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Title: Subjective well-being and social experiences with sport mega-events: The case of Rio

Abstract

Sport mega-events are often supported for their supposed ability to achieve positive social outcomes for the host country residents. However, empirical evidence regarding the effect of sport mega-events on subjective well-being is ambiguous, and therefore there remain questions regarding the effectiveness of sport mega-events in producing positive subjective well-being outcomes, to what extent, and how these outcomes may occur. The purpose of this chapter is to outline an example of how subjective well-being and social experiences have been addressed in relation to a sport mega-event, and to offer considerations for future research in this area. The study presented here was conducted via questionnaire during (n=402), and after (n=401) the Rio 2016 Olympic Games and investigated if social impact experiences from the event could explain variance in subjective well-being amongst host country residents. During the event, we found that social impact experiences were not predictors of subjective well-being. Results following the event demonstrated similar findings. These results indicate that social experiences promoted by hosting Rio 2016 did not change the subjective well-being of host country residents. The results are consistent with existing literature on social impacts of sport events, however are not consistent with existing literature regarding sport event hosting and subjective well-being. We suggest avenues for future research to further investigate subjective well-being and sport events in regard to possible underlying mechanisms of subjective well-being, the longevity of sport mega-event effects on host residents, as well as possible contextual and theoretical advancements in this line of inquiry.

Introduction

Sport mega-events (i.e. the Olympic and Paralympic Games [OPG], FIFA World Cup) have a global reach and scope, and often serve political ambitions (Getz, 2012). Such events are sought after and bid for under the auspices that they create positive economic, social, and political outcomes for the host nation and city (McCloy, 2009; McCloy & Thibault, 2013). However, such outcomes are often not realized, and the costs of hosting (Preuss, Andreff & Weitzmann, 2019) have been found to outweigh benefits (Késenne, 2005; 2012; Müller, 2015).

Sport mega-event supporters in particular have been critiqued for sport mega-events' inability to meet economic goals while the elite and high performance sport systems benefit from such events and the host residents are left to contribute tax money to the venture. Given the lack of economic viability of sport mega events, there has been a shift away from focusing on economic impact towards social impact when considering the benefits such events may have for a community. This is particularly important due to host community tax contributions to publicly funded events, as these individuals deserve to receive a positive return on investment (Késenne, 2005; 2012). As such, scholars have begun investigating the notion of social impact of events more closely and have turned to the concept of a social return on investment (SROI: Arvidson *et al.*, 2013) from sport events for host residents (Taks & Rocha, 2017). Social return on investment focuses on a much broader notion of value, over and above simply economic terms (Nicholls *et al.*, 2012; Davies *et al.*, 2019). Because of their financial contribution to sport events as taxpayers, residents deserve a positive SROI from sport events.

While scholars have investigated a wide variety of social impacts in the context of sport events, subjective well-being has been investigated from the perspective of sport economists as a useful measure to determine SROI of sport mega-events (e.g. Kavetsos & Szymanski, 2010).

Subjective well-being is an individual's own evaluation of their quality of life (Diener, 2000). According to Diener (2000), subjective well-being involves four components: life satisfaction, satisfaction with important domains, positive affect, and low negative affect. Scholars have investigated each of these, as well as other measures in relation to subjective well-being across contexts (Dolan, Peasgood & White, 2008).

Meanwhile, public officials have become increasingly interested in how to improve the general public's well-being, and scholars have also called for the use of indicators and measures of well-being as opposed to purely economic measures for decision making (Diener & Seligman, 2004). This broader call aligns well with sport event research, where scholars have been increasingly interested in the notion of a SROI. Festivals and events have been seen as ways to contribute positively to a community's subjective well-being (Kavetsos & Szymanski, 2010; Yolal *et al.*, 2016), however there remains ambiguous empirical evidence to support this claim, particularly in the context of sport events (Taks *et al.*, 2016; Taks & Rocha, 2017). While there is some evidence to suggest that hosting a sport event does affect happiness and subjective well-being (e.g. Maennig & Porsche, 2008; Kavetsos & Szymanski, 2010), there remain questions regarding the effectiveness of sport mega-events in producing positive subjective well-being outcomes, to what extent, and how these outcomes may occur.

Therefore, the purpose of this chapter is to outline an example of how subjective well-being and social experiences have been addressed in relation to a sport mega-event, and to offer considerations for future research in this area. The chapter will begin with an overview of existing well-being literature in the sport (event) context, followed by a detailed case where subjective

well-being and social experiences were studied in the context of the Rio 2016 Olympic Games¹. We will then discuss considerations and future directions for this burgeoning line of inquiry.

Literature review

Theoretical background: Conceptualizing and measuring well-being

Well-being is a well-researched concept in both psychology and economic domains (Dolan *et al.*, 2008). Subjective well-being, psychological well-being, and social well-being are distinct concepts addressing various aspects of human experiences (Keyes, 1998; Chen *et al.*, 2013). Psychological, or eudemonic, well-being refers to the fulfillment of human potential and meaning (Chen *et al.*, 2013), whereas subjective, or hedonic, well-being refers to an individual's evaluation of their own quality of life (Diener, 2000). Further, social well-being refers to an individual's perception of their contribution to, and participation in, society (Keyes, 1998). For the purposes of this chapter, we will focus on subjective well-being.

Despite a wide array of literature in the area of well-being, there is little consensus regarding components of subjective well-being and scales with which to measure each of them (Dolan *et al.*, 2008). For Diener (2000), subjective well-being involves four components; life satisfaction, satisfaction with important life domains, positive affect, and low negative affect. In sport research, subjective well-being and happiness are at times used synonymously, or happiness is used as a proxy for life satisfaction or subjective well-being (e.g. Hallman, Breuer & Kühnreich, 2013), while other scholars have considered happiness as just one aspect of subjective well-being (Seligman, 2010).

¹ We recognize that in general terms, the Olympic Games should be referred to as the Olympic and Paralympic Games; however, the study reported here did not include the Paralympic component of the Games; hence, we refer to the Games or Olympic Games in the remainder of the text.

Given the various ways subjective well-being has been conceptualized, there are multiple approaches for measuring subjective well-being. One approach involves a single-item measure of happiness, whereby the participant is asked to rate their general feeling of happiness on a scale. The other approach involves a holistic approach to measuring subjective well-being, thereby reflecting the notion that subjective well-being comprises of various components (Diener, 2000; Diener & Seligman, 2004). While there is not one preferred way to do so nor one accepted scale (see, for example Positive and Negative Affect Scale [PANAS], Satisfaction With Life Scale [SWLS]), many scholars suggest that a holistic approach to measuring well-being is more suitable for understanding the concept than a single-item measure (e.g. Diener & Seligman, 2004; Seligman, 2010).

In the context of sport studies, sport economists often rely on a single-item measure to investigate happiness, life satisfaction or subjective well-being through large-scale surveys (e.g. Kavetsos & Szymanski, 2010; Dolan *et al.*, 2019). While this approach has offered significant insight into the relationship between sport and well-being, a holistic approach to measuring the concept should offer better understanding of the complexities of subjective well-being (Littlejohn *et al.*, 2016). Recently, sport event scholars have adopted a holistic approach to studying the concept by drawing upon Diener's (2000) conceptualization (for example, the Sport Event Residents' Happiness Scale; Littlejohn *et al.*, 2016). This holistic approach of measuring subjective well-being assumes that sport event experience might improve the subjective well-being by different means. Event experience is complex and may take on various meanings in one's life (Getz, 2012; Getz & Page, 2016). For example, attending elite sport competitions can help people to increase positive (e.g. enjoyment) and decrease negative (e.g. frustration) life affects. Volunteering at events can make them happy, while simply talking with friends about sport events

can improve one's life satisfaction. Therefore, if we want to further advance the study of subjective well-being in association with sport event experiences, a holistic approach of the concept is necessary.

Subjective well-being, sport participation, and elite sport success

The link between sport/physical activity participation and subjective well-being is well documented (e.g. Downward & Rasciute, 2011; Sato, Jordan & Funk, 2015; Downward, Hallman & Rasciute, 2018; Kim & James, 2019). Downward and Rasciute (2011) used cross-sectional survey data collected from a national survey in the United Kingdom to investigate the effect of sport participation on subjective well-being. The survey measured subjective well-being based on a single item happiness question, where individuals were asked to rate their happiness on a scale from 1 to 10. The authors found that overall, participating in sport and physical activity had a positive effect on subjective well-being as measured this way, and that this effect was stronger amongst individuals who participated in sports with a social interaction component (Downward & Rasciute, 2011). Similarly, a study completed by Downward *et al.* (2018) investigating sport, health, social capital, and subjective well-being found that sport led to subjective well-being but was mediated through health. Further, the authors found that there was no relationship between social capital and sport (Downward *et al.*, 2018). Some work has found that depending on the type and frequency of sport participation, individuals may experience diminishing returns on subjective well-being (Rasciute & Downward, 2010). However, Panza *et al.* (2017) found no evidence that suggests subjective well-being may decrease with increased physical activity intensity. Their results supported other findings that indicate a positive relationship between physical activity and subjective well-being (Panza *et al.*, 2017).

Governments and policymakers have reasons to promote sport and physical activity as mechanisms to increase the health and well-being of their citizens, and often justify their financial contribution to sport as such (Grix & Carmichael, 2012). Similarly, governments and policymakers have promoted the hosting of sport events as a way to increase sport participation. Based on existing research outlined above, this could theoretically contribute to the well-being of the population. However, the notion that sport participation increases simply due to hosting a sport event has been well-researched and no effects have been found (Weed *et al.*, 2015; Mackintosh, Darko & May-Wilkins, 2016). Therefore, the link between sport events, sport participation, and well-being is not clear.

Scholars have investigated the relationship between elite sporting success and subjective well-being, based on the assumption of policy makers that elite sport success increases national pride, happiness, and well-being (Grix & Carmichael, 2012; Hallman *et al.*, 2012). Pawlowski, Downward, and Rasciute (2013) studied the link between national pride following elite sporting success and well-being. In their study, Pawlowski and colleagues (2013) found no support for the notion that national pride following elite success contributes to well-being, confirming the findings of other studies that did not find a link between elite success and subjective well-being (e.g. Kavetsos & Szymanski, 2010; Dolan *et al.*, 2019). Hallman, Breuer, and Kuhnreich (2012) also investigated subjective well-being and national athletic success in Germany. These authors found that interest in sports and sport participation predicted happiness when German athletes succeeded. However, it is not possible to determine causality because it is known that sport participation and physical activity influence subjective well-being positively. Therefore, the effect may not be due to the athletic success, it may rather be simply that those who are more physically active and involved in sport are happier in general (Hallman *et al.*, 2012).

Subjective well-being, social experiences, and sport events

Governments and policymakers claim that sport events can be an avenue to increase sport participation and national pride; both of which governments have assumed to improve well-being (Grix & Carmichael, 2012). However, as discussed above, sport events have not been found to increase sport participation (Weed *et al.*, 2015), nor has national pride from elite sport success been found to significantly affect subjective well-being (Pawlowski *et al.*, 2013). Social impact of sport events remains a salient area of inquiry due to the lack of positive economic impact observed from such events (Késenne, 2005; 2012). Clearly, positive social experiences from events may be considered as a positive SROI (Davies *et al.*, 2019).

Research regarding social impacts of sport events has included research on social cohesion, social capital, national pride, and sport participation, amongst other topics (e.g. Karadakis & Kaplanidou, 2012; Heere *et al.*, 2013; Gibson *et al.*, 2014). In the context of sport mega-events, scholars have found some evidence for positive social impacts in the short-term, with limited long-lasting effects (Gibson *et al.*, 2014; Schlegel, Pfitzner & Koenigstorfer, 2017), however results have been ambiguous at best. Research has also investigated, albeit not as often, the potential for sport events to induce negative social impacts such as disturbance of daily life (e.g. traffic, noise, construction sites) and safety concerns (Deery & Jago, 2010; Balduck, Maes & Buelens, 2011). Further, most research regarding social impacts of sport events has focused on resident perceptions of social impacts, and individuals' attitudes towards event impacts. That is, researchers have asked individuals how they feel about certain impacts, rather than asking about their individual lived experiences. Empirical evidence based on actual lived social experiences has seldom been completed and remains an area for further investigation. Similar to social impacts of sport events,

a few studies have investigated subjective well-being as a possible lasting social effect following the event (Taks *et al.*, 2016; Taks & Rocha, 2017).

There is some research to suggest that hosting sport events increases subjective well-being in the host city and country at least during the event (Maennig & Porsche, 2008; Kavetsos & Szymanski, 2010). Maennig and Porsche (2008) asserted that the feel-good effect was the most detectable outcome of the 2006 FIFA World Cup. Kavetsos and Szymanski (2010) investigated the effect of hosting sport events and national team success on overall life satisfaction. The authors conceptualized life satisfaction as synonymous with well-being and the “feel-good factor”. They used data from 12 different countries gathered via the Eurobarometer, which uses a single measure of life satisfaction stating, “On the whole are you very satisfied, fairly satisfied, not very satisfied, or not at all satisfied with the life you lead?” (Kavetsos & Szymanski, 2010, p. 161). The authors found that the feel-good factor related to hosting football events was significant, however the effect of national team success on feel-good factor was not significant. Further, the authors observed no long-term (i.e. legacy) effects of the feel-good factor. Similarly, Hallman *et al.* (2013) suggested that hosting an event may be more important to subjective well-being than success at the event itself. Subjective well-being was measured with one item “I am happy if German athletes win many medals at Olympic Games or World Championships” with 1 = yes, and 0 = no; Hallman *et al.*, 2013, p. 230). Offering further support to these early studies, Dolan *et al.* (2019) investigated the effect that London 2012 had on subjective well-being of residents using a quasi-experimental design. Dolan *et al.* (2019) primarily investigated subjective well-being using a single-item measure for life satisfaction (e.g., “Overall, how satisfied are you with your life these days?”, p. 4), however also asked respondents to rate their happiness, anxiety, and eudemonia (e.g., “Overall, how happy did you feel yesterday?”, p. 4) using single-item measures. Responses are measured on

11-point Likert scales. The researchers found that there was an increase in subjective well-being during the event, however again no long-term effects were detected.

While offering a worthwhile picture of subjective well-being and sport mega-events, the aforementioned studies have relied on single-item measures of happiness to determine whether the sport event impacted subjective well-being. Littlejohn *et al.* (2016) built a scale to measure holistic subjective well-being according to Diener's (2000) holistic conceptualization. This scale was then used by Taks and colleagues (2016) to empirically investigate the happiness of non-event attendees in the context of two non-mega sport events. The authors found that awareness of the sport events indicated higher happiness, however the data was collected during one time point and therefore increased or decreased levels of happiness could not be determined due to the lack of baseline (pre-event) data. Filo and Coghlan (2016) also examined sport event experiences using a holistic conceptualization of subjective well-being. Filo and Coghlan (2016) used Seligman's (2011, 2018) PERMA framework, which involves five components of well-being; positive emotion, engagement, relationships, meaning, and accomplishment. The authors found that there was evidence of each of these five PERMA domains within individuals' experiences with charity sport events. Using qualitative data, the authors found that the participatory nature of the charity sport event, as well as the charitable aspect, amongst other features of this context contributed to each PERMA domain being evident (Filo & Coghlan, 2016). The authors called for future research using PERMA study for various event contexts to determine the link between these aspects of well-being and sport events.

Further advancing understanding of sport events and subjective well-being, scholars have begun to investigate the underlying mechanisms related to the observed increase in subjective well-being during events. In their paper, Maennig and Porsche (2008) suggested that factors such as

avoiding friction (e.g., avoiding traffic and noise), the weather, and event atmosphere may have played a role in the feel-good effect resulting from the 2006 FIFA World Cup. Schlegel *et al.* (2017) investigated the effect of perceived atmosphere on subjective well-being both before and during the 2014 FIFA World Cup in Rio de Janeiro. The authors found that in general, subjective well-being was higher during the event than before the event. Further, they found a positive and significant relationship between perceived atmosphere and subjective well-being during the event. These findings offer support for the potential of liminality (Chalip, 2006) related to sport events for creating a space in which individuals may experience increased subjective well-being. Schlegel *et al.*'s (2017) study was a starting point to fill a gap regarding the potential underlying mechanisms for subjective well-being arising from sport events. To advance understanding and learn more about the potential of sport events to influence subjective well-being and offer a SROI for taxpayers, further research regarding the underlying mechanisms related to subjective well-being, such as social experiences, is warranted as well as approaching subjective well-being more broadly.

Sport mega-events and subjective well-being: the case of Rio 2016

As demonstrated above, results from existing research have not been consistent, and therefore we cannot conclude whether sport events improve subjective well-being, how long such outcomes may last, or through which mechanisms these outcomes are possible. Further, no research to date has investigated social impact experiences as potential mechanisms for subjective well-being. As such, some advancements can be made in the pursuit of such answers. In the context of sport events and social impacts, investigating subjective well-being in relation to event experiences offers some additional insight into the effect events may have on host country

residents. To begin to fill this identified gap in the sport event and subjective well-being literature, we conducted a study during the 2016 Olympic Games, hosted by Rio de Janeiro, Brazil in August 2016 (abbreviated as Rio 2016 hereafter). For additional contextual information regarding Rio 2016, we refer to Rocha's (2020) work which explained in detail the complex socioeconomic environment within which Rio 2016 was bid for and ultimately hosted. For the sake of the discussion in this chapter, we investigated if social impact experiences from Rio 2016 could explain some variance in subjective well-being of residents, and if these effects are sustained over time, comparing measures taken during and six months after the Games.

Methods

We used two convenience samples of Brazilians, who had not attended Rio 2016 in person, but reported high involvement with the Games via media. We investigated different samples during ($n = 402$) and six months after ($n = 401$) the Games. Although different, the samples have some common characteristics. Respondents were young adults ($M_{\text{during}} = 27.9$; $SD = 6.0$; $M_{\text{after}} = 29.4$; $SD = 6.1$), all respondents had at least a bachelor's degree, and only 23% of the sample, in both times, expressed that paying the bills was difficult. The number of female respondents was close (45% during; 53% after the Games). It is important to note that a limitation of this sample is that it is not representative of the Brazilian population in regard to education and economic demographics.

We investigated five different manifestations of social impact experiences: social cohesion (four items from Taks & Rocha, 2017; e.g., "I create new friendships/relationships in the community because of the Olympic Games"), community spirit (three items adapted from Gibson *et al.*, 2014; e.g., "I feel proud that the Rio is hosting the Olympic Games"), feelings of (un)safety (three items adapted from Kim *et al.*, 2015; e.g., "Rio 2016 makes me feel unsafe because of

potential terrorist attacks”), community involvement (three items adapted from Peterson, Speer & McMillan, 2008; e.g., “I discussed the organization of the Olympic Games with other people in the community”), and sport participation (three items from Taks & Rocha, 2017; e.g., “My interest in sport and/or physical activity has increased because of the Olympic Games”).

Subjective well-being was represented by the average of three indicators: happiness (one item adapted from Kavetsos & Szymanski, 2010), life satisfaction (three items from Connolly, 2013) and life affects (eight items from Diener, 2000). Happiness was measured by asking respondents: “Taking all aspects of your life into account, please select your current overall level of happiness”, measured on a 6-point Likert scale (1 – not happy at all to 6 – very happy). Life satisfaction was measured by the average of three items (Connolly, 2013), where respondents were asked to rate their current level of satisfaction with three domains – life at home, health, and occupation – based on a 4-point Likert scale (1 – not at all satisfied to 4 – very satisfied). Life affects were measured by the average of three positive items (happy, friendly, enjoying myself) and five reversed negative items (frustrated, depressed, hassled, worried, tired; Diener, 2000), where respondents were asked to answer the question “How have you generally felt during the past week?”, based on a 7-point Likert scale (0 – not at all to 6 – very much).

We ran two multiple regression analyses, one for data during Rio 2016 and another for data after Rio 2016 to check if social impact experiences (independent variables) could explain subjective well-being (dependent variable). We ran independent sample *t*-tests to compare social impact experiences and well-being during and six months after the Games.

Results

Regression equation for data *during* Rio 2016 was significant ($F = 2.563$; $p = 0.27$). However, the variance explained in subjective well-being was extremely small (Adj $R^2 = 0.020$).

Moreover, none of the manifestations of social impact experiences were significant predictors of subjective well-being: social cohesion ($b = -0.003$; $t = -0.095$; $p = 0.924$), community spirit ($b = 0.033$; $t = 1.145$; $p = 0.254$), feelings of (un)safety ($b = -0.040$; $t = -1.873$; $p = 0.062$), community involvement ($b = 0.040$; $t = 1.683$; $p = 0.093$) and sport participation ($b = 0.003$; $t = 0.140$; $p = 0.889$).

Regression equation for data *after* Rio 2016 confirmed the result during the Games. The equation was significant ($F = 2.626$; $p = 0.24$), once more, with an extremely low percentage of variance explained in subjective well-being by the combination of all social impact experiences (Adj $R^2 = 0.021$). None of the manifestations of social impact experiences were significant predictors of subjective well-being: social cohesion ($b = -0.029$; $t = -0.740$; $p = 0.460$), community spirit ($b = 0.073$; $t = 2.397$; $p = 0.017$), feelings of (un)safety ($b = -0.018$; $t = -0.893$; $p = 0.372$), community involvement ($b = 0.013$; $t = 0.466$; $p = 0.642$) and sport participation ($b = 0.009$; $t = 0.360$; $p = 0.719$). To control for multiple comparisons, we considered an alpha error of 0.01.

Results of the t -tests show that all manifestations of social impact experiences had lower values six months after Rio 2016: social cohesion ($\Delta M = 0.870$; $t_{755} = 8.095$; $p < 0.001$), community spirit ($\Delta M = 1.437$; $t_{755} = 12.492$; $p < 0.001$), feelings of (un)safety ($\Delta M = 0.309$; $t_{755} = 2.604$; $p = 0.009$), community involvement ($\Delta M = 1.192$; $t_{755} = 10.097$; $p < 0.001$) and sport participation ($\Delta M = 0.905$; $t_{755} = 6.502$; $p < 0.001$). However, subjective well-being did not change significantly six months after the Games ($\Delta M = 0.016$; $t_{801} = 0.343$; $p = 0.732$) (Table 1).

Social impact experiences from Rio 2016 do not explain variances in subjective well-being, either during nor after Rio 2016. As expected, social impact experiences decreased after the Games. However, the values of subjective well-being did not change. These results seem to indicate that social impacts experiences promoted by hosting Rio 2016 did not change the

subjective well-being of host country residents, and subjective well-being was not influenced by Rio 2016.

Discussion

The social impact results from this study are in line with results reported elsewhere, where lasting effects of social impacts from sport events were not observed (e.g. Maennig & Porsche, 2008; Kavetsos & Szymanski, 2010), or limited long-term effects were sustained following the event (Gibson *et al.*, 2014). The results regarding subjective well-being are not consistent with previous literature regarding hosting sport events and happiness, where short-term effects were observed (e.g. Kavetsos & Szymanski, 2010). Results of the current study show that subjective well-being was not affected by social experiences with the Olympic Games in the context of Rio 2016. We understand this is unique because previous studies have not investigated social impact experiences as possible underlying mechanisms of social well-being. Some studies have assumed but have not tested effects of social experiences (e.g. Gibson *et al.*, 2014). This study extends the existing research that demonstrates there is no lasting effect following a sport mega-event on subjective well-being. We found that evaluations of subjective well-being did not change from the time of the Games (where it is supposed to be at its peak; Kavetsos & Szymanski, 2010) to six months after the Games. Therefore, we have little support to affirm that hosting Olympic Games can change subjective well-being among non-attende host country residents.

This study provides insight into underlying mechanisms that may be associated with subjective well-being, which is an under-investigated area in relation to subjective well-being and events. The research approach places individuals' experiences with the event at the center, to test how experiences can be investigated as opposed to perceptions, as well as the value this adds to investigating SROI. However, the results from the study leave areas of additional research to be

explored and suggest that promises regarding long-term positive outcomes from sport mega-events may need to be tempered when promoting or supporting an event.

Considerations and future directions

Underlying mechanisms

Additional research in this area is still needed, particularly regarding actual lived experiences as underlying mechanisms, and how to go about leveraging those mechanisms for positive subjective well-being outcomes, particularly if host country residents are to receive a SROI. Existing work suggests that future research should focus on individuals' actual lived experiences of social impacts (Taks & Rocha, 2017) rather than on perceptions which are more commonly used in social impact studies (e.g., Balduck *et al.*, 2011; Kim *et al.*, 2015). Indeed, these perceptions of social impacts are often based on unsubstantiated opinions, guided by media framing (Sant & Mason, 2015), thus, these measures can be biased. While perceptions, whether accurate or not, may influence subjective well-being, we advocate for more work specifically dealing with individual experiences of events as a worthy avenue for future research.

Social leveraging is the notion that sport events can be used strategically to achieve certain social objectives within the host community and country (Chalip, 2006). Social leveraging involves capitalizing on liminality and *communitas* which arise from events to achieve social objectives (Chalip, 2006). Some work demonstrates the positive and significant relationship between event atmosphere and subjective well-being (see Schlegel *et al.* 2017). Additional investigation into liminality and *communitas*, how to build an atmosphere that fosters subjective well-being, as well as how to appropriately socially leverage the event for the host community would be welcome. Findings in these areas may help events capitalize on the opportunity of

positive social experiences for positive subjective well-being outcomes for both event attendees and others, however, the longevity of these effects remains questionable.

Scholars have found a positive relationship between community benefits and subjective well-being, and therefore have suggested that ensuring community benefits is an important factor for subjective well-being (Yolal *et al.*, 2016). However, according to our findings, social impact experiences did not deliver the necessary community benefits to affect subjective well-being. This notion indicates that resident involvement in event planning and event outcome management may generate more meaningful community benefits and could be a useful future avenue of further investigation in the context of sport events and subjective well-being. This supports Maennig and Porsche's (2008) discussion regarding the importance of limiting friction with the community in order to maximize the feel-good effect. Further, additional resident engagement in planning initiatives may help sport mega-event organizers better consider the cultural context in which the event is being held and therefore help to tailor strategies to the host country, and produce more appropriate outcomes (see Diener, 2000; Misener & Mason, 2006; Kavetsos & Szymanski, 2010). Thus, moving forward, researchers may want to consider addressing involvement from an event planning and management perspective as well as involvement in the event itself to investigate events' effects on subjective well-being.

Long-term effects of sport mega-events on subjective well-being

Demonstrated in the context of the case described above, as well as other empirical research on the topic (e.g. Kavetsos & Szymanski, 2010; Gibson *et al.*, 2014; Dolan *et al.*, 2019) it is clear that there are limitations of sport mega-events for creating long-term social impact. In fact, our study showed that a sport mega-event did not affect subjective well-being in the short, nor in the long term. This is in line with what Diener (2000) and scholars (e.g. Suh, Diener & Fujita, 1996;

Mochon, Norton & Ariely, 2008) suggested, albeit not in the context of events, namely that significant life events do not have a significant effect on overall subjective well-being and quality of life assessments. Diener (2000) suggested that “intense experiences are not the cornerstone of a happy life” (p. 36). This may be an explanation for the empirical evidence that currently exists regarding sport events and subjective well-being. Similarly, scholars have suggested the notion of adaptation in relation to subjective well-being. This concept refers to the tendency that people have to adapt over time to good or bad events, therefore returning to a baseline of happiness (Suh *et al.*, 1996). This phenomenon may well occur in the context sport events however has not, to our knowledge, been investigated in this way. Adaptation to intense experiences may present differently depending on how well-being is measured and conceptualized in a specific study (i.e. a single item happiness measure compared to a holistic approach) and could therefore offer a more nuanced understanding of well-being. Further investigation of adaptation has the potential to provide additional insight into why long-term effects of subjective well-being have not been observed to date.

Scholars in psychology have indeed debated whether well-being should be considered as distinct from happiness and discuss the possibility that happiness measures reflect individuals’ short-term mood as opposed to a general sense of life satisfaction (Seligman, 2010). If, in fact, happiness and well-being should be considered distinct concepts, this may be an explanation for the lack of long-term effects measured when research is conducted using a single-item happiness measure. Although here we have demonstrated the merits of a holistic approach to measuring subjective well-being (Littlejohn *et al.*, 2016), the conceptual make-up of well-being and its relationship with happiness is a larger discussion outside of the scope of this chapter. Regardless, this is worthy of further investigation in the context of sport events in the future, as the distinction

may offer more information regarding the long-term viability of a positive social effect from sport events.

We do not find an effect of sport mega-events on subjective well-being, and existing research has not determined whether or not, and under what circumstances sport mega-events could contribute to improved subjective well-being long-term, hence more research is needed. We are not advocating that effects of sport mega-events on subjective well-being exist and should last forever. For now, more research is needed to investigate if these effects exist and, if they do, how long they last. Therefore, another avenue for future studies is an investigation about the lifespan of effects of sport mega-events on subjective well-being. Knowing the existence and the lifespan of effects can help sport event organizers and host city/country policy makers to find support for hosting their events. Therefore, until some lasting effects are observed that can be attributed to sport mega-events, promises of well-being outcomes need to be tempered in public policy and messaging supporting sport mega-events, as well as justification for the use of public funding to host these types of events.

Contextual and theoretical advancements

Most research in regard to sport events and subjective well-being has been conducted in the context of sport mega-events (for notable exceptions see Littlejohn *et al.*, 2016; Taks *et al.*, 2016), therefore research in other event contexts may provide additional insight. In particular, advancing research in non-mega sport events (NMSEs) may provide further opportunity to capitalize on these underlying mechanisms, and therefore offer a promising avenue of future research. Taks *et al.* (2016) investigated an NMSEs potential to affect happiness in the host community and found that non-event attendees who were aware of the event demonstrated higher levels of happiness. However, the authors stressed that causality cannot be confirmed and these

affects may not be attributed directly to the event itself (Taks *et al.*, 2016). Further, scholars have highlighted the potential of festivals for improving subjective well-being. In Yolal *et al.*'s (2016) work, for example, community benefits and subjective well-being were found to be positively associated during a film festival. Here, the authors explained how certain characteristics of festivals provide an appropriate environment for these effects to manifest, many of which are shared by NMSEs. NMSEs have the potential to be better connected to the community, potentially addressing community involvement, and enhancing community development (Taks, 2013; 2016). Yolal and colleagues (2016) suggested that lower resource demands may be important in influencing subjective well-being, while Maennig and Porsche (2008) suggested that to maximize the potential feel-good factor of a sport event it is necessary minimize points of contention with the host community. NMSEs have lower resource demands than their sport mega-event counterparts (Agha & Taks, 2015), and may offer the potential, therefore, to address these concerns and foster the underlying mechanisms for subjective well-being to be positively affected by sport events.

Theoretically, advancing how well-being is researched and addressed in the sport event literature may help advance some of the aforementioned areas of research and lines of inquiry. Future research in the area of well-being and sport events should further consider subjective well-being as a holistic concept, as well as other forms of well-being, namely social- and psychological well-being. Although these concepts are distinct and have been studied in other fields (i.e. Keyes, 1998; Chen *et al.*, 2013), there is limited discussion in the sport event literature regarding their differences and similarities, and how various aspects of each concept may be influenced by, or manifested in, the sport event context. Recently, scholars have suggested advancing the study of sport and well-being in general and to do so in part by better differentiating between hedonic

(subjective) well-being and eudemonic (psychological) well-being in future studies (Inoue, Sato & Filo, 2020), further justifying additional research in the area.

Conclusion

Despite a variety of existing research in the realm of sport, sport events, and subjective well-being, there remain areas that warrant further investigation. There remain questions regarding how sport events may influence subjective well-being, to what extent and by way of which underlying mechanisms. Studies such as the one described here which investigate actual lived experiences and explore underlying mechanisms of observed effects can begin to fill such gaps in existing literature. We found that social impact experiences are not related to subjective well-being in the context of a sport mega event – Rio 2016 Olympic Games. Additionally, in terms of social impact experiences, no long-term effects were identified six months after the event. These findings are aligned with existing research in the field (e.g. Maennig & Porsche, 2008; Kavetsos & Szymanski, 2010; Gibson *et al.*, 2014), signalling an absence of effects from social interactions promoted by events to affect subjective well-being.

While addressing some gaps in existing research, this study also offers promising avenues for future research in this area. Research moving forward should continue to explore sport mega-events and subjective well-being, host resident experiences, and under what conditions certain effects occur. Specifically, scholars should investigate further the features of certain events that may influence subjective well-being and investigate how to best leverage those features for sustained impact (e.g. atmosphere; Schlegel *et al.*, 2017). Further, research in the context of smaller sport events may indicate that longer-term effects are more likely to happen in other event contexts compared to sport mega-events. Finally, future research should work to expand the investigation of well-being in sport events methodologically by conceptualizing well-being in

different ways (hedonic vs. eudemonic; Inoue *et al.*, 2020) and addressing additional other components of well-being (e.g. PERMA; Seligman, 2011; 2018) to better understand well-being in the context of sport events. Ultimately, additional research in this area will help to inform event managers and policymakers regarding the role that sport events may play in contributing to residents' well-being, and therefore may help to inform evidence-based policy decisions that ensure a SROI for sport event host residents.

References

- Agha, N., & Taks, M. (2015) A theoretical comparison of the economic impact of large and small events. *International Journal of Sport Finance*. 10 (3), 199–216.
- Arvidson, M., Lyon, F., McKay, S., & Moro, D. (2013) Valuing the social? The nature and controversies of measuring social return on investment (SROI). *Voluntary Sector Review*. 4 (1), 3-18.
- Baldock, A.-L., Maes, M., & Buelens, M. (2011) The social impact of the Tour de France: Comparisons of residents' pre- and post-event perceptions. *European Sport Management Quarterly*. 11 (2), 91–113.
- Chalip, L. (2006) Towards social leverage of sport events. *Journal of Sport & Tourism*. 11 (2), 109–127.
- Chen, F. F., Jing, Y., Hayes, A., & Lee, J. M. (2013) Two concepts or two approaches? A bifactor analysis of psychological and subjective well-being. *Journal of Happiness Studies*. 14 (3), 1033–1068.
- Connolly, M. (2013) Some like it mild and not too wet: The influence of weather on subjective well-being. *Journal of Happiness Studies*. 14 (2), 457–473.

- Davies, L. E., Taylor, P., Ramchandani, G., & Christy, E. (2019) Social return on investment (SROI) in sport: A model for measuring the value of participation in England. *International Journal of Sport Policy and Politics*. 11 (4), 585–605.
- Deery, M., & Jago, L. (2010) Social impacts of events and the role of anti-social behaviour. *International Journal of Event and Festival Management*. 1 (1), 8–28.
- Diener, E. (2000) Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*. 55 (1), 34–43.
- Diener, E., & Seligman, M. E. P. (2004) Beyond money: Toward an economy of well-being. *Psychological Science in the Public Interest*. 5 (1), 1–31.
- Dolan, P., Kavetsos, G., Krekel, C., Mavridis, D., Metcalfe, R. D., Senik, C., Szymanski, S., & Ziebarth, N. R. (2016) The host with the most? The effects of the Olympic Games on happiness. *DIW Berlin Discussion Paper No. 1599*. 1-48.
- Dolan, P., Kavetsos, G., Krekel, C., Mavridis, D., Metcalfe, R., Senik, C., Szymanski, S., & Ziebarth, N. R. (2019) Quantifying the intangible impact of the Olympics using subjective well-being data. *Journal of Public Economics*. 177, 1-14.
- Dolan, P., Peasgood, T., & White, M. (2008) Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being. *Journal of Economic Psychology*. 29 (1), 94–122.
- Downward, P., Hallmann, K., & Rasciute, S. (2018) Exploring the interrelationship between sport, health and social outcomes in the UK: Implications for health policy. *European Journal of Public Health*. 28 (1), 99–104.
- Downward, P., & Rasciute, S. (2011) Does sport make you happy? An analysis of the well-being derived from sports participation. *International Review of Applied Economics*. 25 (3), 331–348.

- Filo, K., & Coghlan, A. (2016) Exploring the Positive Psychology Domains of Well-Being Activated Through Charity Sport Event Experiences. *Event Management*. 20 (2), 181–199.
- Getz, D. (2012) Event studies: Discourses and future directions. *Event Management*. 16 (2), 171–187.
- Getz, D., & Page, S. J. (2016) *Event Studies: Theory, research, and policy for planned events* (3rd ed.). Oxon, UK, Routledge.
- Gibson, H. J., Walker, M., Thapa, B., Kaplanidou, K., Geldenhuys, S., & Coetzee, W. (2014) Psychic income and social capital among host nation residents: A pre–post analysis of the 2010 FIFA World Cup in South Africa. *Tourism Management*. 44, 113–122.
- Grix, J., & Carmichael, F. (2012) Why do governments invest in elite sport? A polemic. *International Journal of Sport Policy and Politics*. 4 (1), 73–90.
- Hallmann, K., Breuer, C., & Kühnreich, B. (2013) Happiness, pride and elite sporting success: What population segments gain most from national athletic achievements? *Sport Management Review*. 16 (2), 226–235.
- Heere, B., Walker, M., Gibson, H., Thapa, B., Geldenhuys, S., & Coetzee, W. (2013) The power of sport to unite a nation: The social value of the 2010 FIFA World Cup in South Africa. *European Sport Management Quarterly*. 13 (4), 450–471.
- Inoue, Y., Sato, M., & Filo, K. (2020) Transformative sport service research: Linking sport services with well-being. *Journal of Sport Management*. 34 (4). 1–6.
- Karadakis, K., & Kaplanidou, K. (2012) Legacy perceptions among host and non-host Olympic Games residents: A longitudinal study of the 2010 Vancouver Olympic Games. *European Sport Management Quarterly*. 12 (3). 243–264.
- Kavetsos, G., & Szymanski, S. (2010) National well-being and international sports events. *Journal of Economic Psychology*. 31 (2), 158–171.

- Késenne, S. (2005) Do we need an economic impact study or a cost-benefit analysis of a sports event? *European Sport Management Quarterly*. 5 (2), 133–142.
- Késenne, S. (2012) The economic impact, costs and benefits of the FIFA World Cup and the Olympic Games: Who wins, who loses? In: Maennig W. & Zimbalist A. (eds) *International Handbook on the Economics of Mega Sporting Events*. Cheltenham, UK, Edward Elgar Publishing, pp. 270–278.
- Keyes, C. L. M. (1998) Social well-being. *Social Psychology Quarterly*. 61 (2), 121–140.
- Kim, J., & James, J. D. (2019) Sport and happiness: Understanding the relations among sport consumption activities, long- and short-term subjective well-being, and psychological need fulfillment. *Journal of Sport Management*. 33 (2), 119–132.
- Kim, W., Jun, H. M., Walker, M., & Drane, D. (2015) Evaluating the perceived social impacts of hosting large-scale sport tourism events: Scale development and validation. *Tourism Management*. 48, 21–32.
- Littlejohn, M., Taks, M., Wood, L., & Snelgrove, R. (2016) Sport events and happiness: Towards the development of a measuring instrument. *World Leisure Journal*. 58 (4), 255–266.
- Mackintosh, C., Darko, N., & May-Wilkins, H. (2016) Unintended outcomes of the London 2012 Olympic Games: Local voices of resistance and the challenge for sport participation leverage in England. *Leisure Studies*. 35 (4), 454–469.
- Maennig, W., & Porsche, M. (2008) The feel-good effect at mega sport event: Recommendations for public and private administration informed by the experience of the FIFA World Cup 2006. *Hamburg Contemporary Economic Discussion Paper No. 18*. 1–27.
- McCloy, C. (2009) Canada hosts the world: An examination of the first federal sport hosting policy (1967). *The International Journal of the History of Sport*. 26 (9), 1155–1170.

- McCloy, C., & Thibault, L. (2013) Hosting policies of sport events. In Thibault L. & Harvey J. (eds) *Sport Policy in Canada*. Ottawa, ON, University of Ottawa Press, pp. 243–265.
- Mochon, D., Norton, M. I., & Ariely, D. (2008) Getting off the hedonic treadmill, one step at a time: The impact of regular religious practice and exercise on well-being. *Journal of Economic Psychology*. 29 (5), 632–642.
- Misener, L., & Mason, D. S. (2006) Creating community networks: Can sporting events offer meaningful sources of social capital? *Managing Leisure*. 11 (1), 39–56.
- Müller, M. (2015) The mega-event syndrome: Why so much goes wrong in mega-event planning and what to do about it. *Journal of the American Planning Association*. 81 (1), 6–17.
- Nicholls, J., Lawlor, E., Neitzert, E., & Goodspeed, T. (2012) *The Guide to Social Return on Investment*. London, The SROI Network: Accounting for Value. Available from: <http://www.socialvalueuk.org/app/uploads/2016/03/The%20Guide%20to%20Social%20Return%20on%20Investment%202015.pdf> [Accessed 10th June 2020]
- Panza, G. A., Taylor, B. A., Thompson, P. D., White, C. M., & Pescatello, L. S. (2017) Physical activity intensity and subjective well-being in healthy adults. *Journal of Health Psychology*. 24 (9), 1257-1267.
- Pawlowski, T., Downward, P., & Rasciute, S. (2014) Does national pride from international sporting success contribute to well-being? An international investigation. *Sport Management Review*. 17 (2), 121–132.
- Peterson, N. A., Speer, P. W., & McMillan, D. W. (2008) Validation of A brief sense of community scale: Confirmation of the principal theory of sense of community. *Journal of Community Psychology*. 36 (1), 61–73.
- Preuss, H., Andreff, W., & Weitzmann, M. (2019) *Cost and revenue overruns of the Olympic Games 2000-2018*. Wiesbaden, DE, Springer Gabler.

- Rasciute, S., & Downward, P. (2010) Health or Happiness? What Is the Impact of Physical Activity on the Individual? *Kyklos*. 63 (2), 256–270.
- Reis, A. C., Frawley, S., Hodgetts, D., Thomson, A., & Hughes, K. (2017) Sport participation legacy and the Olympic Games: The Case of Sydney 2000, London 2012, and Rio 2016. *Event Management*. 21, 139–158.
- Rocha, C. M. (2020) Temporal variations in the relationship between legacies and support: A longitudinal case study in Rio 2016 Olympic Games. *Journal of Sport Management*. 34 (2), 130–146.
- Sant, S.-L., & Mason, D. S. (2015) Framing event legacy in a prospective host city: Managing Vancouver’s Olympic bid. *Journal of Sport Management*. 29 (1), 42–56.
- Sato, M., Jordan, J. S., & Funk, D. C. (2015) Distance running events and life satisfaction: A longitudinal study. *Journal of Sport Management*. 29 (4), 347–361.
- Schlegel, A., Pfitzner, R., & Koenigstorfer, J. (2017) The impact of atmosphere in the city on subjective well-being of Rio de Janeiro residents during (vs. Before) the 2014 FIFA world cup. *Journal of Sport Management*. 31 (6), 605–619.
- Seligman, M. (2010) Flourish: Positive Psychology and Positive Interventions. *The Tanner Lectures on Human Values*. Ann Arbor, MI, The University of Michigan, pp. 231-243.
- Seligman, M. (2011) *Flourish*. New York, NY, Free Press.
- Seligman, M. (2018) PERMA and the building blocks of well-being. *The Journal of Positive Psychology*. 13 (4), 333–335.
- Suh, E., Diener, E., & Fujita, F. (1996) Events and subjective well-being: Only recent events matter. *Journal of Personality and Social Psychology*. 70 (5), 1091–1102.
- Taks, M. (2013) Social sustainability of non-mega sport events in a global world. *European Journal for Sport and Society*. 10 (2), 121–141.

- Taks, M. (2016) The rise and fall of mega sport events: The future is in non-mega sport events. In Vanden Auweele, Y., Cook, E. & Parry, J. (eds) *Ethics and Governance in Sport: The future of sport imagined*. New York, NY, Routledge, pp. 84–93.
- Taks, M., Littlejohn, M., Snelgrove, R., & Wood, L. (2016) Sport events and residential happiness: The case of two non-mega sport events. *Journal of Global Sport Management*. 1 (3–4), 90–109.
- Taks, M., & Rocha, C. (2017) Maakte Rio 2016 de Brazilianen gelukkig? [Did Rio 2016 make the Brazilians happy?]. In Hover, P. & Breedveld, K. (eds) *The story of Rio 2016: De maatschappelijke betekenis van de Olympische en Paralympische spelen 2016 [The story of Rio 2016: The societal meaning of the Olympic and Paralympic games 2016]*. Utrecht, NL, Mulier Instituut, pp. 119–127.
- Weed, M., Coren, E., Fiore, J., Wellard, I., Chatziefstathiou, D., Mansfield, L., & Dowse, S. (2015) The Olympic Games and raising sport participation: A systematic review of evidence and an interrogation of policy for a demonstration effect. *European Sport Management Quarterly*. 15 (2), 195–226.
- Yolal, M., Gursoy, D., Uysal, M., Kim, H. (Lina), & Karacaoğlu, S. (2016) Impacts of festivals and events on residents' well-being. *Annals of Tourism Research*. 61, 1–18.

Table 1: Differences between during and after Rio2016 in social impacts and subjective well-being

		During Rio2016		After Rio2016		<i>t</i>	<i>df</i>	<i>p</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
SOCIAL								
IMPACT	Social cohesion	3.47	1.45	2.6	1.5	8.095	755	< .001
EXPERIENCES ⁽¹⁾	Community spirit	4.04	1.66	3.39	1.68	12.492	755	< .001
	Feelings of							
	(un)safety	3.55	1.59	3.24	1.67	2.604	755	0.009
	Community							
	involvement	4.50	1.72	3.31	1.52	10.097	755	< .001
	Sport participation	3.87	1.96	2.96	1.87	6.502	754	< .001
<hr/>								
SUBJECTIVE								
WELL-BEING		4.15	0.64	4.13	0.65	0.343	801	0.732
	Happiness ⁽²⁾	4.61	0.86	4.64	0.78	-0.499	801	0.618
	Life satisfaction ⁽³⁾	2.98	0.49	2.97	0.49	0.558	801	0.577
	Affects ⁽⁴⁾	4.86	0.98	4.79	1.01	0.915	798	0.361

Note. (1) measured on a 7-point Likert scale from 1 – “totally disagree” to 7 – “totally agree”; (2) measured on a 6-point Likert scale from 1 – “not happy at all” to 6 – “very happy”; (3) measured on a 4-point Likert scale from 1 – “not at all satisfied” to 4 – “very satisfied”; (4) measured on a 7-point Likert scale from 0 – “not at all” to 6 – “very much”.