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## **Chapter 2 – Subjective Well-Being and Social Experiences with Sport Mega-Events: The Case of Rio 2016**

*Kerri Bodin*

<https://orcid.org/0000-0001-9963-1643>

*Dr. Claudio Rocha*

<https://orcid.org/0000-0001-6337-004X>

*Dr. Marijke Taks*

<https://orcid.org/0000-0001-5186-8537>

### **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 et al., 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 (Davies et al., 2019; Nicholls et al., 2012). 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 et al., 2008).

Meanwhile, public officials have become increasingly interested in how to improve the general public's well-being, and scholars have also called 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. Kavetsos & Szymanski, 2010; Maennig & Porsche, 2008), 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 Games<sup>1</sup>. 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

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<sup>1</sup> 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.

concepts addressing various aspects of human experiences (Chen et al., 2013; Keyes, 1998). 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 concept (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 et al., 2013), while other scholars have considered happiness as one aspect of subjective well-being (Seligman, 2010).

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) live 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 et al., 2018; Downward & Rasciute, 2011; Kim & James, 2019, Sato et al., 2015). Downward and Rasciute (2011) used cross-sectional survey data collected from a national survey in the United Kingdom to investigate the affect 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, 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 (Mackintosh et al., 2016; Weed et al., 2015). 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. Dolan et al., 2019; Kavetsos & Szymanski, 2010). 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. Gibson et al., 2014; Heere et al., 2013; Karadakis & Kaplanidou, 2012). 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 et al., 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 (Balduck et al., 2011; Deery & Jago, 2010). 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?”), 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 such as social experiences related to subjective well-being 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*

*Participants.* We used two convenience samples of Brazilians, who have not attended Rio 2016 in person, but have 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).

*Scales.* 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 et al., 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 (happily, 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 scales (0 – not at all to 6 – very much).

*Data analysis.* 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 ( $\text{Adj } R^2 = 0.020$ ). 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 ( $\text{Adj } R^2 = 0.021$ ). 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).

*Summary of findings.* 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.

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 EXPERIENCES <sup>(1)</sup>	Social cohesion	3.47	1.45	2.6	1.5	8.095	755	< .001
	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
SUBJECTIVE WELL-BEING		4.15	0.64	4.13	0.65	0.343	801	0.732
	Happiness <sup>(2)</sup>	4.61	0.86	4.64	0.78	-0.499	801	0.618
	Life satisfaction <sup>(3)</sup>	2.98	0.49	2.97	0.49	0.558	801	0.577
	Affects <sup>(4)</sup>	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”.

### Discussion

The social impact results from this study are in line with results reported elsewhere (e.g. Gibson et al., 2014, Maennig & Porsche, 2008, etc.). The results regarding subjective well-being are not consistent with previous literature regarding hosting sport events and happiness (e.g. Kavetsos & Szymanski, 2010), where short-term effects were observed however limited long-term effects were sustained following the event. Results of the current study do not show effects of social experiences with Olympic Games on subjective well-being 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-attendee 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 of inquiry will be addressed further in the following section.

## **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 and Mason, 2015), thus, these measures can be biased. Therefore, more work specifically dealing with individual experiences of events is 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 feelgood 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; Kavetsos & Szymanski, 2010; Misener & Mason, 2006). 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. Dolan et al., 2019; Gibson et al., 2014; Kavetsos & Szymanski, 2010) 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. Mochon et al., 2008; Suh et al., 1996) 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 “set point” 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, a film festival was found that community benefits and subjective well-being were positively associated during the event. 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. Chen et al, 2013; Keyes, 1998), 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 et al., 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 remains 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. Gibson et al., 2014; Kavetsos & Szymanski, 2010; Maennig & Porsche, 2008), 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.

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