affected by the outcome of this situation?	3.57	1.25	-.509	-.815
13. Does this situation have serious implications for me?	3.11	1.44	-.226	-1.32
27. Does this situation have long-term consequences for me?	3.02	1.38	-.129	-1.24
Secondary Appraisal				
Controllable by Self (α=.866)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
12. Do I have the ability to do well in this situation?	2.96	1.36	-.144	-1.28
14. Do I have what it takes to do well in this situation?	3.06	1.38	-.098	-1.25
22. Will I be able to overcome the problem?	2.82	1.39	.092	-1.27
25. Do I have the skills necessary to achieve a successful outcome to this situation?	2.91	1.42	-.017	-1.36
Controllable by Other (α=.793)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
4. Is there someone or some agency I can turn to for help if I need it?	2.51	1.39	-.863	.743
15. Is there help available for me dealing with this problem?	2.56	1.38	.347	-1.15
17. Are there sufficient resources available to help me in dealing with this situation?	2.28	1.26	.546	-.910
23. Is there anyone who can help me to manage the problem?	2.91	1.40	.056	-1.30
Uncontrollable (α=.680)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
1. Is this a totally hopeless situation?	2.17	1.42	-.840	-.724
3. Is the outcome of this situation beyond anyone's control?	1.81	1.27	1.32	.344
18. Is it beyond anyone's power to do anything about this situation?	1.73	1.23	1.55	1.07
21. Is the problem unresolvable by anyone?	1.81	1.29	1.39	.609

Table 9 - Fit statistics of CFA models of the Stress Appraisal Measure (SAM)

	Fit Statistics					
Model	χ^2	*df*	CFI	TLI	RMSEA	SRMR
SAM (Primary)	218.88	51	.796	.736	.095	.075
SAM (Secondary)	118.18	51	.955	.942	.060	.070

Confirmatory factor analysis of primary appraisal resulted in a poorly fitting model (Table 9). Modification indices revealed cross-loadings between items in all three latent constructs. An EFA of the primary appraisal scale was attempted, but no solution produced an adequate fitting model. Confirmatory factor analysis of secondary appraisal resulted in a model with good fit (Figure 4). Each indicator variable loaded significantly onto its latent construct. The latent variables 'controllable by self' and 'controllable by other' were significantly positively correlated.

Figure 4 – Completely standardized CFA of the Stress Appraisal Measure (SAM)



Coping

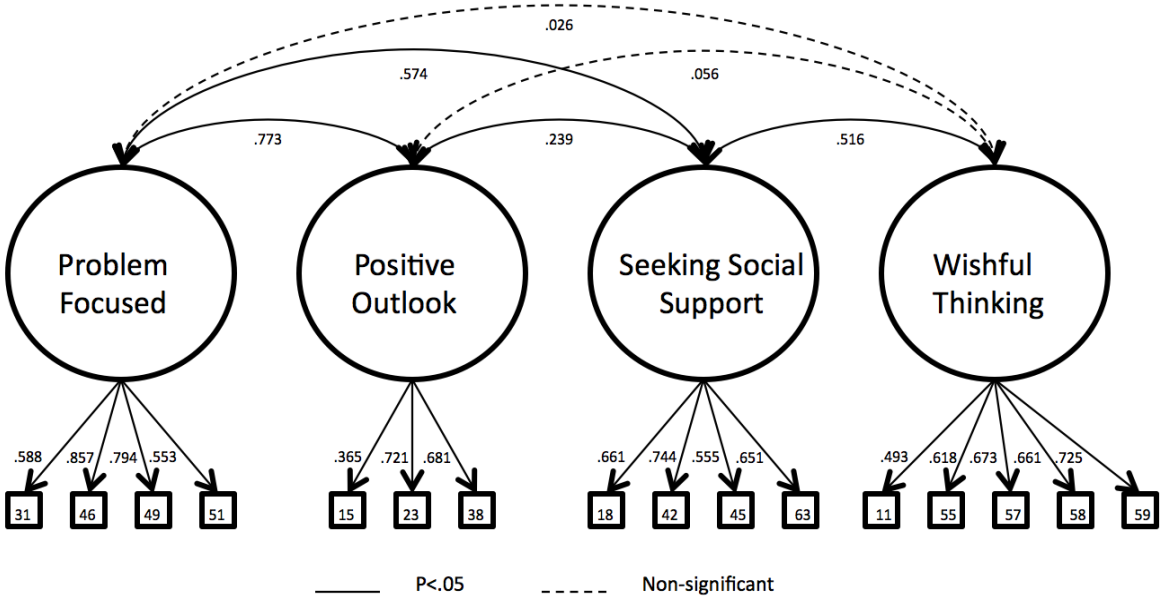
CFA of the WoC resulted in a poorly fitting model. Modification indices (Lagrange multiplier tests) revealed indicator variable cross-loadings, correlated error variances, and correlated factors all to be sources of misfit. As the factor structure of the WoC has previously been found to be inconsistent across stressors and study contexts (Parker et al., 1993), an exploratory factory analysis (EFA) was conducted to determine appropriate factor structure for individuals coping with development in a tourism context. Exploratory factor analysis was conducted using maximum likelihood estimation with Oblimin rotation and Kaiser Normalization. Oblique rotation was preferred over orthogonal rotation as inter-correlation was observed in the CFA analysis in addition to being theoretically expected, as individuals are likely to utilize several types of the myriad coping actions available to them (Fabrigar, Wegener, MacCallum, & Strahan, 1999). EFA produced a four-factor solution using the Eigen-value > 1 and scree-plot point of inflection criteria. Descriptive statistics of the four factors produced by EFA are presented in Table 10.

Table 10 - Descriptive statistics for the four-factor Ways of Coping (WoC)

Item	Descriptives			
Problem-focused (α=.791)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
31. Talked to someone who could do something about the problem	2.86	1.43	.090	-1.34
46. Stood my ground and fought for what I wanted	1.53	1.53	-.234	-1.43
49. I knew what had to be done, so I doubled my efforts to make things work	3.12	1.61	-.114	-1.59
51. I made a promise to myself that things would be better next time	3.42	1.28	-.441	-.830
Positive Outlook (α=.615)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
15. Looked for the silver lining, so to speak; tried to look on the bright side of things	3.80	1.24	-.876	-.216
23. Changed or grew as a person in a good way	2.79	1.56	.208	-1.48
38. Rediscovered what is important in life	3.54	1.40	-.505	-1.08
Seeking Social Support (α=.749)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
18. Accepted sympathy and understanding from someone	3.35	1.41	-.334	-1.18
42. I asked a relative or friend I respected for advice	3.60	1.39	-.592	-.965
45. Talked to someone about how I was feeling	3.63	1.21	-.613	.480
63. I thought about a how a person I admire would handle this situation and used that as a model	3.27	1.41	-.265	-1.24
Wishful Thinking (α=.767)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
11. Hoped a miracle would happen	4.09	1.19	-1.16	.315
55. Wished that I could change what had happened or how I felt about it	3.80	1.25	-.806	-.355
57. I daydreamed or imagined a better time or place than the one I was in	3.59	1.44	-.651	-.943
58. Wished the situation would go away somehow or be over with	4.14	1.08	-1.21	.739
59. Had fantasies or wishes about how things might turn out	3.89	1.20	-.909	-.094

CFA was conducted on the four-factor solution produced by EFA, resulting in a model with good fit (Figure 5). Each indicator variable loaded significantly on its latent construct. The 'problem focused' latent variable was significantly correlated with 'positive outlook' and 'seeking social support. The 'positive outlook' latent variable was also positively correlated with 'seeking social support,' and the 'seeking social support' was additionally correlated with 'wishful thinking.' Descriptive statistics, Cronbach's alpha coefficients, and correlation coefficients of scales used in successfully fitted models are presented in Table 11.

Figure 5 – Completely standardized CFA of the four-factor Ways of Coping (WoC)



X^2=167.14 *df*=98 CFI=.959 TLI=.950 RMSEA=.044 SRMR=.051

Table 11 - Descriptive statistics, Cronbach's alpha coefficients, and correlation coefficients of scales in successfully fitted models

Factor (Range of scores)	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. Appraisal (4-20)	16.68	3.31	**.59**	-	-	-	-	-	-	-	-	-
2. Belonging (4-20)	16.65	3.13	.82*	**.53**	-	-	-	-	-	-	-	-
3. Tangible (4-20)	16.82	3.05	.85*	.88*	**.52**	-	-	-	-	-	-	-
4. Controllable by self (4-20)	11.74	4.70	-.07	-.06	-.04	**.86**	-	-	-	-	-	-
5. Controllable by other (4-20)	10.26	4.27	.19*	.05	.12	.39*	**.79**	-	-	-	-	-
6. Uncontrollable (4-20)	7.52	3.74	-.26*	-.31*	-.21*	.03	-.07	**.68**	-	-	-	-
7. Wishful thinking (5-25)	19.51	4.45	.02	.04	.00	-.26*	-.05	-.19*	**.79**	-	-	-
8. Positive outlook (3-15)	10.13	3.17	-.16*	-.27*	-.19*	.44*	.16*	.10	.14*	**.61**	-	-
9. Seeking social support (4-20)	13.84	4.11	.11	.02	-.05	.17*	.34*	-.10	.58*	.30*	**.75**	-
10. Problem focused (4-20)	12.65	4.61	-.18*	-.28*	-.18*	.49*	.28*	.15*	.08	.80*	.57*	**.76**

*p<.05

Discussion and conclusions

The aim of this research was to explore the suitability of a stress and coping framework for exploring psychological impacts of and behavioral and emotional responses to tourism development. The literature review introduced the stress and coping framework and described linkages of its individual elements to research from the tourism and leisure discipline. Research questions were designed to explore the measurement of latent stress and coping constructs within a tourism development context.

Research question 1 asked, "Are psychologically based measurements of personality, social support, and stress appraisal valid in a tourism host community context?" CFAs of each latent construct offered mixed results. The CFA of the Mini International Personality Item pool provided little support for construct validity in the context of Falmouth, Jamaica. Similarly, the CFA of the Stress Appraisal Measure of primary stress appraisal offered little support for construct validity in this context. However, the CFA of the Stress Appraisal Measure of secondary appraisal supported construct validity, with the theoretical model offering good fit with no modification. The CFA of the Interpersonal Support Evaluation List of social support provided some support for construct validity, as a bi-factor model was necessary to account for the method bias introduced by reverse coded questions. Convergent and discriminant validity of were also supported, with similar concepts (i.e., each individual type of social support) highly correlated with each other and dissimilar concepts (i.e., controllability of stress and social support) not highly correlated with each other. Internal reliability of successfully fitted models was inconsistent, with some Cronbach's alpha's falling below the 0.7 threshold for good fit, likely due to the negative wording method bias within several of the measurement tools.

Research question 2 asked, "What is the structure of coping by individuals responding to stress brought about by tourism development?" The CFA of the theoretically predicted seven-factor Ways of Coping model provided little support for construct validity in this context. As the factor structure of coping is known to shift based on stress, context, etc., an exploratory factor analysis was conducted to determine the structure of coping with stresses caused or exacerbated by tourism development. The four-factor solution produced by EFA proved to be a good fitting, parsimonious model of coping. This finding does not indicate individuals do not necessarily engage in other types of coping, but within this specific measurement tool in this context, these are the types of coping responses that individuals tended to engage in.

The structure of coping in this tourism development context provides some insight into how residents of a community that has undergone cruise tourism development with little opportunity for input cope with resulting stresses. The most frequently used coping response to tourism development related stressors in this case was wishful thinking. That is, individuals engaged in emotion-focused coping most frequently, simply wishing the stressor would go away without taking any action to make it happen. Emotion focused coping has previously been found to be positively linked with negative stress outcomes, meaning engaging in actions like wishful thinking is actually detrimental to health and well being (Penley et al., 2002). Individuals also engaged in problem focused coping, keeping a positive outlook, and seeking social support. Even within the problem-focused coping factor, only some direct action items were present (i.e., stood my ground and fought for what I wanted), mixed with indirect action items (i.e., talked to someone who could do something about the problem), indicating individuals were not likely directly address their stressor, a coping response that has been linked with positive outcomes (Morin, Rodrigue, & Ivers, 2003). The positive outlook factor was composed of items that

involved re-framing the individual's state of mind toward stressors and even perhaps reappraising stress as a *good thing* for their wellbeing. Finally, seeking social support was composed of information gathering items, talking to individuals who might know about the stressful situation, asking for advice, etc. Both seeking social support and positive outlook were composed of a mix of problem-focused and emotion-focused coping responses, and could influence outcomes positively or negatively (Penley et al., 2002).

The stress and coping framework is a new angle from which to examine psychological impacts and responses to tourism development. This research represents the first application of each measurement tool within both a tourism context as well as a Caribbean island context. In their standard form, each measurement tool had limitations in measuring the stress and coping process. It is possible that changing negatively worded questions to the positive could result in better performance of measurement tools. The subjective nature of stressors and coping responses makes consistently performing quantitative measurement tools a scarce commodity. A measurement of coping that uses scale based questions measuring use of 'common coping responses,' in concert with an open ended question that allows individuals to describe other coping efforts may be better suited for the purposes of understanding coping in a variety of contexts. The type of tourism development and host community residents' involvement in decision making prior to development could play an important role in how stress is experienced and coped with. In this case, cruise tourism was developed with little input from local residents, likely pushing individuals toward the generally less effective emotion-focused coping responses. A lack of power in the decision making process by local individuals also likely played a role in the process.

Expanding the framework of tourism impacts research to include psychological phenomena like stress and coping is an important step toward understanding how tourism affects host community residents' quality of life and the host/guest relationship. As there are few established measures within the tourism discipline with which these phenomena may be measured, the process of testing measures derived within the psychological discipline is a logical first step in the creation of tourism specific measurements. Future research should continue to test measurement tools of the stress and coping process and examine the relationships between elements within the process. Tailoring questions to apply to tourism specifically would likely help increase validity of measurement tools from the psychology discipline. Future research should also attempt to measure outcomes of the stress, appraisal, and coping process. The ultimate goal of research attempting to understand this process should be to determine what elements in the process lead to the mitigation of stress and negative outcomes. Understanding each element of the stress, appraisal, and coping process can provide useful information for tourism developers, individuals living in host communities, and community organizations about how individuals are affected by tourism and the most effective ways to mitigate the negative impacts of stress.

CHAPTER 4: SOCIAL SUPPORT AND APPRAISAL AS PREDICTORS OF COPING RESPONSES TO STRESS BROUGHT ABOUT BY CRUISE TOURISM DEVELOPMENT

Introduction

The human response to stress is a behavioral and emotional process in which individuals continually appraise and cope with the ever-changing life events and hassles they encounter in every day life. Stress is one of many possible emotional and psychological impacts that can result from tourism development. Although stress resulting from tourism and tourism development has been documented, especially for those employed in the tourism industry (Law et al., 1995), little research has attempted to understand the stress and coping process of residents of a community developed for tourism (Berno & Ward, 2005). Residents within tourism communities are a key component of the tourism experience, as many individuals have contact with tourists in public spaces or as workers in the tourism system (Easterling, 2004).

Theoretical constructs like the social exchange, power theory, and Doxey's Irridex indicate when negative impacts of tourism outweigh positive impacts, residents tend to react negatively (Ap & Crompton, 1993; Doğan, 1989; Doxey, 1975; Kayat, 2002). Although empirical evidence of extreme negative reactions like antagonistic behavior by host community residents is lacking (Sharpley, 2014), researchers have documented how negative impacts affect resident support for tourism and tourism development as well as the quality of life of host community residents (Andereck, Valentine, Vogt, & Knopf, 2007; Nunkoo & Gursoy, 2012; Nunkoo & Ramkissoon, 2012; Sirakaya, Teye, & Sönmez, 2002). Despite lack of support for development by residents, tourism continues to be an important economic activity, particularly in developing countries and island states where tourism is one of a handful of viable export industries (Seetanah, 2011).

This research utilizes stress and coping theory from the psychological discipline to examine social support and stress appraisal as predictors of behavioral and emotional coping responses by residents of Falmouth, Jamaica who self identified as under stress from cruise tourism development in their community. Structural equation modeling of primary data collected from community residents is used to accomplish this task. This research expands the notion of responses to tourism development from attitudes toward and support for tourism development to include emotional and behavioral responses. Successful coping with stress can help mitigate some of the myriad negative health and psychological outcomes that affect individuals under stress.

Cruise tourism in the Caribbean presents a number of unique issues for residents of host communities. Economic leakage is a well documented phenomenon, and a great deal of cruise passenger spending ends up returning to either cruise companies or other externally owned organizations, resulting in little economic impact in the host community or country (Dann & Potter, 2001; Duval, 2004; Marsh, 2012). Socio-culturally, fantasy themes promoted on cruises can serve to marginalize local culture and promote the cruise ship and port as the travel destination, rather than the host community (Klein, 2011; Wood, 2000). Physical development of port facilities can damage reef ecosystems and the fisherman who depend on them for survival (Erftemeijer et al., 2012). Additionally, the presence of cruise ships in small communities can overtax public systems like roads, waste, water supply, and public spaces (Brida & Zapata, 2009).

Stress is defined as anything that causes an individual psychological distress. "Psychological distress is a negative psychological response…and can include a variety of affective and cognitive states, such as anxiety, sadness, frustration, the sense of being overwhelmed, or helpless" (Kemeny, 2003, p. 124). Stressful events manifest through daily

hassles that can often compound each other (DeLongis et al., 1982). For example, an individual who has a stressful experience navigating traffic and crowding, while trying to buy groceries on a day that cruise ships are in port, returns home and has an argument with their spouse, creating an additional stressor to cope with. Prolonged exposure to stress can negatively impact an individual's overall health and psychological well being (Thoits, 2010). Negative stress outcomes can range from physiological ailments like increased blood pressure (Fraser et al., 1999) to psychological issues like decreased cognitive function (Kemeny, 2003). Negative outcomes from stress disproportionately affect those with low income, education, and occupational prestige (Lantz, House, Mero, & Williams, 2005), all of which are prevalent in Falmouth (Silvera & Johnson, 2010).

Social support, stress appraisal, and coping all play important roles in how individuals are affected by stress and the extent of negative outcomes (Antonovsky, 1981). Social support is defined as "an exchange of resources between two individuals perceived by the provider or the recipient to be intended to enhance the well being of the recipient" (Shumaker & Brownell, 1984, p. 11). Individuals' health and psychological states are generally positively affected by access to and receipt of social support, and the availability of social support provides allows for increased coping options for individuals under stress (Langford, Bowsher, Maloney, & Lillis, 1997b; Thoits, 1995). Appraisal is defined as a process through which individuals evaluates if and how a stressful event is relevant to their well being (Folkman, Lazarus, Dunkel-Schetter, DeLongis, et al., 1986). Individuals who appraise stress as controllable generally utilize problem-focused coping (directly addressing the stressor), while those who appraise stress as not controllable generally utilize emotion-focused coping (adjusting their own emotional response to the stressor) (Endler et al., 2000).

Coping is defined as "cognitive and behavioral strategies used to manage stressful situations" (Shaw et al., 2013, p. 243). The type of coping an individual employs often determines the likelihood and severity of negative health and psychological outcomes; problem-focused coping is generally more effective at mitigating those outcomes than emotion-focused coping (Aldwin & Revenson, 1987). There are a variety of ways for organizations to promote increased social interaction, provide social support, and promote activities that impart a sense of control. For instance, organization of informational meetings and planning activities aimed at facilitating host community resident input into the tourism development process addresses both. When stressors cannot be avoided (i.e., tourism development has already happened), coping behaviors that are found to be effective in mitigating stress can also be taught to those under stress (Morin et al., 2003).

The purpose of this research is to provide tourism researchers with a better understanding of the process of resident behavioral and emotional responses to stress brought about by cruise tourism development. Studying the stress process of residents of communities developed for tourism is particularly important Caribbean nations like Jamaica a variety of unique impacts occur due to the nature of small island states, rise in large scale cruise and enclave tourism developments, and power structures that generally only allow for minimal resident input in decision-making. In many Caribbean nations and similar areas throughout the world, tourism development can be at least partially funded by tax dollars with little input from citizens and little return on investment for the majority of residents.

Literature Review

Stress

Stress is a phenomenon that has been explored extensively in the psychology discipline for more than 60 years (Selye, 1950). The psychological conceptualization of stress derives from early work by engineers seeking to determine the maximum load a weight bearing structure could handle before it collapsed (Selye, 1974). In a way, psychological stress can be considered the load that is placed on an individual, and the maximum load is the amount of stress an individual can handle before negative health and psychological outcomes manifest. While the outright collapse of individuals' psychological systems is possible (known colloquially as a mental breakdown), any number of less severe symptoms can occur along the way. Indeed, in many cases a certain amount of stress can be a positive for human beings, especially when confronted with mortal harm. Stress is detrimental to individuals when it is experienced over a long period of time in response to stressors that may not merit a full response, such as pressure at work to finish a big project or dealing with daily crowds in public places due to increased tourism volume (Sapolsky, 2000).

Individuals experience stress through both major events (i.e., a cancer diagnoses) and daily hassles (i.e., a poor grade on a test). Although on the surface major event stressors may appear to be more serious, daily hassles are actually thought to negatively impact individuals to a greater extent (De Benedittis & Lorenzetti, 1992; Kohn et al., 1994). In many cases, daily hassles can actually be the mechanism through which major events impact the stressed individual (Eckenrode, 1984). The experience of daily hassles on a regular basis results in the release of the stress hormone cortisol by the adrenal gland in the hypothalamic-pituitary-adrenal (HPA) axis (Burke, Davis, Otte, & Mohr, 2005). The negative health, psychological, and behavioral

outcomes that occur as a result of long-term exposure to cortisol are extensive. Increased blood pressure (Schnall et al., 1992), decreased immune system function (Segerstrom & Miller, 2004), impaired memory function (Het et al., 2005), and increased aggression or rule breaking behavior (Platje et al., 2013) are just a few of the many outcomes that can result from stress and cortisol exposure.

While the term *stress* has not frequently been documented as an impact of tourism or tourism development, many of the impacts examined in tourism impact studies could be considered stressors by the definition of "anything that causes an individual psychological distress." Emotional and psychological well being are important elements in an individuals' overall quality of life (QOL) (Schalock, 1997). Tourism's impact on QOL is a growing area of research, and the shift from attitudes toward and support for tourism development toward affect on individuals' life satisfaction represents an important step forward in the impact studies research paradigm (Andereck & Nyaupane, 2011). Studies examining quality of life go beyond simply measuring attitudes toward or support for tourism, tourism development, or tourists, and instead measure how the lives of host community residents are changed for better or worse. Psychological stress is one specific element on the negative spectrum of the overall quality of life of individuals living in communities hosting tourism.

Stress is a subjective phenomenon; even if individuals experience the same exact major stress event (i.e., a plane crash), the way that event affects the lives of each individual survivor is different through the daily hassles they experience. One individual may be unable to fly, necessitating long road, rail, or sea trips that can add stress to their travel experiences or relationships with distant friends and relatives. Another individual may develop a fear of loud noises, leading them to avoid crowded areas or other noisy events. Similarly, tourism affects

individuals in very different ways; in actuality, the physical development of tourism infrastructure is not likely to cause stress for individuals. Some individuals in host communities may experience daily hassles through their interaction with tourists, others may experience a daily hassle at their grocery store as prices rise and they struggle to feed their family, yet others may experience stress as a result of their expectations of tourism differing from reality (Manuscript under review, Citation withheld to protect anonymity). In this way, exploring the stress and coping process of residents of a host community bridges the gap between research examining attitudes toward tourism, tourism development, and tourists in the community (Woosnam, 2012).The subjective experience of stress can be attributed a transactional stress process that includes factors like individual characteristics (i.e., age, gender, personality), perception and receipt of social support, how a stressor is appraised by the individual, and how the individual copes with a particular stressor (Folkman, Lazarus, Dunkel-Schetter, DeLongis, et al., 1986).

Social Support

Researchers have identified several important types of social support, three of which are central to this research: appraisal, belonging, and tangible (Langford, Bowsher, Maloney, & Lillis, 1997). Appraisal support is the perceived availability of similar individuals that can discuss important personal issues (Cohen & Hoberman, 1983). Belonging support is the perception that a peer group exists that an individual can identify and socialize with (Brookings & Bolton, 1988). Tangible support is the perceived availability of direct aid or services through various resources, monetary or otherwise (Schaefer et al., 1981). While similar, the small variations in types of social support allow for a comprehensive understanding of individuals' perception of the availability of several types of social resources (Gottlieb & Bergen, 2010). It is

important to note that each of the three types of social support are defined by *perceptions* rather than actual receipt of support. Measurement of perceived social support is often preferable in research on stress and coping as perception can often outweigh receipt of support in predicting coping actions and health outcomes in individuals who are coping with stress (McDowell & Serovich, 2007; Thoits, 2011).

Social support has been found to benefit the overall well being of individuals in various populations of healthy and ill populations (Chu, Saucier, & Hafner, 2010; Thoits, 1985). In the stress and coping process, social support plays an important role in how stress is experienced and how individuals cope with stress (Cohen & Wills, 1985; DeLongis & Holtzman, 2005).The relationship between social support and coping is complex, and there are several ways social support is thought to influence coping. One prevailing theory is that of social referencing (Bandura, 1986). Through social referencing, individuals under stress can look to others for help in determining the best way to cope with a particular stressor. Individuals under stress are able to observe and interact with other individuals in their social network who may be coping with similar stressors, providing them with guidance on the efficacy of coping actions those individuals have employed (Zimmer-Gembeck & Skinner, 2011). Other studies have found that individuals who are satisfied with their level of social support tend to utilize coping actions that are more likely to reduce negative stress outcomes (Holtzman et al., 2004). In addition, researchers have found that when individuals under stress feel supported, they tend to utilize a greater variety of coping actions (Holtzman et al., 2004). Social support can also adversely affect individuals' coping options, especially for those who feel as though their social support networks are not as helpful as they should be (Dakof & Taylor, 1990).

Appraisal

There are two types of appraisal individual's use in this process: primary appraisal and secondary appraisal. Primary appraisal is essentially the "stake" an individual has in a particular stressor or stress event. Through primary appraisal, individuals are able to determine the centrality of the stress to their well being as well as determine whether the stress could be harmful or beneficial to themselves or those they care about (Newton & McIntosh, 2010). Secondary appraisal involves evaluating what the stressed individual can do about, or controllability of, a stressor or stress event (Peacock & Wong, 1990). Individuals can secondarily appraise stress as controllable by self, controllable by others, or uncontrollable. Although the labels of each type of appraisal indicate the possibility of chronological order, primary appraisal is not always conducted before secondary appraisal and the two processes are likely not independent of one another (Lazarus, 1999).

When individuals appraise stress as controllable, they are generally more successful in their coping responses as they are more likely to attempt to address the stress itself rather than their own emotional response (Endler et al., 2000). Human beings are pre-disposed to appraising events as controllable, even when they are random (e.g., gambling) (Moore & Ohtsuka, 1999). Although in those cases the perception of control is not necessarily beneficial, evolutionarily speaking, perception of control is considered an adaptive trait, as its positive association with successful coping responses usually results in reduced negative health and psychological outcomes from stress (Taylor, 1983). Individuals who appraise stress as uncontrollable are more likely to cope by adjusting their emotional responses (i.e., disengagement, distancing, avoidance). These coping responses are usually less helpful at mitigating stress and negative outcomes (Compas, Jaser, Dunn, & Rodriguez, 2012). There has been less research exploring the

relationship between appraisal of stress as controllable by others and coping, but researchers have theorized such appraisals will lead individuals to utilize the 'seeking social support' coping response, which is a mix of both problem and emotion-focused coping (Folkman & Lazarus, 1985; Peacock & Wong, 1996).

Coping

Lazarus (1966) shifted the focus of coping research from early ego-psychology conceptualizations of coping as unconscious processes that individuals utilized to defend themselves from stress to a continually changing cognitive process (Folkman & Moskowitz, 2004; Vaillant, 1995). Within the coping process, individuals continually evaluate the stressor, their coping options, and myriad other variables like their social support and appraisal of stress. Although there are many ways of classifying coping responses (see Skinner, Edge, Altman, & Sherwood, 2003 for a review), perhaps the most widely utilized and recognized are Folkman and Lazarus' (1980) meta-categories of problem-focused and emotion-focused coping. "Problem-focused coping included efforts to manage the stressor and change the person-environment relationship causing the stress, while emotion-focused coping was found to regulate emotional distress caused by stressors" (Folkman & Lazarus, 1980, p. 223). As previously discussed, problem-focused coping has been found to be more effective at mitigating stress and related health and psychological outcomes than emotion-focused coping across varying populations and stressor types (Penley et al., 2002).

Folkman et al. (1986) utilized exploratory factor analysis to derive eight specific factors comprising problem-focused (confrontive coping and planful problem solving) and emotion-focused (distancing, self controlling, accepting responsibility, escape-avoidance, and positive reappraisal) coping responses as well as one factor comprised of both (seeking social support).

Confrontive coping involves aggressive or hostile efforts to change the stressful situation (i.e., I stood my ground and fought for what I wanted). Planful problem solving involves analyzing the stressful situation and addressing it directly (i.e., I made a plan of action and followed it). Distancing involves detaching from the stressful situation and removing importance from it (i.e., Made light of the situation; refused to get to serious about it). Accepting responsibility involves admitting at least some responsibility for the stressful situation and some element of trying to right wrongs (i.e., I apologized or did something to make up). Escape-avoidance involves mental wishful thinking and physical avoidance of the stressful situation (i.e., wished that the situation would go away or somehow be over with). Positive reappraisal involves focusing on positives gained from the stressful situation (i.e., changed or grew as a person in a good way). Finally, seeking social support involves looking for others to discuss or directly address the stressful situation (i.e., talked to someone who could do something concrete about the problem). Individuals do not always utilize each specific coping response, and each type of response varies in effectiveness at mitigating stress and negative outcomes by stress type and individual (Penley et al., 2002).

Based on relevant literature, this research seeks to answer two questions:

Research question 1: How does social support affect individual coping responses to stress brought about by cruise tourism development?

Research question 2: How does secondary appraisal (controllability) of stress affect individual coping responses to stress brought about by cruise tourism development?

Method

Study site background

Falmouth is community on the northern coast of Jamaica with a population of almost 9,000 people. The community is approximately the midpoint between the larger communities of Ocho Rios and Montego Bay, two areas known to be popular tourist destinations. Prior to the development of the cruise port, Falmouth had seen little in the way of tourists aside from a handful of visitors who stopped to see its classic Georgian Architecture. According to the SDC, "On November 7, 2008, Prime Minister Bruce Golding signed a $224 million contract with [A major cruise company] to modernize the cruise shipping port in Falmouth, Jamaica. The Jamaican government paid for the dredging of the harbour, while the major cruise company paid for the construction of the port. Work on the new cruise port started in 2009. The development of the port offered the opportunity for many construction related jobs. When the construction was finished in March 2011, the construction jobs it provided disappeared and cruise ships started making calls in Falmouth. The port was designed to service a new class of mega cruise ships that can carry in excess of 6,000 passengers and nearly 2,000 staff. According to the Jamaican Tourist Board, in 2012 the port of Falmouth serviced 135 cruise ships carrying 586,578 passengers, or 44.4% of total cruise passengers arriving in Jamaica (Jamaica Tourist Board, 2012). Falmouth is the busiest cruise port by volume in Jamaica, servicing in excess of 100,000 more passengers than the either of the other two major ports, Ocho Rios (393,445 passengers) and Montego Bay (338,972 passengers). The winter months are busiest for the port of Falmouth, with more than 60,000 passengers arriving each month from December – March in 2011/2012. Many of the ships that dock in Falmouth had previously docked in Ocho Rios, with passenger

arrivals at that port decreasing by more than 40% upon the opening of the new modern Falmouth port.

Procedure

Data for this research were collected in a cross-sectional study of residents of Falmouth, Jamaica from February to March 2013. An eleven page, 138-question paper survey was administered face-to-face to a systematic random sample of Falmouth residents over the age of eighteen. Some individuals self administered surveys in the company of researchers, while some individuals preferred have surveys read to them and have researchers record their responses. To ensure sample randomness, each Falmouth residence was counted and mapped by the research team in the two weeks prior to data collection. Researchers counted a total of 3,515 households in Falmouth proper and surrounding neighborhoods. According to SDC estimates, an average of three individuals live in each household, 66% of whom are over eighteen years of age (Silvera & Johnson, 2010). These estimates put the over eighteen population of Falmouth at 7,424 individuals, resulting in a sample size of approximately five percent (5%). Over a period of four weeks, researchers and trained local surveyors attempted a survey at every twelfth house in Falmouth. If there were no persons of the appropriate age at home, the researcher continued to the next house until a suitable individual was found. The qualifier question "Have you experienced stress as a result of the development or operation of the new Falmouth Cruise port" was asked prior to survey administration. In total, researchers approached 599 individuals to administer the paper survey. Eighty-nine (89) residents declined to participate in the study, and 102 residents indicated they experienced no stress from the new cruise port and were not surveyed, resulting in an overall response rate of 60%. Surveys that were not completely filled

out were not used in this analysis, resulting in a total of 363 completed surveys containing no missing data.

Participant profile

An overall profile of survey participants is presented in Table 12. The mean age of participants was 40 years old. In 2010, the SDC conducted a citywide survey in an effort to construct a community profile, compiling data on demographic, social, economic, spatial, environmental, and governance in Falmouth (Silvera & Johnson, 2010). The SDC Falmouth community profile estimated that approximately 72% of household heads in Falmouth were employed, a significant portion of which were employed in service industries (25%). Though English is the official language in Jamaica, most Jamaicans speak a Patois dialect in which the pronunciation and vocabulary is often distinctly different than American or British English.

Table 12 - Profile of survey participants

Variable	Category	Percentage (N=363)
Gender	Male	43%
	Female	57%
Contact with cruise passengers	Quite a bit or a great deal	3%
	Some	4%
	Very little or none	93%
Personal benefit from cruise tourism	Quite a bit or a great deal	2%
	Some	2%
	Very little or none	94%
Employed in tourism industry	Employed in cruise tourism	5%
	Employed in other tourism	8%
	Currently not employed in cruise tourism, but once was	33%
	Never employed in cruise tourism	54%
Self reported monthly income	No formal income	29%
	Less than 16,280 JMD ($164 USD)	6%
	16,281-32,499 JMD ($164-$328 USD)	8%
	32,500-43,499 JMD ($328-$439 USD)	7%
	$43,500-$86,499 JMD ($439-$872 USD)	8%
	$86,500 JMD or more ($872 USD or more)	4%
	Prefer not to answer	38%
Highest level of education (U.S. equivalent)	Pre-primary school (Kindergarten)	2%
	Primary school (Grades 1-6)	3%
	All age/junior high (Grades 7-9)	12%
	Secondary school (High school)	33%
	Vocational school (Often tourism based)	18%
	Post-secondary certificate (To help gain entrance to university or college)	1%
	Other tertiary institutions (i.e., Teachers college or colleges offering associates degrees)	13%
	University	18%

Instruments

Social support was measured using the *Interpersonal Support Evaluation List 12- item version (ISEL),* which measures three factors: appraisal support, belonging support, and tangible support (Cohen & Hoberman, 1983). A shortened version of an established measure of social support was utilized to minimize the risk of transient measurement error (Schmidt et al., 2003). The ISEL (12-item version) has been found to be a psychometrically sound measurement tool (Hawkley et al., 2006). Participants responded to statements on a five-point scale ranging from 1 (definitely false) to 5 (definitely true) indicating how accurate each statement was in describing

themselves. Six (6) items within the ISEL were asked in the negative (e.g., "I don't often get invited to do things with others") and reverse coded.

Stress appraisal was measured using the *Stress Appraisal Measure (SAM)*, a 27-item instrument which measures three primary appraisal factors (threat, challenge, and centrality) and three secondary appraisal factors (controllable by self, controllable by others, and uncontrollable) (Peacock & Wong, 1990). The SAM has been found to be internally reliable and valid in a variety of study areas (Jones et al., 2009; C. L. Park et al., 2006). Participants were asked to write or describe verbally (surveyors transcribed statements verbatim) about a stressful situation resulting from the development or operation of the new cruise port in Falmouth, then to respond to statements about how they viewed the stressful situation they described *right now* (e.g., Does this situation have important consequences for me?) on a five-point scale ranging from 1 (not at all) to 5 (extremely).

Coping was measured using the *Ways of Coping Questionnaire - Revised (WoC)*, a 66-item instrument which measures seven coping factors (e.g., confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape avoidance, planful problem solving, and positive reappraisal) of coping (Folkman, Lazarus, Dunkel-Schetter, Gruen, et al., 1986). The WoC has been utilized to measure coping with countless stressors in a wide variety of contexts; though there has been some disagreement about the factor structure of the WoC (Parker et al., 1993), many empirical studies have found it to be a reliable and valid measure of coping (Jean et al., 1999; Lundqvist & Ahlström, 2006). Participants were asked to indicate the frequency with which they utilized coping behaviors (e.g., I tried to analyze the problem in order to understand it better) in response to the stressful situation they described for the SAM portion

of the survey. Participants responded on a five-point scale ranging from 1 (not used at all) to 5 (used a great deal).

Stressors

Overall, 78% of Falmouth residents who agreed to participate in this study indicated they had experienced stress as a result of the development and operation of the new cruise port. Individuals who indicated they had not experienced stress were not surveyed. The maximum number of stressors listed by any individual was three. Forty-four percent (44%) of survey respondents listed one stressor, 35% of respondents listed two stressors, and 21% of respondents listed three stressors. Five major themes of stressors emerged from thematic analysis of stressors listed by study participants, they were: (1) unmet expectations, (2) overtaxed infrastructure/crowding, (3) increased cost of living, (4) pollution (air, water, noise, etc), and (5) police harassment. The frequency of instances in which survey participants indicated each of these stressors occurred is listed in Table 13.

Table 13 - Stressor themes and frequencies

Stressor	%
Unmet expectations	80%
Overtaxed infrastructure/crowding	44%
Increase in cost of living	11%
Pollution (air, water, noise, etc.)	7%
Police harassment	5%

***Open ended question, multiple responses allowed**

Despite the similarity to many impacts commonly found in locations that have undergone tourism development, the description of impacts expands their understanding, giving researchers a deeper understanding of how and why each of these elements caused stress. In many instances, study participants revealed the 'impacts' of tourism caused *daily hassles* or exacerbated other common daily stresses that may have existed prior to tourism development, creating a level of stress that could be difficult for residents to cope with.

Data analysis

A series of structural equation models (SEM) were estimated to test the relationships between social support and coping as well as secondary appraisal and coping. Each SEM was conducted using the Lavaan package (Rosseel, 2012) in the R software environment for statistical computing and graphics. Each SEM was estimated using maximum likelihood estimation of the sample covariance matrix. Model fit was determined based upon a battery of widely used indices of model fit including mean-adjusted minimum fit chi-square (χ^2), comparative fit index (CFI), Tucker-Lewis Index (TLI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR) (McDonald & Ho, 2002). The χ^2 value is presented despite its sensitivity to sample sizes greater than 200. Cutoff criteria used to determine 'good' fit were: CFI > .9, TLI >.95, RMSEA <.06, and SRMR <.08 to minimize the risk of Type I and Type II error (Hu & Bentler, 1999). Tests of data normality were conducted to meet assumptions required for conducting CFA; cutoff values for 2.0 and 7.0 for skewness and kurtosis were used respectively (Curran et al., 1996). Cronbach's alpha was estimated for each factor to determine internal reliability. A cutoff value of 0.7 was utilized to determine 'good' reliability. Prior to SEM estimation, a series of confirmatory factor analyses (CFA) were conducted to test the construct validity of the entire stress and coping process including personality, social support, appraisal, and coping.

Preliminary CFA of the three-factor ISEL produced a poor fitting model. During the survey process, researchers noted that negatively worded variables were particularly difficult for participants to understand. Negatively worded variables have been noted as a common source of method bias in behavioral research, especially when colloquialisms that may not be familiar to research participants are used (Podsakoff et al., 2003). This possible method bias was addressed

by estimating a bi-factor model, where negatively worded variables within each personality trait were loaded onto an additional latent variable (Table 14). CFA of secondary appraisal yielded good fitting model. Preliminary CFA of the WoC resulted in a poorly fitting model. Modification indices (Lagrange multiplier tests) revealed indicator variable cross loadings, correlated error variances, and correlated factors all to be sources of misfit. As the factor structure of the WoC has previously been found to be inconsistent across stressors and study contexts (Parker et al., 1993), an exploratory factory analysis (EFA) was conducted to determine appropriate factor structure for individuals coping with development in a tourism context. Exploratory factor analysis was conducted using maximum likelihood estimation with Oblimin rotation and Kaiser Normalization. Oblique rotation was preferred over orthogonal rotation as intercorrelation was observed in the CFA analysis in addition to being theoretically expected, as individuals are likely to utilize several of the many types of coping actions available to them to combat stress (Fabrigar et al., 1999). EFA produced a four-factor solution using the eigenvalue > 1.0 and scree-plot point of inflection criteria. Descriptive statistics for the ISEL, SAM, and WoC are presented in Tables 15, 16, and 17 respectively.

Table 14 - Fist statistics of CFA models of the ISEL, SAM, and WoC

	Fit Statistics					
Model	χ^2	*df*	CFI	TLI	RMSEA	SRMR
ISEL (Bi-factor)	78.26	45	.960	.942	.045	.044
SAM (Secondary)	118.18	51	.955	.942	.060	.070
WoC (Four-factor)	167.14	98	.959	.950	.044	.051

Table 15 - Descriptive statistics for the Interpersonal Support Evaluation List (ISEL)

Item	Descriptives			
Appraisal (α=.594)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
2. I feel that there is no one I can share my most private worries and fears with*	2.05	.93	-1.88	3.32
4. There is someone I can turn to for advice about handling problems with my family	4.40	.97	-1.85	2.98
6. When I need suggestions on how to deal with a personal problem, I know someone I can turn to	3.96	1.41	1.04	-.359
11. If a family crisis arose, it would be difficult to find someone who could give me good advice about how to handle it*	3.88	1.50	-.955	-.687
Belonging (α=.529)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
1. If I wanted to go on a trip for a day, I would have a hard time finding someone to go with me*	4.15	1.30	-1.32	.445
5. If I decide one afternoon that I would like to go out that evening, I could easily find someone to go with me	4.31	1.11	-1.74	2.25
7. I don't often get invited to do things with others*	4.38	1.00	-1.87	3.060
9. If I wanted to have lunch with someone, I could easily find someone to join me	3.81	1.39	-.844	-.649
Tangible (α=.514)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
3. If I were sick, I could easily find someone to help me with my daily chores	4.28	1.01	-1.53	1.90
8. If I had to go out of town for a few weeks, it would be difficult to find someone who would look after my house or apartment (the plants, pets, garden, etc.)*	3.89	1.42	-.913	-.628
10. If I was stranded 10 miles from home, there is someone I could call who could come and get me	4.50	.933	-1.91	4.55
12. If I needed some help in moving to a new house or apartment, I would have a hard time finding someone to help me*	4.14	1.34	-1.36	.440

* = Negatively worded

Table 16 - Descriptive statistics for the Stress Appraisal Measure (SAM - Secondary)

Item	Descriptives			
Controllable by Self (α=.866)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
12. Do I have the ability to do well in this situation?	2.96	1.36	-.144	-1.28
14. Do I have what it takes to do well in this situation?	3.06	1.38	-.098	-1.25
22. Will I be able to overcome the problem?	2.82	1.39	.092	-1.27
25. Do I have the skills necessary to achieve a successful outcome to this situation?	2.91	1.42	-.017	-1.36
Controllable by Other (α=.793)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
4. Is there someone or some agency I can turn to for help if I need it?	2.51	1.39	-.863	.743
15. Is there help available for me dealing with this problem?	2.56	1.38	.347	-1.15
17. Are there sufficient resources available to help me in dealing with this situation?	2.28	1.26	.546	-.910
23. Is there anyone who can help me to manage the problem?	2.91	1.40	.056	-1.30
Uncontrollable (α=.680)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
1. Is this a totally hopeless situation?	2.17	1.42	-.840	-.724
3. Is the outcome of this situation beyond anyone's control?	1.81	1.27	1.32	.344
18. Is it beyond anyone's power to do anything about this situation?	1.73	1.23	1.55	1.07
21. Is the problem unresolvable by anyone?	1.81	1.29	1.39	.609

Table 17 - Descriptive statistics for the four-factor Ways of Coping (WoC)

Item	Descriptives			
Problem-focused (α=.791)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
31. Talked to someone who could do something about the problem	2.86	1.43	.090	-1.34
46. Stood my ground and fought for what I wanted	1.53	1.53	-.234	-1.43
49. I knew what had to be done, so I doubled my efforts to make things work	3.12	1.61	-.114	-1.59
51. I made a promise to myself that things would be better next time	3.42	1.28	-.441	-.830
Positive Outlook (α=.615)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
15. Looked for the silver lining, so to speak; tried to look on the bright side of things	3.80	1.24	-.876	-.216
23. Changed or grew as a person in a good way	2.79	1.56	.208	-1.48
38. Rediscovered what is important in life	3.54	1.40	-.505	-1.08
Seeking Social Support (α=.749)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
18. Accepted sympathy and understanding from someone	3.35	1.41	-.334	-1.18
42. I asked a relative or friend I respected for advice	3.60	1.39	-.592	-.965
45. Talked to someone about how I was feeling	3.63	1.21	-.613	.480
63. I thought about a how a person I admire would handle this situation and used that as a model	3.27	1.41	-.265	-1.24
Wishful Thinking (α=.767)	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
11. Hoped a miracle would happen	4.09	1.19	-1.16	.315
55. Wished that I could change what had happened or how I felt about it	3.80	1.25	-.806	-.355
57. I daydreamed or imagined a better time or place than the one I was in	3.59	1.44	-.651	-.943
58. Wished the situation would go away somehow or be over with	4.14	1.08	-1.21	.739
59. Had fantasies or wishes about how things might turn out	3.89	1.20	-.909	-.094

Results

Social Support and Coping

A structural model was estimated to answer Research Question 1, which asked "How does social support affect coping responses to stress brought about by cruise tourism development?" The estimation produced a model with adequate fit (Table 18). Modification indices (Lagrange Multipliers) revealed allowing residuals within wishful thinking coping construct to correlate would result in a better fitting model. As a result, the items 'I daydreamed

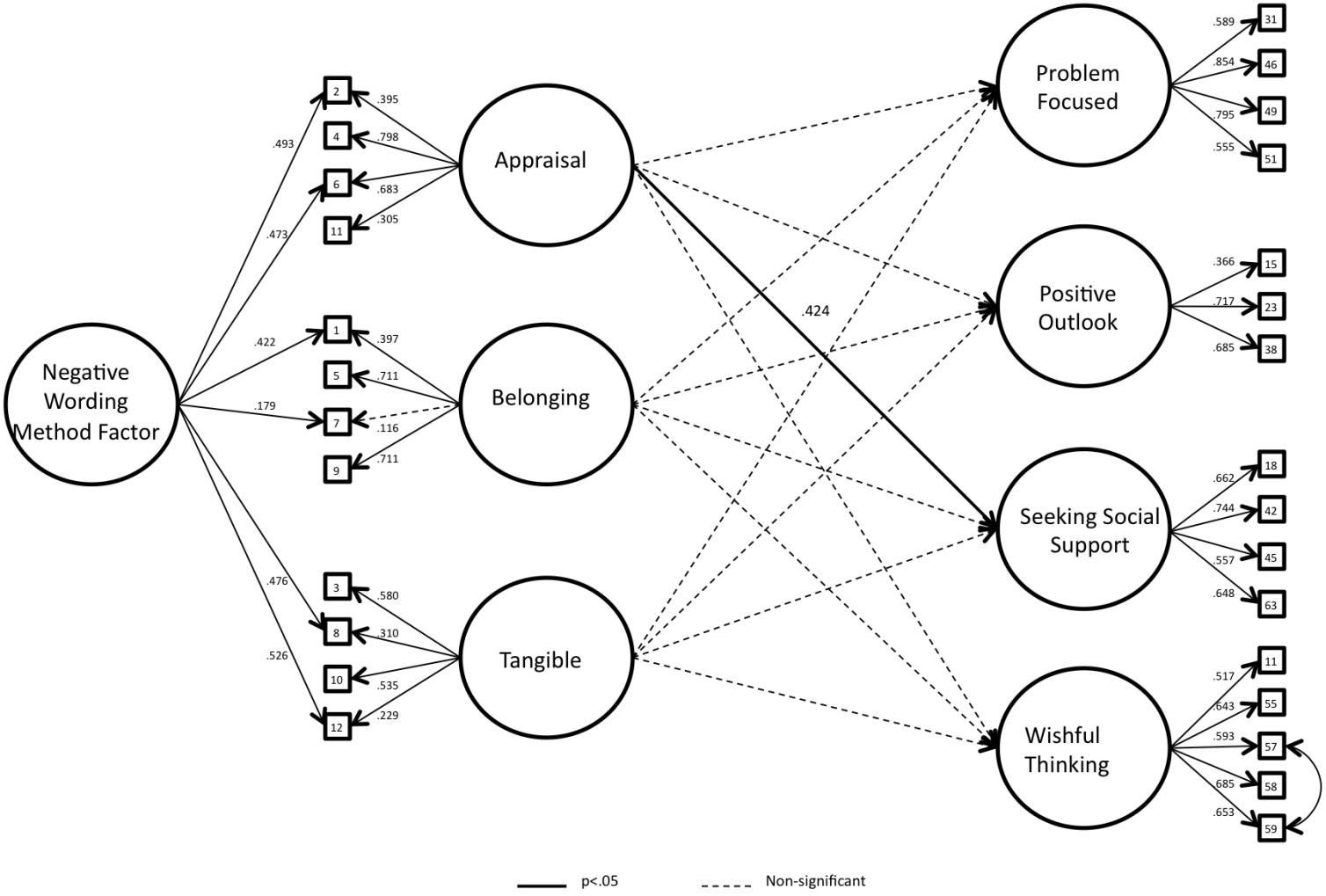
or imagined a better place or time than the one I was in' and 'Had fantasies or wishes about how things might turn out' within the wishful thinking coping construct were allowed to correlate. The estimation produced a model with good fit (Figure 6). Although the TLI fell slightly below the 0.95 threshold for good fit, consideration of the overall battery of fit-tests indicates good fit (Hu & Bentler, 1999).

Table 18 - Fit statistics of social support and coping structural equation models

	Fit Statistics					
Model	χ^2	*df*	CFI	TLI	RMSEA	SRMR
Initial Model	490.42	323	.936	.925	.038	.060
Final Model	473.39	322	.942	.932	.036	.060

In answer to Research Question 1, one statistically significant relationship between social support and coping was found. Specifically, the relationship between appraisal support (the perceived availability of similar individuals that can discuss important personal issues) and seeking social support coping was significant and positive. Other relationships within the model were not statistically significant.

Figure 6 - Completely standardized solution of social support and coping structural equation model



X^2=473.39 *df*=322 CFI=.942 TLI=.932 RMSEA=.036 SRMR=.060

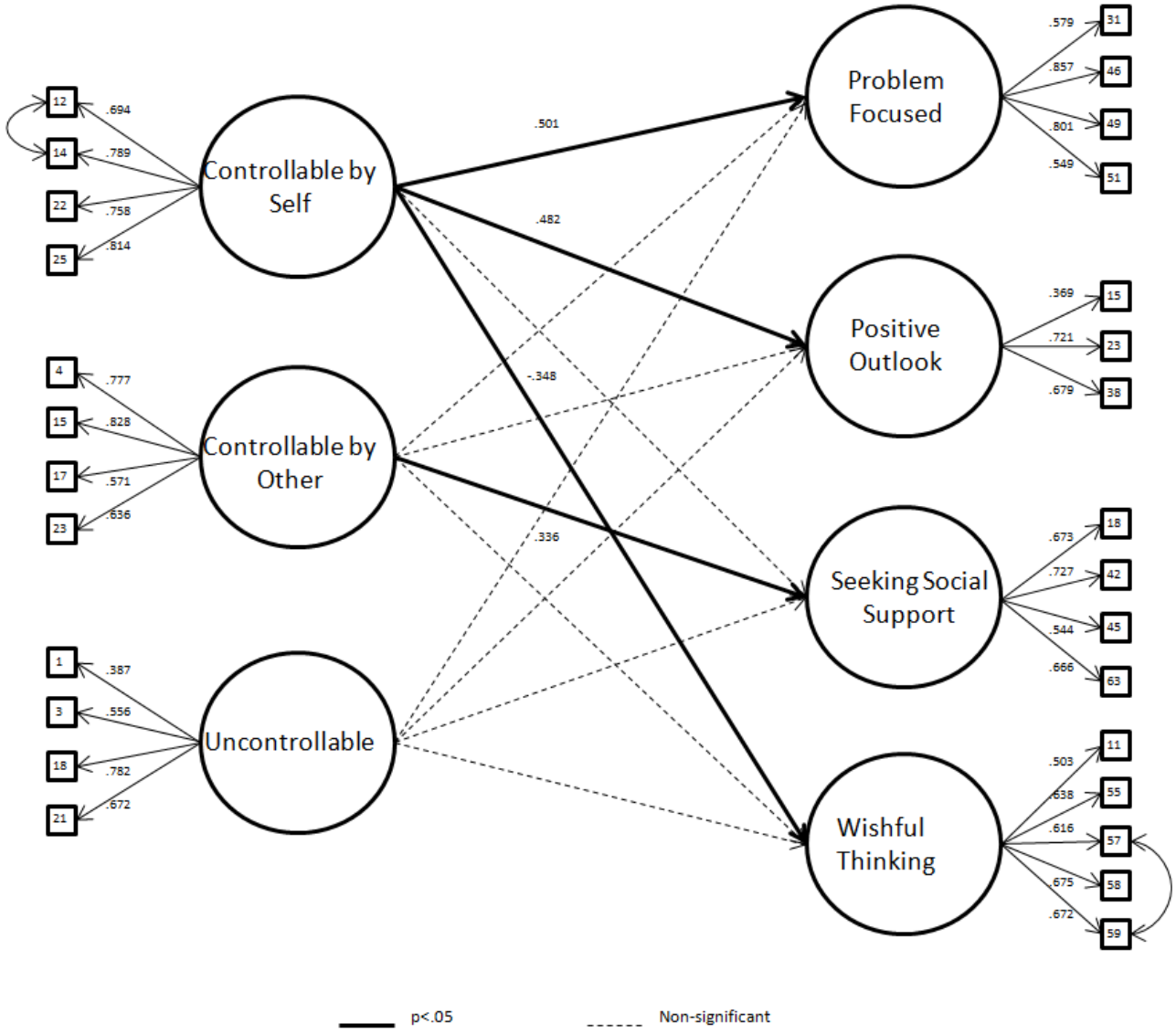
A second structural model was estimated to answer Research Question 2, which asked, "How does secondary appraisal (controllability) of stress affect coping responses to stress brought about by cruise tourism development?" The estimation produced a model with adequate fit (Table 19). Modification indices (Lagrange Multipliers) revealed allowing residuals within the controllable by self appraisal as well as the wishful thinking coping constructs to correlate would result in a better fitting model. As a result, the items 'Do I have the ability to do well in this situation?' and 'Do I have what it takes to do well in this situation?' within the controllable by self appraisal construct, and the items 'I daydreamed or imagined a better place or time than the one I was in' and 'Had fantasies or wishes about how things might turn out' within the wishful thinking coping construct were allowed to correlate. The estimation produced a model with good fit (Figure 7). Again, although the TLI fell slightly below the 0.95 threshold for good fit, consideration of the overall battery of fit-tests indicates good fit (Hu & Bentler, 1999).

Table 19 - Fit statistics of secondary appraisal and coping structural equation models

	Fit Statistics					
Model	χ^2	*df*	CFI	TLI	RMSEA	SRMR
Initial Model	631.37	329	.913	.900	.050	.060
Final Model	581.22	327	.927	.916	.046	.059

In answer to Research Question 2, there were four statistically significant relationships between secondary appraisal and coping within the model. The relationship between controllable by self and problem focused coping was significant and positive. The relationship between controllable by self and positive outlook was significant and positive. The relationship between controllable by self and wishful thinking was significant and negative. Finally, the relationship between controllable by other and seeking social support was significant and positive. Other relationships within the model were not statistically significant.

Figure 7 - Completely standardized solution of secondary appraisal and coping structural equation model



X^2=581.22 *df*=327 CFI=.927 TLI=.916 RMSEA=.046 SRMR=.059

Discussion and Conclusions

This research sought to examine social support and stress appraisal as predictors of behavioral and emotional coping responses by residents of Falmouth, Jamaica who self identified as under stress from tourism development in their community. A majority of individuals approached for participation in this research indicated experiencing stress from tourism and tourism development in their community. Measures of social support, secondary appraisal, and coping were valid in this context with some modifications. The stress and coping theoretical framework is appropriate for measuring tourism impacts on residents of host communities as well as behavioral and emotional coping responses. Structural equation models revealed several important relationships between social support and coping as well as secondary appraisal and coping.

The significant positive relationship between appraisal support and seeking social support coping indicates those with the perception that similar individuals are available to discuss important issues are likely to seek out those interactions. This finding supports the notion that individuals who believe their peers are available will likely make use of them during times of stress, and is consistent with previous research. Appraisal support as the only type of social support that significantly predicted the seeking social support coping response is an interesting finding. A sense of belonging to a peer group and the perception of available tangible aid or services through various resources did *not* significantly predict the seeking social support coping response highlights the importance of the approachability element within appraisal support. This finding indicates that individuals will only seek out assistance from their social groups if they perceive those groups to be available to discuss their stress or other important issues.

There were several significant relationships between secondary appraisal and coping responses. Controllable by one's self was the only significant predictor of problem focused coping, the type of coping consistently proven to be the most effective at mitigating stress and negative outcomes. Controllable by one's self was also a significant positive predictor of positive outlook, where individuals tend to look on the bright side of the situation, and a significant negative predictor of wishful thinking, where individuals simply hope for a reversal of fortunes. These relationships are consistent with previous research and indicate that the perception stress as controllable by the individual under stress is perhaps one of the most important elements in determining coping responses to tourism related stress. Also consistent with previous research was the significant positive relationship between controllable by others and seeking social support, indicating that if an individual thinks someone else can help mitigate their stress, they are likely to approach them for help.

While a great deal of tourism development and activities provide a net benefit for residents of host communities, negative impacts are often an unavoidable byproduct for some. This research provides insight into how social support and stress appraisal affect individuals' coping responses to stress brought about by tourism development. This research is an early step toward understanding the complex process of individuals' emotional and behavioral responses to stress, one of many possible sociocultural impacts of tourism development. In the end, a certain amount of stress may be an inevitable consequence of tourism development. The goal of understanding the stress and coping process is to help those under stress utilize the most effective coping responses to mitigate the many negative outcomes from prolonged exposure to stress, minimizing the affect of tourism on the quality of life for residents of host communities.

Theoretical Implications

This a first attempt at utilizing a stress and coping theoretical framework for understanding the relationships between stress, social support, appraisal, and coping in a tourism and tourism development context. Although this framework has been utilized in a handful of studies within the leisure domain (Iwasaki & Schneider, 2003; Schneider & Hammitt, 1995; Schneider & Stanis, 2007; Schuster, Hammitt, Moore, et al., 2006; Schuster et al., 2003; Schuster, Hammitt, & Moore, 2006), the focus of those studies was on the recreationist rather than residents. Measurement of responses to proposed or actual tourism development has generally been limited to attitudes or support. This research advances the tourism impacts body of research by examining two important relationships within the stress and coping process that adds an emotional and behavioral element to individual responses. Social support and stress appraisal are parallel to social exchange and power theory, which have been widely utilized to understand tourism impacts. In many ways, the perception of controllability is analogous of perceptions of power, as those who appraise stress as controllable generally believe they have the power to do something about it. This research extends that relationship to coping actions and shows the perception of controllability to influence individuals to directly address their stressors through problem-focused coping. Similarly, this research showed individuals were only likely to seek out social support if they felt their support group would reciprocate through discussion, parallel to the central tenet of social exchange theory.

Management Implications

One type of social support and appraisal of stress predict types of coping that researchers have found to be most effective at mitigating stress and negative outcomes. There are several ways in which practitioners can affect the perception of social support and stress appraisal.

Government agencies, NGOs, and other organizations involved in the tourism development process facilitate citizen participation in planning and decision making, imparting a sense of controllability or power to residents of host communities. Such events would provide the added benefit of providing an opportunity for the perception of social support through events like public meetings, focus groups, etc. However, there is a risk that allowing for citizen participation could backfire if the participation is token or limited.

Realistically, some tourism development will continue to take place with little to no citizen participation in planning and decision-making. After development has already taken place, practitioners can still create opportunities for individuals to feel as though they have a social support group with which they can discuss important issues by support groups or meetings for individuals who are under stress. Such meetings would also give individuals opportunities to create groups that may wield more power through numbers that could engage in problem focused coping by directly addressing stressors together, rather than individually.

Limitations

A cross sectional study of stress and coping provides only a snapshot of a dynamic process that is consistently occurring. What is stressful for an individual one day may not be stressful the next. This research only focused on individuals who self identified as under stress, an understanding of characteristics of individuals who did not experiences stress would be helpful in learning why individuals experience stress in the first place. This research also did not measure the success or failure of each coping response at mitigating stress. Negative wording of questions resulted in some measurement error that could be avoided in the future. Finally, this research examines only two relationships within a very complex stress process.

Future Research

Future research should continue to test and refine measurement tools for understanding the stress and coping process in the tourism context. High priority should be assigned to conducting research that explores the efficacy of coping responses at mitigating stress in tourism context. In addition, future research should attempt to understand individuals who are *not* under stress. Finally, future researchers should devise measurement tools and methodologies for measuring all elements of the stress process over a period of time to truly understand this vastly complex phenomenon.

CHAPTER 5: CONCLUSIONS

This study utilized stress and coping theory from the psychology discipline as a framework from which to examine host community resident responses to tourism development. Three research questions guided this study:

Research question 1: How do residents of a host community experience stress from tourism development?

Research question 2: How do established measures of the stress and coping process (Mini-IPIP, ISEL-12, SAM, and WoC) perform in the context of tourism development in a Caribbean island nation?

Research question 3: What are the relationships between social support, stress appraisal, and coping responses by residents of a community developed for tourism?

Each research question was addressed in a separate article of this three-article dissertation. Examined comprehensively, the answers to these research questions provide a great deal of insight into the stress and coping process of individuals in a host community that recently underwent development for cruise tourism. More than three-quarters of individuals approached to participate in this research experienced stress as a result of tourism development and greater than half of participants experienced more than one stressor. Unmet expectations, overtaxed infrastructure/crowding, increased cost of living, pollution, and police harassment were all tourism related sources of stress. While some of these stressors were likely experienced prior to tourism development, the language used by survey participants indicated the development of tourism within their community specifically caused these stressors.

In answer to Research Question 1, stressors were highly interconnected and often compounded each other, with one stressor leading to additional stressors. The stressors

experienced by Falmouth residents were a mix of tangible (i.e., overtaxed infrastructure/crowding, pollution, police harassment, increased cost of living) and intangible (i.e., unmet expectations). The unmet expectations stressor was not only the most commonplace, but also the most informative. Falmouth residents were expecting a great deal of positive impacts would result from tourism development (author's note: whether those expectations were reasonable considering materials distributed by government sources and developers remains in question). It is reasonable to think the high expectations of Falmouthians were cultivated both by circulated materials and the pride that was felt by once again being an important Caribbean port. This disappointment in comparing expectations to reality was evident in other stressor groups (i.e., not only were individuals unable to gain employment in the tourism industry, but they were unable to continue making money through the informal economy due to police harassment); almost a 'salt in the wounds' of other stressors.

In answer to Research Question 2, the measurement tools used to examine the stress and coping process of Falmouth residents offered mixed results. Research results revealed weak support for construct validity of measurements of personality and primary stress appraisal in the context of residents of a small town in the Caribbean. Research results revealed moderate support for construct validity of measurements of social support and coping with some modification, and a bi-factor model and exploratory factor analysis were needed to achieve adequate model fit respectively. Research results revealed strong support for the measure of secondary stress appraisal with no modification. Negatively worded variables were particularly difficult for survey participants to understand, likely resulting from the differing English dialects of survey and participant. The factor structure of the Ways of Coping was found to be

inconsistent with previous research, although a great deal of research has found the Ways of Coping to be an inconsistent measurement tool.

This research represents the first application of each measurement tool within both a tourism context, as well as a Caribbean island context. In their standard form, each measurement tool had limitations in measuring the stress and coping process. It is possible that changing negatively worded questions to the positive could result in better performance of measurement tools. The subjective nature of stressors and coping responses makes consistently performing quantitative measurement tools a scarce commodity. A measurement of coping that uses scale based questions measuring use of 'common coping responses,' in concert with an open ended question that allows individuals to describe other coping efforts may be better suited for the purposes of understanding coping in a variety of contexts.

In answer to Research Question 3, there were several significant relationships between social support and coping as well as secondary stress appraisal and coping. Individuals who perceived that there were peers available to discuss important issues were likely to seek on those interactions as a coping response. Individuals who appraised stressors as controllable were more likely to have utilized problem focused coping and positive outlook coping. In addition, individuals who appraised stressors as controllable were *less* likely to cope through wishful thinking. This combination of significant relationships indicates that both social support and secondary stress appraisal play an important role in determining how individuals cope with stresses brought about by tourism development. The appraisal of stressors as controllable pushes individuals toward coping responses that have been found to be most successful in mitigating stress and negative health outcomes across varying populations and stressors.

Overall, this research study provides insight into how residents of a host community experience and respond to stress brought about by tourism development. The stressors brought about by tourism development were both physical and emotional, with some mirroring common impacts found in previous tourism impacts research (Allen, Long, Perdue, & Kieselbach, 1988; Andereck et al., 2005; Brida & Zapata, 2009). While some measurement tools used to explore the stress and coping process provided weak support for construct validity in this context, tools that were modified or offered strong support for construct validity with no modification reveal a great deal. The Ways of Coping five-factor structure revealed by exploratory factor analysis indicates coping with stress brought about by tourism development in a small Caribbean island occurs in different ways than the random sample of Americans used to derive the original Ways of Coping factor structure. Relationships within the stress and coping process indicate social support and secondary appraisal play an important role in coping with stress brought about by tourism development, and that some types of social support and secondary appraisal are significant predictors of problem-focused coping responses that previous research has found to be effective at mitigating stress and negative outcomes.

Theoretical Implications

The research findings presented in this dissertation indicate stress and coping is a suitable framework from which to examine how individuals respond to impacts of tourism development. The stress and coping framework is particularly well suited to examine causes of stress and the individual response, which were found to be the negative impacts of tourism development. Stress and coping falls within the greater umbrella of quality of life studies, which is moving the tourism impacts research paradigm away from measuring attitudes toward and support of tourism development toward the examining the real changes to everyday lives of individuals in host

communities caused by tourism development and their emotional and behavioral responses (Andereck & Nyaupane, 2011). The stress and coping framework is useful in examining both the tangible and intangible causes and effects of tourism development, making it particularly well suited to examine relationships between them. Direct observation of individuals' behaviors is an unrealistic method of examining responses to tourism development; observation of emotional responses would be strictly limited to the physical manifestations of such emotions. Moreover, direct observation of stress would be limited to physical manifestations such like increased blood pressure, which is the result of many other causes. It is possible that direct observations of community events like church services and events, local government meetings, or other organizational meetings could help inform and confirm the context of the stress and coping process, especially social support.

The widespread nature of stress experienced by Falmouth residents indicates stress and coping responses are one important element in the overall quality of life of host community residents. However, all tourism host communities are not likely to experience the same amount or type of stress as residents of Falmouth. The unique nature of the scale and speed of development that occurred in Falmouth with little input from local residents likely led to a great deal of stress for many residents. Tourists arriving in Falmouth on mega-cruise ships are likely to be very different from local residents in a variety of ways (i.e, demographics or socioeconomic status), possibly leading to additional stress. Additionally, the generally low socioeconomic status of Falmouth residents likely means simply moving away to avoid the stress simply is not an option. The significant relationships between social support, secondary stress appraisal, and coping indicate that those portions of the theoretical model proposed by Folkman et al. (1986) were supported. Relationships between latent constructs were consistent with previous research

examining such relationships within the stress and coping framework. Although several measures of individual elements within the stress and coping process were found to be ineffective in this context, this can be attributed to measurement issues rather than viewed as an indication that these psychological phenomena do not exist or exist in some other form in Falmouth.

Implications for Management and Practice

This research revealed that tourism development causes stress for individuals in host communities in a variety of ways. The widespread nature of stress in Falmouth indicates the importance of this issue for communities. Stress is one of many possible positive and negative impacts of tourism development that can affect quality of life for host community residents. Although this research and other studies have found tourism development to affect host community resident quality of life, tourism remains an attractive development option for many areas, especially those with naturally occurring tourism attractions like sand, sea and sun. Stressors discussed by research participants clearly indicate the process and type of tourism development played a role in causing stress. The expectations of benefits by Falmouth residents far outstripped the reality of tourism development in their community. Whether developers and government agents created those high expectations or Falmouth residents created them independently, a lack of bi-directional communication between residents and those responsible for development likely exacerbated the problem.

For private tourism organizations and government agencies attempting to promote tourism development to local residents, there exists a paradox. Without the perception that tourism development will somehow benefit them, host community residents are unlikely to support development and, in areas where residents have a strong voice in decision-making, may

seek to block development all together. This is especially true in areas where tax dollars are used in development activities. However, when host community residents *do* perceive that tourism will be beneficial to them and those perceptions do not align with reality, stress can result. One solution to this problem is clear and truthful bi-directional communication between residents and those responsible for development about exactly how development and operation of the tourism industry will occur prior to development. Clear communication between developers and those in the community to be developed can help prepare both parties for what to expect from each other. This solution is only useful if power structures within the community place both groups on equal footing, as communication without compromise will likely result additional stressors as observed in this research. The inclusion of an independent mediator in tourism planning and development processes could help ensure equity between parties.

Additional stressors that emerged from this study reveal that a variety of tangible stressors like overtaxed infrastructure/crowding, increased cost of living, pollution, and police harassment also exist. Previous research has treated these stressors as 'impacts' with little insight into how or why they affect host community residents' quality of life. Quotes from survey participants indicate these stressors are *daily hassles* that often compound each other and create additional stress in the day-to-day lives and activities of individuals in host communities. The low socioeconomic standing of much of the community of Falmouth played a significant role in the ways individuals were affected, as many survey participants were struggling to feed their families and the increase in cost of living or police harassment preventing them from conducting non-licensed business put them "over the edge." As the end goal of many development projects is to generate wealth, these research findings indicate tourism development actually had the opposite effect on most host community residents in this case. Local, regional, and national

governments and private development organizations should be aware of the ways in which tourism development may affect its constituents, especially if they are already living in less than ideal conditions.

In many cases, large-scale development projects that benefit few, rather than many, result in a net decline in quality of life. Diminished quality of life, combined with other negative tourism impacts like environmental decline and economic inequity, can lead to diminished attractiveness of such destinations for an increasingly socially and environmentally conscious consumer base. Smaller scale tourism development that provides individuals the opportunity to generate income would likely alleviate some of these stressors for many host community residents. Small-scale tourism development is usually conducted to attract a smaller number of tourists who have more disposable income and are willing to pay for 'sustainable' forms of tourism. Fewer, more socially, economically, and environmentally conscious tourists would also help diminish stressors like overtaxed infrastructure/crowding and pollution.

Realistically, some tourism development will continue to occur that results in many of the stressors revealed by this research. In those cases, results from the structural models with the stress and coping framework reveal how one type of social support and appraisal of stress predict types of coping that researchers have found to be most effective at mitigating stress and negative outcomes. Facilitating creation of groups of individuals under stress could dually serve to provide a peer group with which individuals can discuss important issues but also create a more powerful voice for individuals who would otherwise wield little power within the community, thus imparting a sense of control over stressors. While shifting power structures within communities and allowing for input in real decision making are difficult in practice, the simple act of taking part in efforts working toward those goals could help promote more successful

coping responses and help assuage stress, especially in the short term. However, over the long term, efforts that do not result in any changes could result in additional stress. There are a variety of organizations that could facilitate such activities, like non-profit organizations, non-governmental organizations, churches, families and governmental organizations outside the decision-making hierarchy such as the Social Development Commission in Falmouth.

Limitations

While not all impacts of tourism are negative, the nature of stress imparts a negative connotation to tourism development. It is conceivable that individuals could experience stress from positive impacts (i.e., a new job that creates less family time), as well as negative impacts. This study was limited only to individuals who had experienced stress as a result of tourism development. Valuable information about what factors contributed to the experience of stress in the first place likely could have been gleaned by participation of non-stressed individuals in demographic, personality, and social support elements of the survey instrument. While efforts were made to complete surveys in a geographic area representative of Falmouth, any individuals who may have moved away from the community to escape tourism development were not surveyed. Additionally, individuals who may have worked in the community but did not live there were not surveyed. The quantitative nature of measurement tools used in this research means individuals may have used coping responses that were not measured. Some stresses discussed by survey participants were likely already present within the community prior to tourism development. Throughout the survey process, researchers noticed that some survey participants had difficulty understanding the language used in survey instruments. Finally, the final element of the stress process, health and psychological outcomes, was not measured.

Information about health and psychological outcomes could ultimately reveal which coping responses were most effective at mitigating stress in this context.

Recommendations for Future Research

The findings of this dissertation research provide a solid foundation for future research in this area of inquiry that should help researchers and practitioners understand a previously undocumented phenomenon that plays an important role in host community residents' overall quality of life. However, stress and coping is not the only framework from which to examine how tourism development affects one or more elements of host community residents' overall quality of life (at the individual level), and how those residents respond. Social and psychological theoretical frameworks such as response shift theory (Sprangers & Schwartz, 1999) at the individual level and community resilience at the community level (Norris, Stevens, Pfefferbaum, Wyche, & Pfefferbaum, 2008) should also be explored as frameworks from which to examine the effects of and resident responses to tourism development. It may be that coping with stress brought about by tourism development occurs in different ways than other stressors, but more studies of this phenomenon must occur before that assertion can be made. Further research is needed to determine if stress is experienced and responded to in other community types with varying types and levels of tourism development in the same way as Falmouth.

Further research will be needed to improve the validity and reliability of the comprehensive stress and coping framework in measuring stress and coping in tourism contexts. Efforts should be made to accurately measure each element within the stress and coping process, including health outcomes. Accurate measurement of each construct within the process will allow researchers to estimate all relationships within the model and comprehensively test this

theoretical framework. Future research should work to incorporate additional elements of individual characteristics like level of benefit or employment within the tourism industry.

Eventually, tourism specific measurements of stress and coping should be developed that incorporate stressors and coping responses that are unique to the tourism development context. Through continued refinement of theory and measurement of stress and coping and other frameworks with which to understand tourism impacts and resident responses, researchers can help understand and address this important issue. Tourism development appears set to continue into the coming decades, and efforts should be made to minimize positive benefits and minimize negative impacts through interface between researchers, practitioners, residents, and other community, regional, and national level stakeholder groups.

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