EXAMINING CHANGES IN SPORT EVENT VOLUNTEERS' MOTIVATION, SATISFACTION, COMMITMENT, SENSE OF COMMUNITY: EVIDENCE FROM A PREEVENT–POSTEVENT DESIGN

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The purpose of this study was to examine changes in sport event volunteers' motivation, satisfaction, commitment, and sense of community from preevent to postevent. Data were collected using preevent and postevent online self-administered questionnaires sent to 256 volunteers at the 2019 Osprey Valley Open: a professional golf tournament. One hundred sixty-one volunteers (65% response rate) completed both questionnaires. Data were analyzed using paired sample *t* tests. All constructs demonstrated positive changes from preevent to postevent. Sense of community had the most significant positive change, followed by satisfaction, and then commitment. Motivation did not have a statistically significant change. Results show researchers should move beyond cross-sectional research designs to better understand differences in these constructs across event modes. Practitioners should tailor their strategies toward volunteers' satisfaction, commitment, and sense of community to enhance their experiences at different time points throughout their involvement with a sport event.

Key words: Volunteer experience; Survey methods; Quantitative research;
Event management; Sport events

Introduction

Volunteers, or individuals who provide their time and energy to a formal entity without direct financial remuneration, are crucial for the survival and operations of sport events (Hoye et al., 2020). Volunteers often represent much of the sport event workforce, like in the Olympic Games, where tens of thousands of volunteers are required to assist with the event's delivery (Parent & Ruetsch, 2021). In doing so, sport event volunteers are trained preevent to assume

various roles during the event to contribute to its postevent success.

Given the criticality of sport event volunteers, a phenomenon that has gained importance for event researchers and practitioners is the volunteer experience (Farrell et al., 1998; Gellweiler et al., 2019; Holmes et al., 2018; Nichols et al., 2017; Shaw, 2009). Defined as "an individual's overall perception of their involvement in a given volunteer activity and defined context" (Lachance & Parent, 2020, p. 95), the volunteer experience is important given its impact on sport event planning and hosting (Farrell et al., 1998; Gellweiler et al., 2019; Nichols et al., 2017; Shaw, 2009). On one hand, a positive volunteer experience could lead to higher retention rates or increased intentions to volunteer for other organizations and events. On the other hand, volunteer retention and future volunteer intentions could be inhibited by a negative experience while volunteering, which limits the potential pool of individuals willing to be involved as volunteers.

To date, in the broader event management literature, researchers have discussed the relationship between the volunteer experience and various constructs, such as sociodemographic characteristics (e.g., Fayos Gardó et al., 2014), social anxiety (e.g., Handy & Cnaan, 2007), value dimensionality (e.g., Gallarza et al., 2009), and motivation (e.g., Lamb & Ogle, 2018). However, specific to literature on sport events, the volunteer experience is generally discussed and examined according to four constructs: motivation, satisfaction, commitment, and sense of community. The reason for this approach is twofold.

First, volunteer experience research in sport events—thus, excluding other settings (e.g., religious events; Fayos Gardó et al., 2014) and inquiries concerned with *previous* experiences of individuals (e.g., Bang et al., 2019; Skirstad & Hanstad, 2013)—empirically supports the use of motivation, satisfaction, commitment, and sense of community as predictors (e.g., Costa et al., 2006; Farrell et al., 1998; Green & Chalip, 2004; Güntert et al., 2015; Kerwin et al., 2015). For instance, research demonstrated the utility of constructs like motivation and satisfaction (e.g., Farrell et al., 1998; Güntert et al., 2015), commitment (e.g., Cuskelly et al., 2004; MacLean & Hamm, 2007), and sense of community (e.g., Dickson et al., 2017; Green & Chalip,

2004; Kerwin et al., 2015; Kodama et al., 2013) to make empirical claims towards the volunteer experience (e.g., Costa et al., 2006).

Second, each of the four constructs are independent and behavioral based, thereby providing insights on the perceptions of individuals during their involvement with a sport event (e.g., Kodama et al., 2013; Shaw, 2009). This compares to a descriptive perspective, which is limited to understanding characteristics of volunteers according to sociodemographic indicators (e.g., Fayos Gardó et al., 2014) or previous experiences in other events (e.g., Bang et al., 2019; Skirstad & Hanstad, 2013). Notably, these descriptive characteristics arguably do not provide insights on sport event volunteers' perceptions of their lived experiences (cf., Bang et al., 2019; Skirstad & Hanstad, 2013).

Despite the importance of the volunteer experience and the presence of empirical research on this phenomenon in sport events, one key assumption exists, which demonstrates a fundamental research and knowledge gap: the four constructs are assumed to be static, due in part to the cross-sectional research designs used (cf. Aisbett et al., 2015; Bang & Chelladurai, 2009; Costa et al., 2006; Rogalsky et al., 2016). Specifically, these constructs are studied using data collected either before (e.g., Costa et al., 2006; MacLean & Hamm, 2007), during (e.g., Bang & Chelladurai, 2009; Pauline, 2011), or after the event (e.g., Aisbett et al., 2015; Rogalsky et al., 2016).

In other words, existing research on sport event volunteers has neglected to understand the potential changes in these four constructs over time (e.g., before the event vs. after the event). This is problematic as, if event processes evolve from mode to mode (Parent, 2008; Parent & Ruetsch, 2021), then the four constructs of the volunteer experience would arguably do the same (cf. Aisbett et al., 2015; Costa et al., 2006; Farrell et al., 1998; MacLean & Hamm, 2007; Rogalsky et al., 2016). In addition, event managers may be uncertain on how to effectively manage their volunteers at different time points (e.g., before vs. during the event) to promote a positive volunteer experience. Understanding differences between these time points has important implications for the management processes of volunteers (e.g., recruitment, selection, orientation in the planning mode vs. retention in the wrap-up

mode) during different modes, as event managers could tailor their approaches according to changes in constructs. Such knowledge could assist event managers in fostering a more positive experience among their volunteers to enhance retention and achieve event outcomes (e.g., successful delivery, survival).

Considering the above gap, the purpose of this study was to examine changes in sport event volunteers' motivation, satisfaction, commitment, and sense of community from preevent to postevent. This study is grounded in the sport event volunteer experience conceptual framework (see Lachance & Parent, 2020, 2021), which was developed according to prior research on this phenomenon (e.g., Costa et al., 2006; Farrell et al., 1998; Gellweiler et al., 2019; Kerwin et al., 2015; Kodama et al., 2013; MacLean & Hamm, 2007; Shaw, 2009). In this case, the conceptual framework (see Fig. 1) suggests motivation, satisfaction, commitment, and sense of community can be used as constructs to make conclusions about the volunteer experience. Moreover, the conceptual framework posits these constructs are subject to change at different time points (see dotted line), a claim this study seeks to empirically test.

Considering these notions, the conceptual framework is appropriate for this study given the purposeful delimitation to the four constructs in the context of a sport event. This study makes theoretical contributions as the assumption regarding the static nature of the volunteer experiences' constructs across the event life cycle is challenged given the identified changes. Methodologically, this study demonstrates the value of conducting research in events at multiple time points to highlight potential changes in a phenomenon considering the overreliance on cross-sectional approaches in the sport event volunteer literature.

Literature Review

Here, literature on the sport event volunteer experience and its four constructs are reviewed. From this literature review, hypotheses are developed to address the stated purpose.

Sport Event Volunteer Experience Research

The volunteer experience is an important topic in sport event volunteer research and has been examined both qualitatively (e.g., Gellweiler et al., 2019; Holmes et al., 2018; Nichols et al., 2017; Shaw, 2009) and quantitatively (e.g., Aisbett et al., 2015; Costa et al., 2006; Kerwin et al., 2015; MacLean & Hamm, 2007; Rogalsky et al., 2016). Four constructs are collectively suggested to impact the volunteer experience: motivation, satisfaction, commitment, and sense of community (Costa et al., 2006; Farrell et al., 1998; Kerwin et al., 2015; Lachance & Parent, 2020, 2021; MacLean & Hamm, 2007). Recently, the four constructs were found to statistically predict the volunteer experience through direct and indirect relationships (Lachance et al., 2021). However, these findings were derived from a cross-sectional study. Thus, our knowledge of potential changes in the volunteer experience and its four constructs at different time points remains poor.

Though some attempts have been made in previous sport event volunteer studies to collect data at multiple time points such as preevent and postevent (e.g., Dickson et al., 2015; Kerwin et al., 2015; Skirstad & Hanstad, 2013) or preevent, during the event, and postevent (e.g., Güntert et al., 2015; Neufeind et al., 2013), these studies have been limited by the purposeful selection of one or two constructs (e.g., sense of community, motivation). As a result, this has hindered researchers' ability to draw conclusions regarding the volunteer experience given
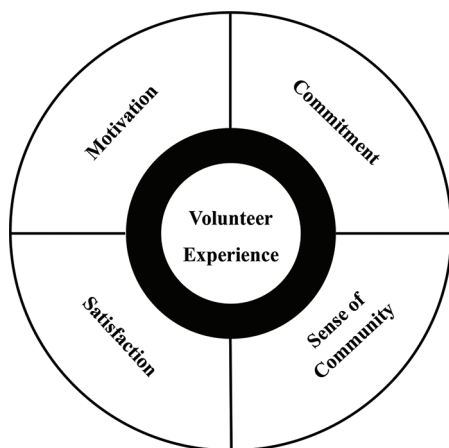

Figure 1. Conceptual framework (adapted from Lachance & Parent, 2020, 2021).

its multidimensional nature (Lachance et al., 2021). Literature related to each volunteer experience construct examined in this study is now reviewed.

Motivation

Motivation is a multidimensional construct and represents the reasons for an individual to partake in volunteering (Bang & Chelladurai, 2009; Farrell et al., 1998). Motivation has received the most attention in the sport event volunteer literature (Kim, 2018; Kim & Cuskelly, 2017; Wicker, 2017) and various scales, such as the Special Event Volunteer Motivation Scale (e.g., Farrell et al., 1998) and the Volunteer Motivations Scale for International Sporting Events (e.g., Bang & Chelladurai, 2009), have been developed and applied to investigate the motives of sport event volunteers.

Research has explored relationships between motivation and a variety of other constructs, which includes commitment (e.g., MacLean & Hamm, 2007), future volunteer intentions (e.g., Dickson et al., 2015), motivational climate (e.g., Allen & Shaw, 2009), volunteer experience (e.g., Farrell et al., 1998), and management practices (e.g., recruitment, retention; Kim & Cuskelly, 2017). Together, these studies have demonstrated the presence of relationships between these aforementioned constructs and motivation.

Specific to the volunteer experience and motivation, previous studies have discussed the presence of direct relationships (e.g., Downward & Ralston, 2005; Farrell et al., 1998) and indirect relationships to the volunteer experience (e.g., Lachance & Parent, 2020, 2021). Although researchers have identified direct and indirect relationships, motivation is recognized as an important construct to predict the volunteer experience (Downward & Ralston, 2005; Farrell et al., 1998; Lachance et al., 2021). Researchers have suggested motivation to be positive in both the planning (e.g., Lachance & Parent, 2020) and implementation modes (e.g., Lachance & Parent, 2021). However, distinct characteristics in the implementation mode, such as the event's atmosphere and excitement (e.g., Güntert et al., 2015; Holmes et al., 2018; Shaw, 2009), could lead to higher levels of motivation than in the planning mode where work is mundane (e.g., Lachance & Parent, 2020). Based on these notions, the following hypothesis is proposed:

H1: Sport event volunteers will have a more positive motivation towards volunteering postevent than they did preevent.

Satisfaction

Satisfaction refers to understanding how volunteers' needs are met during their involvement in events and, like motivation, is also presented as an important construct to understand the volunteer experience (Farrell et al., 1998; Pauline, 2011). Several scales have been applied to measure sport event volunteer satisfaction like the Volunteer Satisfaction Index (e.g., Pauline, 2011). Satisfaction has also been investigated in relation to other constructs, such as motivation (e.g., Farrell et al., 1998), future volunteer intentions (e.g., Pauline, 2011), role ambiguity (e.g., Rogalsky et al., 2016), and management practices (e.g., perceived organizational support, perceived supervisor support; Aisbett et al., 2015).

Satisfaction impacts the volunteer experience both positively (e.g., Farrell et al., 1998; Rogalsky et al., 2016) and negatively (e.g., Lachance & Parent, 2020). Positive impacts are associated with good communication (e.g., Farrell et al., 1998; Pauline, 2011), perceived organizational and supervisor support (e.g., Aisbett et al., 2015), and low role ambiguity and high role performance (e.g., Rogalsky et al., 2016). In contrast, negative impacts on satisfaction are attributed to poor role performance such as failing to meet the expectations of the organizing committee during the planning mode whereby the volunteer experience is hindered (Lachance & Parent, 2020). However, this negative relationship is suggested to change during the event in which the volunteer experience is then positively impacted (Lachance & Parent, 2021). Considering this posited negative to positive change in satisfaction at different time points, the following hypothesis is proposed:

H2: Sport event volunteers will have a more positive satisfaction towards volunteering postevent than they did preevent.

Commitment

Research on commitment among volunteers is more prevalent in the context of sport organizations (e.g., Cuskelly & Hoye, 2013; Cuskelly et al.,

1998) compared to sport events where fewer studies are found (e.g., Green & Chalip, 2004; MacLean & Hamm, 2007). For sport event volunteers, commitment is defined as "a sense of affective attachment to a sport organization in which individuals experience intensive organizational involvement and internalize the organization's goals" (Cuskelly & Boag, 2001, p. 68).

Previous studies have examined the relationship between different constructs and commitment among sport event volunteers, including the relationship between commitment and motivation (e.g., MacLean & Hamm, 2007), and between commitment and satisfaction (e.g., Costa et al., 2006). Commitment has also been discussed according to management-related factors in events, such as perceived organizational support and perceived supervisor support (e.g., Aisbett & Hoye, 2015). Compared to motivation and satisfaction, commitment has been shown to have an indirect impact on the volunteer experience (Lachance et al., 2021). For instance, when developing an emotional attachment to the event and volunteer group, commitment indirectly impacts the volunteer experience through motivation (Lachance & Parent, 2020, 2021).

Though studies have demonstrated commitment among sport volunteers changes throughout an individual's involvement (e.g., Cuskelly et al., 1998; Cuskelly et al., 2002), this knowledge has not been explored beyond enduring sport organizations. As events are temporary and processes differ from mode to mode (Parent, 2008), the emotional attachment of volunteers in the context of sport events may also be subject to change; however, this potential change in commitment remains unexplored. Doing so would also be important to further assess the transferability of findings from previous research examining changes in volunteers' commitment in sport organizations (e.g., Cuskelly et al., 1998). Notably, Lachance and Parent's (2020, 2021) studies from the planning and implementation mode, respectively, found commitment to impact the volunteer experience. However, this impact was noted as positive in both the planning and implementation modes. Considering these results, the following hypothesis is proposed:

H3: Sport event volunteers will have a more positive commitment towards volunteering postevent than they did preevent.

Sense of Community

Compared to the three previous constructs, sense of community, which is a "recognition of a shared purpose and common identity" (Kerwin et al., 2015, p. 78), has received less attention in the sport event volunteer literature. Specific to sport event volunteer research, sense of community is based on the collective perception of its presence within the volunteer workforce of an event (Kerwin et al., 2015) rather than the broader community (e.g., Chalip, 2006) or social capital (e.g., Welty Peachey et al., 2013). Previous research has discussed the importance of factors related to sense of community among sport event volunteers (e.g., culture, relationships, identity, camaraderie) to positively impact their experience (Kerwin et al., 2015; Kodama et al., 2013; Lachance & Parent, 2020, 2021).

Similar to the previous constructs, sense of community acts as an important construct to predict the volunteer experience (Lachance et al., 2021). Kerwin et al. (2015) investigated sense of community among volunteers in a community-level sport event. Though not the purpose of their study, Kerwin et al.'s (2015) results suggested a positive change in sense of community from preevent to postevent as mean scores of measured items increased. Thus, the following hypothesis is proposed:

H4: Sport event volunteers will have a more positive sense of community towards volunteering postevent than they did preevent.

Methodology

Details of the study's selected context are presented below, followed by information on the chosen research design (i.e., preevent and postevent), data collection method (i.e., online self-administered questionnaires), sample characteristics, and data analysis.

Context

The study context was the 2019 Osprey Valley Open (OVO), a professional golf tournament held in Toronto, Canada July 11–14. The event is affiliated with one of the Professional Golf Association's

(PGA) developmental tours, the Mackenzie Tour–PGA Tour Canada. The 2019 OVO included 159 competitors and 256 volunteers. Within the OVO's structure, volunteers were each assigned a formal role in a specific department such as security, transportation, scoring, maintenance, or hospitality.

In this study, participants respected the fundamental characteristics of being a sport event volunteer (Hoye et al., 2020). For recruitment, individuals were invited to complete an online registration form that was managed by the event organizing committee. To the authors' knowledge, the online registration form was advertised via the event's social media account. Though volunteers for the OVO were required to pay a CAD$56.50 registration fee to offset event administration and operation costs, they received complimentary golf passes and volunteer attire in exchange. This practice is common for volunteers at other professional golf tournaments (e.g., RBC Canadian Open, Ryder Cup, CP Women's Open). However, it is important to note that this practice in the OVO does not mean volunteers received a direct financial compensation for their services. OVO volunteers still partook in a freely chosen activity without direct financial compensation. The absence of financial compensation among volunteers was confirmed through the inclusion of a question in the survey that asked participants: "Did you receive any monetary payment for volunteering?" For volunteers to participate in the study, they had to have answered "no" to this question, thus supporting their ability to be considered as sport event volunteers. Beyond the recruitment process described above for this event, knowledge about the selection procedures of volunteers or management practices (e.g., Holmes et al., 2018) used during the event are unknown.

Data Collection

A preevent–postevent research design was used to collect data relating to volunteers' motivation, satisfaction, commitment, and sense of community at two time points: preevent and postevent. The preevent and postevent questionnaires were both developed using Qualtrics and e-mailed to the event volunteers via the OVO's tournament director. In total, the questionnaires were administered to 256 event volunteers, and each questionnaire assessed

respondents' motivation, satisfaction, commitment, and sense of community. Each questionnaire took approximately 10 min to complete. No respondent issues related to questionnaire comprehension were reported to any members of the research team during data collection.

The preevent questionnaire was administered on June 8, 2019, and remained open for 2 weeks until June 21, 2019. This 2-week period was chosen, as volunteers' first training sessions were held on June 22–23, 2019. This ensured preevent data were collected before any event training or interaction, apart from initial volunteer recruitment and commitment. Similar to the preevent questionnaire, the postevent questionnaire was administered on July 15, 2019, the day following the event's completion, and the questionnaire remained open for a 2-week period (i.e., until July 28, 2019). The final sample included 161 volunteers (65% response rate) who provided complete questionnaire responses for both time points (i.e., preevent and postevent). Despite the small sample size, the collected responses are above the minimum number (i.e., $n = 157$) required to generalize to this population (i.e., OVO volunteers) according to the standard effect sizes (cf. George & Mallery, 2019). The minimum sample size was determined through the Z-score, calculated from the known population size ($n = 256$) with a 95% confidence interval.

Questionnaire Measures

For the purposes of the preevent–postevent analysis, the same items were used at both time points with slight grammatical differences for future/present and past-tense differences. All questionnaire items were adapted from previous research. Motivation was measured using seven items adapted from MacLean and Hamm's (2007) sport event volunteer research. Satisfaction was measured using 11 items adapted from Galindo-Kuhn and Guzley's (2001) Volunteer Satisfaction Index. Commitment was measured using nine items adapted from Cuskelly and Boag's (2001) questionnaire on organizational commitment. Finally, sense of community was measured using eight items adapted from Kerwin et al.'s (2015) Sense of Community in Sport Scale.

To confirm items were well suited following study adaption (e.g., modifying labels to be

Table 1

Model Fit Statistics for CFA Preevent and Postevent Models

Model	χ^2/df	CFI	TLI	RMSEA
Preevent model	2.74	0.95	0.95	0.063
Postevent model	2.64	0.95	0.96	0.059

consistent with the context), a confirmatory factor analysis (CFA) was run (see Table 1). Consistent with statistics literature (see Hair et al., 2010) fit indices were satisfactory for both the preevent and

postevent models (i.e., $\chi^2/df > 3$; CFI ≥ 0.95; TLI ≥ 0.95; and RMSEA < 0.07). Consequently, both the preevent and postevent CFA models had adequate fit.

Table 2 presents the standardized factor loading for all preevent and postevent items. Items displayed in the table are preevent wording (e.g., *I want to provide myself with the excitement I crave*), while postevent wording was changed for past tense (e.g., *I wanted to provide myself with the excitement I craved*). All items loaded on their designated factors with appropriate scores ranging

Table 2

Standardized Factor Loading for Preevent and Postevent CFA Models

Items	Preevent	Postevent
Motivation		
I want to provide myself with the excitement I crave	0.91	0.90
I want to improve my skills and abilities	0.85	0.86
Volunteering activities energize me	0.95	0.93
Volunteering creates a better society	0.87	0.83
Volunteering my services for the OVO is considered prestigious	0.77	0.79
I want to gain a feeling of belonging	0.81	0.83
I adhere to the organizational committee's specific goals	0.90	0.88
Satisfaction		
The availability of getting help when I need it	0.90	0.90
The support network that is in place for me when I have volunteer-related problems	0.90	0.91
The way in which the agency provides me with performance feedback	0.91	0.95
The progress that I see in the clientele served by the OVO	0.89	0.94
The difference my volunteer work is making	0.77	0.74
The chance I have to use my knowledge and skills in my volunteer work	0.81	0.76
The access I have to information concerning the OVO	0.92	0.94
The freedom I have in deciding how to carry out my volunteer assignment	0.79	0.80
The friendships I make while volunteering here	0.82	0.81
The amount of interaction I have with other volunteers	0.93	0.95
The amount of time spent with other volunteers	0.90	0.91
Commitment		
I am willing to put in a great deal of effort beyond what's normally expected in order to help this event be successful	0.85	0.90
I speak of volunteering for this event with my friends as a great experience	0.87	0.91
I would accept almost any task in order to keep volunteering for the OVO	0.90	0.93
I find that my values and the OVO's values are very similar	0.91	0.89
I am proud to tell others that I am part of the OVO		0.91
This event really inspires the best in me and my performance as a volunteer	0.92	0.94
I am extremely glad that I chose to become a member of the OVO	0.89	0.90
I really care about the fate of my volunteer experience	0.90	0.92
For me, this is the best possible sport events to volunteer	0.82	0.91
Sense of Community		
Leaders of the OVO care about their volunteers	0.91	0.90
Leaders of the OVO support their volunteers	0.89	0.91
I feel comfortable talking openly with the leaders of the OVO	0.77	0.79
I feel like I belong when volunteering for the OVO	0.87	0.86
Volunteering provides me with friends who share a strong commitment to volunteering	0.93	0.93
OVO staff make decisions that benefit everyone	0.90	0.92
OVO staff consider everyone's needs when making decisions	0.81	0.81
I have influence over what the OVO is like	0.92	0.90

from 0.70 to 0.95, per George and Mallery's (2019) guidelines. Consistent with the four applied scales mentioned above, each questionnaire item was measured on a 5-point Likert-type scale ranging from 1 "*strongly disagree*" to 5 "*strongly agree*." The use of a 5-point Likert-type scale was applied as it creates less confusions among respondents and increases their completion rate of the questionnaire as opposed to a 7-point Likert-type scale for example (Bouranta et al., 2009). Items for each preevent and postevent construct (i.e., motivation, satisfaction, commitment, sense of community) were summed and averaged to form an overall measure at each time point. To confirm reliability, Cronbach's alpha scores were measured for both preevent and postevent constructs (ranging from 0.797 to 0.933), with all scores above the appropriate 0.7 threshold (George & Mallery, 2019).

Sample Characteristics

In total, 161 sport event volunteers provided complete responses to the preevent and postevent questionnaires. All volunteers resided within the province of Ontario and performed a variety of roles for the event, including, but not limited to, scoring ($n = 32$), caddying ($n = 25$), player assistance ($n = 11$), and crowd control ($n = 11$). The age of volunteers ranged from 18 to 82 years old, with most being between 60 and 69 years old (47.8%, $n = 77$). Most respondents identified as males (68.3%, $n = 110$) while some identified as females (29.8%, $n = 48$) or preferred not to disclose (1.9%, $n = 3$). A large portion of respondents (47.8%, $n = 77$) had a household income above the national mean (i.e., CAD\$70,336; Statistics Canada, 2017), and had completed some form of education beyond a high school diploma (e.g., college diploma, undergraduate degree; 60.9%, $n = 98$). Most respondents were married (69.6%, $n = 112$) and had children (60.2%, $n = 97$). The average OVO volunteer participated in sport or physical activity multiple times a week ($M = 3.54$, $SD = 1.69$) and knew a fellow volunteer at the event (71.5%, $n = 98$).

Data Analysis

Paired sample t tests were used to test for statistical significance between the preevent and postevent measures. A paired sample t test is used to determine whether the mean difference between paired observations (here, preevent vs. postevent) is statistically significant (George & Mallery, 2019). Thus, this analytical choice is appropriate given the purpose of this study. The analyses were conducted on the same participant sample at two time points (i.e., preevent and postevent) for motivation, satisfaction, commitment, and sense of community. Zero outliers were detected that were more than 1.5 box lengths from the edge of the box in a boxplot. The assumption of normality was not violated, as assessed by Shapiro–Wilk's test for each analysis (George & Mallery, 2019). Thus, all 161 respondents were used within each of the four paired sample t test analyses. Mean scores, standard deviations, t values, p values, and Cohen's d effect sizes are presented for each analysis.

Results

Here, descriptive statistics for both preevent and postevent construct measures are presented and analyzed. This section also presents the statistical changes in the constructs from the volunteer experience based on the paired samples t tests.

Descriptive Statistics

Table 3 presents the descriptive statistics for preevent and postevent scores of all measured items.

All preevent mean scores revealed favorable responses, that is, above "neutral" but below "agree" on the Likert-type scale. For preevent measures, commitment ($M = 3.96$) indicated the highest mean score while sense of community ($M = 3.36$) revealed the lowest mean score. In contrast, for postevent measures, sense of community ($M = 4.38$) indicated the highest mean score with motivation ($M = 3.69$) revealing the lowest mean score. All preevent and postevent measures indicated favorable responses (i.e., above a neutral mean score of 3.0). Beyond these positive commonalities, all preevent and postevent constructs held relatively tight groupings (i.e., $SD < 1.00$). This finding is not surprising given the homogenous nature of the sample and respondents' characteristics discussed above.

Table 3

Descriptive Statistics for Preevent and Postevent Items

Items	Preevent M (SD)	Postevent M (SD)
Motivation		
I want to provide myself with the excitement I crave	3.33 (1.10)	3.39 (1.07)
I want to improve my skills and abilities	3.52 (1.10)	3.73 (0.98)
Volunteering activities energize me	3.67 (1.03)	3.90 (0.88)
Volunteering creates a better society	4.16 (0.94)	4.31 (0.80)
Volunteering my services for the OVO is considered prestigious	3.19 (1.00)	3.61 (1.03)
I want to gain a feeling of belonging	2.59 (1.13)	2.78 (1.26)
I adhere to the organizational committee's specific goals	3.67 (1.06)	4.18 (0.87)
Satisfaction		
The availability of getting help when I need it	3.58 (0.89)	4.03 (1.03)
The support network that is in place for me when I have volunteer-related problems	3.55 (1.00)	4.10 (1.04)
The way in which the agency provides me with performance feedback	3.10 (1.02)	3.56 (1.15)
The progress that I see in the clientele served by the OVO	3.34 (0.97)	3.75 (0.95)
The difference my volunteer work is making	3.69 (0.97)	4.14 (0.87)
The chance I have to use my knowledge and skills in my volunteer work	3.75 (0.97)	3.96 (1.02)
The access I have to information concerning the OVO	3.64 (1.00)	3.94 (1.02)
The freedom I have in deciding how to carry out my volunteer assignment	3.59 (0.93)	4.08 (0.93)
The friendships I make while volunteering here	3.47 (1.07)	4.17 (0.85)
The amount of interaction I have with other volunteers	3.55 (0.98)	4.10 (0.94)
The amount of time spent with other volunteers	3.43 (1.05)	3.99 (0.95)
Commitment		
I am willing to put in a great deal of effort beyond what's normally expected in order to help this event be successful	4.18 (0.95)	4.51 (0.70)
I speak of volunteering for this event with my friends as a great experience	4.12 (0.95)	4.55 (0.72)
I would accept almost any task in order to keep volunteering for the OVO	3.39 (1.12)	3.82 (1.20)
I find that my values and the OVO's values are very similar	3.80 (0.91)	4.32 (0.71)
I am proud to tell others that I am part of the OVO	4.32 (0.84)	4.66 (0.60)
This event really inspires the best in me and my performance as a volunteer	3.98 (0.96)	4.26 (0.86)
I am extremely glad that I chose to become a member of the OVO	4.18 (0.93)	4.71 (0.61)
I really care about the fate of my volunteer experience	4.05 (0.96)	4.47 (0.74)
For me, this is the best possible sport events to volunteer	3.58 (1.14)	3.97 (1.01)
Sense of Community		
Leaders of the OVO care about their volunteers	3.90 (0.91)	4.46 (0.75)
Leaders of the OVO support their volunteers	3.96 (0.92)	4.68 (0.77)
I feel comfortable talking openly with the leaders of the OVO	4.00 (0.92)	4.61 (0.67)
I feel like I belong when volunteering for the OVO	3.76 (0.89)	4.48 (0.70)
Volunteering provides me with friends who share a strong commitment to volunteering	3.73 (0.93)	4.04 (1.04)
OVO staff make decisions that benefit everyone	3.51 (1.01)	4.25 (0.88)
OVO staff consider everyone's needs when making decisions	3.70 (0.84)	4.38 (0.69)
I have influence over what the OVO is like	3.81 (0.88)	4.26 (0.85)

When examining the descriptive changes in the constructs, each construct's mean score increased from preevent to postevent measures and standard deviation scores decreased from preevent to postevent measures. These results indicate a more positive and tighter dispersion of answers from preevent to postevent; suggesting volunteering can positively shift volunteers' motivation, satisfaction, commitment, and sense of community, and can create more homogenous outcomes for volunteers of the same event. The largest increase was found in sense of community, which increased by 30.4% (1.02 points on the 5-point scale) from preevent to postevent. In contrast, the smallest increase was seen in motivation, which increased by 7.0% (0.24 points on the 5-point scale) from preevent to postevent; less than one third of the percentile and score change for sense of community. This analysis suggests that, while all constructs positively changed from preevent to postevent, the degree of these changes can vary from construct to construct. Table 4 presents the descriptive and t test results for each construct.

Table 4

Descriptive and Paired Sample *t* Test Statistics for Preevent and Postevent Measures

	Preevent M (SD)	Postevent M (SD)	t
Motivation	3.45 (0.74)	3.69 (0.68)	1.571
Satisfaction	3.53 (0.79)	3.98 (0.75)	4.204***
Commitment	3.96 (0.79)	4.36 (0.61)	7.201***
Sense of community	3.36 (0.77)	4.38 (0.66)	8.862***

Notes. All items were measured on a 5-point Likert-type scale ranging from 1 *strongly disagree* to 5 *strongly agree*. ****p* > 0.001.

Changes in Motivation, Satisfaction, Commitment, and Sense of Community

Four paired sample *t* tests were conducted to determine whether there was a statistically significant mean difference between volunteers' preevent and postevent motivation, satisfaction, commitment, and sense of community. Overall, after volunteering at the OVO, significant differences were found between volunteers' preevent and postevent satisfaction, commitment, and sense of community.

Specifically, volunteers were more satisfied postevent ($M = 3.98$, $SD = 0.75$) as opposed to preevent ($M = 3.53$, $SD = 0.79$), with a statistically significant mean increase of 0.45, 95% CI (0.186, 0.363), $t(161) = 4.204$, $p > 0.001$, $d = 0.62$. Volunteers were more committed postevent ($M = 4.36$, $SD = 0.61$) as opposed to preevent ($M = 3.96$, $SD = 0.79$), with a statistically significant mean increase of 0.40, 95% CI (0.397, 0.608), $t(161) = 4.181$, $p > 0.001$, $d = 0.58$. Volunteers felt a stronger sense of community postevent ($M = 4.38$, $SD = 0.66$) as opposed to preevent ($M = 3.78$, $SD = 0.77$), with a statistically significant mean increase of 0.60, 95% CI (0.404, 0.587), $t(161) = 5.072$, $p > 0.001$, $d = 0.75$. However, there was no significant difference reveled from preevent motivation ($M = 3.45$, $SD = 0.74$) to postevent motivation ($M = 3.69$, $SD = 0.68$); $t(161) = 1.571$, $p = 0.122$.

These paired sample *t* test analyses indicate H2, H3, and H4 were supported: sport event volunteers had a more positive satisfaction, commitment, and sense of community postevent than they did preevent. However, these results also indicate H1 was not supported: sport event volunteers did not have a more positive motivation postevent than

they did preevent. Table 4 presents the *t* test scores for each of the four constructs analyzed.

Discussion

The purpose of this study was to examine changes in sport event volunteers' motivation, satisfaction, commitment, and sense of community from preevent to postevent. Based on the paired sample *t* tests conducted, the first hypothesis is refuted, while the remaining three hypotheses are confirmed. These findings highlight the dynamic nature of constructs related to the volunteer experience given the positive changes in mean scores from preevent to postevent. However, only three constructs (i.e., satisfaction, commitment, and sense of community) had a statistically significant and positive change from preevent to postevent. Results for each construct are further discussed below according to relevant literature. In addition, propositions (i.e., statements of relationships between constructs and on a more concrete level; Bacharach, 1989) are offered for each construct to foster future research.

Motivation

In contrast to satisfaction, commitment, and sense of community, the lack of statistical significance in motivation's change from preevent to postevent (see Table 2) is worthy of discussion given the abundance of previous research on motivation (e.g., Allen & Shaw, 2009; Bang & Chelladurai, 2009; Farrell et al., 1998; Kim, 2018; MacLean & Hamm, 2007). The statistical insignificance could be explained by an individual's internal and/or external motives being determined prior to volunteering rather than being subject to change because of different processes occurring before versus during the event. We know an individual may be motivated to volunteer for the event because of a variety of factors, such as a need to contribute to the local community, develop personal skills, event prestige, values, community or family pressure, networking, or social interactions (e.g., Bang & Chelladurai, 2009; Farrell et al., 1998; Kim, 2018).

Despite these examples and the multidimensional nature of volunteer motivation (Bang & Chelladurai, 2009; Farrell et al., 1998; Kim, 2018),

our findings indicate these motives appear to be determined prior to the event, rather than being developed and enhanced over time like satisfaction, commitment, and sense of community. This contests findings from previous sport event volunteer research where motives were found to have a statistically significant change from being egoistic preevent (e.g., desire to be involved) to altruistic postevent (e.g., contribute to the community; Dickson et al., 2015). Further, this contests claims based on the applied sport event volunteer experience conceptual framework considering a positive change in motivation was found, but it was not statistically significant from preevent to postevent (cf. Lachance & Parent, 2020, 2021). In the present study, volunteers attributed their preevent and postevent motives to egoistic factors like gaining work experience, access to high-level competition, and materials (e.g., uniforms, golf certificates). Nevertheless, a potential reason to explain differences in the findings from this study with the literature is the timing of data collection: Dickson et al. (2015) collected data 2 days before the event and 3 months after the event compared to our approach of 2 weeks preevent and postevent. For instance, volunteers' motives might have been subject to more change given Dickson et al. (2015) collected data later than the present study (3 months after the event vs. 2 weeks). Further, volunteers from their study might have been subject to information recall issues considering the amount of time that had passed between the end of the event to data collection. Thus, data collection timelines appear to be an important factor to consider in future studies examining sport event volunteer motivation. This importance could also be extended to the other constructs, though longer data collection periods postevent would be required to ascertain the extent of this importance. Considering the above discussion, the following proposition is offered: *motivation's relationship with the volunteer experience will be positive but statistically insignificant over the event's life cycle*.

Satisfaction

Findings indicated a significant change in volunteers' satisfaction from preevent to postevent. This highlights the importance of satisfaction during the

event experience as discussed in previous research (e.g., Farrell et al., 1998; Lachance & Parent, 2020, 2021; Lachance et al., 2021; Pauline, 2011). This result supports notions of the applied conceptual framework whereby satisfaction's significant change highlights its ability to change positively over time (Lachance & Parent, 2020, 2021).

Though the importance of this construct is supported, the positive change from preevent to postevent could be explained by factors related to volunteers' assigned roles. For instance, previous research has found that role performance and role satisfaction positively impact volunteers' satisfaction (Rogalsky et al., 2016) while Lachance and Parent (2020, 2021) suggested role diversity can lead to a positive change in satisfaction. Organizational features (e.g., social support, task support, obligations; Neufeind et al., 2013) and management practices, such as communicating frequently with volunteers preevent and during the event about their experiences with assigned roles (Farrell et al., 1998; Pauline, 2011), could also explain the positive change in volunteers' satisfaction found in the present study. Nevertheless, the positive change in satisfaction advances previous cross-sectional research on this construct (e.g., Pauline, 2011; Rogalsky et al., 2016) by further supporting its importance for volunteers' experiences and its dynamic nature at different time points of an individual's involvement with a sport event. Given the above discussion, the following proposition is offered: *satisfaction will have a positive and statistically significant relationship with the volunteer experience over the event's life cycle*.

Commitment

The results support commitment's hypothesis according to the applied sport event volunteer experience conceptual framework considering volunteers' commitment had a positive significant change (Lachance & Parent, 2020, 2021). The significant change in volunteers' commitment from preevent to postevent also supports research conducted in sport organizations (e.g., Cuskelly et al., 1998; Cuskelly et al., 2002) and moves it into a new context. However, though commitment has been found to change over time in enduring sport organizations, this change was found to be negative

and attributed to a reevaluation of the reasons for individuals to be involved due to factors like mismanagement and low competencies of other volunteers (Cuskelly et al., 2002). Considering this, the positive and significant change found in sport event volunteers' commitment means context (e.g., sport event versus sport organization) may influence commitment's positive or negative longitudinal change (cf. Cuskelly et al., 1998, 2002).

Commitment's positive change could be attributed to management practices used by event managers, such as providing better communication and support from the supervisor and organizing committee before and during the event compared to enduring sport organizations. In turns, this effective communication and support would enhance the volunteer's emotional attachment (i.e., commitment) postevent (e.g., Aisbett & Hoye, 2015). The temporary nature of sport events could also explain the positive change in commitment found in this study compared to negative changes in the context of enduring sport organizations (cf. Cuskelly et al., 1998, 2002). This is because volunteers may feel obligated to continue their involvement in a sport event as it has a defined start and end, while those in enduring sport organizations are subject to a potentially prolonged involvement in which their emotional attachment and reasons to participate may be reevaluated more frequently (Cuskelly et al., 1998, 2002). Considering the above discussion, the following proposition is offered: *commitment will have a positive and statistically significant relationship with the volunteer experience over the event's life cycle*.

Sense of Community

The most positive change from preevent to postevent was found in sense of community. This positive change supports sense of community's importance for sport event volunteers (cf. Costa et al., 2006; Dickson et al., 2017; Kerwin et al., 2015; Lachance & Parent, 2020, 2021). Previous research has discussed how social-related factors, such as culture, relationships, and common identities, can enhance sense of community among sport event volunteers (Kerwin et al., 2015; Kodama et al., 2013; Lachance & Parent, 2020, 2021). This change could be explained by volunteers' sense

of community being absent during orientation and training as individuals meet each other for the first time, but is developed through interactions and establishing relationships with other volunteers during the event itself (cf. Costa et al., 2006; Kodama et al., 2013), thus leading to a positive change from preevent to postevent (Kerwin et al., 2015). In turn, the presence of previously-established relationships among most volunteers in this study's sample could further explain the positive significant change found in this construct.

However, research on sport event volunteers' sense of community has been largely derived from cross-sectional designs with one notable exception where data were collected preevent and postevent (see Kerwin et al., 2015). This notable example was used to develop the hypothesis specific to the sense of community construct. Given the change from preevent to postevent, the present study's findings confirm Kerwin et al.'s (2015) where sense of community had a positive change. However, this study goes beyond Kerwin et al. (2015), suggesting this positive change is statistically significant at multiple time points during the volunteer experience. From the above discussion, the following proposition is offered: *sense of community will have a positive statistically significant relationship with the volunteer experience over the event's life cycle*.

Theoretical Contributions

Three theoretical contributions are offered. First, this study's findings contribute to knowledge on the volunteer experience by statistically demonstrating the dynamic nature of its four constructs: motivation, satisfaction, commitment, and sense of community. Researchers interested in sport event volunteers should pay particular attention to satisfaction, commitment, and sense of community, as these three constructs had a statistically significant change from preevent to postevent than motivation. Considering the statistically insignificant change in motivation from preevent to postevent, its importance as it relates to the volunteer experience is contested (cf. Allen & Shaw, 2009; Downward & Ralston, 2005; Farrell et al., 1998; Lachance et al., 2021). The present study's findings demonstrate the need for researchers interested in sport event

volunteers to move beyond a focus on motivation to explore other constructs (i.e., satisfaction, commitment, and sense of community) of the volunteer experience, especially because they are dynamic, yet only three can be considered as demonstrating statistically significant changes over time. A deeper focus on constructs beyond motivation is critical to better understand the complexities of the volunteer experience given the (inter) relationships with and between its constructs. Given the above, our study offered four propositions to guide additional research to help advance our understanding of the volunteer experience as a phenomenon throughout the event's life cycle.

Second, this study's use of the sport event volunteer experience conceptual framework contributes to its scientific utility and temporal boundary (Corley & Gioia, 2011). On one hand, this study demonstrates the ability for the conceptual framework to be applied whereby measures for each construct allow empirically derived conclusions to be made (i.e., scientific utility). On the other hand, this study provides empirical support for the conceptual framework to be used at different time points, thereby highlighting the identified changes in the four examined constructs (i.e., temporal boundary). These contributions are important as the conceptual framework can allow researchers to explore the volunteer experience, while considering the importance of time (e.g., type of event mode) to better understand the dynamic nature of this phenomenon.

Finally, this study demonstrates the need to move beyond cross-sectional research designs. Using a longitudinal approach to study volunteer experience and its four constructs is important as findings from the present study contest previous sport event volunteer research conducted cross-sectionally through questionnaires (e.g., Aisbett et al., 2015; Bang & Chelladurai, 2009; Costa et al., 2006; Farrell et al., 1998; Lachance et al., 2021; MacLean & Hamm, 2007; Pauline, 2011; Rogalsky et al., 2016). Arguably, previous knowledge from these cross-sectional studies is limited as volunteers' involvement in a sport event is neither static nor cross-sectional, and processes change over time in sports events (Parent, 2008). Considering the impact of time on the volunteer experience and its four constructs (Lachance & Parent, 2021), this study further advocates for more longitudinal sport

event volunteer research. It would be important to continue understanding how changes in selected constructs over time compare to knowledge derived from previous cross-sectional research (e.g., confirm or refute) as done in the present study. Motivation-related findings in the present study compared to the literature are a case in point: data collection timing is not only important to include given the potential changes preevent and postevent, but also the length of the timing may affect results (e.g., 2 weeks vs. 3 months). Thus, researchers interested in this area should carefully choose their data collection timing, justify it, and consider it when analyzing their data and comparing it to the literature to derive novel contributions.

Practical Implications

A challenge for practitioners is to manage their volunteers' experiences (Lachance & Parent, 2020). This study offers practical implications to event practitioners before, during, and after the event according to the examined constructs.

Our findings indicate that, before the event, practitioners should provide social-related opportunities for volunteers. For instance, orientation and training sessions should also be used by event practitioners as an opportunity for volunteers to develop relationships among themselves to enhance their sense of community. Strategies could also be applied by event practitioners to enhance volunteers' satisfaction, commitment, and motivation like providing materialistic gains (e.g., uniforms, vouchers to competitions, or tourism attractions) to meet individual needs and foster a stronger emotional attachment toward the event and volunteer group prior to their involvement.

During the event, practitioners should apply the following strategies to have a positive change in volunteers' motivation, satisfaction, commitment, and sense of community. First, having informal conversations with volunteers to assess their experiences with assigned roles and/or provide supervisory support (e.g., communication) could be important to manage their emotional attachment to the event. Second, recognizing volunteers' efforts can be an important strategy for event practitioners to use in relation to satisfaction. This can be done informally during the event, such as providing them with more

responsibilities or nonfinancial rewards (e.g., tickets to events or attractions). Finally, event practitioners should seek to establish a strong culture within their volunteer group based on common identities (e.g., matching uniforms, event brand/image), purposes (e.g., delivering a successful event, contributing to the local community), and values (e.g., civic engagement) during the event. However, this strong culture should be developed before the event according to the strategies listed above.

After the event, practitioners should recognize the efforts of its volunteer workforce more formally than during the event. This formal recognition should occur in the form of a "thank you" social event or celebration. Here, practitioners should ensure volunteers are being celebrated for their efforts and time given to the event. However, this strategy is paramount for practitioners to capitalize on the positive change in commitment. The strong emotional attachment among volunteers, which positively changed from preevent to postevent, can be used to better retain individuals for future events. For instance, individuals might be more willing to continue their involvement if their emotional attachment positively changed during their experience, thereby facilitating retention.

Limitations and Future Research Directions

First, this study's sample featured a small volunteer workforce from a single sport event (i.e., 256 volunteers). The small sample size was dominated by males and older adults who were married and had children. Other characteristics not considered in this study (e.g., the impact of gender and/or age) could have impacted our findings in terms of the positive significant and insignificant changes found in the constructs from preevent to postevent. Future research should aim to garner greater sample sizes (likely in larger events with more volunteers) to allow for more nuanced comparisons and statistical analyses to be completed. The generalizability of this study's findings could also be assessed by comparing the changes in the four constructs among multiple volunteer groups, such as based on gender (e.g., Skirstad & Hanstad, 2013) or volunteers from the same or multiple events (e.g., mega-sport event vs. international-level sport event) with larger sample sizes.

Second, building on this study's findings, future research should understand how these constructs' longitudinal changes can be leveraged by event practitioners, such as enhancing future volunteer intentions. Though this study's findings demonstrated the dynamic nature of the volunteer experience's four constructs—as indicated by a positive change in preevent versus postevent mean scores—changes in the relationships between these constructs and the volunteer experience over time were not examined. Given this, an important next step is to understand the impact of changes between these constructs and the volunteer experience at different time points over the event's life cycle. We have offered propositions to help future studies in this regard.

Third, this study did not focus on the interrelationships between the constructs themselves. Considering the dynamic, positive nature of the constructs' relationships with volunteer experience found in the present study, the interrelationships between the four constructs should also be subject to change throughout a volunteer's involvement with a sport event (cf. Lachance et al., 2021). To do so, longitudinal research is required to better capture the complexities of the volunteer experience and its four constructs given their potential to change at different time points. Such potential changes require longitudinal research designs, which have been lacking in the sport event volunteer literature (cf. Costa et al., 2006; Farrell et al., 1998; Lachance et al., 2021; MacLean & Hamm, 2007; Rogalsky et al., 2016). These longitudinal research designs will help better understand the dynamic nature of these constructs and refine our understanding of sport events' most vital and ubiquitous resource: volunteers.

Finally, this study focused on the four constructs to make claims towards the volunteer experience in sport events (see Lachance et al., 2021). That being said, future research should not shy away from considering other constructs beyond the four examined in this study as it relates to predicting the volunteer experience. This stream of research is important to critically discuss the conceptualization and measurement of the volunteer experience in sport events according to the current focus on motivation, satisfaction, commitment, and sense of community (cf. Lachance & Parent, 2020, 2021; Lachance et

al., 2021). Such constructs could include role ambiguity (e.g., Rogalsky et al., 2016); human resource management practices (e.g., selection, recruitment, orientation, training, recognition; Kappelides et al., 2021; Shaw, 2009); or sociodemographic characteristics (e.g., gender; Skirstad & Hanstad, 2013) whereby mediating or moderating relationships could better explain or challenge previously established relationships and assumptions, namely the use of the four constructs. Nevertheless, additional research is warranted to refine our understanding of the volunteer experience in sport events.

Conclusion

The purpose of this study was to examine changes in sport event volunteers' motivation, satisfaction, commitment, and sense of community from pre-event to postevent. Results demonstrated a positive change in the examined constructs. However, only satisfaction, commitment, and sense of community had a statistically significant change from preevent to postevent.

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