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Leveraging For-Cause Physical Activity Events for Physical Activity Promotion: An Investigation Using Self-Determination Theory

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Leveraging For-Cause Physical Activity Events for Physical Activity Promotion: An
Investigation Using Self-Determination Theory

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DEDICATION

This dissertation is dedicated to charities and non-profit organizations hosting 5Ks and other types of physical activity fundraisers. Thank you for providing the opportunity to individuals to support your mission while making enjoyable memories and experiencing the benefits of being physically active.

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I would like to acknowledge the prayers and support of my family as I completed yet again, another degree. I thank my mentor, Dr. Sara Wilcox, for her patience and understanding. Thank you for helping me overcome my many doubts and fears. Thank you for your mentorship helping me write better, think better, and preparing me for a successful career. Thank you, committee members, Drs. Diane Ehlers, Brooke McKeever, and Jennifer O'Neill, for your insights and support to my dissertation.

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ABSTRACT

Motivating individuals to live active lifestyles remains a challenging but important public health issue. For-cause physical activity events reach large groups of people, many of whom are not regularly active. However, little research has applied established health behavior theories to explain participation in for-cause events. Therefore, the purpose of this dissertation was to investigate participation in for-cause events through the lens of Self-Determination Theory (SDT).

The first study recruited participants (n=207) registered in a for-cause PA event (i.e., 5K distance or shorter) to complete online surveys that assessed need satisfaction for autonomy, competence, and relatedness; intrinsic motivation; altruism; PA behavior; and intention to repeat participation in future for-cause events. Analyses assessed change in need satisfaction for autonomy, competence, and relatedness from exercise before and after completing the event. Additional analyses assessed the associations of these three needs, intrinsic motivation, and altruism on intention to repeat participation in future for-cause events and PA behaviors. Results revealed a significant increase in competence satisfaction ($p = 0.04$) and decrease in relatedness satisfaction ($p = 0.04$). The increase in autonomy satisfaction was not statistically significant ($p = 0.25$). In addition, participants with higher post-event relatedness satisfaction were more likely to intend to repeat participation in a future for-cause event. Lastly, higher levels of post-event autonomy, competence, and relatedness satisfaction and intrinsic motivation

were associated with greater post-event PA and higher levels of post-event competence and relatedness satisfaction and intrinsic motivation were associated with meeting PA guidelines.

The second study assessed participants' (n=18) experiences in for-cause events through semi-structured interviews. Constructs of Self-Determination Theory, altruism, and intention for PA were applied when coding, with the addition of emergent coding methods to assess additional themes in responses. Participants described their experiences in line with the three needs of SDT, especially competence and relatedness. Participants also described motivations for exercise aligning with identified (i.e., motive to exercise to meet personal goals) and intrinsic motivation (i.e., motive to exercise is inherent in performing the behavior). Responses often highlighted altruistic motives suggesting a potential fourth need in the context of for-cause events. Lastly, participants referred to the importance of a strong community formed through these events. Participants' desire to join and support the cause helped explain their intention to remain active and involved in for-cause events.

This mixed methods dissertation provides initial support for the application of SDT to participation in for-cause events. These events enlist large numbers of participants and may help reach and motivate those who are not regularly active. This study's findings support how individuals may initially participate in a for-cause event to support the cause rather than do PA, suggesting new ways to promote events, reach participants, and motivate them to do PA. This dissertation highlights potential leverage

points of for-cause events to promote PA, particularly by satisfying participants' needs for altruism, competence, relatedness.

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CHAPTER I

INTRODUCTION

Overview

Physical activity affords numerous health benefits (DHHS, 2018; Lee et al., 2012). Despite these benefits, many Americans do not regularly participate in physical activity (Blackwell & Clarke, 2018; Hallal et al., 2012). Complex and interrelated intrapersonal (Harwood, Keegan, Smith, & Raine, 2015), interpersonal (Barber, 2013), and environmental (Durand, Andalib, Dunton, Wolch, & Pentz, 2011) factors are known to influence physical activity levels. In recent years, charities, non-profit organizations, and other entities have sponsored for-cause physical activity events as fundraisers (Irwin, Lachowetz, Cornwell, & Clark, 2003; Lachowetz & Gladden, 2003). While individuals often provide support to charities by volunteering time or donating money, these “charity sports events” (Won, Park, Lee, & Chung, 2011) allow individuals to support the organization through physical activity, inciting a new term, “physical philanthropy” (Meyer & Umstatted Meyer, 2017). These events attract hundreds to thousands, and even tens of thousands, of participants and vary in the types of distances and physical activities offered. Some examples of large, nationwide events include the Susan G. Komen Race for the Cure or bicycle tours for Multiple Sclerosis. Examples of smaller, local events include the Famously Hot Pink Half Marathon, 5k, & 10k (Columbia, SC) and the 5k Glo Run (Columbia, SC, and cities throughout the U.S.). Due to the large number

of participants these events attract, there may be high potential to reach and motivate a wider range of people to be physically active (Bernhart & O'Neill, 2019; Murphy, Lane, & Bauman, 2015).

In for-cause events, individuals “volunteer” their bodies through physical activity (Meyer & Umstatted Meyer, 2017). Motivations for taking part in these events and how participants progress from awareness, attraction, attachment, and allegiance to the event, have been investigated and include belief in making a difference, desire to improve the charity, and camaraderie of participating in the event (Filo, D. Groza, & Fairley, 2012; Filo, Funk, & O'Brien, 2008, 2009). These motivational factors may resemble constructs of self-determination theory (SDT). According to SDT, when a behavior meets three basic psychological needs of autonomy, competency, and relatedness, the behavior is more likely to be intrinsically motivated and maintained, which may prove useful for physical activity and health researchers (Deci & Ryan, 1980). Indeed, a systematic review identified SDT-based interventions and studies investigating need satisfaction and motives for exercise and found consistent evidence supporting the positive relationship between autonomous motivation, competence satisfaction, and intrinsic motivation on exercise (Teixeira, Carraça, Markland, Silva, & Ryan, 2012). In addition to SDT, altruism, embodied in physical philanthropy and a desire to help others, is not part of SDT but may carry relevance for understanding how participating in a for-cause event meets an individual's desire to be altruistic, thereby influencing physical activity behaviors (Bell & Stephenson, 2014; Bunds, Brandon-Lai, & Armstrong, 2016).

Scope

The goal of this mixed-methods study/dissertation was to examine how for-cause physical activity events meet needs of participants. Further, the associations between meeting participant needs of autonomy, competency, relatedness; level of intrinsic motivation; and altruism were examined related to intention to participate in future for-cause events and post-event PA. This dissertation also explored participants' descriptions of their experiences taking part in for-cause events and how those descriptions connected to SDT and physical activity.

Research aims, hypotheses, and questions

Aim 1: Examine, among adults taking part in for-cause events, the impact participation has on need satisfaction related to autonomy, competence, and relatedness for physical activity.

Hypothesis Aim 1: Participating in a for-cause event will increase need satisfaction related to autonomy, competence, and relatedness for physical activity.

Aim 2: Examine whether post-event need satisfaction and intrinsic motivation for physical activity and altruism are associated with intentions for repeat event participation and regular physical activity participation.

Hypothesis Aim 2.1: Post-event need satisfaction and intrinsic motivation for physical activity and altruism will be positively associated with intention to repeat participation in for-cause events.

Hypothesis Aim 2.2: Post-event need satisfaction and intrinsic motivation for physical activity and altruism will be positively associated with physical activity levels.

Aim 3: Explore how participants in a for-cause event describe their experiences and motivations to be involved in a for-cause event in relation to SDT constructs, altruism, and physical activity.

Research Question Aim 3: How are tenets of SDT and altruism present in participants' descriptions of their experiences in a for-cause event?

Aim 4: Describe how participants view the meaning of completing a for-cause event and how these meanings may relate to future physical activity-related goals, participation, and/or intention to complete another for-cause event(s).

Research Question Aim 4.1: How do participants describe their experiences and thoughts associated with completing the event?

Research Question Aim 4.2: How do participants discuss their experiences and thoughts on their future goals, participation, and intention to be physically active or complete other for-cause events?

List of operational definitions and terms

The following list of terms and variables commonly used in the study is provided for below for reference.

For-cause event: any physical activity-based (e.g., walk, run, cycle, etc.) race or event (e.g., 5k, swim, etc.) hosted by a charity or non-profit organization where proceeds, registration costs, and/or additional sponsorship funds raised benefit a cause

Autonomy: one of the three psychological needs in SDT where individuals choose behaviors based on their own desires

Competence: one of the three psychological needs in SDT where individuals experience mastery of a behavior

Relatedness: one of the three psychological needs in SDT where individuals experience social interaction and connectedness as a result of doing a behavior

Amotivation: a behavior regulation in SDT where an individual has an absence of motivation or lack of intention to perform a behavior

Extrinsic motivation: a behavior regulation in SDT where a behavior is motivated by an external factor; consists of four sub-regulation types

External regulation: one of four regulations of extrinsic motivation where an individual engages in a behavior to receive an external reward or avoid an external punishment

Introjected regulation: one of four regulations of extrinsic motivation where an individual engages in a behavior due to a self-imposed source of pressure (e.g., guilt/shame)

Identified regulation: one of four regulations of extrinsic motivation where an individual engages in a behavior due to a sense of personal goals (e.g., losing weight)

Integrated regulation: one of four regulations of extrinsic motivation where an individual engages in a behavior to confirm a sense of self or identity

Intrinsic motivation: a behavior regulation in SDT where a person engages in a behavior for the sake of the doing the behavior; the behavior is pleasurable and/or satisfying

Altruism: an individual's desire to perform a behavior to benefit the well-being of others

CHAPTER II

BACKGROUND & LITERATURE REVIEW

Introduction

This review of the literature explains the importance of physical activity and propose how charity-sponsored for-cause events may be leveraged for physical activity promotion. It describes the importance of physical activity and national guidelines for physical activity, the history and development of charity-sponsored sports events, the application of Self-Determination Theory (SDT) to physical activity, and the examination of how SDT and altruism can be applied in the context of these events. Few behavioral studies exist in in this context using established health behavior theories. This literature review includes an overview of the existing studies investigating motivations of participants in for-cause events and highlights areas for future research consideration.

Physical activity overview

According to the 2018 Physical Activity Guidelines for Americans, adults should accumulate at least 150 minutes of moderate-intensity aerobic activity, 75 minutes of vigorous-intensity aerobic activity, or some combination of both each week. Further, adults should also seek to move more and sit less and do muscle-strengthening activities at least two days per week (DHHS, 2018; Piercy et al., 2018). Throughout the past 40 years, physical activity surveillance systems such as the Behavioral Risk Factor Surveillance System (Pierannunzi, Hu, & Balluz, 2013) and the National Health and

Nutrition Examination Survey (Schmid, Ricci, & Leitzmann, 2015) have assessed physical activity levels across age groups and regions of the United States (Fulton et al., 2016). These surveillance systems have stressed that adults throughout the United States participate in low levels of physical activity levels (Blackwell, Lucas, & Clarke, 2014). Despite evidence from large prospective and experimental studies about the health benefits of physical activity, many adults do not meet physical activity guidelines (Hallal et al., 2012; Troiano et al., 2008; Tucker, Welk, & Beyler, 2011).

According to recent data and statistics from the 2017 Behavioral Risk Factor Surveillance System, 50.3% of adults in the United States met the aerobic physical activity guidelines recommendation and 30.2% of adults met the recommendations for strength training. Only 20.3% of adults met combined recommendations for aerobic activity and strength training. Men are only slightly more active than women when it comes to achieving at least 150 minutes per week of moderate-intensity aerobic activity at 51.6% and 49.1% respectively. Considering race/ethnicity, 46.8% of Hawaiian/Pacific Islander adults meet aerobic guidelines recommendations, while 43.5% of Non-Hispanic Black adults meet recommendations. The proportion of adults meeting aerobic guidelines is lowest between the ages of 35-44 at 48.0%. The prevalence of adults meeting aerobic guidelines is slightly higher in adults 45-54 at 48.5%, adults 55-64 50.2%, and is highest among adults 65 or older at 53.6%. Furthermore, the prevalence of meeting aerobic guidelines is positively associated with yearly income and education (Centers for Disease Control and Prevention & National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health., 2017).

While the most recent BRFSS data on physical activity are self-report, the most recent data from the National Health and Nutrition and Examination Survey assessed physical activity using Actigraph monitors across a representative sample people living in the United States (Troiano et al., 2008). Adult men and women are least active accumulating a combined 8.7 minutes and 5.4 minutes, respectively. Mexican Americans had higher physical activity levels than non-Hispanic white and non-Hispanic black populations across most age ranges in men and women. In adults ages 20-59, non-Hispanic whites were least active for men and women compared to non-Hispanic blacks and Mexican Americans. Adult compliance with meeting recommendations of 30 or more minutes of moderate- or greater-intensity activity on 5 of 7 days was 3.5% in adults ages 20-59 and only 2.4% in adults age 60 and older.

As physical activity rates remain low in the United States, researchers and practitioners continue to explore, develop, and refine interventions and programs to increase physical activity levels to improve overall health. Extensive evidence supports an inverse relationship between physical activity and adverse health outcomes such as obesity (Luppino et al., 2010), type 2 diabetes (Aune, Norat, Leitzmann, Tonstad, & Vatten, 2015), all-cause mortality (Evenson, Wen, & Herring, 2016), cardiovascular disease (Wahid et al., 2016), and cancer (Kyu et al., 2016). While the importance of physical activity and health is well established, researchers and practitioners struggle to effectively facilitate the population's adoption and maintenance of physically active lifestyles. Physical activity behavior change proves difficult requiring individuals to find ways to overcome complex personal, social, environmental, and even policy barriers to

change. Common barriers include lack of time (Joseph, Ainsworth, Keller, & Dodgson, 2015), low interest or motivation (Teixeira et al., 2012), environmental constraints (Durand et al., 2011), and minimal social support (Smith, Banting, Eime, O'Sullivan, & van Uffelen, 2017). Thus, researchers and practitioners continue to focus efforts on establishing programs and strategies to help overcome barriers and facilitate successful behavior changes and maintenance of these changes.

One relatively unexplored setting for motivating and increasing physical activity behaviors is through for-cause physical activity events (Bernhart & O'Neill, 2019; Murphy et al., 2015). These events, connected to charitable causes and/or non-profit organizations, allow participants to support a cause or mission of interest while simultaneously preparing for and engaging in physical activity (Won et al., 2011). Considering the popularity of these events throughout the United States and worldwide, and the varied types of activities and distances offered, these events may attract hundreds to thousands, and even tens of thousands of participants at the local and national level (Bernhart & O'Neill, 2019; Murphy & Bauman, 2007). This ability to reach large groups of people suggests there may be high potential in studying how for-cause events may be leveraged for physical activity promotion by introducing individuals and communities to a physically active lifestyle and potentially contributing to positive health behavior changes (Chalip, 2006; Chalip, Green, Taks, & Misener, 2017).

History of for-cause events

Charities commonly have raised money and awareness for their cause through in-kind contributions and volunteers donating time in clerical tasks and/or field work.

While this type of support remains popular today, the emergence of physical activity for-cause events over the past 40 years has created a unique merging of competitive sports events with charitable fundraising (King, 2008). Thus, behavioral investigations of the associations between physical activity behavior change in the context of for-cause events are relatively few, meriting the need for further investigation (Murphy & Bauman, 2007).

To understand the rapid rise in popularity of for-cause events, consider the relatively short history of these events. The first charity walk in the United States was organized by the Church World Service in 1969 in Bismarck, ND, and supported CROP Hunger Walks (Stammer, 2009). During this walk, 1,000 people participated and raised \$25,000. Now occurring annually in multiple events nationwide, local CROP Hunger Walks attract over 200,000 participants who are sponsored by nearly two million other individuals. The following year in 1970, the March of Dimes organized the WalkAmerica, currently known as the March for Babies (Rose, 2010). In 2017, more than 7 million participants in more than 500 March for Babies events nationwide walked and raise \$75 million (March of Dimes, 2018).

Other prominent physical activity for-cause events include the Relay for Life and the Susan G. Komen Race for the Cure (King, 2008). Relay for Life began in 1985 when Dr. Gordon Klatt walked and ran for 24 consecutive hours in Tacoma, Washington, to raise money for the American Cancer Society. In 24 hours, he walked and ran 83.6 miles and raised \$27,000 (American Cancer Society, Inc., 2018). The first Susan G. Komen event took place in 1983 and attracted 800 participants in Dallas, TX. Since then, the

Race for the Cure has expanded to 140 events held worldwide (Susan G. Komen, 2018). According to the 2016-2017 report from Race for the Cure, more than 850,000 people participated in Race for the Cure events (Susan G. Komen, 2017).

These landmark events have paved the way for other charity and non-profit organizations to organize, sponsor, and host their own for-cause events. With the inception of charity walks in the 1970s, the accompanied “running boom” of the 1970s (Robinson, 2011) popularized competitive running and races in the United States. Nearly 50 years later, the findings from a national survey of runners in the United States (Running USA, 2018) reports that there were an estimated 17 million finishers in road races, with nearly 8.2 million of those finishers events of 5K distance. The large numbers of these events and participants suggest great potential to reach the population and potentially increase physical activity levels. Today’s for-cause events have expanded from walks and walk-a-thons to other activities including running, cycling, swimming, obstacle courses, triathlon, and more. The wide range and diversity of activities and distances offered may increase the likelihood of attracting individuals of various age groups, gender, and race/ethnicity interested in trying a new activity, leading to a unique opportunity to reach more people and promote physical activity.

Due to the varied opportunities individuals have to choose from and select events to try new activities, charities and other organizations must continually consider innovative ways to attract the attention of potential supporters (Sargeant, 1999). This unique integration of physical activity and charity also provides a unique partnership opportunity between charity organizations and businesses. As such, cause-related

marketing (Yuksel, McDonald, & Joo, 2016) may also contribute to the perceived prestige of a for-cause event, potentially increasing the likelihood of recruiting and retaining participants (Kim, Liu, & Love, 2015). Cause-related marketing describes how businesses and charities form partnerships to market a product where a portion of the profit from the product goes to a charity or cause (McGlone & Martin, 2006). One of the most familiar examples of cause-related marketing occurred in 2006 when the Lance Armstrong Foundation partnered with Nike to launch the LIVESTRONG campaign (McGlone & Martin, 2006). This partnership led to Nike providing the resources to manufacture and sell the popular yellow LIVESTRONG wristbands, while the Lance Armstrong Foundation benefitted from raising money for cancer research and increasing awareness. Another example of cause-related marketing occurred between the NFL and Campbell Soup in 2000 to support the Tackling Hunger campaign (Holmes, 2001). These examples of cause-related marketing may compare to charities and non-profit organizations today using for-cause events to market, promote, and raise money and support. Researchers should continue to study participants' motivations for physical activity and their experiences of completing for-cause events to better understand potential benefits of completing the event (e.g., volunteerism, building community, increasing awareness, physical activity, etc.).

Participants' motivations and experiences with for-cause events

A literature search using PubMed, Google Scholar, PsycINFO, and the Physical Education Index was conducted for this study to identify relevant studies. Search terms commonly included "physical activity," "for cause," "charity sports event," "charity," and

“altruism,” and “philanthropy.” See Table 2.1 for a list of studies related to for-cause events and participant motivations. For-cause events have also been referred to as “charity sports events” (Won et al., 2011) or “sports philanthropy” (Thompson, 2011). To better understand this growing field, the term “physical philanthropy” has been created to describe charitable behavior by doing physical activity (Meyer & Umstattd Meyer, 2017). Having a common language of terminology when discussing for-cause events will improve and expand the literature in this area. It will also help to provide a greater understanding of these events and how practitioners may leverage them to promote physical activity. Due to the relatively young history of charities and non-profit organizations hosting and sponsoring for-cause events, research continues to grow investigating participants’ motivations and experiences in for-cause events and any subsequent effects on behaviors.

Filo and colleagues have contributed significantly to the literature investigating participants’ motivations for and experiences in for-cause events. Their studies, grounded in the Psychological Continuum Model, have contributed a greater understanding and rationale for further investigation of this area of research. The Psychological Continuum Model identifies four connections sport spectators and fans form with their favorite sports and teams – awareness, attraction, attachment, and allegiance (Funk & James, 2001). Filo and colleagues have used this theory to investigate participants’ experiences in the LIVESTRONG challenge. One of their first studies provides important insight about participants’ motivations to take part in the event (Filo et al., 2008). The findings revealed that participant attraction to the Lance Armstrong

Foundation event was motivated by factors including participants' intellectual, social, competency, reciprocity, self-esteem, need to help others, and desire to improve the charity. Attachment to the event was developed through the charitable component as well as participants' motivation for social interaction and competency. While Filo and colleagues used the Psychological Continuum Model to guide their work, the Psychological Continuum Model was not originally designed to inform intervention development or explain participant behavior.

Filo and colleagues (2009) continued to explore attachment through semi-structured interviews with 32 participants in the LIVESTRONG Challenge in 2006. They grouped participants' responses into three primary categories related to their reasons for attachment to the event: camaraderie, cause, and competency. These themes were further divided into sub-themes of solidarity and belonging (camaraderie), making a difference, finding inspiration, inspiring others (cause), and health and fitness, physical challenge, and activity (competency). In another study, the Psychological Continuum Model concept of attachment was explored using an open-ended, qualitative survey of participants of an Multiple Sclerosis (MS) Walk. Results revealed attachment to the MS Walk was developed through the participants forming their identity as a fundraiser, aligning their own experiences or those of close family members with the cause, and fulfilling the need for social connections with others who share a common goal to end MS (Snelgrove, Wood, & Havitz, 2013). In addition, another study of MS Walk participants revealed similar motives of wanting to support the cause, socialize with others, enjoy the activity, and gain health benefits (Won et al., 2011).

Filo and colleagues (2012) also investigated attachment by exploring the importance of participants' belief in making a difference by completing the event. Findings revealed that participants' beliefs about making a difference and attachment to the event were impacted by social and charitable motives compared to motives for physical achievement or escape from daily routines.

While Filo and colleagues have contributed significantly to the literature in this area, additional studies have also been conducted. Higgins and Lauzon (2003) investigated how non-profits use physical activity events as fundraising tools to understand how the event solicits and increases public awareness about the organization's mission and efforts as well as how the event meets participants' needs. Through semistructured interviews, some participants revealed they attended the event for the cause while others attended for the physical activity or sport. One participant shared how the cause-focused events are ideal for encouraging physical activity in less active individuals. In addition, the study's findings revealed a common theme of participants wishing to donate to a charity through a physical activity event rather than traditional fundraising avenues, suggesting application of the newly applied term, physical philanthropy. Even more, another group of researchers (Umstattd Meyer, Meyer, Wu, & Bernhart, 2018) examined motivations of cancer survivors participating in LIVESTRONG events. They found significant relationships between cancer-survivor participants' desire to help others with regular physical activity and participation in LIVESTRONG events. Won and colleagues (2010) also identified a number of important motivators using surveys and interviews for participants in a previous Relay for Life

Event. In order of importance, they found that the primary motivators included philanthropy, family, group collaboration, social/entertainment, sports, and external/benefits-related needs. They suggested continuing to incorporate more comprehensive measures in future studies rather than limiting measured variables to event-specific characteristics.

Bennett and colleagues (2007) developed a questionnaire to explore motives associated with helping others such as helping the charity, the sport and/or achievement related to improved performance or status of the event, and the social aspect of having fun and meeting others. Out of the 10 motives identified in the questionnaire, the four most common were involvement with the sport, cause, opportunity to lead a healthy lifestyle, and a social desire to meet others. A study of runners in a cause-based marathon benefitting a faith-based water charity determined three motivational themes related to philanthropy and participation: (1) embodied martyrdom of experiencing sacrificing their body to complete the event, (2) embodied internalization of the cause understanding what it is like to need water, and (3) religious philanthropy seeing themselves as a group and active participant in their religion (Bunds et al., 2016). This unique case study filled an important gap in the for-cause event literature where participants' attachment was applied to an international context, rather than a local or health-based condition such as LIVESTRONG, cancer, or MS. While involvement with the charity seems to be a common theme across studies, Taylor and Shanka (2008) identified contrasting motives where participants' desires to challenge

themselves and have fun were the primary motivators, followed by other factors such as raising money for charity or being with friends and family.

Multiple factors have appeared to influence participation in a for-cause event. Identifying these factors is important because many individuals may choose to participate in for-cause events as a leisure-time activity over a range of alternatives (Bennett et al., 2007). Thus, learning more about these motivational factors will benefit researchers and practitioners to increase the understanding of alternative ways they can promote participation in these events to reach more individuals apart from messages focused primarily on physical activity.

With this understanding, additional gaps in the literature remain. First, more work is needed to identify differences in how changing marketing strategies focused on the cause rather than the event or activity may reach more participants. A second gap includes studies incorporating the use of quantitative data to assess health behavior theories. In addition, much research related to participants' motivations and experiences has been exploratory through qualitative research without using an established health behavior theory. Further, given the large-scale nature and notoriety of the LIVESTRONG Challenge, future research has been suggested to examine participants' behaviors and belief in making a difference in smaller, lesser-known charity sports events (Filo et al., 2012). Lastly, little is known about how participating in a for-cause event influences an individual's physical activity levels (Murphy et al., 2015).

A theoretical view of participating in for-cause events – Self-Determination Theory

While the previous work of Filo and colleagues applied the Psychological Continuum Model as a theoretical lens to understand participation in these events, most other research in the field has not incorporated an established theory. Even more, given the complexity of health behavior change due to intrapersonal (Harwood et al., 2015), interpersonal (Smith et al., 2017), and environmental facilitators and barriers (Durand et al., 2011), a call for theory-based behavior change interventions has been made as these types of studies are often reported as more effective than non-theory based interventions (Goodson, 2009). Given that researchers have called for the inclusion of theory into research and practice to improve the work's relevance, contribute meaningful findings to the field, and advance the literature on a given topic (Glanz, Rimer, & Viswanath, 2008), this study will explore participation in for-cause events through a tested theory of motivation, Self-Determination Theory (SDT).

SDT provides a framework examining the interplay of social and cultural factors associated with an individual's volition and control of behavior. Founded by Deci and Ryan (1980), the primary tenets of SDT include that as the individual's needs for autonomy, competency, and relatedness are met, their motivations for a behavior will be more intrinsic rather than extrinsic. Autonomy refers to one's volition to make decisions on his or her own. Competency refers to experience mastery and the extent to which individuals have control over an outcome. Relatedness refers to connections one feels to others by engaging in the behavior. The extent to which individuals meet these basic psychological needs for a target behavior such as physical activity varies across

different behaviors. While SDT outlines various types of motivation regulation, individuals may differ to their degree of motivation and typically do not remain completely in one type of motivation (i.e., each can be thought of as on a continuum rather than being a category).

The continuum of extrinsic and intrinsic exercise regulations of SDT can be divided further. Amotivation refers to a lack of motivation to perform a behavior. Low confidence, lack of knowledge about the benefits of doing the behavior, or dislike of the behavior may cause this type of motivation. Extrinsic motivation is further divided into four different types of exercise regulations. The least autonomous form of extrinsic motivation is external regulation where a person engages in a behavior to avoid a punishment or receive a reward such as a positive doctor's appointment. The second is introjected regulation where a person engages in a behavior due to a self-imposed pressure, such as guilt about not following through with a health goal. The third type is identified regulation where a person engages in a behavior based on an external outcome such as achieving certain health benefits. The final, and most autonomous form of extrinsic motivation is integrated regulation where a person engages in a behavior to confirm a sense of self such as one who is an exerciser, a runner, or an athlete. Intrinsic motivation is not divided into sub-categories and is where a person engages in a behavior for the pleasure of doing the behavior alone. This type of exercise regulation carries significance as intrinsic behaviors are more likely to be sustained (Owen, Smith, Lubans, Ng, & Lonsdale, 2014).

Research has shown that when a person engages in a behavior that meets his or her needs for autonomy, competency, and relatedness, he or she will be more self-determined or have intrinsic motivation to do the behavior (Teixeira et al., 2012). In addition, research has also found associations between identified and integrated regulations and physical activity adoption (Silva et al., 2010). However, there is some evidence suggesting identified (Teixeira et al., 2012) and integrated (Dishman, McIver, Dowda, Saunders, & Pate, 2015; Miquelon & Castonguay, 2017) regulations result in as good or better PA behavior adoption and maintenance. Having higher needs satisfaction and more autonomous forms of motivation may lead to more consistent and sustained behavior. In addition, SDT has also been applied to predict intention to continue involvement in student-athlete sport activities (Keshtidar & Behzadnia, 2017).

SDT has only recently been applied to understanding physical activity behaviors. For example, researchers have designed and delivered effective interventions for PA guided by SDT (Duda et al., 2014; Friederichs, Oenema, Bolman, & Lechner, 2015; Hartmann, Dohle, & Siegrist, 2015; Jolly et al., 2009; Levy & Cardinal, 2004; Silva et al., 2010).

Teixeira and colleagues (2012) conducted an important systematic review examining the predictive utility of SDT in relation to physical activity. Their review included 66 studies related to SDT needs satisfaction and behavioral regulations and physical activity or exercise. They observed similar findings across experimental, cross-sectional, and prospective studies applying SDT to physical activity or exercise behaviors. Findings consistently supported positive associations between competence

satisfaction and exercise, identified regulation for short-term motivations, and intrinsic motivation for long-term motivations for exercise.

Previous research has affirmed that higher levels of identified and integrated forms of extrinsic motivation are associated with long-term physical activity or exercise (Daley & Duda, 2006; Edmunds, Ntoumanis, & Duda, 2006; Markland, 2009). Identified regulation was more predictive of initial adoption of physical activity (Daley & Duda, 2006; Ingledew, Markland, & Ferguson, 2009) and intrinsic motivation more predictive of longer-term adherence (Silva et al., 2011). Teixeira and colleagues (2012) also found consistent results connecting competence and intrinsic motivation for physical activity in diverse samples and settings.

Compared to the existing research concerning SDT behavioral regulations for exercise, little research exists examining relationships between the three needs of SDT and exercise. This may be due to the inconsistent measures used to assess needs satisfaction for exercise. However, of the studies reviewed, Teixeira and colleagues found consistent positive associations between competence satisfaction and exercise. No negative associations were found between autonomy and exercise or between relatedness and exercise (2012).

Teixeira and colleagues (2012) also acknowledged limitations in applying SDT to physical activity promotion. These limitations included the heterogeneity of study samples and expanding studies to examine causal pathways of developing motivation for physical activity. As discussed, SDT has been used to guide intervention development for physical activity and provides a framework for understanding the adoption and

maintenance of physical activity behavior. However, SDT has yet to be applied to the context of for-cause event participation and for-cause events may be a relevant setting to promote physical activity within SDT.

SDT in this setting may help explain the potential of participants in for-cause events transitioning from adoption of physical activity to maintenance. For example, to meet individuals' need of autonomy, individuals can choose to participate in an event of interest, selecting from a wide variety of events with various causes to support, activities, and distances. Their need for competency may be met through their ability to show mastery by celebrating survivorship of a health condition or management of a disease or being able to complete the event. In the context of for-cause walks, the challenge of runs or longer distances may be too difficult for those who are not regularly active and completing the walk and/or 5K may enhance the person's sense of competence for future events. Their need for relatedness may be met through their opportunity to help and support others dealing with a similar health issue, meet others who share common goals and interests in the cause and/or activity, or participate with friends and family. As participants complete their chosen for-cause events and potentially meet needs for autonomy, competency, and relatedness, then SDT postulates they will have higher intrinsic motivation to complete for-cause events and perhaps will be more likely to adopt and maintain regular physical activity. Applications of SDT to physical activity may help better understand behavior maintenance (Fortier, Duda, Guerin, & Teixeira, 2012), an area that has been challenging for behavioral researchers to explain. Therefore, it appears important to provide researchers and

health promotion professionals with an understanding of the possible effects completing for-cause events may have on physical activity.

When helping helps – altruism in for-cause events

As described earlier, participants have cited motives of altruism and wanting to demonstrate support for the cause and helping others paramount to doing physical activity in for-cause events. Instances of altruistic motives are evident in participants who volunteer time to train for and travel to the event, donate money and services, and offer one's body to complete a physical activity event (Jeffery & Butryn, 2012). Most studies to date that have examined altruistic motives have been qualitative and exploratory, and none have incorporated validated measures of altruism with participants in for-cause events. This lack of direct measurement of altruism in for-cause event research is a significant gap in the literature as altruism has been found to be associated with other positive health behaviors such as healthy eating (Crawford, Brown, Nerlich, & Koteyko, 2010), organ donation (Morgan & Miller, 2002), and volunteering (Kahana, Bhatta, Lovegreen, Kahana, & Midlarsky, 2013).

While altruism is not directly included in the three needs of SDT, participants' desire to be altruistic may resemble a fourth need participants fulfill in a for-cause event, thereby potentially increasing future participation and motivation to be physically active. Altruism may also resemble integrated regulation in SDT where a person desires to raise support and participate in a for-cause event to confirm his or her identity as an altruistic person who help others.

Summary, forecast, and next steps

This review of literature has provided an overview of the importance of physical activity and how the rise of for-cause events may have relevance for public health organizations, health communication efforts, and future research and practice in leveraging the promotion of physical activity (Chalip, 2006; Lane, Murphy, & Bauman, 2015; Murphy et al., 2015). For-cause events may provide a meaningful and memorable first experience to physical activity and assist individuals to begin the path toward a physically active lifestyle. This review has defined participation in for-cause events in the context of SDT and altruism, suggesting the potential of for-cause events to reach more people and understand a new method of promoting physical activity. Thus, researchers and practitioners can further enhance their understanding of the potential influence of promoting physical activity among participants in for-cause events.

Table 2.1. Summary of Research Examining Participant Motivations in For-Cause Events

Study	For-cause event	Sample	Theoretical Background	Methods	Motivations	Future steps
Won et al., 2011	MS Walk	n=247	Donor behavior in charity sports events in low-intensive events	Paper and pencil questionnaire	Supporting MS, socialization, enjoying sports, personal benefits	Study gender differences in motivations; apply up-to-date social networking and social media for recruitment; market opportunity to give, rather than exercise
Meyer & Umstattd Meyer, 2017	LIVESTRONG Challenge	n=6,758	Muscular Christianity	Online questionnaire	Participants of Physical Philanthropy were more likely to be male, higher SES, and non-Hispanic White	Recruitment to involve females, lower SES, diverse race/ethnicity, and shorter events to encourage larger events in the future
Filo, et al., (bike, 2008)	Lance Armstrong Foundation Ride for the Roses (2005) and LIVESTRONG Challenge (2006)	N=4 focus groups (n=31 total participants, 19 in Ride for the Roses, 12 in LIVESTRONG challenge)	Psychological Continuum Model	Focus groups	Intellectual, social, competence, reciprocity, self-esteem, need to help others, desire to improve charity contribute to attraction	Event managers seek to create and promote an environment at the event to recruit and maintain participants

Filo et al., (2009)	LIVESTRONG Challenge	n=32	Psychological Continuum Model	Semistructured interviews	Camaraderie, cause, and competence contribute to enhanced meaning of participating in the event and contribute to attachment	Focusing on creating environments fostering these experiences will effectively lead to long-term and sustainable events
Snelgrove et al., 2013	MS Walk	n=57	Psychological Continuum Model	Online questionnaire	Participants form attachment to the event through (1) being known as a fundraiser, (2) aligning self and cause, and (3) developing social bonds.	Future investigations examining how charities influence one or more of the identified types of attachment.
Filo et al., 2012	LIVESTRONG Challenge (2007)	n=568	Psychological Continuum Model	Online questionnaire	Belief in making a difference mediates the relationship between social and charity motives and attachment to the event	Marketing efforts should highlight that participating will increase a participant's belief he or she is making a difference

Higgins & Lauzon, 2003	Various	Participant observation at 12 events, n=12 interviews with participants and n= 12 interviews with host organizations	Social Marketing and Diffusion of Innovations	Observation and interviews	Events have 2 purposes: celebrate a cause and offer an event satisfying interests of participants. Events are useful for fundraising and publicity.	Organizations should adopt social marketing to increase diffusion of events that meet participant needs.
Umstattd et al., 2018	LIVESTRONG	n=3257	Physical Philanthropy	Online questionnaire	Participant desire to help was positively related with physically active LIVESTRONG support, which was related to physical activity and quality of life	Cancer survivors may benefit from participating in for-cause events. Research the act of helping others and additional health behaviors and health outcomes. Continue to encourage cancer survivors to help others by participating.

Won et al., 2010	Two Relay for Life Events	n=211	Non profit fundraising and sport marketing	Paper and pencil questionnaire	Primary motivations were philanthropy, family needs, group collaboration, entertainment, sports, and external benefits.	Continue to tailor and develop sport-related fundraising programs. Consider participant demographics for market segmentation. Investigate profitability of events, longer follow-up, are needed.
Bennett et al., 2007	Various	n=579	Proposed a conceptual model with 12 factors influencing motivation and decision to participate	In-person, online, mail questionnaire	Personal involvement with cause, opportunity to lead healthy lifestyle, involvement with sport, desire for social interaction with others were primary motivators.	Examine participants' perceptions of entrance fees; differences in attitude and behavior between novices and experienced participants; offer more sports as part of charity sports events
Bunds et al., 2016	Miami Marathon	n=16; sample included charity fundraisers, event participants, and charity organizers	Religiosity, consumer ethics, charitable behaviors	Semistructured interviews	3 themes emerged: (1) Embodied philanthropy, (2) internalization of the cause, and (3) religiosity	Promote connection between physical activity and charitable causes; investigate points of attachment and connection to sport-related charities; investigate individual characteristics beyond focus on "object" of attachment

Taylor & Shanka, 2008	N/A	n=218	Not for profit fundraising	In-person and online questionnaire	Achievement, involvement, status, and socialization contributed to motivations. Overall satisfaction with the event was significantly related to future intention to participate.	Research investigating social impact of the event in the community, investigate differences between leisure and serious participants,
Coghlan & Filo, 2013	Autoethnographic and LIVESTRONG	Focus groups (n=31), interviews (n=32)	Constant comparative method	Constant Comparative Method	Tourism, sport, and charity, connectedness with self, others, and cause	More autoethnographic research, multi-day events, managing meanings of experience

Filo, Spence, & Sparvero , 2013	LIVESTRONG	n=46	Structural and cultural properties of community	Semistructured interviews	5 of 6 properties of community experience (Gemeinschaft) – social ties, social attachment, ritual, similarity with others, common beliefs, NOT small group size	Charities provide training and mentoring to participants to encourage involvement,
Rundio, et al.,	Multiple cause-related and non-cause related aqua run and bicycle events	n=170	Motivation	Paper survey	General health, personal goal achievement, weight, self-esteem, and affiliation	Wider variety of events, assess promotion materials for inclusion of connecting charity to activity/event

CHAPTER III

METHODOLOGY

Significance of the proposed study

In recent years, charities, non-profit organizations, and other entities have sponsored for-cause physical activity events as fundraisers (Irwin et al., 2003; Lachowetz & Gladden, 2003). These events attract hundreds to thousands, and even tens of thousands, of participants and vary in the types of distances and physical activities offered. Due to the large number of participants these events attract, there may be potential to reach and motivate a wider range of people to be physically active (Murphy et al., 2015).

Innovation of the proposed study

This study of physical activity motivation and behavior in participants of for-cause events was novel in three ways. First, this study applied SDT and altruism to understanding participation in for-cause events. SDT had not yet been applied to for-cause events and applications of altruism as a motivation had been limited to qualitative studies. This study extended the application of SDT to for-cause events and added altruism as a consideration for an additional need as part of SDT. Second, this study provided evidence to suggest a potential leveraging of for-cause events in promoting physically active lifestyles. Researchers and practitioners may consider introducing individuals to physical activity goal-setting and overcoming barriers by completing for-

cause events. Third, this study benefited the organization(s) hosting for-cause events. The findings from participants in this study were shared with event leaders to improve and adapt future promotion efforts and raise support or awareness for the associated cause.

Approach of the proposed study

Mixed methods techniques were used in this study (Tariq & Woodman, 2013). The study collected data through online (i.e., SurveyMonkey) surveys as well as semi-structured interviews. To address the first two study aims, surveys were administered before and after the for-cause event. Quantitative analyses were used to analyze relationships between need satisfaction for exercise, intrinsic motivation, altruism, intention, and physical activity behaviors. To address the final two aims of this study, semi-structured interviews were conducted with participants to learn about connections they identified between their motivations and experiences of physical activity. Qualitative analyses of emergent coding (Charmaz & Belgrave, 2007) and an a priori guided theory (Haardörfer, 2019) were used to develop a codebook to identify themes related to SDT as well as any emergent themes.

Statement of compliance and protection of human subjects

All study investigators completed research training through the Collaborative Institutional Training Initiative at the University of South Carolina and maintained up-to-date certification as outlined by the Office of Research Compliance. After receiving approval from the University of South Carolina Institutional Review Board, this study complied with all rules, regulations, and training requirements outlined by the necessary

offices and participating organizations to ensure participant safety, confidentiality, and anonymity. Participation in this study was voluntary and there were minimal to no anticipated risks to participants in this study.

Prior to beginning the pre- and post-event surveys, a paragraph describing the purpose of the study was provided to participants. Participants who wished to participate were asked to indicate they had read the informed consent page and agreed to participate in the study. Participants were able to skip any question(s) they did not wish to answer and discontinue the survey at any time.

Prior to beginning the semistructured interview, the purpose of the study was shared with the participant and allowed time for him/her to ask any questions before proceeding with the interview. Interview participants were free to skip any question they did not wish to answer and discontinue the interview at any time.

Conceptual Model

The conceptual model in Figure 3.1 illustrates the proposed relationships between for-cause events, SDT, altruism, intention, and physical activity. The model reads from left to right, beginning with the for-cause event. It was hypothesized that participants in for-cause events will experience increased need satisfaction of autonomy, competency, and relatedness for exercise after having completed the event. It was also hypothesized that these three needs, intrinsic motivation, and altruism would be positively associated with intention to repeat participation in for-cause events and physical activity behaviors.

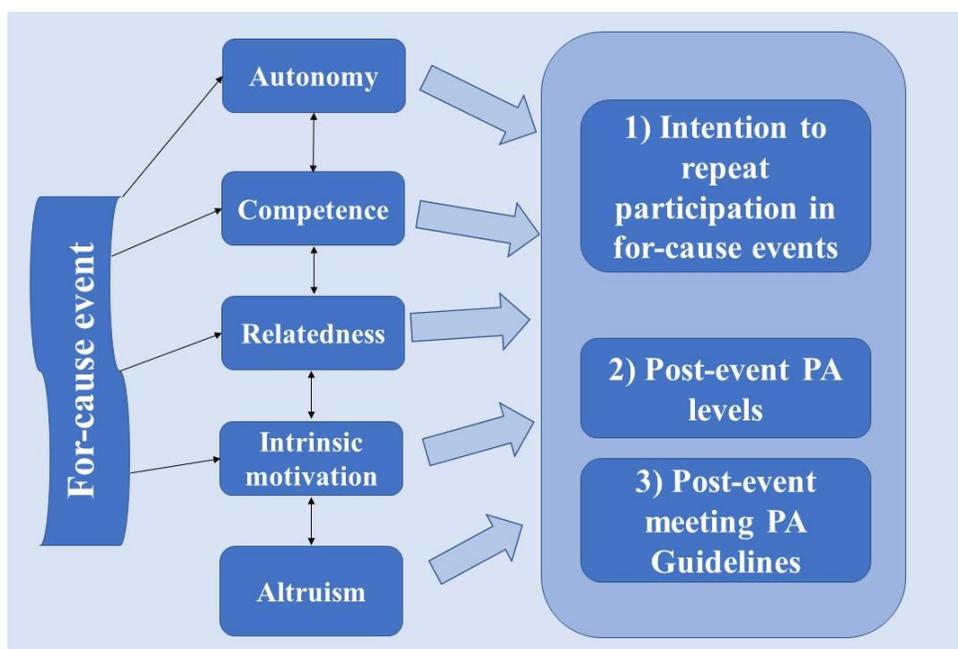


Figure 3.1. Conceptual model applying SDT and Altruism to Participating in For-cause Events

Aims 1 and 2 Approach

Aim 1: Examine, among adults taking part in for-cause events, the impact participation has on need satisfaction related to autonomy, competence, and relatedness for physical activity.

Hypothesis Aim 1: Participating in a for-cause event will increase need satisfaction related to autonomy, competence, and relatedness for physical activity.

Aim 2: Examine whether post-event need satisfaction and intrinsic motivation for physical activity and altruism are associated with intentions for repeat event participation and regular physical activity participation.

Hypothesis Aim 2.1: Post-event need satisfaction and intrinsic motivation for physical activity and altruism will be positively associated with intention to repeat participation in for-cause events.

Hypothesis Aim 2.2: Post-event need satisfaction and intrinsic motivation for physical activity and altruism will be positively associated with physical activity levels.

Sampling plan and recruitment

This study aimed to recruit 300 participants through organizations hosting for-cause events in Columbia, SC. All participants completed a for-cause event between August 2018 and December 2018. A full list of all recruited events is provided in Appendix A.

Selection criteria

Inclusion criteria for this study were participants in a for-cause event between August and December 2018, specifically those events of 5K distance or shorter and those explicitly connected to a cause or charity. Additional criteria for study participation included being 18 years of age or older and providing consent to complete pre- and post-event surveys and/or interview.

Pre-event data collection

Pre-event data collection occurred between the time of registration until one hour before the event. Email was the most frequently used recruitment strategy. To recruit participants for the pre-event survey, three emails were sent leading up to the event.

Upon agreement between the event coordinator and the study coordinator (JAB, participants were recruited to complete the pre-event survey in one of three ways. First, in instances when the event leader agreed to provide email lists of registered participants to the primary investigator (JAB), the primary investigator would send email invitations to participants. Second, in instances where the event leader(s) did not agree to share email lists of registrants, the event leader(s) sent an email on behalf of the study coordinator. Lastly, when the event leader agreed to help with the study, but did not agree to share emails with the primary investigator or send emails, a one-page flyer was posted on the social media account for the event and/or included in participants' race packets.

Post-event data collection

Post-event data collection began two weeks after the event and continued until eight weeks after the event. Participants were recruited using the email addresses provided at the end of the pre-event survey (see Appendix D.2). To pair responses from pre- and post-event surveys and to minimize participant burden, a unique participant ID was created for each participant. This unique ID was assigned to a specific post-event survey URL for each respondent. There were a total of 3 emails sent to participants to complete the post-event survey. The first was at 2 weeks the following the event, the second at 4 weeks, and the third at 6 weeks. The post-event survey closed 8 weeks after the event.

Variables and measures

To address the first aim and hypothesis of this study, the survey included measures of demographics, SDT constructs, altruism, previous and future planned participation in for-cause events, intention for future for-cause event participation, physical activity, and previous activities or involvement with the organization. Surveys were created and made available using SurveyMonkey software and were also available in hard copy, if requested (see Appendix F). The beginning of each survey included an informed consent section explaining the purpose of the study, potential harms or benefits to participants, confidentiality of responses, and explained that participants could skip any question they were uncomfortable answering (see Appendices E.1 and E.2). Upon completing the pre- and post-event survey, participants had the option to be entered into a drawing to receive one of ten \$50 gift cards to REI or to choose for a \$50 donation to be made to the charity or non-profit organization hosting their event.

The survey included the following sections:

Sociodemographics – Demographics questions, assessed at pre-event, were from the 2018 Behavioral Risk Factor Surveillance System survey (Centers for Disease Control and Prevention (CDC), 2018). Characteristics included gender, age, race/ethnicity, marital status, level of education, zip code of residence, employment status, number of children in household, annual household income, weight, height, and pregnancy status.

Need Satisfaction – Participants' need satisfaction associated with autonomy, competency, and relatedness was measured at pre- and post-event using the

Psychological Need Satisfaction in Exercise Scale (Wilson, Rogers, Rodgers, & Wild, 2006). This scale has high internal consistency for each need ($\alpha > 0.90$). The scale contains 6 questions for each need (i.e., autonomy, competence, and relatedness). Respondents answered each question on a Likert scale from 1 (i.e., false) to 6 (i.e., true). Scores were summed for each section related to autonomy, competency, or relatedness. Combined need satisfaction scores could range from 18 to 108 while individual need scores for autonomy, competence, and relatedness could range from 6 to 36.

Motivation – Motivation for physical activity was measured at pre- and post-event using the Behavioral Regulation in Exercise Questionnaire-2 (BREQ-2). This scale includes 19 questions and was used in over 50% of studies included in a systematic review on SDT and PA (Teixeira et al., 2012). Participants selected on a scale of 0 to 4 whether a statement meets one of the following categories: not true for me (0), sometimes true for me (1, 2 or 3), or very true for me (4). A score for each type of motivation was calculated by summing the responses for items in that scale. Amotivation, external regulation, identified regulation, and intrinsic regulation are assessed using 4 items each. Introjected regulation is assessed using 3 items. Cronbach's α for the following constructs are as follows: amotivation (0.83), external regulation (0.79), introjected regulation (0.80), identified regulation (0.73), and intrinsic regulation (0.86) (Markland & Tobin, 2004).

Altruism – Altruism was assessed pre-event using a modified version of the Self-Report Altruism scale (Witt & Boleman, 2009). The modified scale includes 14 items assessing the frequency with which one participates in altruistic behaviors such as blood donation, giving money to charity, and giving directions to a stranger. Participants reported how frequently they engaged in each altruistic behavior on a scale where 0=never, 1=once, 2=more than once, 3=often, and 4=very often. The responses were summed to compute a total score of altruism ranging from 0 to 56.

Physical Activity – Pre-event physical activity was measured using a five-category self-report physical activity scale (Jurca et al., 2005). This scale was originally developed to validate a non-exercise model for predicting cardiorespiratory fitness using gender, age, body mass index, resting heart rate, and self-reported physical activity. Respondents could self-identify into one of five possible usual activity-level categories (1) inactive or little activity other than usual daily activities; (2) regularly (≥ 5 days/week) participate in physical activities requiring low levels of exertion that result in slight increases in breathing and heart rate for at least 10 minutes at a time; (3) participate in aerobic exercises such as brisk walking, jogging or running, cycling, swimming, or vigorous sports at a comfortable pace or other activities requiring similar levels of exertion for 20 to 60 minutes per week; (4) participate in aerobic exercises such as brisk walking, jogging or running at a comfortable pace, or other activities requiring similar levels of exertion for 1 to 3 hours per week; (5) participate in aerobic exercises

such as brisk walking, jogging or running at a comfortable pace, or other activities requiring similar levels of exertion for over 3 hours per week.

Post-event physical activity was measured using the International Physical Activity Questionnaire-Short Form (IPAQ-SF) (Craig et al., 2003). The IPAQ-SF was developed to assess physical activity and sedentary behaviors and has been used worldwide for global physical activity surveillance. The IPAQ-SF has also been assessed for validity and reliability previously and has been used in various settings (Hagströmer, Oja, & Sjöström, 2006). Time spent in moderate- and vigorous-intensity physical activities was calculated as a continuous variable of MET-minutes according to IPAQ scoring protocol (IPAQ, 2005) and a categorical variable for meeting the 2018 Physical Activity Guidelines for Americans.

Therefore, this study converted physical activity to the continuous variable of MET-minutes of physical activity per week. Using this continuous variable, physical activity was also treated as a dichotomous variable for meeting or not meeting physical activity guidelines. Individuals with 600 MET-minutes of physical activity or more per week were classified as meeting recommendations and individuals who reported less than 600 MET-minutes of physical activity per week were classified as not meeting recommendations (Brown, Burton, Marshal, & Miller, 2008).

Intention – Intention to participate in another for-cause event was measured on a 5-point Likert scale where a 1 means extremely unlikely and a 5 means extremely likely.

Involvement with the organization – During the pre-event survey, this section included questions related to participants' previous service, volunteer, financial, or other philanthropic involvement and activities with the organization.

Motivations for participating in the event – At pre-event, respondents answered 9 questions related to motivations to participate in a for-cause event. This scale was previously used in a study of participants in a for-cause event (Filo, Funk, & O'Brien, 2011). Participants answered on a scale of 1 (Strongly Disagree) to 7 (Strongly Agree) for the following reasons for completing the event: expand my knowledge, interact with others, improve my skill and ability in doing the activity, avoid the hustle and bustle of daily activities, help the charity, discover new things, meet new and different people, keep in shape physically, and relieve stress and tension.

Statistical power

Using the statistical software, GPower, the desired sample size to test the first aim using ANCOVA for repeated measures within subjects was 148 participants. All analyses were performed using a two-tailed test with an alpha level of 0.05. Achieving a sample of this size will yield a power of 95% to detect a small-to-medium effect Cohen's f effect size of 0.15. All diagnostics for interpreting results were preceded by assessing variable distributions and model assumptions to assure no violations have been made.

Statistical analysis

All survey data were exported from Survey Monkey and stored in an excel spreadsheet for data management. Spreadsheets were then imported for statistical analyses using SAS v.9.4.

First, descriptive statistics, including frequencies, proportions, means, and medians, were used to describe sociodemographics, event participation, need satisfaction, altruism, exercise regulation, and physical activity variables. Sociodemographic variables included gender, age, race/ethnicity, BMI, employment status, and annual household income. The event participation variable refers to the number of for-cause events completed or planned to complete in 2018. In addition, chi-square and student's t-tests analyzed differences in participants who complete both surveys and participants who only completed the pre-event survey. The need satisfaction variables included autonomy, competence, and relatedness. The altruism variable came from the score on the self-report altruism scale (assessed at pre-event only). The exercise regulation variables included the score from the behavioral regulation to exercise scale for amotivation, external regulation, introjected regulation, identified regulation, and intrinsic motivation. For the physical activity variables, one was the ordinal variable for pre-event PA. A second was the continuous MET-minutes per week of physical activity and the third was a dichotomous variable of meeting or not meeting guidelines for physical activity.

Second, repeated measures analysis of covariance (ANCOVA), multiple logistic, and multiple linear regression were used to evaluate the relationships between the variables for aims one and two.

Aim 1 – The first aim was to examine the impact of participation in a for-cause event on autonomy, competence, and relatedness satisfaction. Analyses for Aim 1 included three repeated measures ANCOVA models to examine whether needs satisfaction for the three outcomes of autonomy, competency, and relatedness changed from pre- to post-event while controlling for age, race, gender, education, and pre-event physical activity level. The independent variable was time and dependent variables were scores for need satisfaction related to autonomy, competence, and relatedness.

Aim 2 – The second aim was to examine whether post-event need satisfaction, intrinsic motivation, and altruism were associated with intention for repeat participation and physical activity levels. Prior to analyses, due to the known relationships between need satisfaction and intrinsic motivation, inter-correlations of need satisfaction variables and intrinsic motivation were examined. Upon observing strong positive inter-correlations between the independent variables, individual models including only a single independent variable plus covariates were reported in the results rather than a single model including all independent variables and covariates. Analysis for the first hypothesis in Aim 2 used multiple logistic regression to assess post-event levels of need satisfaction and intrinsic motivation and altruism on post-event intention to repeat participation in a 2018 for-cause event. Due to positive skewness of the distribution of the intention to repeat participation variable, this variable was dichotomized into high (intention=5) and low (intention=1,2,3, or 4)

intention. The outcome variable (dependent variable), post-event intention to participate in another for-cause event in 2018, was measured on a Likert scale of 1 (extremely unlikely) to 5 (extremely likely). The independent variables were post-event levels of need satisfaction for autonomy, competence, relatedness, and intrinsic motivation and altruism. Analysis for the second hypothesis used multiple linear and multiple logistic regression to assess the associations between level of post-event need satisfaction and type of motivation for exercise and physical activity levels. Multiple linear regression was used for the continuous outcome variable of weekly MET-minutes of physical activity and multiple logistic regression was used for the dichotomous outcome variable of meeting or not meeting physical activity guidelines. The independent variables were post-event levels of need satisfaction for autonomy, competence, relatedness, and intrinsic motivation and altruism.

Selection of Covariates

Covariates for the models in Aim 1 were race, age, gender, and education level as these variables have repeatedly been shown to relate to physical activity. For the models in Aim 2, analyses controlled for the same covariates in Aim 1 plus participants' pre-event physical activity levels and pre-event measures of autonomy, competence, and relatedness satisfaction, and intrinsic motivation.

Aims 3 and 4 Approach

Aim 3: Explore how participants in a for-cause event describe their experiences and motivations to be involved in a for-cause event in relation to SDT constructs, altruism, and physical activity.

Research Question Aim 3: How do participants describe their experiences and thoughts in a for-cause event in relation to SDT constructs, altruism, and physical activity?

Aim 4: Describe how participants view the meaning of completing a for-cause event and how these meanings may relate to future physical activity-related goals, participation, and/or intention to complete another for-cause event(s).

Research Question Aim 4.1: How do participants describe their experiences and thoughts associated with completing the event?

Research Question Aim 4.2: How do participants discuss their experiences and thoughts on their future goals, participation, and intention to be physically active or complete other for-cause events?

Sampling plan and recruitment

To address the final two aims and research questions of this study, a purposive sample of participants who completed the pre- and post-event surveys for aims one and two was recruited. The goal was to complete 20 semi-structured interviews or until saturation was reached. Saturation in qualitative research refers to the practice of continuing to collect data until no new themes related to the research question emerge (Bertaux, 1981). Using purposive sampling, more specifically critical case sampling, participants were selected based on their potential to give the most information about

SDT, specifically intrinsic motivation, in the context of for-cause events. Attention was given to selecting eligible participants who would represent varying perspectives of physical activity and the event based on their usual physical activity routines.

Three criteria were used for the selection of interview participants. First, participants must have completed both the pre- and post-event surveys. Second, participants were not meeting physical activity guidelines, as indicated by their identified activity category on the 5-category self-report physical activity scale of 1, 2, or 3. Third, participants were sampled to reflect low, medium, and high levels of intrinsic motivation based on scores on the BREQ-2, which has a possible range of 0 to 16. Three categories of scores for intrinsic motivation were created for low, medium, and high intrinsic motivation. Low was 0 to 8, medium was 9 to 11, and high was 12 to 16. The plan was to recruit a similar number of participants across each intrinsic motivation category for a total of 20 participants. See table below for illustration of sampling strategy.

Table 3.1. Activity Category by Intrinsic Motivation (IM) Score for Interview Recruitment.

	1	2	3	4	5
IM 0 to 5	Prioritized recruiting as close to an equal number of participants in the three ranges of scores for IM who were in the activity categories of 1, 2 and 3.			Participants in the activity categories of 4 and 5 will not be considered for interviews, regardless of intrinsic motivation category.	
IM 6 to 11					
IM 12 to 16					

Participants who completed both surveys had the opportunity to accept or decline the opportunity to be potentially selected to complete a follow-up interview.

Participants were recruited via email (see Appendix C). Three email invitations were sent to participants to complete an interview.

Interview protocol and measures

Interviews took place in-person at an agreed upon location or by telephone. All interviews were audio recorded to maintain the integrity of participants' responses.

A modified semi structured interview guide (see Appendix I) was developed in a previous study for a class project during the fall semester of 2017. This interview guide was tested with a sample of 6 participants in a multi-day for-cause event and explored altruistic motivations, physical activity experiences, and intention to participate in future events. The current interview guide expanded upon the previously developed interview guide and was modified to incorporate questions related to SDT constructs and aims of this study. During each interview, notes on participants' responses and field notes/memos were documented following each interview.

Before each interview, the interviewer explained the purpose of the study, potential risks and benefits to the individual, and asked for his or her verbal consent and agreement to participate and record the interview. This study description and informed consent were included in the interview guide (see Appendix H).

Statistical analysis

All interviews were transcribed verbatim by JAB. As transcriptions were finalized, all identifying information was removed before uploading the transcripts into NVivo 12 (QSR International Pty Ltd., 2018), a qualitative data analysis software. Transcripts were assigned an interview ID.

Aim 3 – The third aim was to explore participant descriptions of experiences in for-cause events related to SDT constructs, altruism, and physical activity. Data were analyzed using NVivo 12. A codebook from the previously mentioned study and class project was referenced during initial coding. For the present study, the codebook was expanded using principles of grounded theory based on themes related to SDT, altruism, core values, physical activity, and intention (Charmaz & Belgrave, 2007). A second coder read and coded a subsample (n=6) of interview transcripts to identify possible codes, categories, and themes from the responses. The interviewer also completed memos consistently throughout the interview and analysis process to ensure a high- quality study and codebook based on new information from interviews, relevant findings, and comparing previously coded data to new themes.

Aim 4 – The fourth aim was to describe how participants viewed completing a for-cause event(s) and how their views may be attributed to future physical activity goals, participation, and/or intention to complete another for-cause event(s). The same analysis plan from Aim 4 was used to answer research questions 4.1 and 4.2 about participants’ descriptions completing the event and any impacts on future goals, participation, and intention to be physically active. The previous codebook was referenced to begin the coding process and expanded to identify new themes that emerged from the interviews.

Study Budget and Incentive

Participants who completed the pre- and post-event surveys were entered into a drawing for an incentive. Participant ID numbers were randomly selected to identify ten eligible participants. Participants were contacted via email and asked if they would like to receive a \$50 gift card to REI or a \$50 in-kind donation made on their behalf to the charity/non-profit organization hosting their event. A confirmation email was sent to the participants that a donation was made in their honor or with the online gift card. For those who completed an interview, a \$20 gift card to REI was offered or a \$20 in-kind donation to the organization hosting their event. Applications for additional graduate student study funding to offset remaining costs were completed. However, no funds were received. The primary advisor (SW) agreed to help cover these costs to meet the research goal.

- 20 interview participants x \$20 = \$400
- Ten gift cards or in-kind donations x \$50 = \$500
- Total projected cost = \$900

CHAPTER IV: MANUSCRIPT 1

PHYSICAL ACTIVITY IN PARTICIPANTS OF A FOR-CAUSE PHYSICAL ACTIVITY EVENT: AN APPLICATION OF SELF-DETERMINATION THEORY¹

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Abstract

Introduction: Many people experience barriers to physical activity (PA). For-cause PA events such as 5K races may provide a unique way of overcoming barriers and promoting PA.

Purpose: This study used Self-Determination Theory to investigate changes in need satisfaction for exercise before and after completing a for-cause event (i.e., 5K run/walk or shorter) and how need satisfaction, altruism, and intrinsic motivation related to intention to participate in future events and PA levels.

Methods: Participants (n=207) in a quasi-experimental study completed pre- and post-event online surveys of sociodemographics, need satisfaction for exercise, exercise regulation, altruism, and PA.

Analysis: Repeated measures ANCOVA assessed change in need satisfaction for autonomy, competence, and relatedness to exercise from pre- to post-event controlling for covariates. Multiple logistic regression assessed how post-event need satisfaction, intrinsic motivation, and altruism related to post-event intention to complete another for-cause event and meeting PA guidelines. Multiple linear regression assessed how need satisfaction, altruism, and intrinsic motivation related to post-event PA levels. All multiple regression models controlled for pre-event measures of need satisfaction.

Results: There was a significant increase in competence satisfaction and a significant decrease in relatedness satisfaction. Participants with higher post-event relatedness satisfaction were significantly more likely to intend to repeat participation in a future for-cause event. Higher levels of post-event autonomy, competence, and relatedness

satisfaction and intrinsic motivation were significantly associated with greater post-event PA levels and higher levels of post-event competence and relatedness satisfaction and intrinsic motivation were significantly associated with meeting PA guidelines.

Discussion: Constructs of Self-Determination Theory related to PA behaviors and intentions as partially hypothesized in a study of participation in for-cause events.

Future efforts to promote PA through these events may wish to prioritize the theoretical construct of relatedness satisfaction in for-cause events.

Introduction

Individuals who regularly engage in physical activity (PA) receive numerous health benefits (DHHS, 2018; Lee et al., 2012; Piercy et al., 2018). Despite strong evidence supporting the benefits of PA, many do not regularly engage in PA (Blackwell & Clarke, 2018; Troiano et al., 2008). Maintaining regular PA proves difficult as individuals experience intrapersonal, interpersonal, and environmental barriers to PA (Barber, 2013; Durand, Andalib, Dunton, Wolch, & Pentz, 2011; Harwood, Keegan, Smith, & Raine, 2015).

Ecological approaches to interventions, which consider broader social and environmental influences on behavior as compared to one-on-one interventions, are recommended to help promote the adoption and maintenance of PA (Sallis et al., 2006). For-cause events are common in communities yet understudied for their role in promoting PA (Irwin, Lachowetz, Cornwell, & Clark, 2003; Lachowetz & Gladden, 2003). These events, hosted by charities and non-profit organizations, often occur through a 5K walk or run, allowing people to be physically active to support a cause. This type of helping behavior through PA has been referred to as “physical philanthropy” (Meyer & Umstattd Meyer, 2017). For-cause events also may include shorter and longer distances and may incorporate other types of activities such as cycling, triathlon, 3-on-3 basketball, and more. Individuals completing for-cause events may have the opportunity to overcome barriers to PA due to unique motivations of participants, which may prove useful in promoting PA (e.g., altruistic desire to help the charity).

The high frequency of for-cause events suggests the potential to introduce individuals to PA (Bernhart & O'Neill, 2019; Lane, Murphy, & Bauman, 2015). Previous research suggests that primary motivations for participating in these events extends beyond the activity itself. For example, Filo and colleagues (2009) found camaraderie, supporting the cause, and competence to be important experiences of participants in a charity bicycle event. Bunds and colleagues (2016) also found that participants created connections between the charity's mission and PA during the event. These studies, among others (Filo, D. Groza, & Fairley, 2012; Filo, Funk, & O'Brien, 2008; Snelgrove, Wood, & Havitz, 2013; Won, Park, & Turner, 2010), point to the ability of for-cause events to reach people who might not otherwise engage in PA. Therefore, for-cause events may present a unique leveraging point to encourage and promote PA (Bernhart & O'Neill, 2019; Chalip, 2006).

Considering the barriers people experience to PA, including intrapersonal barriers of a lack of self-efficacy (Ashford, Edmunds, & French, 2010) and interpersonal barriers such as a lack of an exercise partner or group (Barber, 2013), researchers and practitioners are often tasked with developing interventions and programs that help overcome multiple barriers simultaneously. To date, research investigating participation in for-cause events has primarily used the Psychological Continuum Model (Funk & James, 2001) to explain participants' motivations and experiences in the event (Filo et al., 2012, 2008, 2009). Another theory, Self-Determination Theory (SDT), which has recently been applied to PA behaviors (Teixeira, Carraça, Markland, Silva, & Ryan, 2012), may also be relevant to examining and explaining participation in for-cause events and

potential leveraging on increasing PA levels. Developed by Deci and Ryan (1980), primarily as a theory of motivation, SDT posits that behaviors will be more intrinsically motivated (i.e., doing the behavior out of a personal pleasure) as an individuals' needs related to autonomy, competence, and relatedness are met as a result of performing a behavior.

To date, much of the research in for-cause PA events exists in the marketing and the economic literatures about the financial return charities receive by hosting these events (McGlone & Martin, 2006; Woolf, Heere, & Walker, 2013). Evidence concerning the potential for PA promotion and increasing population levels of PA is lacking (Bernhart & O'Neill, 2019; Lane et al., 2015). Even more, for-cause event studies incorporating measures from established behavior theories, such as SDT, are limited.

Therefore, the purpose of this study was two-fold. First, we examined changes in participants' need satisfaction for autonomy, competence, and relatedness for exercise after participating in a for-cause event. We hypothesized that participation in the event would increase autonomy, competence, and relatedness need satisfaction for exercise. Second, we examined whether post-event need satisfaction, intrinsic motivation, and altruism were associated with post-event intention to participate in future for-cause events and PA levels. We hypothesized that post-event need satisfaction, intrinsic motivation, and altruism would be positively associated with intention to participate in future events and higher PA levels.

Methods

Study Design and Sample

A quasi-experimental design was used. Participants completed measures before and after the event. Inclusion criteria were: (1) 18 years or older, (2) participated in a for-cause event of 5K distance or shorter between August 2018 and December 2018, (3) provided online informed consent, and (4) completed pre- and post-event surveys. The Institutional Review Board at the University of South Carolina determined the study to be exempt.

Recruitment

For-cause events of 5K distance or shorter in the greater Columbia, SC, area were identified through a local running company website that manages most event registrations as well as through additional online searches. The study coordinator (JAB) contacted leaders for each event by email at least eight weeks prior to the event asking them to assist with sharing information about the study to their event registrants. Upon agreement, participants were recruited in one of three ways. First, the event leader provided email lists of pre-registered participants to the study coordinator (JAB) to send email invitations to participants. Second, in instances where the event leader(s) did not agree to share email lists of registrants, the event leader(s) sent an email on behalf of the study coordinator. Lastly, when the event leader did not agree to share emails or send emails, a one-page flyer was posted on the social media account for the event and/or included in participants' race packets.

Data Collection

All data were collected through online surveys created with SurveyMonkey. Pre-event participant recruitment began within 6 weeks prior to the date of the event, and participants were sent three requests to complete the survey. Post-event recruitment began 2 weeks after the event and continued until 8 weeks post-event. Participants were sent three requests at 2-, 4-, and 6- weeks post-event to complete their survey. Only participants who completed the pre-event survey and provided follow-up contact information were sent the post-event survey.

Participants who completed both surveys were given the option to be entered into a drawing for one of ten \$50 gift cards or could elect to make a \$50 donation to the organization hosting the event they completed.

Measures

Unless stated otherwise, all measures were assessed at pre- and post-event.

Sociodemographics

At pre-event only, participants reported their age, annual household income, gender, employment status, height, weight, and race/ethnicity, using questions from the 2018 Behavioral Risk Factor Surveillance System questionnaire (Centers for Disease Control and Prevention (CDC), 2018). Participants also listed the names of for-cause events completed in the previous 12 months.

Need Satisfaction and Intrinsic Motivation - Self-Determination Theory

The Psychological Need Satisfaction in Exercise Scale assessed need satisfaction for autonomy, competence, and relatedness (Wilson, Rogers, Rodgers, & Wild, 2006).

The scale has been previously reported to have high internal consistency ($\alpha=0.90$) for each need (Wilson et al., 2006). Respondents answered 6 statements addressing each need for a total of 18 items. Responses ranged from 1 (false) to 6 (true). Need satisfaction scores for each need could range from 6 to 36. In this study, internal consistency for pre-event autonomy was $\alpha=0.94$, competence was $\alpha=0.94$, and relatedness was $\alpha=0.93$.

Intrinsic motivation was measured using the Behavioral Regulation in Exercise Questionnaire-2 (Markland & Tobin, 2004). This questionnaire contained 4 items to assess a participant's level of intrinsic motivation for exercise and has high internal consistency ($\alpha=0.86$). Participants responded to a 5-item scale where 0 was not true for me and 4 was very true for me. Total scores could range from 0 to 16. In this study, internal consistency for pre-event intrinsic motivation was $\alpha=0.91$.

Altruism

At pre-event only, altruism was measured using a modified version of the Self-Report Altruism Scale (Rushton, Chrisjohn, & Fekken, 1981). The original scale included 20 items and had high internal consistency ($\alpha=0.89$) (Rushton et al., 1981). The modified version from Witt and Boleman (2009), used in this study, included 14 items. Response options were 0 (never), 1 (once), 2 (more than once), 3 (often), and 4 (very often) according to the extent participants engaged in various behaviors. Responses were summed and scores could range from 0 to 56. In this study, internal consistency for altruism was $\alpha=0.85$.

Intention to Participate in Future For-Cause Events

Post-event intention for participating in a future for-cause event was measured on a Likert scale from 1 (extremely unlikely) to 5 (extremely likely).

Physical Activity

Pre-event PA was assessed using a categorical measure to estimate cardiorespiratory fitness (Jurca et al., 2005). For this study, we did not use the measure to calculate fitness. Participants selected which statement best described their usual pattern of daily activities. Options included: (1) inactive or little activity other than usual daily activities, (2) regularly (>5 days/week) participate in physical activities regarding low levels of exertion that result in slight increases in breathing and heart rate for at least 10 minutes at a time, (3) participate in aerobic exercises such as brisk walking, jogging or running, cycling, swimming, or vigorous sports at a comfortable pace or other activities requiring similar levels of exertion for 20 to 60 minutes per week, (4) participate in aerobic exercises such as brisk walking, jogging or running at a comfortable pace, or other activities requiring similar levels of exertion for 1 to 3 hours per week, or (5) participate in aerobic exercises such as brisk walking, jogging or running at a comfortable pace, or other activities requiring similar levels of exertion for over 3 hours per week.

Post-event PA was measured using the International Physical Activity Questionnaire-Short Form (IPAQ-SF), an established and validated measure (Craig et al., 2003). Respondents provided the number of days and time spent each day in moderate- and vigorous-intensity PA. Time spent in moderate- and vigorous-intensity exercise was

converted to MET-minutes to create a continuous variable of moderate- and vigorous-intensity PA (IPAQ, 2005). Using metabolic equivalent (MET) conversions for moderate- and vigorous-intensity exercise (i.e., vigorous MET-minutes = 8 x vigorous minutes and moderate MET-minutes = 4 x moderate minutes), participants' reported moderate- and vigorous-intensity MET-minutes were summed to create a total MET-minute variable. Respondents were categorized as meeting PA guidelines if they if they accumulated at least 600 MET-minutes of PA (DHHS, 2018)

Data Analysis

All data were analyzed using SAS v.9.4. Missing data were handled using full information maximum likelihood estimates for all statistical models. Due to high levels of self-reported PA, along with distributions of measures violating normality assumptions, the post-event MET-minutes PA variable was winsorized, a method that addresses extreme values for PA data (Bui et al., 2015). In this study, all MET-minute values above the 90th percentile were replaced with the 90th percentile score. Before winsorizing, the range of MET-minutes was 0-13,400 and the median was 1920. The mean MET-minutes of PA were 2425.28 (SD=2053.19). After winsorizing, the range of MET-minutes was 0-5040 and the median was 1920. The mean winsorized MET-minutes of PA were 2245.50 (SD=1554.40). One respondent was removed from the analysis due to an implausible value of MET-minutes of PA (i.e., participant reported one full day of vigorous PA).

Descriptive statistics were used to summarize study participants. Chi-square, fisher's exact, and student t-tests were used to compare differences between

participants who completed both surveys and participants who were eligible but did not complete the post-event survey. Next, repeated measures ANCOVA models assessed change in autonomy, competence, and relatedness from pre-event to post-event (one model for each of the three needs). Covariates included age, race, gender, education level, and pre-event PA level. An a priori power calculation (using GPower) indicated that 148 participants, each providing pre- and post-measures, were needed to yield a power of 95% to detect a small-to-medium effect (Cohen's $f = 0.15$).

To address the second study purpose, we originally planned to conduct one multiple logistic regression model and two multiple linear regression models to estimate the relationships of participants' post-event need satisfaction (autonomy, competence, relatedness), intrinsic motivation, and altruism (independent variables) on meeting PA guidelines, intention to participate in future for-cause events, and PA levels, respectively (dependent variables). Because of the significantly interrelated SDT independent variables, we conducted a series of multiple linear and multiple logistic models where each independent variable of interest was tested, controlling only for the covariates of age, race, education level, gender, pre-event PA level, and corresponding pre-event need satisfaction or intrinsic motivation measure. In addition, because the distribution of the post-event intention variable was highly positively-skewed, the continuous 5-item Likert scale was categorized into high (5) and low (1-4) intention, necessitating multiple logistic regression.

All models controlled for known covariates of PA including race (white vs. non-white), age, gender, and education (less than college degree vs. college degree or

higher). Models also controlled for the pre-event PA measure. Statistical significance was defined a priori at 0.05.

Results

Descriptive Results

As shown in Figure 4.1, 65 event organizers were contacted regarding the study. Nineteen (29%) agreed to allow participants to be contacted for the study, and 14 of the 19 event organizers followed through on their commitment to help with the study. Thirteen (20%) event organizers declined participation, and 32 (49%) did not respond to the requests to participate in the study.

Across the 14 events, 357 participants started the pre-event survey. Forty-nine (14%) participants began but did not complete the survey, 7 (2%) did not meet eligibility criteria, and 21 (6%) did not provide follow-up contact information on their pre-event survey.

Two hundred and eighty participants (78% of the original 357) were sent a post-event survey link. Forty-four (16% of the 280) participants never began the survey, 13 (5%) began but did not complete the survey, and 13 (5%) were ineligible (e.g., did not complete post-event informed consent or did not participate in the event). In addition, 3 (1%) participants completed both measures as a result of completing more than one of the events. Thus, only data from their first event were used. In total, 207 participants (74% of the 280 eligible) completed a pre- and post-event survey and were included in the final sample.

Table 4.1 provides results of the descriptive characteristics of study participants (n=207) and the results comparing those who completed both surveys and those who only completed the first survey. No significant differences were observed between those who completed versus those who did not complete the post-event survey. Nearly half of the participants were between the ages of 40-59 and were overweight or obese. Most were women (75%), white/Caucasian (92%), employed for wages (72%), and had a college education of 4 years or more (80%).

Change in Need Satisfaction for Exercise

As shown in Table 4.2, after adjusting for covariates, competence significantly increased from pre-event to post-event, whereas relatedness significantly decreased from pre-event to post-event. Autonomy did not significantly increase from pre-event to-post-event.

Self-Determination Theory and Intention to Participate in Future For-Cause Events

Table 4.3 provides results for the five multiple logistic regression models controlling for covariates that assessed the relationships between post-event (1) autonomy, (2) competence, (3) relatedness, (4) intrinsic motivation, and (5) altruism and post-event intention to participate in another for-cause event in the next 12 months. Only post-event relatedness was significantly and positively associated with intention. Post-event autonomy and competence satisfaction, intrinsic motivation, and altruism were positively but not significantly associated with intention.

SDT and PA

Table 4.4 provides the results of the five multiple linear regression models controlling for covariates that examined associations between post-event (1) autonomy, (2) competence, (3) relatedness, (4) intrinsic motivation, and (5) altruism with post-event PA levels of participants. Post-event autonomy, competence, relatedness and intrinsic motivation were each significantly related to higher levels of MET minutes of PA (p values <.05).

Lastly, Table 4.5 provides the results of five multiple logistic regression models controlling for covariates that examined how (1) autonomy, (2) competence, (3) relatedness, (4) intrinsic motivation, and (5) altruism were associated with participants' likelihood of meeting PA guidelines. Of the entire sample, 87% of participants were classified as meeting PA guidelines. Post-event, competence, relatedness, and intrinsic motivation were significantly associated with meeting PA guidelines.

Discussion

This study applied SDT to individuals taking part in for-cause events of 5K distance or shorter. We investigated whether participants' need satisfaction for autonomy, competence, and relatedness for exercise changed from pre to post completion of the event and whether post-event need satisfaction for exercise (autonomy, competence, relatedness) and intrinsic motivation and altruism related to intention to participate in future for-cause events as well as post-event PA.

Overall, more than 3,000 people participated in the 14 events included in this study. Of those included in the study, nearly half were between the ages of 40 and 59.

Reaching individuals in this age group for PA remains paramount for delaying the age of onset of chronic diseases and maintaining functioning for activities of daily living (Nelson et al., 2007). For-cause events may also provide adults in this age group the opportunity to support charities and other organizations promoting various health conditions pertinent to them or others close to them while also helping them to remain active (Snelgrove et al., 2013). Further, these events may provide a relatively stress-free environment for adults who prefer outdoor or other social exercise settings to come together and be active.

Nearly half of the sample was overweight or obese, based on self-reported height and weight. Due to already high levels of obesity (Hales, Fryar, Carroll, Freedman, & Ogden, 2018) and associated co-morbid conditions with overweight and obesity (Jarolimova, Tagoni, & Stern, 2013), promoting participation in for-cause events may reach people who are not regularly active and help keep them motivated and on schedule for increasing PA and managing weight.

Our first study aim hypothesized that participants' need satisfaction for autonomy, competence, and relatedness would increase after participating in a for-cause event. Consistent with our hypothesis, competence significantly increased. Within the context of for-cause events, competence may refer to the participants' experience and feelings of their accomplishment and ability to overcome challenges by choosing a 5K event and successfully completing it. In addition, events often provide a t-shirt, finishing medal, and/or printed results further showcasing participants' accomplishments and competence for PA. These feelings, inspired through completing

the event, may be stronger compared to the feelings after checking-in and out of fitness facilities or completing group exercise classes. While gym memberships and exercise classes may create feelings of competence for some, for-cause events may impact individuals new to exercise more deeply due to the added charitable component. Feelings of competence may also resemble another similar construct associated with PA, self-efficacy (Ashford et al., 2010). Thus, as participants experience increased feelings of competence, levels of self-efficacy may increase.

Contrary to our hypothesis, we observed a significant decrease in relatedness satisfaction for exercise from pre- to post-event. This result seems counterintuitive based on SDT and PA (Barbeau, Sweet, & Fortier, 2009) as well as previous findings of participants describing their experiences in for-cause events where they highlighted the sense of shared identity and community at for-cause events (Bennett, Mousley, Kitchin, & Ali-Choudhury, 2007; Filo et al., 2009). We believe this unexpected finding may be explained in two ways. First, we recruited a convenience sample where almost 75% of the participants had previously completed at least one for-cause event in the past 12 months. Thus, we might have observed a ceiling effect for higher scores for relatedness. Second, because we waited to survey participants at post-event and some participants may not have been completing an additional event in the near future, they may have experienced declines in social interactions related to PA.

Our second study aim was to examine whether post-event need satisfaction (autonomy, competence, and relatedness) and intrinsic motivation, and altruism were associated with post-event intention to participate in future for-cause events in the next

12 months and with PA levels. Analyses controlled for the corresponding pre-event levels of need satisfaction and intrinsic motivation. Consistent with our hypothesis, relatedness satisfaction was significantly and positively associated with intention to repeat participation in for-cause events. This finding confirms previous research where participants cited aspects of the for-cause event such as creating a sense of community and camaraderie (Bennett et al., 2007; Bunds et al., 2016; Filo et al., 2009). These findings also align with a previous study assessing the relationship between relatedness and PA (Barbeau et al., 2009). Further, due to interpersonal barriers to exercise some may experience (Barber, 2013), for-cause events may offer the social component other exercise programs offer which may encourage people to get begin doing PA and want to participate. Contrary to hypotheses, we found post-event autonomy, competence, intrinsic motivation, and altruism were not associated with intention to participate in future for-cause events.

We also found post-event autonomy, competence, relatedness, and intrinsic motivation were significantly associated with PA levels. These findings align with a previous systematic review examining the relationship between these SDT constructs and PA behaviors (Teixeira et al., 2012). For-cause events may allow participants to develop autonomy and competence for PA by providing opportunities to identify and sign-up for an event (i.e., autonomy) and then attend and finish the event (i.e., competence). Additionally, because many people often sign-up for these events for altruistic motivations to support the cause, our study's findings suggest completing the

event will also meet participants' needs for exercise, thereby influencing intention to repeat participation in another for-cause event and perhaps engage in regular PA.

Unexpectedly, we did not observe any significant relationships between altruism and intention to participate in future for-cause events or PA levels. Physical philanthropy (Meyer & Umstattd Meyer, 2017), described as a helping behavior of volunteering one's body and time through PA compared to traditional forms of support (i.e., financial, volunteering in non-physically active way) is a relatively new term and therefore, understudied in the literature. In the future, measures specific to physical philanthropy may need to be developed to understand the relationship of altruism within the context of for-cause events and intention to do for-cause events or PA.

This study had several limitations. First, our study may have had selection bias due to its reliance on a convenience sample. Participants who self-selected to participate in the study may have different experiences with for-cause events and PA than those who did not participate. Future studies should prioritize recruiting individuals new to for-cause events. Second, this study relied on self-report data which is prone to social desirability biases. Although we used established and validated measures for pre-event (Jurca et al., 2005) and post-event PA (Craig et al., 2003) and followed winsorization protocol used in previous studies to account for overreporting of post-event PA levels (Bui et al., 2015), individuals often over-report PA levels on self-report measures. Due to cost and feasibility limitations, we were unable to use accelerometers or other sensor measures of physical activity. Future studies should explore using these methods of measurement, even if just in a sub-sample of participants. A fourth

limitation of our study is we did not randomize individuals to either participate in a for-cause event, non-active for-cause event, or another condition, which limits our ability to make causal statements regarding changes in need satisfaction as a result of the for-cause event. Finally, we did not follow participants for a long period of time limiting our ability to observe long-term changes in need satisfaction or PA behaviors after having completed a for-cause event.

Despite these limitations, our study had several strengths. First, the evidence base in PA behavioral and theory-driven research in for-cause events is relatively young. Our investigation contributes to better understanding how for-cause events may be leveraged to promote PA. In addition, our study was one of the first to use an established health behavior theory, SDT, to explain for-cause event participation and experiences. This inclusion fills an important gap where limited research currently exists using health behavior theories to explain for-cause event participation, and its effect on health behaviors. Third, this study confirms the relevance and alignment of behavioral constructs of SDT including competence, relatedness, and intrinsic motivation, and the associations of these constructs with PA behaviors.

As charities and other organizations continue to organize and host for-cause events, future research should continue to investigate these events and how they may influence and promote PA in the population. Specifically, these events may be particularly relevant for relatedness satisfaction. In addition, the increasing number of these events presents a higher likelihood of participants finding events benefitting causes and organizations they wish to support or already support, enabling them to rally

themselves and others to the cause while meeting needs of autonomy, competence, relatedness for exercise.

Conflicts of Interest

The authors declare no conflicts of interest.

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Ethical Approval

The Institutional Review Board at the University of South Carolina determined the study to be exempt. Completion of the online surveys was voluntary.

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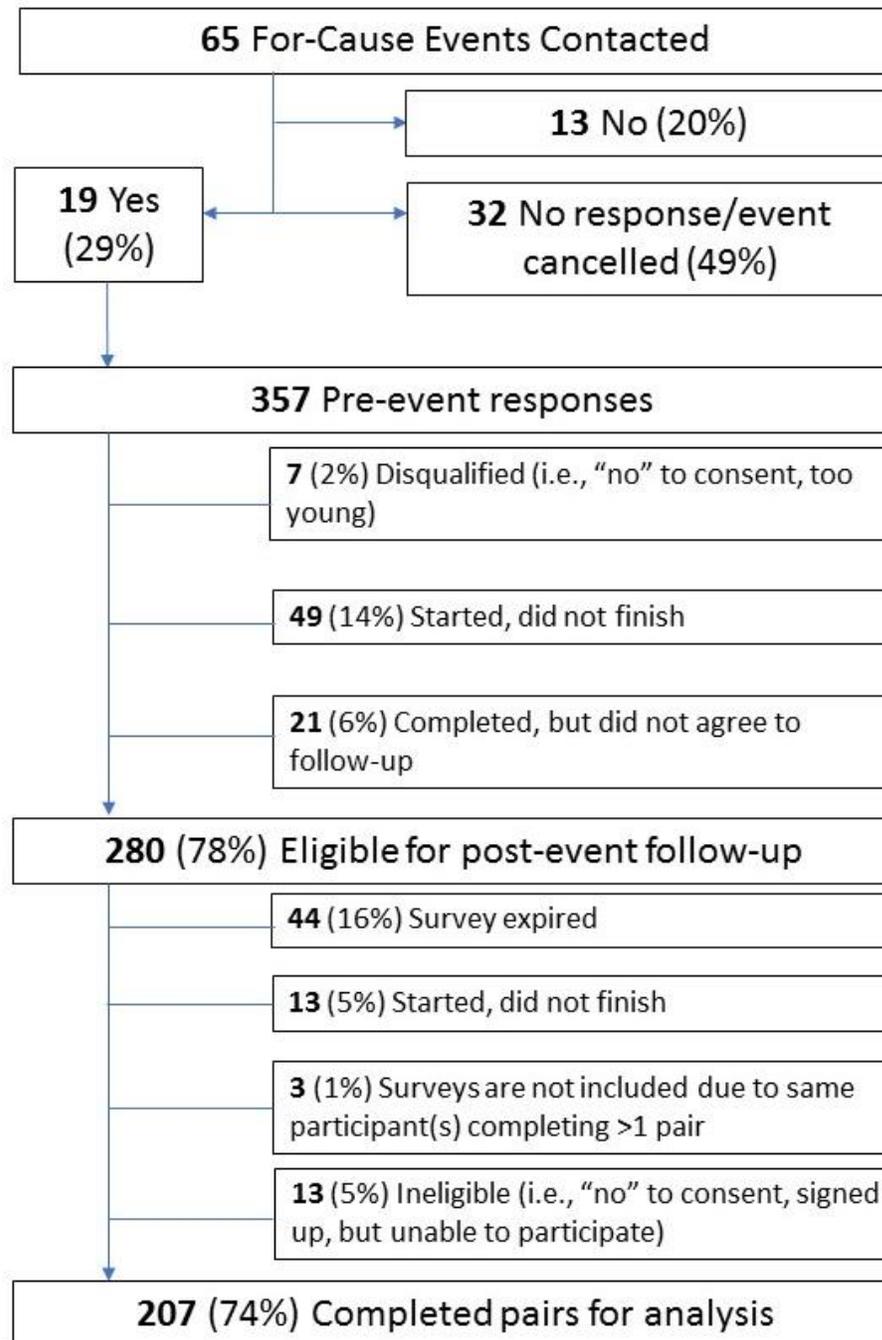


Figure 4.1. Recruitment of Participants in For-Cause Events

Tables

Table 4.1. Characteristics of Participants Completing For-Cause Events

	Completed pre- and post-event surveys (n=207)	Only completed pre-event survey (n=70)	P value ¹
Characteristic	% or Mean (SD)	% or Mean (SD)	
Age, years	43.39 (12.23)	43.04 (11.41)	0.83
18-24	3.86	4.29	
25-39	39.13	34.29	
40-59	45.41	52.86	
60+	10.63	8.57	
Missing	0.97	0.00	
Gender			0.09
Men	25.12	24.29	
Women	74.40	75.71	
Missing	0.48	0.00	
Race/ethnicity			0.30
American Indian	0.00	1.43	
Asian	2.90	2.86	
African American	2.42	4.29	
White/Caucasian	92.27	88.57	
Other	0.97	2.86	
Missing	1.45	0.00	
Body Mass Index, kg/m ²	25.52 (4.92)	26.36 (6.32)	0.81
Underweight	1.93	1.43	
Normal	48.31	45.71	
Overweight	31.88	28.57	
Obese	14.98	21.43	
Missing	2.90	2.86	
Employment Status			0.45
A homemaker	8.21	10.00	
A student	2.90	2.86	
Employed for wages	72.46	71.43	
Out of work >1 year	0.48	0.00	
Out of work <1 year	0.48	0.00	
Retired	8.70	2.86	
Self-employed	6.28	12.86	

Missing	0.48	0.00	
Education			0.86
College 4 years or more	80.19	78.57	
College 1 to 3 years	16.91	20.00	
Grade 12 or GED	2.42	1.43	
Missing	0.48	0.00	
Annual Household Income			0.53
Less than \$10,000 per year	0.48	1.43	
Less than \$20,000 per year	1.45	0.00	
Less than \$35,000 per year	3.38	8.57	
Less than \$50,000 per year	9.66	5.71	
Less than \$75,000 per year	10.63	17.14	
\$75,000 or more	58.94	52.86	
Missing	15.46	14.29	
2018 Event Participation			0.9711
0	28.50	28.57	
1-2 events	33.82	38.57	
3-6 events	22.71	20.00	
7-11 events	4.35	2.86	
12 events or more	5.80	4.29	
Missing	4.83	5.71	

¹Chi-square tests were used to assess differences in categorical variables. Fisher's exact tests were used to assess differences in groups with less than 5 participants. Student t-tests were used to assess differences in continuous variables

Table 4.2. Change in Need Satisfaction from Pre-event to Post-event – Repeated Measures ANCOVA

Self-Determination Theory Need	Pre-event LSM, SE	Post-event LSM, SE	Effect size d	Time effect F	p
Autonomy	32.95, 0.33	33.23, 0.33	0.06	1.31	0.25
Competence	30.40, 0.39	30.97, 0.40	0.09	4.11	0.04
Relatedness	27.36, 0.58	26.43, 0.63	-0.11	4.48	0.04

Note: LSM = least squares mean. SE = standard error. Each model adjusted for age, race, gender, education, and pre-event physical activity level. Models accounted for missing data using Full Information Maximum Likelihood Estimation. Effect size was computed as Cohen's $d = (\text{post-event LSM} - \text{pre-event LSM}) / \text{pre-event unadjusted SD}$.

Table 4.3. Relationships between Study Independent Variables and Intention to Repeat Participation in a For-cause Event

Independent variable of interest	Odds Ratio	95% Confidence Interval
Autonomy satisfaction	1.061	0.964, 1.167
Competence satisfaction	1.020	0.939, 1.108
Relatedness satisfaction	1.054	1.000, 1.112*
Altruism	1.017	0.976, 1.060
Intrinsic motivation	1.053	0.942, 1.176

Note: Each independent variable was tested in it's own logistic regression model that adjusted for age, gender, race, education, pre-event physical activity level, and the corresponding pre-event need satisfaction or intrinsic motivation score

*p<0.05

Table 4.4. Relationships between Study Independent Variables and MET-minutes of PA.

Independent variable of interest	β (Standard error)	t-value	P value
Autonomy satisfaction	81.72 (33.52)	2.44	0.02
Competence satisfaction	65.44 (26.95)	2.43	0.02
Relatedness satisfaction	57.95 (17.73)	3.27	<0.01
Altruism	13.58 (13.81)	0.98	0.33
Intrinsic motivation	111.56 (37.14)	3.00	<0.01

Note: Each independent variable was tested in it's own multiple linear regression model that adjusted for age, gender, race, education, pre-event physical activity level, and the corresponding pre-event need satisfaction or intrinsic motivation score

Table 4.5. Relationships between Study Independent Variables and Meeting Physical Activity Guidelines

Independent variable of interest	Odds Ratio	95% Confidence Interval
Autonomy satisfaction	1.068	0.952, 1.198
Competence satisfaction	1.114	1.005, 1.235*
Relatedness satisfaction	1.120	1.042, 1.204*
Altruism	1.013	0.957, 1.072
Intrinsic motivation	1.218	1.062, 1.397*

Note: Each independent variable was tested in it's own multiple linear regression model that adjusted for age, gender, race, education, pre-event physical activity level, and the corresponding pre-event need satisfaction or intrinsic motivation score *p<0.05

CHAPTER V: MANUSCRIPT 2

APPLYING SELF-DETERMINATION THEORY TO PARTICIPANTS' EXPERIENCES IN FOR-
CAUSE PHYSICAL ACTIVITY EVENTS: A QUALITATIVE STUDY¹

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Abstract

Introduction: For-cause physical activity events reach many people and may leave them with positive and meaningful experiences with physical activity. Little existing research incorporates physical activity behavior theories to explain participants' experiences in these events.

Purpose: The purpose of this study was to explore the application of Self-Determination Theory (SDT) and altruism in participants' motivations and experiences completing a for-cause event. We also studied responses about their experiences in terms of intention for future physical activity and for-cause event participation.

Methods: Semi-structured interviews were conducted with participants (n=18) of 5K for-cause events. The interview guide and coding structure were guided by SDT.

Results: Most participants shared experiences consistent with the SDT constructs of autonomy, competence, and relatedness. Responses also reflected identified and intrinsic motivation and altruism. The unique creation of a strong community and desire to support the cause explained intention to remain active and involved in for-cause events.

Discussion: SDT appears to be a relevant theory for understanding and explaining participants' motivations and behaviors related to PA in for-cause events. The usefulness of for-cause events to reach and engage more people through experiences of competence, relatedness, community support, and altruism are worthwhile when promoting for-cause events and PA.

Introduction

Participating in physical activity (PA) affords numerous health benefits (DHHS, 2018; Lee et al., 2012; Piercy et al., 2018). Despite well-established health benefits of PA, many individuals are not regularly active (Blackwell & Clarke, 2018; Hallal et al., 2012; Troiano et al., 2008). Previous research cites a multitude of barriers to PA that individuals encounter (Barber, 2013; Durand, Andalib, Dunton, Wolch, & Pentz, 2011; Harwood, Keegan, Smith, & Raine, 2015). As a result, low rates of PA and increased time spent in sedentary behaviors is a cause for concern (Wu et al., 2017). Researchers and practitioners must seek innovative ways to promote PA at the population level.

In recent years, PA interventions have been conducted in settings including the workplace (Malik, Blake, & Suggs, 2014), healthcare (Orrow, Kinmonth, Sanderson, & Sutton, 2012), and faith-based organizations (Parra, Porfírio, Arredondo, & Atallah, 2017). Research has also focused on developing eHealth interventions promoting PA (Gal, May, van Overmeeren, Simons, & Monninkhof, 2018). Even with these efforts, there remains a continuing need to develop innovative ways to reach more people and help them adopt and maintain regular PA.

One under-researched area with potential for promoting PA is through for-cause events (Bernhart & O'Neill, 2019; Murphy, Lane, & Bauman, 2015). For example, a previous study concluded that participants took part in the event for primary reasons separate from the desire for doing PA (Filo, Funk, & O'Brien, 2008). This unique perspective suggests these events have potential to leverage and promote PA and may reach individuals traditional interventions do not (Chalip, Green, Taks, & Misener, 2017).

These events, also known as “charity sports events,” (Won, Park, Lee, & Chung, 2011) often take place as a 5K race or walk. Other events may involve shorter or longer distances and vary in activities such as walk-a-thons, cycling, and more. In recent years, the popularity and prevalence of for-cause events has risen, attracting hundreds and in some cases, thousands of participants of all ages, race, and PA levels (Bernhart & O’Neill, 2019; Murphy et al., 2015). While these events offer organized opportunities for people to be physically active, the events also allow individuals to identify and sign-up for specific events supporting causes important to them. This unique combination of helping behaviors and engaging in PA has recently been described as “physical philanthropy” (Meyer & Umstattd Meyer, 2017) and may help explain another relationship between increased levels of PA and altruism (Tan et al., 2009).

Previous research has investigated participants’ motivations and experiences for signing up and completing for-cause PA events (Bunds, Brandon-Lai, & Armstrong, 2016; Filo et al., 2008; Filo, Funk, & O’Brien, 2009, 2011). Interviews and focus groups with individuals supporting LIVESTRONG events found that participants experienced benefits of fulfilling social needs, self-esteem, and a desire to help others (Filo, D. Groza, & Fairley, 2012; Filo et al., 2008, 2009). Promoting participation in for-cause events through altruistic or social enjoyment viewpoints, rather than as a need for PA, may encourage more individuals and communities to get involved and reverse trends in physical inactivity.

The Psychological Continuum Model (Funk & James, 2001) was developed primarily as a way to examine behavior of sport consumers (e.g., spectators, fans) and

how they develop connections to a team through awareness, attraction, attachment, and allegiance. While Filo and colleagues used the Psychological Continuum Model to guide their work, the Psychological Continuum Model was not originally designed to inform intervention development or explain participant behavior. Self-Determination Theory (SDT) may be a relevant theory to explain participation in for-cause events. Developed by Deci and Ryan (1980), SDT has been applied to PA behaviors, suggesting its relevance for greater understanding of PA adoption and maintenance (Teixeira, Carraça, Markland, Silva, & Ryan, 2012). In brief, SDT posits that people will perform behaviors when they have intrinsic motivation to do so (i.e., fulfillment by the behavior itself), and intrinsic motivation is enhanced when needs for autonomy, competence, and relatedness as a result of doing the behavior are met. For example, for-cause events may fulfill a need for autonomy by providing individuals the freedom of choosing a specific cause they would like to support and find a corresponding event benefitting that cause. The event may also fulfill the need for competence by providing an experience of overcoming challenges and completing the event. Lastly, the event may fulfill a need for relatedness by bringing individuals with shared interests in the cause or the activity. Fulfilling these needs would then potentially increase participants' intrinsic motivation for PA.

Studies applying SDT to for-cause event participation are limited. Qualitative investigations could be particularly useful to understand how the constructs of SDT bear relevance, meriting future research in this area. Therefore, the purpose of this qualitative investigation was to investigate the following two aims: (1) to explore

constructs related to SDT, altruism, and PA in participants' experiences of completing a for-cause event and (2) to describe how participants viewed completing a for-cause event and how their experience impacted intention for future PA completing more for-cause event(s).

Methods

Study Design and Sample

This study occurred between November 2018 and April 2019. The study consisted of eighteen semi-structured interviews with a purposive sample of participants who completed a for-cause event (i.e., 5K run/walk or shorter) between August 2018 and December 2018. Eligibility criteria included: (1) 18 years or older, (2) participated in a for-cause event of 5K distance or shorter, (3) completed an online pre-event and post-event survey, (4) reported to be underactive or not meeting physical activity guidelines, and (5) agreed to a verbal informed consent prior to beginning the interview. We also sampled participants across low, medium, and high levels of intrinsic motivation (see below) to explore diverse experiences across the continuum of motivation. The Institutional Review Board at the University of South Carolina determined the study to be exempt.

Recruitment

Participants were recruited from those who had registered and completed for-cause events occurring in the greater Columbia, SC, area and who completed pre- and post-event surveys (Bernhart et al., in progress). We purposively sampled those who were underactive or inactive prior to the event to better understand the potential of

for-cause events to promote PA among those not regularly active. Within this purposive sample, we then sought to sample equal numbers of participants across low, medium, and high levels of intrinsic motivation. See measures section below for descriptions of identifying underactive or inactive participants and intrinsic motivation.

Forty-nine participants were eligible to complete an interview. Eleven (22%) denied requests to participate in the interview, 17 (35%) did not respond to requests to complete an interview, and 3 (6%) replied with interest, but did not follow-through on requests to schedule an interview. In total, 18 (37%) completed an interview.

Three emails consisting of the initial invitation and two follow-up requests sent at least two weeks apart were sent to participants to invite them to take part in the interview. Beginning at least two weeks after the participants had completed their post-event survey, the study coordinator (JAB) contacted eligible participants in small groups to assess responsiveness. Subsequent small groups were emailed until all eligible participants were contacted.

All participants provided verbal informed consent prior to beginning the interview. Participation in the interview was voluntary and participants could stop the interview at any time. Upon completing the interview, participants received a \$20 gift card or they could select for a \$20 donation to be made towards the organization hosting their event.

Measures

Participant characteristics of age, gender, race/ethnicity, education, annual household income, and height and weight were measured using the 2018 Behavioral

Risk Factor Surveillance System questions (Centers for Disease Control and Prevention (CDC), 2018).

Pre-event PA was measured using a categorical measure where participants self-identify their usual level of physical activity based on one of five categories. Although this measure was developed to validate an estimation of cardiorespiratory fitness level (Jurca et al., 2005), this study only used the measure to categorize activity levels of participants. This measure was cross validated with other large cohort studies assessing fitness with correlations between 0.72 to 0.80. An answer of 1 corresponded to “inactive or little activity other than usual daily activities.” An answer of 2 corresponded to “regularly (>5 days/week) participate in physical activities regarding low levels of exertion that result in slight increases in breathing and heart rate for at least 10 minutes at a time.” An answer of 3 corresponded to “participate in aerobic exercises such as brisk walking, jogging or running, cycling, swimming, or vigorous sports at a comfortable pace or other activities requiring similar levels of exertion for 20 to 60 minutes per week.” Participants answering 4 or 5 were excluded from the eligible sample, which indicated higher PA levels.

Intrinsic motivation was measured using the Behavioral Regulation in Exercise Questionnaire-2 (Markland & Tobin, 2004). This questionnaire contained 4 items to assess a participant’s level of intrinsic motivation for exercise. Participants responded to a 5-item scale where 0 was not true for me and 4 was very true for me. Total scores could range from 0 to 16. We defined low intrinsic motivation as 0 to 8, medium as 9 to 11, and high as 12 to 16.

An interview guide was developed previously and evaluated by a qualitative research expert and tested with 6 participants in multi-day for-cause events (unpublished data). For the present study, the interview guide was modified to focus on participation in a single-day for-cause event and expanded to include questions to elicit responses addressing SDT. The interview guide contained four groups of questions to assess participants' (1) initial motivation and interest to take part in the for-cause event, (2) understanding of the organization hosting the event, (3) perceptions towards PA, and (4) beliefs of how completing the event impacted current and future behaviors. Further evaluation by experts in physical activity and health behavior research affirmed revisions to the final interview questions (see Table 5.2).

Data Collection

One interviewer (JAB) conducted, transcribed, and coded all interviews. All but one of the interviews were conducted over the phone. Upon the participant's request, one interview occurred at a local public library. Interviews ranged from 21 to 42 minutes with an average duration of 30 minutes. All interviews were audio recorded and transcribed verbatim by JAB. Transcripts were not shared back to participants for comment and/or correction.

To protect confidentiality of audio and transcription files, the study coordinator (JAB) assigned a participant identifier to each file pair. Further, all identifying names and personal references between the interviewer and interviewee were removed from the final transcripts. JAB completed interview memos after each interview and discussed his progress regularly with a second coder (LD) and the study advisor (SW). Regular

meetings with LD and SW also discussed potential saturation as interviews were completed. Based on interview memos by JAB, saturation was estimated to have been reached at 15 interviews. However, recruitment and data collection continued to reach the goal of 20 participants. After exhausting all recruitment attempts, the final interview sample was 18.

Data Analysis

Descriptive statistics were used to summarize participants completing interviews. Chi-square, Fisher's exact, and student t-tests were used to compare differences in those who completed interviews and those who did not.

Interview transcripts were analyzed using NVivo 12 qualitative data analysis (QSR International Pty Ltd., 2018) software by two trained coders, JAB and LD. JAB and LD independently coded two interviews using an a priori codebook based on the constructs of SDT, intention, and altruism, (Haardörfer, 2019) and created new codes using emergent coding (Charmaz & Belgrave, 2007). After independently coding 4 interviews, of which LD also independently coded 2 of these 4, SW reviewed coding schemes. JAB and LD incorporated suggestions from SW and continued independently coding remaining interviews. JAB and LD met weekly to discuss coding consistency, emerging thematic elements, and to discuss discrepancies until consensus was achieved. In total, 6 of the 18 interviews were independently double-coded by JAB and LD. JAB coded the remaining 12 interviews using a constant comparative method (Kolb, 2012) to ensure match to previously coded passages and emergent coding to identify new possible themes in the remaining interviews.

Results

Sample Characteristics

Table 5.1 includes the sociodemographics of participants completing interviews and a comparison to participants who were eligible but did not complete interviews. Participants completing interviews did not significantly differ to those not completing interviews. The final sample (n=18) consisted of 4 (22%) men and 14 (78%) women. Most participants were white (83%) and had at least a college education (78%). Nearly two-thirds of the sample were either overweight (39%) or obese (22%) BMI status. The average age of participants was 40.22 years (SD=10.09). Two (11%) participants reported a pre-event PA of 1 (i.e., inactive or little activity), seven (39%) reported a 2 (i.e., regularly participate in activities for at least 10 minutes at a time), and nine (50%) reported a 3 (i.e., participate in aerobic exercises 20 to 60 minutes per week). Four (22%) participants were categorized as low intrinsic motivation, six (33%) medium, and eight (44%) high.

Aim 1: To explore constructs related to SDT, altruism, and PA in participants' motivations and experiences of completing a for-cause event

Themes of relatedness, competence, and autonomy were observed in participants' responses. In addition, themes of identified and intrinsic motivation and altruism were present.

Relatedness. Within the context of for-cause events, responses were coded to relatedness when participants described connections they experienced with others. Of the three needs of SDT, relatedness appeared most frequently. Many participants

described how the for-cause event brought their family and/or community together. For example, one respondent shared

“I don’t typically run races. And I did it [the for-cause event] because it was a family event and I could do it with my family...and so we got to do something together as a team.” (Respondent #6).

Another described how completing the event led to the realization that *“...communities are really strong. And I think that 5K races bring communities together.”* (Respondent #5). The same participant also shared *“they [for-cause events] start the conversation. They bring everyone together. They show common causes, common experiences”* (Respondent #5) and how doing an event *“can be a really fun way to see the personality behind your community”* (Respondent #5).

Lastly, another participant explained how taking part in the for-cause event led to the creation of a more personal connection to the clients the host charity served by sharing

“I think about our victims and...how they’re put out of their comfort zone. They don’t know where to go. They don’t know where the resources are...I kinda was just like, so I can see how a victim could feel because now I’m doing something out of my comfort zone...so it kinda puts that into perspective” (Respondent #10).

Competence. Responses were coded to competence when participants described overcoming challenges, completing the event, and crossing the finish line. Competence was often described through feelings of pride and a sense of accomplishment. One participant shared that *“I was wondering if I was gonna make this or not. And I did...and that is a good feeling to know you’ve accomplished something and*

it's, and you've finished" (Respondent #11). Another shared that participating in the event was *"...small steps. I think that was a small step that I completed it. Big at the time, but at the end, grand scheme, small step. And I'm gonna try and build on it."* (Respondent #3). In addition, another shared that *"...towards the end when you're like, 'oh, it's a lot left' and you're very tired. Uhm, but it was kinda amazing...I challenged myself to run the whole thing and not to walk any of it, and I did"* (Respondent #12). A few participants referred to their prior experiences and their training to overcome challenges during the event.

Autonomy. Responses were coded to autonomy when participants described personal decisions to choose to sign up for the event. Of the three needs, responses connected to autonomy were least often shared. However, autonomy was important for those who shared that *"...[it] kinda clicked when I saw it. And I said, I wanna do that...I decided I was gonna do it regardless"* (Respondent #3). Another shared that doing the event brought the realization that *"running is more daunting than people think"* and *"there's like some core of like self-confidence and independence to doing it [the event] by yourself"* (Respondent #5). Another described the process of getting involved through the self-driven behavior of *"I had signed up for it. I paid for it. I showed up. I was gonna finish it"* (Respondent #9).

Altruism. For-cause events support charities and organizations. As such, many participants highlighted altruistic motivations. Many participants described their desire for helping others and how supporting the charity contributed to a more fulfilling

experience, consistent with “physical philanthropy” (Meyer & Umstattd Meyer, 2017).

For example, one participant described completing the event as

“...it’s having something that you’ve done it for. I mean, it always feels good to complete something like that. But knowing that you’ve helped an agency or helped someone or done something, it’s, it’s much much more fulfilling”

(Respondent #10).

Another shared a connection between PA and how this helped one stay healthy in order to support the organization

“...honestly, it was just an opportunity to support the ministry. Uhm, there are different opportunities, and this is one that I am interested in. Not a lot of like, well keeping fit uhm and you know taking care of your body, kinda similar to taking care of others and their bodies and children and everything...[so] it was an opportunity to support and help the ministry” (Respondent #12).

Another highlighted that

“it’s just such an important cause, and you know, regardless of my physical ability at the time, it’s just more, this particular race is more about you know just tryin’ to help them further their mission” (Respondent #15).

The same participant further stated doing the for-cause event was a

“...win-win. You’re not only getting exercise, but you’re supporting such a good cause. And even if you have to get out there and walk the entire thing, you’re still doing something not only for yourself, but for a great cause” (Respondent #15).

Motivations for PA. As outlined in SDT, behaviors for motivations can exist on a continuum from extrinsic to intrinsic motivation. Extrinsic motivations are further divided into external, introjected, identified, and integrated. Identified, external, and intrinsic regulation motivations for doing PA appeared most often in responses. For identified regulation motives (i.e., doing PA to lose or maintain weight), one respondent shared that *“I wanna make sure I stay in shape”* (Respondent #8) while another stated that *“I do it to maintain my health and my weight”* (Respondent #13). In addition, another shared that after completing the event, there was *“a little bit of an attitude adjustment”* and wanting *“to challenge myself to stay uhm fit”* (Respondent #1). Others shared external regulation motivations (i.e., doing PA to avoid punishment or for an award) for doing PA as it *“...really does help me. I feel like it helps me stay more focused at work and...to keep diligent...at my work and other responsibilities”* (Respondent #9). Another participant expressed how doing PA and the for-cause events permitted a personal award of *“it means I can eat more tacos and pizza”* (Respondent #8). One participant described a friend’s feelings towards completing the event stating that *“I wanna keep doing this, but I only wanna do the ones that give out medals”* (Respondent #18). Lastly, intrinsic regulation motivations (i.e., doing PA for the pleasure of doing the behavior) were seen in participants’ responses. Some shared that *“I like to be active...[but] I am not a fan of running”* (Respondent #15), *“It’s [PA] something I enjoy doing”* (Respondent #17), *“I just love running”* (Respondent #8), and another who shared *“I am not like an avid runner, but I love to be physically active”* (Respondent #5).

Even more, one participant shared “[I]t was an important 5K. I like to run. I’m not that great at it. But I like to run” (Respondent #7).

Aim 2: To examine how participants describe the meaning of completing a for-cause event and how these meanings relate to future PA goals and intention to complete more for-cause event(s)

Participants described completing the for-cause event in terms of anticipated excitement of the event, community support, and having an enjoyable time. Participants also described their goals for staying active and completing future for-cause events and offered recommendations to those who may be hesitant to get involved.

Excitement and anticipation of event. Participants described excitement regarding the upcoming event. Excitement included having a new experience, the opportunity to exercise, location of the event, and the well-organized nature of the event. One participant shared “*this year’s the first time we’ve run a race as a family and...we’re looking forward to doing you know, another one*” (Respondent #6). Another described multiple feelings of excitement sharing “*...it’s a very good cause. And it’s an organized event. And it’s the chance you know, also to exercise. I just, I thought the three were a good combination*” (Respondent #1). Another expressed excitement in signing-up because “*...it was the first one that they had done*” (Respondent #4).

Community Support. Participants often shared how community support at the event enhanced their experiences. Some participants highlighted the ability to gather together and support the cause. For example, one shared

“...we wanted to make sure that we know that our agency was represented, and so we tried to get as many people to come together. So, we just wanted to get that out there and show that we were supporting uhm, the event.” (Respondent #10).

Others described how they believed their participation supported the community. For example, participants shared that *“...it’s nice to be in that community”* (Respondent #2) and *“...it lets the community know that I’m there to support them in any way”* (Respondent #4). Another shared that the for-cause event displayed the importance of the community describing how the event brought

“...everybody together and show everybody that we are humans and we’re all real and we can achieve things together. That’s a big part of it. I think that [for-cause] events do that” (Respondent #5).

Lastly, some participants shared how the community supported them as they completed the event. One participant stated *“Everybody there was just very positive and there were all types of folks there. All ages. And uhm, everybody was real friendly and just very supporting”* (Respondent #1). Another shared

“they had people at the end where the halfway point was. They were motivating. They were just like ‘you can do it.’ ‘Here we go.’...and afterwards, it wasn’t just about who finished first. They had categories of age ranges, they celebrated people in various stages...so it was just really kinda you know, this is great” (Respondent #10).

A fun event. As participants further reflected on their experiences after completing the event, many discussed the fun and enjoyable time they had during the event. For example, one participant shared *“a lot of people dress up you know. It’s the holiday season. It’s fun”* (Respondent #13). Another shared, *“Oh my goodness. I had a blast”* (Respondent #10) and another stated *“Just to go out there and have a good time and have fun”* (Respondent #17). Lastly, one shared *“I would then tell you first off, it was awesome...I had a lot of fun, and I would do it again”* (Respondent #4).

Recommendations for others. Participants also shared thoughts and suggestions for those hesitant in getting involved in an event. Encouragement and advice often centered on an *“anybody can do it”* attitude. For example, one individual shared

“I’ve been tellin’ them, just try it. You don’t have to run the whole thing. At least try to start out with a light jog. If you feel like you can’t push yourself, at least just do a fast-paced walk” (Respondent #13).

Another participant encouraged people

“...to just try it because everybody will cheer you on. There’s people of all sizes and fitness levels out here. You know, some people...they just walk the entire time and there are some people that start and stop. So, I mean, there’s everybody out there and everybody is encouraged” (Respondent #16).

Another participant shared that *“I would say if they were new to the community, it would allow them to meet other people”* (Respondent #4) and another one shared that *“So, it gets you out there, uhm, kinda like a a boost to show you what to start”* (Respondent #12). Even more, one participant described gratefulness for the for-cause

event and recommended the popular phrase, “Just do it” saying “It’s not as far as you think it is and it’s not as hard as you think it is (Respondent #5).

As participants shared, some discussed multiple themes related to SDT and altruism, connecting these themes to intention for completing future for-cause events and doing PA. For instance, one participant emphasized how the experience of relatedness at the for-cause event increased motivation to do PA compared to doing PA without the for-cause event where

“...a 5K by yourself...you don’t have a purpose to it as much. Uhm, at least when you have a ministry to run for and donate with and just get the opportunity to mingle with other people who have the same goals as you do. That motivational factor, in life, in general, just being able to encourage each other, build each other up. So, that is definitely a difference” (Respondent #12).

Another participant connected competence and intention for PA saying

“you know, it’s a lot of times just taking that first step of getting out there and then realizing, you know, I can do this. So, if somebody is going you know with just in their mind they’re going to support a good cause but then they get out there and see that they physically, I can do this, and it might encourage them to you know start taking steps to take better care of themselves. I mean, what an awesome thing is that?” (Respondent #15).

Lastly, two participants described how identifying the mission of the host organization the event may encourage PA. One participant described it as

“We were sold when my neighbor said they wanted us to come...because we cherish them so much...you have all the avenues and everything to support that and when you see it successful then it makes it easy to go out and be like, sure, I’ll run a 5K even though I hate running. And that’s for me...Because you have Daybreak, they’re doing it and then you have people supporting them like my neighbors on a regular basis” (Respondent #6).

The second participant described

“Leo, I’ll be honest was the boy and the other children...the Foundation benefits. I’ve always said like if Leo can run this race which somebody is powering his chair to run it...then I can run this race. Because if Leo were able to run, he would run the race. So...I think the 5K shows the possibilities that Leo and children like Leo can bring to us in the future and how they can open our eyes in that there aren’t any roadblocks. It’s never a no, it’s just a how.” (Respondent #5).

Intention for PA. Participants were asked to think forward and discuss intention for continuing to do PA. It was clear that for some participants, completing the for-cause event served as an impetus to continue doing PA. For example, one participant reflected that

“...to be honest, as I’m approaching uhm a couple years away from 50, you know...I think I might want to challenge myself to do something like that again...and setting goals and meeting those goals” (Respondent #15).

Another participant shared that *“I just think it gave me a little bit of an attitude adjustment in that improvement. Improvement because it was just so positive and to*

challenge myself” (Respondent #1) and another participant highlighted that *“after completing a 5K, you feel like you should be running more, you feel like you should sign up for more. Because it’s kinda addicting personally”* (Respondent #7). These responses also illustrate how SDT applies to for-cause event participation. By completing the event, participants expressed how meeting a primary need (competence) led to increased intrinsic motivation (exercising for the challenge) and intention to be active.

Further, another participant was excited to share *“I’m becoming more inspired to exercise. Definitely...I’m taking stairs more often than the elevator and looking for ways to, I park further out in the parking lot”* (Respondent #11). After having done one of the first 5Ks in a long time, one participant shared *“I’ve got myself a kayak and been trying to be active on the weekends.”* (Respondent #3). Another shared that doing the for-cause event *“...made me feel like I should do more. It made me definitely feel like I need to start running again”* (Respondent #7) and another shared that the goal for PA since the event has been *“to try and squeeze it in when I can”* (Respondent #9).

Intention for future for-cause events. Participants were also asked to think forward and discuss intention for doing another for-cause event and many shared how completing the for-cause event sparked interest for doing future events. One participant shared that

“I would do another one even though my activity level has kinda gone down a little bit...I surely do want to do another one. Uhm, well I’ve done one. I wanna keep training and I’m gonna get back on that program to train up to do another one” (Respondent #10).

Some participants stated that *“I plan to participate in the next 5K. It’s an annual thing”* (Respondent #12) and *“It definitely makes me want to do more charity 5Ks”* (Respondent #7). A few participants were strongly committed to continuing for-cause events, for example *“we will continue to do it until they stop”* (Respondent #16) and *“I’ll do the 5K every year”* (Respondent #5), as well as, *“I’ve already signed up for next year”* (Respondent #4). Another highlighted the importance of family that led to the first time completing the event stating *“if my family expressed interest in doing the race again next year, I would definitely do it”* (Respondent #2).

Discussion

For-cause events reach a large number of people and have the potential to motivate and encourage people to do PA (Bernhart & O’Neill, 2019; Murphy et al., 2015). This qualitative study examined participants’ experiences in for-cause events and how completing these events satisfied the three basic human needs and types of motivations in SDT and intentions for future PA and participation in for-cause events.

Overall, the three needs of SDT, were present in participants’ responses about their experiences in the for-cause events. This finding reinforces the applicability of SDT and PA behaviors (Teixeira et al., 2012) and suggests it’s usefulness in this new context of for-cause events. In particular, responses describing how participants met relatedness needs were most common, perhaps due to the group nature of the event. By participating in the event and meeting other people who share similar interests in either the activity or organization, participants made connections they otherwise might not have made without the event (Bunds et al., 2016; Filo et al., 2009). Competence

needs were also met, as completing the event enabled participants to experience and overcome any challenges, accomplish their goals, and complete the event. These feelings of accomplishment may resemble self-efficacy, a well-known and applied construct with PA (Bandura, 2004; Tang, Smith, Mc Sharry, Hann, & French, 2018). Lastly, while not as common in responses as relatedness and competence, some participants fulfilled needs for autonomy in their ability to select an event, sign up, and show up on race day.

Altruism also heavily influenced participants' experiences. These findings align with previous research (Bunds et al., 2016; Filo et al., 2008, 2011) and also connect to previous research that has suggested altruistic behaviors may contribute to increased levels of PA (Varma et al., 2016). Studying altruism alongside the three needs of SDT may carry added significance for individuals doing for-cause events who have a stronger desire to help others over doing PA. Because completing a for-cause event allows for the combination of helping behaviors and PA (Meyer & Umstattd Meyer, 2017), altruism may resemble a fourth need fulfilled in for-cause events. While these findings emphasize the importance of altruism, adding it as a fourth need may not always fit other behavioral contexts applying SDT. However, this study's inclusion of altruism alongside SDT emphasizes how for-cause events may reach more people with altruistic motivations to get involved in a for-cause event compared to those who may not otherwise seek opportunities to do PA.

Participants also highlighted the aspect of community support and looked forward to doing more events in the future. This creation of a community within a

community carries significance as social support has previously been identified as an important indicator of successful behavior change for PA (Barber, 2013). For-cause events usually provide a relatively stress-free environment where people come together and meet others with shared interests in the cause and/or activity. As relationships are created and strengthened, participants can continue to build social support and build accountability signing up for future events.

Furthermore, participants frequently shared an “anybody can do it” attitude asked to give suggestions they would give for newcomers to for-cause events. This attitude is important as many people may have hesitations and concerns before getting involved or they may believe they lack the ability to complete the event. Adopting the “anybody can do it” attitude and then experience the spirit of relatedness and community at the event may carry additional significance for instilling self-efficacy in individuals to complete future events.. These positive experiences of participants after completing these events may provide PA interventionists and practitioners with a window of opportunity to reach more people. For example, if these people had been less likely to join traditional PA programs before doing the for-cause event, they may be more open to joining traditional programs after realizing their capability and completing the event. Thus, PA interventionists and practitioners may be able to reach more people by sharing information about regularly occurring walking groups or training programs or classes for other types of PA beyond the for-cause event.

This study had limitations. First, the sample was predominantly homogeneous in terms of gender, education, and socioeconomic status, limiting generalizability of our

study's findings. Given our sample was well educated and of higher socioeconomic status, participants' perspectives may have been limited compared to others of differing sociodemographic backgrounds. The sample was also confined to a southeastern state where regular opportunities to complete for-cause events throughout the year may be higher compared to other parts of the country where limitations such as the weather or limited places to host events exist. An additional limitation of response bias may have been present as this type of bias is common in qualitative research as participants may have answered questions for social desirability. Participants may have been inclined to share positive experiences or withhold certain perspectives to assist with the research.

Despite these limitations, the study also had notable strengths. First, this is one of the first known studies to investigate participant experiences in a for-cause event using SDT (Teixeira et al., 2012). Our findings emphasize the relevant connections some participants may experience between the ability to support the charity and/or find a shared community behind the for-cause event.. Second, this study provides a new lens to begin to understand the relevance and potential to leverage for-cause events (Chalip et al., 2017; Lane, Murphy, & Bauman, 2015) for PA promotion through SDT and by sharing messages with an "anybody can do it" viewpoint as well as having a fun and enjoyable experience. Lastly, this study revealed important characteristics of for-cause events that may resemble previously successful interventions seeking to increase levels of competence (Teixeira et al., 2012) and social support (Smith, Banting, Eime, O'Sullivan, & van Uffelen, 2017). Given the growing number of charities hosting for-cause events, many individuals who may not otherwise have engaged in PA now have

multiple opportunities year-round to identify causes they wish to support and enjoy the benefits of being active.

This research contributes to the literature introducing the relevance of SDT in a new setting, for-cause PA events. Intrinsic motivation for PA is important for sustained PA (Teixeira et al., 2012) and participants have described how for-cause events emulate opportunities for meeting needs of autonomy, competence, and relatedness, as well as a potential fourth need of altruism. Participants' descriptions of their experiences further strengthens how for-cause events may be one untapped area for promoting PA. In addition, event organizers may reach more participants creating tailored messages bringing together the community, supporting the charity, and increasing competence for PA. Researchers and practitioners may also choose to highlight the unique combination of these constructs in for-cause events to follow-up with participants after the event sharing information about PA programs in their community. Future research should continue exploring ways to increase sustained PA behavior change through a better understanding of motivations and experiences in for-cause events.

Conflicts of Interest

The authors declare no conflicts of interest.

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Ethical Approval

The Institutional Review Board at the University of South Carolina determined the study to be exempt. Completion of the online surveys was voluntary.

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Tables

Table 5.1. Characteristics of Participants Completing Interviews Versus Participants Who Did Not

	Completed interview (n=18)	Did not complete interview (n=31)	P value ¹
Characteristic	% or Mean (SD)	% or Mean (SD)	
Age (M, SD)	40.22, 10.09	40.97, 11.23	0.82
18-24	11.11	3.23	
25-39	33.33	48.39	
40-59	55.56	41.94	
60+	0.00	6.45	
Gender			1.00
Men	22.22	19.35	
Women	77.78	80.65	
Body Mass Index, kg/m² (M, SD)	27.79, 6.77	26.83, 4.64	0.56
Underweight	5.56	0.00	
Normal	33.33	32.26	
Overweight	38.89	45.16	
Obese	22.22	19.35	
Missing	0.00	3.23	
Race			0.32
White	83.33	90.32	
Asian	5.56	3.23	
African American	11.11	0.00	
Other	0.00	3.23	
Missing	0.00	0.00	
Pre-event Physical Activity³			1.00
1	11.11	16.13	
2	38.89	38.71	
3	50.00	45.16	
Intrinsic Motivation²			0.95
Low	22.22	22.58	
Medium	33.33	29.03	

High	44.44	48.39	
Education			0.70
College 4 years or more	77.78	64.52	
College 1 to 3 years	22.22	32.26	
Grade 12 or GED	0.00	3.23	
Annual Household Income			0.32
Less than \$10,000 per year	5.56	0.00	
Less than \$20,000 per year	0.00	0.00	
Less than \$35,000 per year	5.56	0.00	
Less than \$50,000 per year	16.67	12.90	
Less than \$75,000 per year	11.11	3.23	
\$75,000 or more	50.00	64.52	
Missing	11.11	19.35	
2018 Event Participation			
0	50.00	45.16	0.69
1-2 events	22.22	32.26	
3-6 events	22.22	9.68	
7-11 events	0.00	6.45	
12 events or more	0.00	0.00	
Missing	5.56	3.23	

¹Chi-square tests were used to assess differences in categorical variables. Fisher's exact tests were used to assess differences in groups with less than 5 participants. Student t-tests were used to assess differences in continuous variables

²Scores for Intrinsic Motivation could range from 0 to 16. Those scoring 0 to 8 were classified as low, 9 to 11 as medium, and 12 to 16 as high in intrinsic motivation.

³Pre-event Physical Activity categories referred to (1) inactive or little activity, (2) participate in physical activities >5 days/week for 10 minutes at a time, (3) participate in aerobic exercises for 20 to 60 minutes per week

Table 5.2. Interview Questions

Category Description	Questions and probes
<p>First, I would like to ask what motivated or influenced your decision to participate in the [EVENT]:</p>	<ol style="list-style-type: none"> 1. Can you describe how you heard about the event? Had you previously heard about the organization? How do you normally learn about these types of events? 2. What excited you most about participating? 3. What worried you most about participating? 4. Did you sign up to participate alone, or with a friend, or group of friends? <ul style="list-style-type: none"> • Why? How important was it for you to have friends present at the event? 5. How did your personal beliefs influence your decision to participate in this event?
<p>Next, I'd like to ask more about how the role of the mission of the organization hosting your event affected your decision to participate:</p>	<ol style="list-style-type: none"> 1. Can you describe of the mission of the organizations in your own words? <ul style="list-style-type: none"> • What key words are meaningful to you? 2. What do these organizations mean to you? 3. Apart from the 5k, how have you been affected or involved with any of these organizations? 4. How do you normally support the other charities? 5. Why did you choose to support the foundation through physical activity? <ul style="list-style-type: none"> • What did participating in this event mean to you? 6. What connections do you see between physical activity and the cause/organization?

<p>Next, I'd like to ask more about your perception towards physical activity and the _____ (event).</p>	<ol style="list-style-type: none"> 1. Before the event, can you tell me about your physical activity routine? (e.g., activities, group/solo, frequency, duration, etc.) <ul style="list-style-type: none"> • When did you begin training for the event? 2. What does being physically active mean to you? Can you tell me why you are/are not physically active? <ul style="list-style-type: none"> • Has this changed since participating in the Cocoa Cup? 3. What was the most challenging part of the event and how were you able to overcome it? <ul style="list-style-type: none"> • Can you describe a moment when you desired to drop out of the race before finishing? • What or who helped you finish the event? 4. In what ways was the event encouraging and supporting of you being physically active? 5. Can you describe what it felt like to cross the finish line and complete the 5k/walk? 6. How do you feel having completed the 5k with this organization compared to completing a 5k/walk on your own?

<p>Now, I'd like to ask more about how your participation has impacted you.</p>	<ol style="list-style-type: none">1. How do you plan to continue supporting these organizations moving forward?2. After having participated, can you tell me about your current physical activity routine? (e.g., activities, group/solo, frequency, duration, etc.)3. In what ways do you feel your experience completing this event has impacted you? (e.g., career goals, education, service, etc.)<ul style="list-style-type: none">• In what ways do you think participating in these types of events impacts people?4. What are your goals/plans for physical activity and/or participating in a future charity physical activity event?5. What suggestions would you have for somebody interested in participating in a charity?6. What more, if anything, should I know about your experiences surrounding this event?
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CHAPTER VI

OVERALL DISCUSSION

Many people do not regularly engage in physical activity (PA), placing them at higher risk of developing preventable and chronic diseases (Blackwell & Clarke, 2018; Hallal et al., 2012). It is well understood that individuals experience barriers to PA (Barber, 2013; Durand et al., 2011; Harwood et al., 2015), and work continues to be done to motivate individuals to engage in PA to receive health benefits. One increasingly popular and unique opportunity to reach more people for PA promotion may be through participation in for-cause PA events (Bernhart & O'Neill, 2019; Murphy et al., 2015). These events, often taking place as a 5K run or walk, bring large numbers of people together to demonstrate support for a cause through PA. Therefore, these events may provide researchers and practitioners with a unique ability to leverage for-cause events to help individuals overcome barriers to PA and increase PA levels (Bernhart & O'Neill, 2019; Chalip, 2006; Murphy et al., 2015).

Due to the large number of for-cause events taking place year-round, individuals have multiple opportunities to get involved. For most events, the process and cost of signing up is relatively inexpensive compared to other more expensive exercise intervention programs and classes and/or equipment (i.e., consumer wearable activity trackers), and much of the preparation for these events involves walking or jogging exercises that can be done outside of a structured setting.

Previously, research has centered on the marketing of for-cause events and dual-organization benefit between corporate sponsors and charity or non-profit organizations (McGlone & Martin, 2006; Woolf, Heere, & Walker, 2013). In the behavioral sciences, research has been conducted to better understand participant motivations and experiences in for-cause events (Bennett et al., 2007; Bunds et al., 2016; Filo et al., 2008, 2009, 2011; Rundio, Heere, & Newland, 2014; Snelgrove et al., 2013; Won et al., 2011, 2010). Much of the existing research has used the Psychological Continuum Model (Funk & James, 2001) to explain participants' attraction, attachment, and allegiance to these events (Filo et al., 2012, 2008, 2009, 2011) or has been exploratory without using an established theory to investigate participant motives and experiences (Bennett et al., 2007; Bunds et al., 2016; Rundio et al., 2014, 2014; Snelgrove et al., 2013; Won et al., 2011).

While exploratory investigations provide meaningful information to substantiate the relevance for future research of the topic, the evidence supporting the benefits of participation in for-cause events can now be strengthened by applying established theories. One theory, Self-Determination Theory (SDT), has recently been applied to PA behaviors with success (Teixeira et al., 2012). As outlined in SDT, as individuals' needs for autonomy, competence, and relatedness are met as a result of performing the behavior of interest, intrinsic motivation to continue doing the behavior will increase (Deci & Ryan, 1980). This theory not yet been applied to PA in the context of for-cause events.

Therefore, this mixed-methods dissertation applied SDT to PA in participants of for-cause events (i.e., 5K distance run/walk or shorter). Using a pre-post design collecting data through online surveys and conducting semi-structured interviews with a purposive sample of participants, this dissertation provides one of the first studies to better understand behaviors in for-cause events through SDT. This final discussion chapter provides an overview of the primary findings from each study, limitations, and suggested future research, implications, and next steps regarding the potential to leverage for-cause events to promote PA.

Major Findings – Study 1

The first study addressed two aims. The first aim was to examine, among adults taking part in for-cause events, the impact participation had on need satisfaction related to autonomy, competence, and relatedness for PA. It was hypothesized that participating in a for-cause event would increase need satisfaction related to autonomy, competence, and relatedness for PA from pre-event to post-event. The second aim examined whether post-event need satisfaction, intrinsic motivation, and altruism for PA were associated with intention for repeat participation and PA. It was hypothesized that post-event needs satisfaction, intrinsic motivation, and altruism for PA would be positively associated with intention to repeat participation in for-cause events. It was also hypothesized that post-event needs satisfaction, intrinsic motivation, and altruism for PA would be positively associated with PA levels.

To study these aims, participants completed online surveys before and after completing a for-cause event. Participants answered questions reporting their levels of

autonomy, competence, and relatedness satisfaction from exercise; intrinsic motivation; altruism; PA; and intention for future participation and PA.

After completing the for-cause event, participants' need satisfaction for competence significantly increased while need satisfaction for relatedness significantly decreased. The significant increase in competence bears relevance because this construct can be compared to another well-known construct associated with PA, self-efficacy (Ashford, Edmunds, & French, 2010). The significant decrease in relatedness was unexpected, particularly given previous research where participants highlighted the community aspect and meeting others as primary motivations for getting involved (Bennett et al., 2007; Filo et al., 2009). This finding may be explained by participants who were not preparing to complete another event in the short-term future. As a result, participants may potentially have had decreased contact and interaction with others through PA.

Regarding the second aim, individuals who reported higher levels of post-event relatedness satisfaction were significantly more likely to intend to repeat participation in a future for-cause event during the next twelve months. This finding of the importance of relatedness aligns with previous research in SDT (Barbeau, Sweet, & Fortier, 2009) and intention to participate in future for-cause events (Bennett et al., 2007; Bunds et al., 2016; Filo et al., 2009). In addition, individuals reporting higher levels of post-event autonomy, competence, and relatedness satisfaction, and intrinsic motivation had significantly higher post-event PA levels, further solidifying the relevant application of SDT to PA (Teixeira et al., 2012).

Major Findings – Study 2

The second study addressed two aims. The first was to explore how participants in a for-cause event described their experiences and motivations to be involved in a for-cause event in relation to SDT constructs, altruism, and PA. Responses were analyzed to find answers to the question, “How are tenets of SDT and altruism present in participants’ descriptions of their experiences and thoughts in a for-cause event in relation to SDT constructs, altruism, and PA?” The second aim was to describe how participants viewed the meaning of completing a for-cause event and how these meanings may relate to future PA-related goals, participation, and/or intention to complete another for-cause event(s). Responses were analyzed to find answers to the questions of “How do participants describe their experiences and thoughts associated with completing the event?” and “How do participants discuss their experiences and thoughts on their future goals, participation, and intention to be physically active or complete other for-cause events?”

To study these aims, participants completed semi-structured interviews after completing a for-cause PA event. Participants answered questions describing their experiences and motivations for getting involved with the event, PA behaviors and attitudes, and intention for PA and future involvement with for-cause events.

The major findings of the second study revealed the relevance and usefulness of SDT for understanding participants’ experiences in for-cause PA events. For instance, participants’ descriptions of their experiences most often connected to SDT constructs including competence and relatedness. Participants referred to satisfying competence

needs when they described overcoming challenges during the event and experiencing feelings of pride and accomplishment following their achievements. Participants also referred to satisfying relatedness needs when they described the importance of completing the event with friends and family. Needs for autonomy were also satisfied when participants described their ability to identify and choose an event they wanted to complete. In addition, participants' responses matched identified regulation when associating PA in the event with the desire to stay in shape and maintain weight. Responses also matched intrinsic motivation when participants described their enjoyment of running and doing PA.

Even more, some responses connected multiple constructs of SDT, altruism, and PA, suggesting the uniqueness of how these events resonate with participants and can be used to promote PA in multiple ways. For example, one participant described how competence satisfaction in completing the event led to an increased motivation to set goals for future PA. Another participant shared how meeting others with similar goals at the for-cause event and the ability to be active increased the significance of doing PA compared to doing PA alone. In other responses, some highlighted the importance of community support and engagement as integral parts of their experiences. Further, some incorporated multiple themes of SDT, altruism, and the importance of community when describing intention to continue doing the event. Lastly, some offered suggestions to others who may be considering getting involved in for-cause events. Given the limited existing evidence of SDT and PA investigations of participation in for-cause events, this qualitative research study helps support the use of and application of SDT in future

studies. The findings also support the understanding that many may get involved initially for reasons other than to do PA, suggesting the potential for researchers and practitioners to partner with for-cause events to reach more people to promote PA.

Applying SDT to For-cause Events

As revealed in these two studies, SDT appears to be a relevant theory to begin to understand PA adoption and maintenance in the context of completing for-cause PA events. While SDT was originally designed as a theory of motivation and not to predict behavior change, the relevance and applicability of SDT to PA has been applied with promising findings (Teixeira et al., 2012) across various contexts and study designs (Duda et al., 2014; Hartmann et al., 2015; Silva et al., 2011). Researchers have found positive associations between autonomy, competence, and relatedness satisfaction with exercise (Barbeau et al., 2009; Edmunds et al., 2006) as well as the associations of identified regulation with initial adoption of and long-term PA (Daley & Duda, 2006; Edmunds et al., 2006; Markland, 2009).

All but one of the findings between SDT and PA in for-cause events were in the hypothesized direction. In study 1, a non-statistically significant increase in autonomy satisfaction and a significant increase in competence satisfaction were observed from pre-event to post-event. However, a significant decrease in relatedness satisfaction was observed occurred after completing the event. We also found positive associations of the three needs of SDT and intrinsic motivation on intention to participate in another for-cause event (relatedness was the only significant association) and PA levels (all three

needs were significantly associated). While not significant, altruism was associated with higher PA levels and intention to participate in future for-cause events.

In study 2, we observed how participants met autonomy, competence, and relatedness needs when completing the event. More importantly, participants often cited altruism as a strong motivator encouraging involvement. Altruistic motives have been identified previously in for-cause event research (Bunds et al., 2016; Filo et al., 2008; Umstattd Meyer et al., 2018) and may also explain physical philanthropy (Meyer & Umstattd Meyer, 2017). Physical philanthropy describes how individuals can demonstrate support for a cause or others by doing PA. The importance of altruistic motivations in for-cause events observed in this study suggests that if SDT is applied in this context, altruism may be warranted as an additional core need. With the understanding that many participants may choose to get involved in for-cause events to show support for a cause rather than to do PA, researchers and practitioners have a unique opportunity to reach this group of people to promote PA they often struggle to reach for other PA interventions and programs.

Limitations

This dissertation study had several limitations. First, one of the primary limitations of the study was related to how SDT constructs were measured. While we used validated measures for need satisfaction for exercise (Wilson et al., 2006) and behavioral regulations for exercise (Markland & Tobin, 2004), these measures were not created specific to PA behaviors and participation in for-cause events. Instead, the included measures focused on whether exercise in general met the three core needs,

and the behavioral regulations items also referred to exercise in general. Future research may need to develop specific measures to better understand needs and motivations specific to for-cause events.

A second limitation was that participants were not randomized to complete a for-cause event and another condition, nor was there a comparison group. Cross-sectional studies are unable to identify cause and effect relationships whereas randomized control trials are often considered the gold standard for establishing causality (Hariton & Locascio, 2018). However, the implementation of a randomized design within this context may not be practical. Therefore, quasi-experimental approaches that include a comparison group of participants who do not complete a for-cause event would be preferable.

A third limitation was the use of a convenience sample, leading to potential selection bias. Participants were able to self-enroll into the study by completing online surveys. As part of the convenience sample, study participants were predominantly female, white, of high education (i.e., college degree or more), and high socioeconomic status (i.e., reported annual household income \$75,000 or greater). We may not have reached a true representation of all individuals who take part in for-cause events, especially those who may be new to PA or for-cause events. This limitation may prevent the ability to generalize this study's findings to other populations.

A fourth limitation was that we did not implement a long-term follow-up with participants to understand the potential lasting effects of completing a for-cause PA event on constructs of SDT, PA, and intention. Without a longer follow-up, this study

was not able to assess maintenance of PA levels or participants' follow through of intention to complete future for-cause events.

A fifth limitation was the use of a self-report measure for PA. The use of a self-report measure may have subjected PA data to response bias. Even though an established and validated measure of PA was used (Craig et al., 2003), participants may have overestimated their responses due to social desirability. To improve the measurement of PA, future studies may sub-sample participants to wear accelerometers or PA trackers. Also related to response and social desirability biases, individuals completing semi-structured interviews may have shared more positive experiences and/or withheld more negative perspectives to assist with the research.

Strengths

Despite these limitations, this dissertation had several strengths. First, this investigation applied a novel approach of using the established theory of SDT to PA in the context of for-cause events. Theory-based investigations of for-cause events are limited and this dissertation contributes a greater understanding of participation in for-cause events and promotion of PA through SDT. In addition, this dissertation used a mixed methods approach to investigate the application of SDT to for-cause event participation. Given some of the limitations of quantitative research (e.g., understanding the context of data) and qualitative research (e.g., lack of statistical analyses to generalize findings), mixed methods studies allow researchers to collect comprehensive data concerning the phenomenon of interest and explain it from multiple points of view (Tariq & Woodman, 2013). Third, this study suggests that for-cause events have the

potential to be leveraged to increase PA levels (Murphy et al., 2015); however, more research and robust study designs are needed. Fourth, we identified an important construct, altruism, which may compliment future SDT investigations in this setting. Altruism may serve as a fourth need that is satisfied as part of completing for-cause events that may then be attributed to increased levels of intrinsic motivation for PA. The role of altruism and its influence in individuals who initially decide to participate in for-cause events to support the cause rather than to do PA highlights the unique opportunity researchers may have working with these events to reach this subset of the population to promote PA.

Future research, implications, and next steps

For-cause events reach large numbers of people (Bernhart & O'Neill, 2019; Murphy et al., 2015) and have the potential to promote positive experiences for PA in those who otherwise may not choose to engage in PA. Research is mixed pertaining to achieving successful behavior change maintenance for PA (Fjeldsoe, Neuhaus, Winkler, & Eakin, 2011; Kahlert, 2015). Thus, some researchers (Craggs, Corder, van Sluijs, & Griffin, 2011; Dumith, Gigante, Domingues, & Kohl, 2011) have advocated for promoting PA as soon as possible in children and adolescents to ensure they remain active into adulthood. Mixed findings exist concerning the effectiveness of PA interventions increasing long-term PA behaviors (Hobbs et al., 2013; Marcus Bess H. et al., 2006; Müller-Riemenschneider, Reinhold, Nocon, & Willich, 2008). Because some individuals may identify more strongly with participating in for-cause events due to personal connections and/or desires to perform altruistic behaviors, researchers may have a

unique window of opportunity in for-cause events to reach people to promote long-term PA.

Given the popularity of for-cause events and the relatively young evidence base substantiating the need for more health-related and PA research in this context, this dissertation suggests various future steps, implications, and next steps. First, work should be done to develop SDT and PA measurement scales specific to the context of for-cause events. Having validated scales would strengthen the understanding of participants' experiences and how researchers may collaborate with organizations hosting for-cause events to promote PA. Second, future research may wish to implement a quasi-experimental design to have a comparison group of people who do not participate in a for-cause event to better assess differences in constructs of SDT and PA behaviors. Third, future research should implement a longer follow-up period with participants. A longer follow-up period will allow researchers to assess maintenance of PA and have an increased understanding of the interplay of SDT constructs, PA, and intention as a result of completing a for-cause event.

Overall, this study provides a new understanding of the leveraging potential of for-cause PA events to promote PA on a population level in the context of SDT (Chalip et al., 2017; Lane et al., 2015). For many participants, preparing for and completing a for-cause event may provide a fun, relatively inexpensive, and pressure-free setting to experience the benefits of doing PA. Therefore, incorporating participation in a for-cause event into new and existing PA intervention approaches to reach diverse groups of people should be considered. For example, healthcare providers may suggest patients

identify a cause of interest and an associated for-cause event to increase PA rather than to suggest the patient simply exercise more. In addition, researchers leading a PA intervention seeking to recruit a range of participants of various socioeconomic status may choose to partner with an organization to host a for-cause event in a certain area of town or supporting a specific cause relevant to the community to increase participant representation from diverse socioeconomic classes. Registration rates could be discounted to reach a more diverse group of participants. If successful, findings from this type of study could reveal a novel way of recruiting large and diverse groups of people and begin to close the disparity in PA behaviors. In addition, PA interventions guided by SDT and need satisfaction may promote participation in a for-cause event as a long-term goal to observe if emphasizing need satisfaction to study subjects early on will enhance outcomes such as higher PA levels among study subjects after completing the event. Lastly, researchers may be able to reach inactive individuals who completed their first for-cause event and/or those who had a positive experience. Shortly after completing an event, individuals may be more willing to participate in an intervention to increase PA.

This study's findings compliment a previous investigation which identified the importance of participants' belief that their completion of the event truly makes a difference (Filo et al., 2012). In order to continue to attract these same participants in future events, charities and organizations may wish to update promotional materials leading up to and at the event showcasing how the previous year's event(s) helped fund projects such as renovating facilities to serve clients, increasing the distribution of a

product or service, or hearing personal testimonies of clients benefitting from the funds raised in the event.

This study's findings also compliment participants' emphasis on the importance of community at for-cause events (Bennett et al., 2007; Filo et al., 2008; Snelgrove et al., 2013; Won et al., 2011). Given the rise of the use of social media, technology, and eHealth PA interventions (Gal, May, van Overmeeren, Simons, & Monninkhof, 2018), communities reached in previous successful PA intervention in worksites (Malik, Blake, & Suggs, 2014), health care (Orrow, Kinmonth, Sanderson, & Sutton, 2012), and faith-based organizations (Parra, Porfírio, Arredondo, & Atallah, 2017) should not be overlooked. Researchers and representatives from charities and non-profit organizations could form new partnerships with these settings to help promote their events. Individuals may even have potential existing social networks in these various settings. Therefore, more participants could continue to be reached through these events to receive PA promotion messages and have memorable experiences doing PA.

Another implication of for-cause event participation may apply to public health and/or sport and behavioral psychologists. Previous research has identified a connection between participating in a for-cause event and five psychology domains of well-being (Filo & Coghlan, 2016). As this study's findings suggest, participants in for-cause events meet multiple needs related to overall health and well-being such as accomplishment through competence or sharing memorable experiences with others through relatedness. Understanding how to translate these experiences may be advantageous for public health and/or sport and behavioral psychologists working with individuals

desiring to improve overall health. Considering the application of holistic health (Steinberg, 2006) to for-cause event participation, intellectual dimensions may be influenced as individuals identify a cause of interest they want to support and find an associated event. Social dimensions may be influenced as individuals gather with others at the event. Emotional dimensions may be influenced as they experience feelings of accomplishment and successfully overcoming challenges. The mental dimensions of health may be influenced as individuals fulfill altruistic desires to support charities and organizations. Lastly, the spiritual dimensions of health may be influenced as individuals potentially increase their understanding of religious disciplines and practices related to health or gain a greater understanding of their role in the community. Sport and behavioral psychologists and researchers could compare feelings of satisfied holistic health between individuals who complete a for-cause event and individuals who do not.

Previous research has also suggested that charities and non-profit organizations tailor marketing strategies to reach more prospective participants (Filo et al., 2008; Higgins & Lauzon, 2003; Won et al., 2011). This study's findings provide an additional framework that event leaders can use to share messages to promote messages about participating in for-cause events. By understanding the applicability of the three needs of SDT and a fourth potential need, altruism, to completing a for-cause event, researchers and organizations could tailor messages using these constructs. For example, messages can be tailored to satisfying relatedness needs by promoting individuals to sign-up as a team of small groups made of family members, co-workers, or other areas of common interest (i.e., PA, religious, advocacy, etc.). Messages could also

be tailored to satisfying competence needs by promoting how participants will experience feelings of accomplishment after taking the time to prepare for and complete the event. Researchers could then assess how these tailored messages were associated with participants' feelings of need satisfaction compared to participants who completed events where marketing was not tailored.

As charities continue hosting for-cause events, research should continue to better understand participant experiences in these events and possible effects on PA behaviors. Research should also continue to apply established health behavior theories, such as SDT, to participants' experiences. This study applies SDT and suggests the leveraging potential of for-cause events by suggesting that individuals may at first complete a for-cause event with the primary interest of supporting the cause instead of doing PA. Therefore, researchers and practitioners have a unique opportunity to reach this subsample of the population that other research and programs struggle. This study's findings suggest that participants may likely experience simultaneous benefits of satisfying needs, supporting a cause, and being a part of the community through what many may initially perceive as a secondary focus, engaging in PA.

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APPENDIX A
RACES TO CONTACT

Date	Event Name	Distance	Location
7/28/2018	Guardians of the Night K-9	5k	Columbia
8/4/2018	Sweet Baby O	5k	Columbia
8/11/2018	811 Run	5k	Columbia
8/11/2018	Prosperity Hoppin Run	5k,2M	Prosperity
9/1/2018	Justin Pepper 5K	5k	Chapin
9/8/2018	Race to the Finish & 1 Mile Fun Run	5k, 1M	Lexington
9/14/2018	Tunnel to Towers	5k run and walk	Columbia
9/15/2018	Forrest Ray Classic	5k	Sumter
9/15/2018	Springdale 5k	5k	Camden
9/16/2018	Camp Cole	5k	Columbia
9/22/2018	Teal Day 5k	5k	Columbia
9/22/2018	Revolutionary Run	5k	Camden
9/22/2018	Ebenezer Freedom Run	5k	W. Columbia
9/22/2018	Lake Murray Dam Run	5k,10k	Irmo
9/29/2018	Superhero 5K	5k	Columbia
9/29/2018	Rooster Run	5k	Columbia
9/29/2018	WIL To Run	5k	Columbia
9/29/2018	Fiaversary	5k	Chapin
10/5/2018	Lexington XC	3k	Lexington
10/6/2018	12th Mayor's Walk Against Domestic Violence	walk	Columbia
10/6/2018	Anytime Fitness Highway to Health	5k	Batesburg Leesville
10/18/2018	Run for Rotary	5k	Winnsboro
10/13/2018	Famously Hot Pink Half	5k,10k,Half,WALK	Columbia
10/19/2018	Running for your Life	5k	Columbia
10/20/2018	Ray Tanner Home Run	5k,12k,1m	Columbia
10/20/2018	Daybreak Ministries	5k	Columbia
10/21/2018	Out of the Darkness Community Walk	walk	Columbia
10/27/2018	Pink Ribbon 5k	5k	Orangeburg
10/27/2018	Pumpkin Run	5k	Irmo

10/27/2018	Sumter Sunrise Rotary Run	5k	Sumter
10/27/2018	Go Leo Go	5k	Columbia
10/28/2018	Delta Zeta Turtle Trot	5k	Columbia
11/3/2018	Walk to End Alzheimer's	2 mile walk	Columbia
11/3/2018	Lung Force	5k	Folly Beach
11/3/2018	Heart Check Run/Walk	5k	Columbia
11/10/2018	Colonial Cup Road Race	5k,10k	Historic Camden
11/10/2018	SVPC Bizarre 5k and 5M for the Build	5k, 5M	Columbia
11/10/2018	Veterans Day 5K	5k	Columbia
11/10/2018	JDRF One Walk	up to 3m	Columbia
11/10/2018	Run Hard Lexington 5k	5k	Lexington
11/11/2018	Run For Our Troops	5k	West Columbia
11/17/2018	Run For Thanks	5k \$\$\$	Pinopolis
11/17/2018	Riverbanks Run	5k	Columbia
11/22/2018	Sumter YMCA Turkey Trot	5k	Sumter
11/22/2018	Run Hard Turkey Trot	5m, 2m, family fun run	Lexington
11/22/2018	Boys and Girls Club of the Midlands Turkey Day	5k	Columbia
12/1/2018	Fitness Zone Jingle Bell	5k \$\$\$	Lugoff
12/1/2018	Deck The Hall & Reindeer Fun Run	5k,2K	Columbia
12/1/2018	Green Door	5k	Lexington
12/1/2018	Ugly Sweater 5k	5k	Summerville
12/1/2018	Anderson YMCA Reindeer Run	5k	Anderson
12/1/2018	Jingle Bell Jog	5k	Blythewood
12/8/2018	Harborside Lights	5k	Columbia
12/8/2018	Santa's Holiday Hustle	5k	Gaffney
12/8/2018	Friends of Caroline Gingerbread	5k	Beaufort
12/8/2018	Sugar Creek Jingle Bell Jog	5k	Greer
12/8/2018	Reindeer Run	5k	Charleston
12/8/2018	Speak Up; Reach Out	5k	Myrtle Beach
12/8/2018	Bulldog Breakaway	5k	Charleston
12/15/2018	Ugly Holiday Sweater	5k	Forest Acres
12/15/2018	5th Annual Tacky Sweater	5k	Greenville
12/15/2018	Jingle Trot	5k	Greenville
12/15/2018	Cocoa Cup	5k	Summerville
12/24/2018	Jingle Jingle Run	5k	Hilton Head
1/19/2019	Red Shoe Run	5K, 10K	Columbia

APPENDIX B

STUDY FLYER

Please help us learn more about participation in for-cause races and events.

Those who complete a pre- and post-event survey will have a chance of winning a \$50 gift card to REI or having a donation made to your event's cause.

Complete the survey at: [insert link]



For more information about the study or survey, contact:
John Bernhart
bernhaj@email.sc.edu
304-216-6146



APPENDIX C

EMAIL RECRUITMENT TEMPLATES

[For Organization Leader(s)]

Good Morning/Afternoon/Evening, [Insert Name],

My name is John Bernhart and I am a graduate student at USC studying exercise science/public health. I am interested in studying the reach and impact of “for-cause” physical activity events and how these events are related to motivating individuals to begin a physically active lifestyle.

I am writing to see if you are willing to partner with me to help me complete my study. I would like to contact participants in your upcoming [Insert Event]. I am hoping to send a 2-part survey via email to the people registered in your event. The first part will be completed before the event and the second part will be completed 2-4 weeks after the event. I also plan to follow-up with an interview to a select few participants.

As an incentive to participants who complete the surveys and/or interview, I am offering entry into a drawing for one of ten \$50 gift cards or an in-kind donation in honor of the participant to your organization for every survey pair that is completed.

In addition, if of interest to you, I would share a summary report of my findings with your organization to help guide your marketing and planning efforts for future events.

I understand if you do not wish to distribute the emails of the participants in your event. If so, I would like to discuss other methods of recruiting participants with you (e.g., posting a flyer for my study online, meeting participants at the event expo and finishing area of the event, etc.).

If you have any questions, please do not hesitate to ask. I am willing to meet or chat by phone if needed.

Thanks for your time and consideration,
John Bernhart
304.216.6146

bernhaj@email.sc.edu

[Pre-event Survey Recruitment]

Good Morning/Afternoon/Evening, [Insert Name],

My name is John Bernhart and I am a graduate student at USC studying exercise science/public health. I am interested in studying the reach and impact of “for-cause” races and events.

I am writing to ask if you would be willing to complete a 2-part survey about your motivations and experiences in this event. The survey should take you between 15-25 minutes to complete and you will complete the first survey before the event and the second survey 2-4 weeks after the event. Here is the link to the survey: (INSERT LINK). You may return to the survey to complete your responses, but responses cannot be edited once the survey is submitted.

As a thank you for completion of the 2-part survey, you will be entered into a drawing to receive one of ten **\$50** gift cards to REI or an in-kind donation to your event’s cause. You can choose between the gift card or donation.

Whether or not you participate is your choice and won’t impact your participation in the event. Please let me know if you have any questions.

Thanks for your time and consideration and I look forward to hearing from you soon!

John Bernhart
304.216.6146
bernhaj@email.sc.edu

[Post-event Survey Recruitment]

Good Morning/Afternoon/Evening, [Insert Name],

My name is John Bernhart and I am a graduate student at USC studying exercise science/public health. I am interested in studying the reach and impact of “for-cause” races and events.

You are receiving this email because you agreed to participate in a study and complete pre- and post-event surveys as part of the [INSERT NAME OF EVENT]. Thank you for completing the pre-event survey. It is now time to complete the post-event survey. Like the first survey, this survey should take you between 15-25 minutes to complete.

Here is the link to the survey: (INSERT LINK). You may return to the survey to complete your responses, but responses cannot be edited once the survey is submitted.

As a thank you for completing the 2nd survey, you will be entered into a drawing to receive one of ten **\$50** gift cards to REI or an in-kind donation to your event's cause. If selected, you will have the opportunity to choose between the gift card or donation.

Please let me know if you have any questions. Thanks for your time and consideration and I look forward to hearing from you soon!

John Bernhart
304.216.6146
bernhaj@email.sc.edu

[Interview Email Recruitment]

Good Morning/Afternoon/Evening, [Insert Name],

My name is John Bernhart and I am a graduate student at USC studying exercise science/public health. You recently completed a survey related to your participation in [INSERT NAME OF EVENT]. Thank you! I am interested in studying the reach and impact of "for-cause" physical activity events.

You have been selected to participate in a follow-up interview. Should you be agreeable, I am writing to see when you are available to complete this interview? The interview can be completed in-person or by phone.

As a thank you for your additional participation and completing the interview for this study, you will be offered either a \$20 gift card to REI or for a \$20 in-kind donation to be made to the organization hosting the [INSERT EVENT NAME].

I understand if you do not wish to participate in this additional interview at this time.

Thanks for your time and consideration and I look forward to hearing from you soon!
John Bernhart
304.316.6146
bernhaj@email.sc.edu

APPENDIX D

INFORMED CONSENT

Pre-event Survey

My name is John Bernhart and I am a graduate student at the University of South Carolina. I am conducting a project to learn more about the impact of for-cause events. I am expecting to enroll about 300 people into this study.

You are being asked to take part in this study because you have registered for a for-cause event. I am asking you to answer questions about yourself, your physical activity, and your motivations to the best of your ability.

The survey should take between 15-25 minutes to complete. There will be a pre-event survey and I will send a post-event survey beginning two weeks after your event. Participation is voluntary. Please know that you can refuse to answer or skip any question(s). I will not share your responses with anyone except for members of the research team.

I may summarize the findings from the surveys for the organization or charity hosting your event. Your name will not be included in any reports created. As a thank you for your time and completion of the pre- and post-event surveys, you will be entered into a drawing to receive one of ten \$50 gift cards to REI or in-kind donation to be made on your behalf to the organization hosting your event. You can choose between the gift card or the donation. In addition, your participation may benefit others like you and helping organizations continue to promote their cause and host their events.

There are very few risks related to participating in this study. If you are uncomfortable answering a question(s), you are free to skip it. You may stop the survey at any time. There are no consequences for not answering questions.

If you have any questions about this study, please contact me at 304-216-6146 or bernhaj@email.sc.edu. You can also contact the Office of Research Compliance at the University of South Carolina at 803-777-7095 if you have any concerns. Please keep this page for future reference. If you agree to take part in this study, please go to the next page/click here to start answering questions.

Post-event Survey

My name is John Bernhart and I am a graduate student at the University of South Carolina. I am conducting a project to learn more about the impact of for-cause events. I am expecting to enroll about 300 people into this study.

You are being asked to take part in this study because you have registered for a for-cause event and completed the pre-event survey. I am asking you to answer questions about yourself, your physical activity, and your motivations to the best of your ability.

The survey should take between 15-25 minutes to complete. Participation is voluntary. Please know that you can refuse to answer or skip any question(s). I will not share your responses with anyone except for members of the research team.

I may summarize the findings from the surveys for the organization or charity hosting your event. Your name will not be included in any reports created. As a thank you for your time and completing the pre- and post-event surveys, you will be entered into a drawing to receive one of ten \$50 gift cards to REI or in-kind donation to be made on your behalf to the organization hosting your event. If selected, you can choose between the gift card or the donation. In addition, your participation may benefit others like you and helping organizations continue to promote their cause and host their events.

There are very few risks related to participating in this study. If you are uncomfortable answering a question(s), you are free to skip it. You may stop the survey at any time. There are no consequences for not answering questions.

If you have any questions about this study, please contact me at 304-216-6146 or bernhaj@email.sc.edu. You can also contact the Office of Research Compliance at the University of South Carolina at 803-777-7095 if you have any concerns. Please keep this page for future reference. If you agree to take part in this study, please go to the next page/click here to start answering questions.

APPENDIX E

FOR-CAUSE EVENTS SURVEY

Pre-event

Pre-event Survey For-Cause Events

My name is John Bernhart and I am a graduate student at the University of South Carolina. I am conducting a project to learn more about the impact of for-cause events. I am expecting to enroll about 300 people into this study.

You are being asked to take part in this study because you have registered for a for-cause event. I am asking you to answer questions about yourself, your physical activity, and your motivations to the best of your ability.

The survey should take 15-25 minutes to complete. Participation is voluntary. Please know that you can refuse to answer or skip any question(s). I will not share your responses with anyone except for members of the research team.

I may summarize the findings from the surveys for the organization or charity hosting your event. Your name will not be included in any reports created. As a thank you for your time and completing the pre- and post-event surveys, you will be entered into a drawing to receive one of ten \$50 gift cards to REI or in-kind donation to be made on your behalf to the organization hosting your event. If selected, you can choose between the gift card or the donation. In addition, your participation may benefit others like you and help organizations continue to promote their cause and host their events.

There are very few risks related to participating in this study. If you are uncomfortable answering a question(s), you are free to skip it. You may stop the survey at any time. There are no consequences for not answering questions.

If you have any questions about this study, please contact me at 304-216-6146 or bernhaj@email.sc.edu. You may also contact my faculty mentor, Dr. Sara Wilcox, at 803-777-8141 or wilcox@mailbox.sc.edu. You can also contact the Office of Research Compliance at the University of South Carolina at 803-777-7095 if you have any concerns. Please keep this page for future reference. If you agree to take part in this study, please go to the next page/click here to start answering questions.

* 1. After having read more about the study, do you wish to participate? If you select "Yes," you are giving your consent to take part in the study.

Yes

No

Pre-event Survey For-Cause Events

Part 1

The questions in this section ask about your motivations for participating in charity physical activity events and exercise.

* 2. Please list the name of the upcoming event in which you are registered to participate.

Pre-event Survey For-Cause Events

Part 1, continued

Please rate your motivations for signing up to participate in this charity 5k or walk on a scale of 1 (Strongly Disagree) to 7 (Strongly Agree).

* 3. I signed up to participate in this event to...

	1 (Strongly Disagree)	2	3	4	5	6	7 (Strongly Agree)	Prefer not to respond
Expand my knowledge	<input type="radio"/>							
Interact with others	<input type="radio"/>							
Improve my skill and ability in doing the activity	<input type="radio"/>							
Avoid the hustle and bustle of daily activities	<input type="radio"/>							
Help the charity	<input type="radio"/>							
Discover new things	<input type="radio"/>							
Meet new and different people	<input type="radio"/>							
Keep in shape physically	<input type="radio"/>							
Relieve stress and tension	<input type="radio"/>							

Pre-event Survey For-Cause Events

Part 2

We are interested in the reasons underlying peoples' decisions to engage, or not engage in physical exercise. Using the scale below, please indicate to what extent each of the following items is true for you.

* 4. Please indicate to what extent each of the following items is true for you.

	0 (not true)	1	2 (sometimes true)	3	4 (very true)	Prefer not to respond
I exercise because other people say I should	<input type="radio"/>					
I feel guilty when I don't exercise	<input type="radio"/>					
I value the benefits of exercise	<input type="radio"/>					
I exercise because it's fun	<input type="radio"/>					
I don't see why I should have to exercise	<input type="radio"/>					

Pre-event Survey For-Cause Events

Part 2, continued

* Please indicate to what extent each of the following items is true for you.

	0 (not true)	1	2 (sometimes true)	3	4 (very true)	Prefer not to respond
I take part in exercise because my friends/family/partner say I should	<input type="radio"/>					
I feel ashamed when I miss an exercise session	<input type="radio"/>					
It's important to me to exercise regularly	<input type="radio"/>					
I can't see why I should bother exercising	<input type="radio"/>					
I enjoy my exercise sessions	<input type="radio"/>					

Pre-event Survey For-Cause Events

Part 2, continued

* Please indicate to what extent each of the following items is true for you.

	0 (not true)	1	2 (sometimes true)	3	4 (very true)	Prefer not to respond
I exercise because others will not be pleased with me if I don't	<input type="radio"/>					
I don't see the point in exercising	<input type="radio"/>					
I feel like a failure when I haven't exercised in a while	<input type="radio"/>					
I think it is important to make the effort to exercise regularly	<input type="radio"/>					
I find exercise a pleasurable activity	<input type="radio"/>					

Pre-event Survey For-Cause Events

Part 2, continued

* Please indicate to what extent each of the following items is true for you.

	0 (not true)	1	2 (sometimes true)	3	4 (very true)	Prefer not to respond
I feel under pressure from my friends/family to exercise	<input type="radio"/>					
I get restless if I don't exercise regularly	<input type="radio"/>					
I get pleasure and satisfaction from participating in exercise	<input type="radio"/>					
I think exercising is a waste of time	<input type="radio"/>					

Pre-event Survey For-Cause Events

Part 3

The section describes various behaviors. Please report how often you would do each of the following behaviors.

* 5. Please fill in the circle that best represents your answer.

	Never	Once	More than Once	Often	Very Often	Prefer not to respond
I would give directions to someone I did not know.	<input type="radio"/>					
I would make change for someone I did not know.	<input type="radio"/>					
I would give money to a charity.	<input type="radio"/>					
I would donate clothes or goods to a charity.	<input type="radio"/>					
I would help carry belongings of someone I did not know.	<input type="radio"/>					

Pre-event Survey For-Cause Events

Part 3, continued

* Please fill in the circle that best represents your answer.

	Never	Once	More than Once	Often	Very Often	Prefer not to respond
I would delay an elevator and hold the door for someone I did not know.	<input type="radio"/>					
I would allow someone I did not know to go in front of me in line.	<input type="radio"/>					
I would point out a clerk's error in undercharging me for an item.	<input type="radio"/>					
I would let a neighbor I did not know well borrow an item of value to me.	<input type="radio"/>					
I would help a classmate who I did not know well with a homework assignment when my knowledge was greater than his or hers.	<input type="radio"/>					

Pre-event Survey For-Cause Events

Part 3, continued

* Please fill in the circle that best represents your answer.

	Never	Once	More than Once	Often	Very Often	Prefer not to respond
I would voluntarily look after a neighbor's pet or children without being paid.	<input type="radio"/>					
I would offer to help a handicapped or elderly person across the street.	<input type="radio"/>					
I would offer my seat on a train or bus to someone who was standing.	<input type="radio"/>					
I would help an acquaintance move houses.	<input type="radio"/>					

Pre-event Survey For-Cause Events

Part 4

In this section, we are interested in your physical activity routine prior to signing up for this charity 5k or walk.

* 6. Select **ONE** activity category that best describes your **USUAL PATTERN OF DAILY PHYSICAL ACTIVITIES BEFORE** you decided to take part in this 5k or walk, including activities related to house and family care, transportation, occupation, exercise and wellness, and leisure or recreational purposes.

- Inactive or little activity other than usual daily activities
- Regularly (**≥ 5 days/week**) participate in physical activities requiring low levels of exertion that result in slight increases in breathing and heart rate for **at least 10 minutes at a time**.
- Participate in aerobic exercises such as brisk walking, jogging or running, cycling, swimming, or vigorous sports at a comfortable pace or other activities requiring similar levels of exertion for **20 to 60 minutes per week**.
- Participate in aerobic exercises such as brisk walking, jogging or running at a comfortable pace, or other activities requiring similar levels of exertion for **1 to 3 hours per week**.
- Participate in aerobic exercises such as brisk walking, jogging or running at a comfortable pace, or other activities requiring similar levels of exertion for over **3 hours per week**.
- Prefer not to respond

Part 5

The next section asks you to rate how true some items are for you. Using the scale below, please indicate to what extent each of the following items is true for you where a 1 is false and 6 is true.

* 7. Please indicate to what extent each of the following items is true for you where a 1 is false and 6 is true.

	1 (false)	2	3	4	5	6 (true)	Prefer not to respond
I feel that I am capable to complete exercises that are personally challenging	<input type="radio"/>						
I feel free to exercise in my own way	<input type="radio"/>						
I feel attached to my exercise companions because they accept me for who I am	<input type="radio"/>						
I feel confident I can do even the most challenging exercises	<input type="radio"/>						
I feel free to make my own exercise program decisions	<input type="radio"/>						
I feel like I share a common bond with people who are important to me when we exercise together	<input type="radio"/>						

Part 5, continued

* Please indicate to what extent each of the following items is true for you where a 1 is false and 6 is true.

	1 (false)	2	3	4	5	6 (true)	Prefer not to respond
I feel confident in my ability to perform exercises that personally challenge me	<input type="radio"/>						
I feel like I am in charge of my exercise program decisions	<input type="radio"/>						
I feel a sense of camaraderie with my exercise companions because we exercise for the same reasons	<input type="radio"/>						
I feel capable of completing exercises that are challenging to me	<input type="radio"/>						
I feel like I have a say in choosing the exercises that I do	<input type="radio"/>						
I feel close to my exercise companions who appreciate how difficult exercise can be	<input type="radio"/>						

Pre-event Survey For-Cause Events

Part 5, continued

* Please indicate to what extent each of the following items is true for you where a 1 is false and 6 is true.

	1 (false)	2	3	4	5	6 (true)	Prefer not to respond
I feel like I am capable of doing even the most challenging exercises	<input type="radio"/>						
I feel free to choose which exercises I participate in	<input type="radio"/>						
I feel connected to the people who I interact with while we exercise together	<input type="radio"/>						
I feel good about the way I am able to complete challenging exercises	<input type="radio"/>						
I feel like I am the one who decides what exercises I do	<input type="radio"/>						
I feel like I get along well with other people who I interact with while we exercise together	<input type="radio"/>						

Pre-event Survey For-Cause Events

Part 6

In this section, we are interested in your prior involvement and planned future involvement with charity 5K or walking events.

* 8. Not counting the upcoming walk or 5K for which you have registered, have you ever participated in a charity physical activity event(s)?

- Yes No Prefer not to respond

Pre-event Survey For-Cause Events

Part 6, continued

* Please list the names of the other event(s) you have participated in: (note that the box will expand to fit your comments)

* 9. Not counting the upcoming walk or 5K for which you have registered, have you participated in a charity physical activity event(s) in the past 12 months?

Yes

Prefer not to respond

No

Pre-event Survey For-Cause Events

Part 6, continued

* Please list the names of the other event(s) you have participated in the last 12 months. (note that the box will expand to fit your comments)

* 10. How likely are you to participate in another charity physical activity event in the next 12 months?

Extremely unlikely

Unlikely

Neutral

Likely

Extremely likely

Prefer not to respond

Pre-event Survey For-Cause Events

Part 6, continued

* Please list the names of the other event(s) you plan to participate in the next 12 months. (note that the box will expand to fit your comments)

* 11. Have you previously participated in a charity physical activity event with this specific organization/cause?

Yes

No

Pre-event Survey For-Cause Events

Part 6, continued

* Please list the name(s) and year(s) of the charity physical activity events. (note that the box will expand to fit your comments)

Pre-event Survey For-Cause Events

Part 6, continued

* 12. Given that this 5k or walk event is to raise money for a charity, how important is this charity/organization/cause to you?

Not at all important	Somewhat important	Important	Very important	Prefer not to respond
<input type="radio"/>				

* 13. In what other ways have you been involved with this charity/organization/cause? Check all that apply.

- | | |
|--|--|
| <input type="checkbox"/> Survivor | <input type="checkbox"/> Employee |
| <input type="checkbox"/> Family/friend association | <input type="checkbox"/> None of the above |
| <input type="checkbox"/> Volunteer | <input type="checkbox"/> Prefer not to respond |
| <input type="checkbox"/> Financial donor | |

Other (please specify)

Pre-event Survey For-Cause Events

Part 7

For the next two questions, "exercise regularly" means to take part in activities like brisk walking for at least 150 minutes per week OR to take part in activities like jogging or running for at least 90 minutes per week OR some combination of the two.

* 14. Please rate your answer for the following statement on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*).

	1 (<i>strongly disagree</i>)	2	3	4	5	6	7 (<i>strongly agree</i>)	Prefer not to respond
I plan to exercise regularly over the next week.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part 8

In this final section, we are interested in some basic demographic information.

* 15. What is your gender?

- Male Prefer not to respond
 Female

* 16. What is your age in years? (if you prefer not to respond, please type that in the box)

* 17. Are you Hispanic, Latino/a, or Spanish origin?

- Yes Prefer not to respond
 No

* 18. Which one or more of the following would you say is your race?

- White Pacific Islander
 Black or African American Other
 American Indian or Alaska Native Prefer not to respond
 Asian

* 19. Are you...?

- Married Never married
 Divorced A member of an unmarried couple
 Widowed Prefer not to respond
 Separated

* 20. What is the highest grade or year of school you completed?

- Never attended school or only attended kindergarten College 1 to 3 years (some college or technical school)
 Grades 1 through 8 (elementary) College 4 years or more (college graduate)
 Grades 9 through 11 (some high school) Prefer not to respond
 Grade 12 or GED (high school graduate)

* 21. What is the zip code where you currently live? (if you prefer not to respond, please type that in the box)

* 22. Are you currently...?

- | | |
|--|---|
| <input type="radio"/> Employed for wages | <input type="radio"/> A student |
| <input type="radio"/> Self-employed | <input type="radio"/> Retired |
| <input type="radio"/> Out of work for 1 year or more | <input type="radio"/> Unable to work |
| <input type="radio"/> Out of work for less than 1 year | <input type="radio"/> Prefer not to respond |
| <input type="radio"/> A homemaker | |

* 23. How many children less than 17 years of age live in your household? (if you prefer not to respond, please type that in the box)

* 24. Is your annual household income from all sources

- | | |
|--|---|
| <input type="radio"/> Less than \$10,000 | <input type="radio"/> Less than \$50,000 |
| <input type="radio"/> Less than \$15,000 | <input type="radio"/> Less than \$75,000 |
| <input type="radio"/> Less than \$20,000 | <input type="radio"/> \$75,000 or more |
| <input type="radio"/> Less than \$25,000 | <input type="radio"/> Prefer not to respond |
| <input type="radio"/> Less than \$35,000 | |

* 25. About how much do you weigh without shoes? *Please answer in pounds.* (if you prefer not to respond, please type that in the box)

* 26. About how tall are you without shoes? (if you prefer not to respond, please type that in the box)

Feet

Inches

* 27. To your knowledge, are you now pregnant?

- | | |
|---------------------------|---|
| <input type="radio"/> Yes | <input type="radio"/> Don't know/not sure |
| <input type="radio"/> No | <input type="radio"/> Prefer not to respond |

23

Thank you for completing the pre-event survey. As a reminder, this is a two-part survey. You will receive a follow-up email to complete this survey beginning 2 weeks after completing your event. Your responses from both surveys will remain confidential. Any responses included in a summary report will not contain any personal identifying information.

In order for me to connect your responses from this pre-event survey with responses on the post-event survey and be able to use your responses in my study, please provide your email address.

* Email address (if you prefer not to respond, please type that in the box, but without your email address to send you the post-event survey, I will be unable to include your responses in my study)

* Name (if you prefer not to respond, please type that in the box)

Once you complete BOTH the pre- and post- event survey, you will be asked if you wish to enter the drawing for either a \$50 gift card to REI or a \$50 in-kind donation to be made to your event's host organization.

If you have any further questions about this study, you are welcome to contact me at bernhaj@email.sc.edu or by phone at 304-216-6146.

Post-event Survey

Post-event Survey For-Cause Events

Some time ago, you completed an online survey focused on for-cause events. You completed the survey before you took part in a walk or 5K. As part of participating in this study, you are now being asked to complete the post-event survey.

The survey should take between 15-25 minutes to complete. Participation is voluntary. There are very few risks related to participating in this study. If you are uncomfortable answering a question(s), you are free to skip it. You may stop the survey at any time. There are no consequences for not answering questions.

Upon completing the post-event survey, you will have the option to select if you would like to be entered into a drawing to receive one of ten \$50 gift cards to REI or an in-kind donation to be made on your behalf to the organization hosting your event. If selected, you can choose between the gift card or the donation.

If you have any questions about this study, please contact me at 304-216-6146 or bernhaj@email.sc.edu. You may also contact my faculty mentor, Dr. Sara Wilcox, at 803-777-8141 or wilcox@mailbox.sc.edu. You can also contact the Office of Research Compliance at the University of South Carolina at 803-777-7095 if you have any concerns.

Please keep this page for future reference. If you agree to take part in this study, please answer "yes" to the following question to start answering questions.

* After having read more about the study, do you wish to participate? If you select "Yes," you are giving your consent to take part in the study.

Yes

No

Post-event Survey For-Cause Events

Part 1

We are interested in the reasons underlying peoples' decisions to engage, or not engage in physical exercise. Using the scale below, please indicate to what extent each of the following items is true for you.

* 1. Please indicate to what extent each of the following items is true for you.

	0 (not true)	1	2 (sometimes true)	3	4 (very true)	Prefer not to respond
I exercise because other people say I should	<input type="radio"/>					
I feel guilty when I don't exercise	<input type="radio"/>					
I value the benefits of exercise	<input type="radio"/>					
I exercise because it's fun	<input type="radio"/>					
I don't see why I should have to exercise	<input type="radio"/>					

Post-event Survey For-Cause Events

Part 1, continued

* Please indicate to what extent each of the following items is true for you.

	0 (not true)	1	2 (sometimes true)	3	4 (very true)	Prefer not to respond
I take part in exercise because my friends/family/partner say I should	<input type="radio"/>					
I feel ashamed when I miss an exercise session	<input type="radio"/>					
It's important to me to exercise regularly	<input type="radio"/>					
I can't see why I should bother exercising	<input type="radio"/>					
I enjoy my exercise sessions	<input type="radio"/>					

Post-event Survey For-Cause Events

Part 1, continued

* Please indicate to what extent each of the following items is true for you.

	0 (not true)	1	2 (sometimes true)	3	4 (very true)	Prefer not to respond
I exercise because others will not be pleased with me if I don't	<input type="radio"/>					
I don't see the point in exercising	<input type="radio"/>					
I feel like a failure when I haven't exercised in a while	<input type="radio"/>					
I think it is important to make the effort to exercise regularly	<input type="radio"/>					
I find exercise a pleasurable activity	<input type="radio"/>					

Post-event Survey For-Cause Events

Part 1, continued

* Please indicate to what extent each of the following items is true for you.

	0 (not true)	1	2 (sometimes true)	3	4 (very true)	Prefer not to respond
I feel under pressure from my friends/family to exercise	<input type="radio"/>					
I get restless if I don't exercise regularly	<input type="radio"/>					
I get pleasure and satisfaction from participating in exercise	<input type="radio"/>					
I think exercising is a waste of time	<input type="radio"/>					

Part 2

We are interested in finding out about the kinds of physical activities that people do as part of their everyday lives. The questions will ask you about the time you spent being physically active in the last 7 days. Please answer each question even if you do not consider yourself to be an active person. Please think about the activities you do at work, as part of your house and yard work, to get from place to place, and in your spare time for recreation, exercise or sport.

Think about all the **vigorous activities** that you did in the last 7 days. Vigorous physical activities refer to activities that take hard physical effort and make you breathe much harder than normal. Think only about those physical activities that you did for at least 10 minutes at a time.

* 2. During the last 7 days, on how many days did you do **vigorous** physical activities like heavy lifting, digging, aerobics, or fast bicycling?

* How much time did you usually spend doing **vigorous** physical activities on one of those days?

hours per day OR

minutes per day

Part 2, continued

Think about all the **moderate activities** that you did in the last 7 days. Moderate activities refer to activities that take moderate physical effort and make you breathe somewhat harder than normal. Think only about those physical activities that you did for at least 10 minutes at a time.

* 3. During the last 7 days, on how many days did you do **moderate** physical activities like carrying light loads, bicycling at a regular pace, or doubles tennis? Do not include walking.

* How much time did you usually spend doing **moderate** physical activities on one of those days?

hours per day OR

minutes per day

Post-event Survey For-Cause Events

Part 2, continued

Think about the time you spent walking in the last 7 days. This includes at work and at home, walking to travel from place to place, and any other walking that you have done solely for recreation, sport, exercise, or leisure.

4. During the last 7 days, on how many days did you walk for at least 10 minutes at a time?

* How much time did you usually spend walking on one of those days?

hours per day OR

minutes per day

Post-event Survey For-Cause Events

Part 2, continued

The last question is about the time you spent sitting on weekdays during the last 7 days. Include time spent at work, at home, while doing course work and during leisure time. This may include time spent sitting at a desk, visiting friends, reading, or sitting or lying down to watch television.

* 5. How much time did you usually spend sitting on one of those days?

hours per day OR

minutes per day

Part 3

The next section asks you to rate how true some items are for you. Using the scale below, please indicate to what extent each of the following items is true for you where a 1 is false and 6 is true.

* 6. Please indicate to what extent each of the following items is true for you where a 1 is false and 6 is true.

	1	2	3	4	5	6 (true)	Prefer not to respond
I feel that I am capable to complete exercises that are personally challenging	<input type="radio"/>						
I feel free to exercise in my own way	<input type="radio"/>						
I feel attached to my exercise companions because they accept me for who I am	<input type="radio"/>						
I feel confident I can do even the most challenging exercises	<input type="radio"/>						
I feel free to make my own exercise program decisions	<input type="radio"/>						
I feel like I share a common bond with people who are important to me when we exercise together	<input type="radio"/>						

Post-event Survey For-Cause Events

Part 3, continued

* Please indicate to what extent each of the following items is true for you where a 1 is false and 6 is true.

	1 (false)	2	3	4	5	6 (true)	Prefer not to respond
I feel confident in my ability to perform exercises that personally challenge me	<input type="radio"/>						
I feel like I am in charge of my exercise program decisions	<input type="radio"/>						
I feel a sense of camaraderie with my exercise companions because we exercise for the same reasons	<input type="radio"/>						
I feel capable of completing exercises that are challenging to me	<input type="radio"/>						
I feel like I have a say in choosing the exercises that I do	<input type="radio"/>						
I feel close to my exercise companions who appreciate how difficult exercise can be	<input type="radio"/>						

Post-event Survey For-Cause Events

Part 3, continued

* Please indicate to what extent each of the following items is true for you where a 1 is false and 6 is true.

	1 (false)	2	3	4	5	6 (true)	Prefer not to respond
I feel like I am capable of doing even the most challenging exercises	<input type="radio"/>						
I feel free to choose which exercises I participate in	<input type="radio"/>						
I feel connected to the people who I interact with while we exercise together	<input type="radio"/>						
I feel good about the way I am able to complete challenging exercises	<input type="radio"/>						
I feel like I am the one who decides what exercises I do	<input type="radio"/>						
I feel like I get along well with other people who I interact with while we exercise together	<input type="radio"/>						

Post-event Survey For-Cause Events

Part 4

In this section, we are interested in your prior involvement and planned future involvement with charity 5k or walking events.

* 7. How likely are you to participate in another charity physical activity event in the next 12 months?

extremely unlikely	unlikely	neutral	likely	extremely likely	Prefer not to respond
<input type="radio"/>					

Post-event Survey For-Cause Events

Part 4, continued

* Please list the names of the other event(s) you plan to participate in: (note that the box will expand to fit your comments)

* Please describe further your reasoning for participating or not participating in a future charity physical activity event. (note that the box will expand to fit your comments)

Post-event Survey For-Cause Events

Part 4, continued

* 8. Given that this 5k or walk event is to raise money for a charity, how important is this charity/organization/cause to you?

Not at all important Somewhat important Important Very important Prefer not to respond

* 9. In what other ways have you been involved with this charity/organization/cause? Check all that apply.

- | | |
|--|--|
| <input type="checkbox"/> Survivor | <input type="checkbox"/> Employee |
| <input type="checkbox"/> Family/friend association | <input type="checkbox"/> None of the above |
| <input type="checkbox"/> Volunteer | <input type="checkbox"/> Prefer not to respond |
| <input type="checkbox"/> Financial donor | |

Other (please specify)

Post-event Survey For-Cause Events

Part 5

For the next two questions, "exercise regularly" means to take part in activities like brisk walking for at least 150 minutes per week OR to take part in activities like jogging or running for at least 90 minutes per week OR some combination of the two.

* 10. Please rate your answer for the following statement on a scale of 1 (strongly disagree) to 7 (strongly agree).

	1 (strongly disagree)	2	3	4	5	6	7 (strongly agree)	Prefer not to respond
I plan to exercise regularly over the next week.	<input type="radio"/>							

Post-event Survey For-Cause Events

Part 6

In these final two questions, we are interested in some basic demographic information.

* 11. What is your age in years? (if you prefer not to respond, please type that in the box)

* 12. About how much do you weight without shoes? *Please answer in pounds.* (if you prefer not to respond, please type that in the box)

Post-event Survey For-Cause Events

Thank you for completing the post event survey. Because you have completed both surveys, you now have the option to enter in a drawing for one of ten \$50 gift cards to REI or to have an in-kind donation made to your organization. As a reminder, all of your responses from the pre-event survey and the post-event survey will be kept confidential and not contain any personal identifying information.

Thank you for completing the pre- and post-event survey. You may be contacted for an additional follow-up interview. If you are selected and complete the interview, you will receive the option of a \$20 gift card to REI or a \$20 in-kind donation made to the organization of your event.

If you have any further questions about this study, you are welcome to contact me at bernhaj@email.sc.edu or by phone at 304-216-6146.

* Would you like to be entered into the drawing for either a \$50 gift card or donation to the organization hosting your event?

Yes

No

* Name (if you prefer not to respond, please type that in the box, but I will not be able to enter you into the drawing)

APPENDIX F

QUALITATIVE INTERVIEW GUIDE

Hello, my name is John Bernhart and I am a graduate student at the University of South Carolina. I am conducting a project to learn about the impact of for-cause events. As a participant in the [event], I am inviting you to participate in this study to help me learn about the impact of these types of events. First, I would like to thank you for completing the pre- and post-event surveys.

Next, before we get started, I would like to use an audio recorder so that I can refer back to our conversation when I write my report. Do you mind if I record this interview?

a . (NO) Thank you!

b . (YES) OK. I understand. This is a requirement to participate in the study, so you will not be able to participate in the interview today. Thank you for your time.

I am hoping to learn more about your motivations and experiences related to the event as well as your physical activity routines. There are no right or wrong answers, so please feel free to share openly and honestly. Your participation will benefit others like you and may help organizations continue to promote their cause and host their events.

If you agree to participate in the interview, you will be asked questions related to motivations, experiences, and more. The interview will last between 25-50 minutes and I will be taking notes throughout the interview. I want to assure you that all your responses will be confidential and only used for research purposes. If any question makes you uncomfortable, feel free to not respond. Your participation is voluntary and you may refuse to answer or skip any question. Additionally, you may stop the interview at any time.

Upon completing the interview, you will have the option of receiving a \$20 gift card to REI or a \$20 in-kind donation to the [causes supported by the event].

Do you have any questions for me before we get started?

Interviewee ID: _____ **Date/Time:** _____

First, I would like to ask what motivated or influenced your decision to participate in the [EVENT]:

6. Can you describe how you heard about the event? Had you previously heard about the organization? How do you normally learn about these types of events?
7. What excited you most about participating?
8. What worried you most about participating?
9. Did you sign up to participate alone, or with a friend, or group of friends?
 - Why? How important was it for you to have friends present at the event?
10. How did your personal beliefs influence your decision to participate in this event?

Next, I'd like to ask more about how the role of the mission of the organization hosting your event affected your decision to participate:

7. Can you describe of the mission of the organizations in your own words?
 - What key words are meaningful to you?
8. What do these organizations mean to you?
9. Apart from the 5k, how have you been affected or involved with any of these organizations?
10. How do you normally support the other charities?
11. Why did you choose to support the foundation through physical activity?
 - What did participating in this event mean to you?
12. What connections do you see between physical activity and the cause/organization?

Next, I'd like to ask more about your perception towards physical activity and the _____ (event).

7. **Before** the event, can you tell me about your physical activity routine? (e.g., activities, group/solo, frequency, duration, etc.)
 - When did you begin training for the event?
8. What does being physically active mean to you? Can you tell me why you are/are not physically active?

- Has this changed since participating in the [EVENT]?
9. What was the most challenging part of the event and how were you able to overcome it?
 - Can you describe a moment when you desired to drop out of the race before finishing?
 - What or who helped you finish the event?
 10. In what ways was the event encouraging and supporting of you being physically active?
 11. Can you describe what it felt like to cross the finish line and complete the 5k/walk?
 12. How do you feel having completed the 5k with this organization compared to completing a 5k/walk on your own?

Now, I'd like to ask more about how your participation has impacted you.

7. How do you plan to continue supporting these organizations moving forward?
8. **After** having participated, can you tell me about your **current** physical activity routine? (e.g., activities, group/solo, frequency, duration, etc.)
9. In what ways do you feel your experience completing this event has impacted you? (e.g., career goals, education, service, etc.)
 - In what ways do you think participating in these types of events impacts people?
10. What are your goals/plans for physical activity and/or participating in a future charity physical activity event?
11. What suggestions would you have for somebody interested in participating in a charity?
12. What more, if anything, should I know about your experiences surrounding this event?

I want to thank you for participating in this study and remind you that your responses have been recorded. Your responses will be kept confidential and we will remove all identifying information. If you have any further questions about the study, please contact me at bernhaj@email.sc.edu or by phone at 304-216-6146.

Would you like to receive a \$20 gift card to REI or for a \$20 donation?