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RESEARCH ARTICLE

The relationship between volunteer management, satisfaction, and intention to continue volunteering in sport events: An environmental psychology perspective

Weisheng Chiu¹ | Hyoung-Kil Kang² | Heetae Cho^{3,4} 

¹Lee Shau Kee School of Business & Administration, Hong Kong Metropolitan University, Kowloon, Hong Kong

²Department of Physical Education, Kyungnam University, Changwon, Republic of Korea

³Department of Sport Science, Sungkyunkwan University, Suwon, Republic of Korea

⁴Department of Physical Education and Sports Science, Nanyang Technological University, Singapore, Singapore

Correspondence

Weisheng Chiu, Lee Shau Kee School of Business & Administration, Hong Kong Metropolitan University, 30 Good Shepherd Street, Kowloon, Hong Kong.
Email: chiuws@hkmu.edu.hk

Hyoun-Kil Kang, Department of Physical Education, Kyungnam University, Changwon 51767, Republic of Korea.
Email: hkilkang@kyungnam.ac.kr

Heetae Cho, Department of Sport Science, Sungkyunkwan University, 2066 Seobu-ro, Jangan-gu, Suwon, Gyeonggi-do 16419, Republic of Korea.
Email: htcho@g.skku.edu

Abstract

This study aimed to investigate the relationship between volunteer management, motivation, satisfaction, and continuance intention to volunteer through the lens of Mehrabian and Russell's (1974) environmental psychology model. Moreover, the moderating effect of the volunteer experience was examined in the relationships between constructs. Data were collected from volunteers participating in various sport events in Singapore ($N = 290$). Results showed volunteer management positively influenced volunteers' satisfaction, which in turn affected their continuance intention. Moreover, motivation had a positive impact on both satisfaction and continuance intention. In addition, the moderating role of volunteer experience was identified. Based on Mehrabian and Russell's (1974) environmental psychology model, the findings of this study offered an alternative perspective on volunteers' satisfaction and continuance intention and provided insights into specific groups of volunteers.

KEYWORDS

continuance intention, motivation, satisfaction, volunteer experience, volunteer management

1 | INTRODUCTION

Volunteer management in sport events has received increased attention in both academic research and practice. Volunteers are considered the “backbone” of sport events because they provide a large percentage of human resources (Izzard, 2014). For example, more than a quarter of workers were volunteers in Vancouver, Sochi, and PyeongChang Winter Olympic Games (Bada, 2018). Moreover, volunteers play an essential role in many ways in supporting sport events. First, volunteers help deliver different services and achieve the organization's goals. Second, by using volunteers as human resources, organizers of sport events can reduce staff costs and offer economic efficiency. Third, volunteers can contribute innovative and new ideas that can be beneficial to the organization (Bang & Chelladurai, 2009; Farrell et al., 1998; Studer, 2016; Wicker, 2017). Due to the importance of volunteers in sport events, various volunteer-oriented management practices are designed to meet volunteers' expectations and needs, which further increase their satisfaction and future intention to continue volunteering (Wisner et al., 2005).

Volunteer satisfaction and continuance intention are important factors contributing to the sustainability of volunteerism in sport events (Alfes et al., 2017). The review of sport event volunteerism research has identified two main perspectives on recognizing volunteer satisfaction and behavior (Lee et al., 2016; Studer, 2016; Wicker, 2017). The first perspective emphasizes volunteer management practices at the organizational level and examines their impact on volunteers' perception, attitude, and behavior (Aisbett & Hoye, 2015; Cuskelly et al., 2006; Doherty, 2009). The second viewpoint focuses on volunteers at the individual level, highlighting motivational factors for volunteers that predict their volunteer experience and ultimately impact their behavior (Bang et al., 2019; Fairley et al., 2007; Hallmann & Harms, 2012). These studies have identified the roles of volunteer management practices and volunteers' motivation in satisfaction and behavior at the organizational and individual levels, respectively.

However, it should be noted that there have been a few studies conducted from a multi-level perspective to simultaneously consider the impact of volunteer management practices and motivational factors on volunteer satisfaction and continuance (Legg & Karner, 2021; Swierzy et al., 2018). Scholars have argued that the extant literature on sport event volunteerism focuses on a relatively narrow range of topics from the individual perspective, such as motivation, commitment, and costs and benefits (Hallmann & Zehrer, 2019; Lachance et al., 2021; Wicker, 2017; Wicker & Hallmann, 2013; Won et al., 2021; Won et al., 2023). Therefore, scholars suggested integrating other perspectives (organizational level) in order to have a more comprehensive framework examining volunteer satisfaction and continuance intention (Liu & Jia, 2022; Wicker, 2017; Wicker & Hallmann, 2013). Moreover, scholars have criticized that the previous studies lack clear and vigorous theoretical frameworks to explain volunteers' emotional and behavioral responses (Hoye et al., 2009; Kim, 2018; Kragt & Holtrop, 2019). Sporadic studies applied the self-determination theory (Deci & Ryan, 1985) and primarily explored the impact of motivation on volunteer behavior from the individual perspective (Wicker, 2017). It should be noted that a strong and sound theory is critical for delving into fundamental perceptions of volunteers and understanding the systematic explanations for a certain situation (Sutton & Staw, 1995).

To better understand volunteer satisfaction and behavior, this study developed a research framework to examine the relationships between volunteer management practices and motivation, volunteer satisfaction, and continuance intention. In particular, to address the lack of sound theory in the sport volunteerism literature, this study applied Mehrabian and Russell's

(1974) environmental psychology model as the theoretical base to explain the roles of environmental stimuli (volunteer management) and personal characteristics (motivation) in volunteers' affective response and behavior. In addition, previous studies argued that additional investigation of identifying moderators is necessary to add value to the knowledge of sport event volunteerism, especially volunteer experience (Wicker, 2017). In particular, volunteer experience previous studies found that volunteers with different experience levels showed different patterns in terms of their satisfaction and perceptions toward management styles (Pauline, 2011; Schlesinger et al., 2013). However, the role of volunteer experience is still not clear in the literature on sport event volunteerism. Therefore, this study attempted to explore the moderating role of the volunteer experience in the relationships between volunteer management practices and motivation, volunteer satisfaction, and continuance intention. Applying Mehrabian and Russell's (1974) environmental psychology model provided better comprehension by combining environmental and personal factors to affect volunteer satisfaction and behavior. Also, examining the moderating effect of volunteer experience provided insights into specific groups of volunteers.

2 | LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 | Mehrabian and Russell's environmental psychology model

Environmental psychology is a unique area that provides a suitable foundation for studying the settings in which people engage. Its primary objective is to elucidate the connection between human actions and spatial contexts by exploring how humans interpret and react to their environment (Craig, 1973; Mehrabian & Russell, 1974). Specifically, Mehrabian and Russell (1974) adopted the emotion-oriented approach and developed the environmental psychology model (Figure 1). The model is based on the Stimulus-Organism-Response (S-O-R) paradigm, whereby environmental stimuli (S) can cause the emotional reactions (O) of individuals, which in turn result in their approach-avoidance behaviors (R) within the environment. In particular, environmental stimuli include all the features of environmental stimuli of a certain environment, and the more stimuli exist, the more impactful they are (Mehrabian & Russell, 1974). There are three primary emotional responses: pleasure (happy or sad), arousal (feeling stimulated or uninspired to take action), and dominance (ability to control a situation or be submissive), which are caused by environmental stimuli (Mehrabian & Russell, 1974). Emotional responses

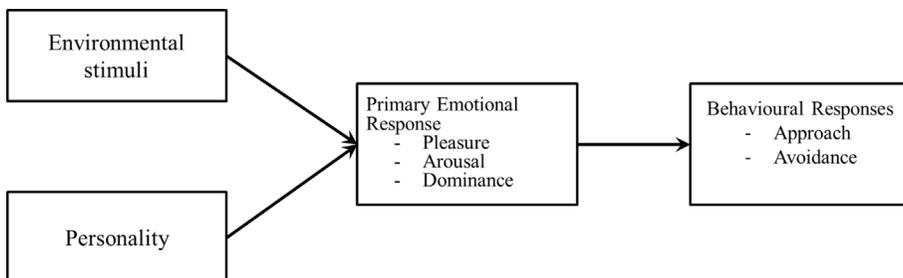


FIGURE 1 Mehrabian and Russell's (1974) environmental psychology model.

can trigger two types of behavioral responses. The approach is considered a favorable aspect of behaviors, including the desire to continue and better performance. On the other hand, avoidance refers to negative behaviors, such as discontinuance and limited performance (Mehrabian & Russell, 1974). In addition, Mehrabian and Russell's (1974) model also argued that the emotional responses of individuals toward a particular environment may vary depending on certain personal characteristics. Therefore, both environmental stimuli and personal characteristics determine their intervening reactions, which result in either approach or avoidance behaviors. In particular, approach behaviors refer to positive behaviors, such as individuals' desire to stay in the environment where they feel pleasure, while avoidance behaviors indicate negative behaviors, such as individuals' intention to leave the environment where they are unhappy or bored (Clark et al., 2009).

Since Mehrabian and Russell's (1974) model was proposed, it has been widely applied in consumer behavior research in various service contexts, such as sport spectators (Cho et al., 2019; Uhrich & Koenigstorfer, 2009), customers in restaurants (Kim et al., 2017), and consumers in retail stores (Das & Varshneya, 2017). However, it should be noted that, to a lesser extent, a few studies have examined the role of environmental stimuli in employees' responses and behaviors. Scholars have argued that employees' working experience is also determined by the environmental conditions in which they work (Kaminakis et al., 2015; Parish et al., 2008). For example, Parish et al. (2008) found that employees' environmental perceptions positively affect job satisfaction and commitment, which further results in a lower level of turnover intention. Moreover, it also found that employees' well-being and engagement were influenced by their awareness of environmental cues (Ahmed et al., 2020).

In the context of volunteerism, scholars have recently applied Mehrabian and Russell's (1974) environmental psychology model as the theoretical foundation to understand volunteers' emotional responses and behaviors (Cho, Li, & Wu, 2020; Cho, Wong, & Chiu, 2020; Ngah et al., 2022; Sha, 2021). These studies argued that the voluntary work environment, shaped by leadership behavior, managerial practices, policies, and procedures, affects the emotional responses of volunteers, such as satisfaction and emotional exhaustion, and eventually, behavioral responses (e.g., continuance intention and organizational citizenship behavior). For example, Cho, Li, and Wu (2020) found a significant impact of the work climate on unpaid employees' (volunteers) emotional responses and continuance intention. Moreover, Ngah et al. (2022) argued that service leadership styles serve as environmental stimuli, which affect volunteers' satisfaction and behaviors. Accordingly, this study considers volunteer management practices as a way to shape a voluntary work environment, with the potential to further affect the emotional response (i.e., job satisfaction) and behavioral outcome (i.e., continuance intention.) (Cho, Wong, & Chiu, 2020; Wisner et al., 2005).

According to Mehrabian and Russell's (1974) model, personality was considered an individual predisposition which influences the organism and response to environmental stimuli. In this study, volunteers' motivation is viewed as one of the individual predispositions, as motivation is the most fundamental personality trait (Corr et al., 2013; Parks & Guay, 2009). Motivation is regarded as the process of satisfying specific needs (Maslow, 1943) and, therefore, forms a tendency to perform in a particular way (Corr et al., 2013; Parks & Guay, 2009). Past research has found that volunteers are more likely to build a positive attitude and mood and engage in future volunteer activities when motivated (Cho et al., 2023; Cho, Li, & Wu, 2020; Sha, 2021; Zhigang et al., 2022). Therefore, this study views motivation as an antecedent of volunteers' emotional and behavioral responses.

In sum, aligning with Mehrabian-Russell's environmental psychology model (Mehrabian & Russell, 1974), the current study regarded volunteer management as an environmental factor and considered motivation as a personal factor (Bang et al., 2023; Cho et al., 2019; Cho, Li, & Wu, 2020; Ngah et al., 2022; Schlesinger & Nagel, 2013; Sha, 2021); we explored their impacts on volunteer satisfaction and intention to continue volunteering in the future. More importantly, due to the lack of theoretical framework in the extant sport volunteerism literature (Kim, 2018), this study emphasizes the critical role of volunteer management in volunteers' intention to continue volunteering from an alternative perspective of environmental psychology.

2.2 | Volunteer management

Volunteer management refers to organizations' responsibility to manage their voluntary workforce (Wicker, 2017). Volunteers do not receive monetary rewards or compensation; thus, their values, attitudes, and motivations toward their work may be different from those of paid workers (Alfes et al., 2017). Although some human resources (HR) practices developed for paid employees can be transferred to those for volunteers, different designs and implementations of volunteer management practices are necessary due to the lack of formal reward and power structures (Alfes et al., 2017; Cuskelly et al., 2006; Hager & Brudney, 2015). Therefore, volunteer management practices need to be identified and categorized to provide a framework for examining their influence on volunteers' attitudes and behaviors (Wisner et al., 2005).

Einolf (2018) reviewed 81 articles and identified 11 volunteer management practices supported by empirical evidence: liability insurance, role clarity, job design, recruitment strategies, placement, orientation and training, supervision and communication, recognition, satisfying motivations, reflection, and socially supportive environment. These 11 volunteer management practices have been found to be correlated with various positive volunteer outcomes, such as satisfaction, commitment, volunteer engagement, and continued volunteering. It was found that the volunteer management practice proposed by Wisner et al. (2005) was the most comprehensive conceptualization, which consists of most of 11 empirically supported practices for volunteer management.

In particular, Wisner et al. (2005) proposed six dimensions of management practice in the context of volunteerism: schedule flexibility, orientation and training, empowerment, social interaction, reflection, and rewards. First, schedule flexibility refers to the design and feasibility of volunteers' duty schedules, such as the timing and quantity of work. Volunteers decide their schedule availability to volunteer work, including when they can work and how much they want to volunteer. Therefore, working time arrangement is a crucial management practice for volunteers. Second, orientation and training include activities that develop the required knowledge for the vision and specific skills to achieve goals. Orientation and training sessions help volunteers gain confidence in their ability and understanding of their work. Third, empowerment indicates that the organization provides opportunities for volunteers to be involved in the decision-making process. This management practice encourages volunteers to contribute their skills and offer feedback during their volunteer work. Fourth, social interaction includes various formal and informal interactions between group members, including volunteers and paid employees. The socially interactive environment created by the organization helps volunteers build social connections and relationships. Fifth, reflection refers to the formal opportunities

for volunteers to exchange experiences and perspectives on their work. Volunteers can make sense of their roles and experiences during the reflection. Last, rewards are the organization's appreciation of volunteers' efforts. Although volunteers do not receive formal monetary compensation, the organization's recognition of effort and non-financial rewards can offer a sense of being valued in their volunteer work. These six dimensions of volunteer-oriented HR practices cover comprehensive and unique aspects of volunteer management practices. Overall, the six dimensions proposed by Wisner et al. (2005) provide a useful framework for organizations to develop effective management practices in volunteerism.

The HR practices for volunteer management should be tailored to the organization's specific needs (Brudney et al., 2019; Lee et al., 2023; Walk et al., 2019). This can be achieved through assessing the organization's objectives, understanding the volunteers' motivations and expectations, and aligning the management practices accordingly (Walk et al., 2019). While the six dimensions of volunteer-oriented HR practices provide a useful framework, each organization should assess its own needs and develop strategies accordingly (Wisner et al., 2005). By doing so, organizations can ensure that their volunteer management practices are effective and aligned with their goals and the needs of their volunteers (Wisner et al., 2005).

In the context of sport event volunteerism, some specific volunteer management practices are required to be effective. For instance, sport event organizers should provide adequate orientation and training for sport volunteers to ensure they are familiar with not only tasks but also the sport itself. Moreover, providing sport-related social activities can play a critical role in building teamwork and commitment. Finally, rewards can be both tangible and intangible and relevant to sports events, such as free access to the event or memorabilia of the event. Previous studies have found the six dimensions of volunteer management practices useful in the context of sport event volunteerism (Cho, Wong, & Chiu, 2020; Liu & Jia, 2022; Won et al., 2022). Therefore, effective volunteer management practices in the context of sport event volunteerism should include tailored orientation and training, sport-related social activities, and appropriate rewards to ensure volunteers feel valued and motivated to continue their involvement in sport events (Brudney et al., 2019; Lee et al., 2023; Walk et al., 2019).

2.3 | Volunteer motivation

Extant literature on volunteerism has identified various types of volunteer motivation (Bang et al., 2008; Clary et al., 1998; Khoo & Engelhorn, 2011; Lee et al., 2014). Motivation generally can be defined as an individual desire to find volunteering opportunities, engage themselves in voluntary helping, and continue their involvement in volunteerism (Lee et al., 2014). The Voluntary Functions Inventory (VFI, Clary et al., 1998) identified six underlying factors: values (values related to altruistic consideration for others), understanding (new experiences and exercise rarely-used skills), social (social relationships), career (career-related experience), protective (decreasing negative feelings), and enhancement (growing and developing psychologically) (Clary & Snyder, 1999). In the context of sport event volunteerism, volunteer motivations have been considered as the individual factor associated with volunteer experience and behavior (Bang et al., 2008; Lee et al., 2016). Moreover, the review of the literature found that altruism and career-related dimensions are considered as major factors that conceptualize volunteer motivation for participating in sport events (Bang et al., 2008; Bang & Chelladurai, 2009; Hallmann & Harms, 2012; Lai et al., 2013; Welty Peachey et al., 2014). Therefore, the

two-dimensional motivation proposed by Wisner et al. (2005) was adopted for studying sport event volunteers in this study.

2.4 | Volunteer satisfaction

Satisfaction has been one of the most discussed topics in volunteerism studies. The concept of volunteer satisfaction is developed from job satisfaction in the paid work setting (Galindo-Kuhn & Guzley, 2002), which is defined as “a pleasurable affective condition resulting from one’s appraisal of how the experienced job situation meets one’s need, value, and expectation” (Dawis & Lofquist, 1984, p. 72). Job satisfaction consists of various aspects of work experience, including the job itself, pay, promotion, supervisor, co-workers, social, and growth (Hackman & Oldham, 1975; Spector, 1997). However, the concept of job satisfaction in the paid work setting can not be fully applied to the voluntary context due to the different natures of human capital being denoted and compensated (Boezeman & Ellemers, 2009; Galindo-Kuhn & Guzley, 2002). As volunteering does not provide monetary rewards, voluntary work itself and relationships with supervisors and peers are more critical in building volunteer satisfaction (Galindo-Kuhn & Guzley, 2002; Henderson & Sowa, 2019). More specifically, volunteer satisfaction needs to be measured by individuals’ volunteer experience, volunteer role, as well as relationships and interaction with the organization, supervisors, and co-workers (Galindo-Kuhn & Guzley, 2002; Henderson & Sowa, 2019).

2.5 | Impact of volunteer management on satisfaction and continuance intention

At the organizational level, the effectiveness of volunteer management practice is a crucial predictor of volunteers’ satisfaction and continuance intention. Aisbett and Hoye (2015) argued that volunteers’ satisfaction and sustained volunteering are determined by volunteer management practices, which can strengthen volunteers’ ability (orientation and training), motivation (intangible and tangible rewards), and opportunity (social interactions). For example, Aisbett and Hoye (2015) argued that effective volunteer management could instill volunteers’ perception of organizational and supervisor support, leading to their satisfaction with sport events. Also, previous studies found that support and recognition were more important determinants of job satisfaction for volunteers as compared to paid employees (Aisbett & Hoye, 2015; Cuskelly et al., 2006; Liu & Jia, 2022). Moreover, Cuskelly et al. (2006) found that the more intensively an organization utilized training and development practices in volunteer management, the more likely volunteers are to continue volunteering. Further, management practices that fulfill volunteers’ needs can result in longer volunteering time (Finkelstein, 2008) and lower turnover intention (Valéau et al., 2013; Walk et al., 2019).

In addition, volunteers who perceived a clear volunteering role showed a higher level of satisfaction and intention to continue (Cho, Wong, & Chiu, 2020; Liu & Jia, 2022; Lo Presti, 2013). Similarly, Fallon and Rice (2015) found that staff development practices, such as support, recognition, and training, significantly predicted volunteers’ satisfaction and retention intention. Previous studies found that volunteer management is positively associated with satisfaction and continuance intention (Cho, Wong, & Chiu, 2020; Fallon & Rice, 2015; Liu & Jia, 2022; Lo

Presti, 2013; Valéau et al., 2013; Walk et al., 2019). Accordingly, the following hypotheses were established.

H1. Effective Volunteer management has a positive impact on satisfaction.

H2. Effective Volunteer management has a positive impact on continuance intention.

2.6 | Impact of motivation on satisfaction and continuance intention

At the individual level, individual motivation has been identified as a critical component in relation to volunteering satisfaction and continuance intention. Farrell et al. (1998) suggested the linkage between volunteer motivation and satisfaction and argued that volunteers are more likely to feel satisfied when their motivational needs are met (Bang & Ross, 2009). Pearce (1983) also claimed that greater volunteer motivation leads to higher satisfaction and less intention to quit. From the perspective of functionalism, individuals' life outcomes, such as satisfaction with volunteer experience, depend on the extent of fulfillment of their motivational goals (Clary et al., 1998), signifying the significant role of volunteer motivation in predicting satisfaction. For example, a positive correlation between volunteer motivation and satisfaction has been found in various mega-events, such as Olympic Games (Bang et al., 2019; Reeser et al., 2005) and World Expos (Lee et al., 2014).

Moreover, motivation is an essential factor in predicting individuals' intention to volunteer (Bang & Lee, 2014; Cheung et al., 2006; Clary et al., 1998; Hall et al., 1999; Hallmann & Harms, 2012; Hoye et al., 2008; Lai et al., 2013). Scholars have argued that individuals whose motivational needs and goals are fulfilled through volunteer activities in a sport event are more likely to continue volunteering in the same event in the future (Bang & Lee, 2014; Lai et al., 2013; Lee et al., 2013; Welty Peachey et al., 2014). Previous studies found that the more motivated individuals corresponded with an increased intention to volunteer in different cultural contexts (Cheung et al., 2006; Marta & Pozzi, 2008). As such, based on the findings of previous studies, we developed the following hypotheses:

H3. Motivation has a positive influence on satisfaction.

H4. Motivation has a positive influence on continuance intention.

2.7 | Volunteer satisfaction and continuance intention

Volunteer satisfaction plays a critical role in maintaining volunteer activities and is a functional element of the volunteer process (Finkelstein, 2008; Galindo-Kuhn & Guzley, 2002). Previous studies argued that volunteer satisfaction determines the frequency and duration of volunteer service and the likelihood of continuing future volunteer activities (Galindo-Kuhn & Guzley, 2002). Various studies have identified volunteer satisfaction as a significant predictor of future volunteering decisions (Bang, 2015; Bang et al., 2019; Schlesinger et al., 2019; Vecina et al., 2012). For example, Bang et al. (2019) found that volunteer satisfaction predicts volunteers' intention to continue volunteering in the near future. In addition, Schlesinger et al. (2019)

found that volunteers want to continue volunteering when they are satisfied with task design, leadership recognition, and support from the sports clubs. Hence, the following hypothesis was established.

H5. Satisfaction has a positive impact on continuance intention.

2.8 | The moderating role of volunteer experience

Volunteer experience refers to the degree of individuals' involvement and engagement in volunteer activities (Bang et al., 2019; Doherty, 2009). More specifically, volunteer experience reflects individuals' frequency of participating in volunteer activities (Bang et al., 2019; Doherty, 2009; Pauline, 2011; Stukas et al., 1999). Although the role of volunteer experience in the extant literature is still not clear, some studies found that volunteers with different experience levels showed different patterns (Bang et al., 2019; Doherty, 2009; Pauline, 2011; Schlesinger et al., 2013; Stukas et al., 1999). It was found that more experienced volunteers had a higher level of volunteer satisfaction (Pauline, 2011). In particular, more experienced volunteers are more satisfied with task design, leadership, and recognition (Schlesinger et al., 2013). Moreover, prior research found that inexperienced volunteers reported higher levels of continuance intention (Bang et al., 2019; Doherty, 2009). Although these studies identified the variation between inexperienced and experienced volunteers in their satisfaction and continuance intention, how volunteer experience moderates the influence of predictors (volunteer management, motivation, and satisfaction) on continuance intention to volunteer is unknown. This study assumed that different levels of prior experience play a significant role in affecting volunteers in various ways in terms of their perceptions of volunteer management, motivation, satisfaction, and continuance intention to volunteer in future events. Therefore, this study attempts to explore the moderating role of volunteer experience in the relationship between volunteer management, motivation, satisfaction, and continuance intention.

Volunteers with more previous experience may be more familiar with volunteering work conditions and have more practical views on volunteer management practices (Ratten et al., 2009). When volunteers are more experienced and familiar with their responsibilities, they may gain a sense of external control (Stukas et al., 1999). Therefore, their satisfaction and continuance intention could be more profoundly influenced by their familiarity with volunteer management practices and their sense of external control (Bang et al., 2019; Stukas et al., 1999). On the other hand, less experienced volunteers may have fewer cues to evaluate the environmental stimuli (i.e., volunteer management) and lower levels of external control in the volunteer activities (Ratten et al., 2009; Stukas et al., 1999). Therefore, less experienced volunteers' satisfaction and continuance intention might be less influenced by the environment and more influenced by personal factors (i.e., motivation). In sum, volunteers who have more experience may be well-managed and/or highly motivated, further resulting in higher levels of satisfaction and continuous intention. On the other hand, less experienced volunteers who are not well-managed and/or less motivated may be less likely to be satisfied and continue volunteering, therefore not acquiring such experience. Accordingly, this study proposed the following hypothesis and research model (Figure 2).

H6. Volunteer experience moderates the influences of volunteer management and satisfaction on satisfaction and continuance.

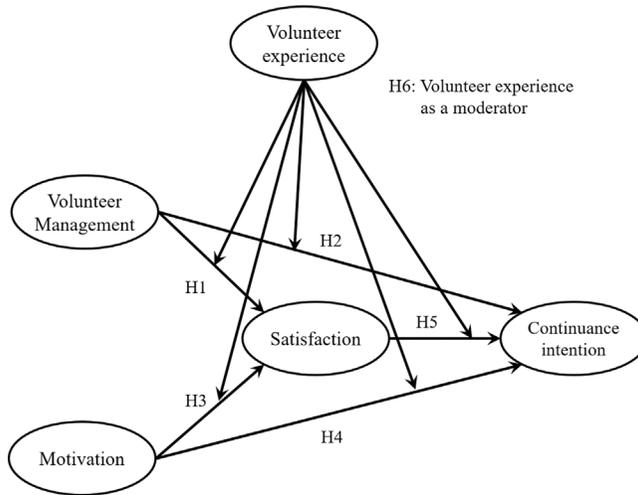


FIGURE 2 A hypothesized model.

3 | METHODS

3.1 | Participants and procedures

Before data collection, a pilot study was conducted on 30 undergraduate students from a major university in Singapore to ensure the clarity and relevance of survey items. After a few minor amendments, the survey was finalized. To reach more sport volunteers from diverse events, data were collected in two phases. First, three sport event management companies were contacted and asked to distribute the link to the online survey to their volunteers who participated in various sport events, including Color Run, WTA Finals Singapore, and Singapore Golf Open. These sport event management companies were selected as they regularly host sport events and have a large pool of active volunteers. The authors collected the second batch of data during two sport events in Singapore, including the Super League Triathlon and Singapore Marathon. More specifically, 39.7% of respondents ($n = 122$) were collected from volunteers of three sport event management companies who participated in different sport events. Meanwhile, 60.3% of participants ($n = 185$) were recruited by authors' on-site surveys from two sport events. All participants were assured of their confidentiality and were given the informed consent form for acknowledgment, and a total of 307 questionnaires were collected.

3.2 | Measures

The questionnaire was designed based on previous studies (Cho, Wong, & Chiu, 2020; Wisner et al., 2005) to measure the organization's volunteer management, motivation, satisfaction, and continuance intention to volunteer. First, the six-dimension scale of volunteer management was used to measure volunteer management practices offered by the organization: (1) schedule flexibility (three items); (2) orientation and training (four items); (3) empowerment (three items); (4) social interaction (six items); (5) reflection (seven items); and (6) rewards (six items). Second, satisfaction was assessed by a five-item scale to measure the level of satisfaction with

the volunteer experience. Third, motivation was categorized into two dimensions. The four-item scale of altruism assessed the sport volunteer's desire to help others. A two-item scale of career advancement assessed the sport volunteer's desire to gain experience or work contact as a motivation. Finally, continuance intention was evaluated by a 4-item scale to measure sport volunteers' willingness to continue participating in volunteer activities in different sport events in the near future. All items were assessed with 5-point Likert Scales anchored by (5) "strongly agree" to (1) "strongly disagree" based on previous studies. In addition, volunteer experience was measured by one item, "How long do you regularly participate in volunteer activity (years)."

3.3 | Data analysis

A preliminary analysis was employed using SPSS 22.0. Descriptive statistics were performed, and eight outliers were identified using the Mahalanobis distance analysis (Hair et al., 2010). Consequently, 299 responses were retained for further analyses. As a next step, the data normality was tested using skewness and kurtosis statistics to examine whether the data fulfilled the assumptions required for structural equation modeling (SEM). All skewness values ranged between -2 and $+2$, and Kurtosis statistics of all items were between -7 and $+7$, indicating the normality of the data required for SEM analysis (Byrne, 2016; Hair et al., 2010).

Data analysis was conducted in two phases, following the guidelines of Anderson and Gerbing (1988). First, scale reliability and validity were examined by confirmatory factor analysis (CFA). Next, SEM analysis was carried out to examine the hypothesized relationship in the research model. In addition, the moderating impact of volunteer experience was examined in the research model. Analyses of CFA and SEM were performed using the AMOS 22.0 program. The measurement model and research model were evaluated by χ^2 statistic index, degree of freedom, comparative fit index (CFI, >0.90), non-normed fit index (NNFI, >0.90), and root mean square error of approximation (RMSEA, <0.08) (Hair et al., 2010).

4 | RESULTS

4.1 | Demographic characteristics

Of the total 290 respondents, 51.4% ($n = 149$) were male and 48.6% ($n = 141$) were female. The average age of participants is 28.94 years old ($SD = 10.71$). The majority of respondents held a college/university degree (59.3%, $n = 172$) and volunteered at running/marathon events (63.4%, $n = 184$). In addition, volunteers have an average of 1.92 years ($SD = 1.24$) of experience as a volunteer. Table 1 presents the detailed characteristics of respondents in this study.

4.2 | Scale reliability and validity

CFA was initially conducted to evaluate the adequacy of the measurement model. However, it revealed inadequate model fit: $\chi^2 = 2242.784$, $df = 900$, $\chi^2/df = 2.492$, CFI = 0.852, NNFI = 0.837, RMSEA = 0.070. The values of CFI and NNFI fell out of the recommended criterion. After careful inspection, we found that some items (SF3, OT4, SI1, RWD2, and SAT5) revealed low factor loadings (<0.50). Moreover, according to modification indices

TABLE 1 Demographics of respondents (N = 290).

Characteristics	<i>n</i>	%
Gender		
Male	149	51.4
Female	141	48.6
Education		
Graduate school	13	4.2
College/University	172	59.3
Vocational Education	21	7.2
Post-secondary school	35	12.1
Secondary school or less	49	16.9
Type of sport event		
Running/Triathlon	184	63.4
Golf	37	12.8
Tennis	34	11.7
Dragon boat	9	3.1
Others	26	9.0
Volunteer experience (Mean = 1.92, SD = 1.24)		
≤ 1 year	137	47.2
2–3 years	127	43.8
>3 years	26	9.0
Age (Mean = 28.94, SD = 10.71)		
<20	55	19.0%
20–30	138	47.6%
30–40	45	15.5%
>40	52	17.9%

(MI) information, a few items (SI3, SI6, RWD6, CONT3, and CONT4) revealed multiple significant MIs. As such, we decided to remove these items due to the significant improvement of model fit ($\chi^2 = 1133.967$, $df = 482$, $\chi^2/df = 2.353$, CFI = 0.910, NNFI = 0.900, RMSEA = 0.067) without changing the theoretical meaningfulness of the construct (Bentler & Chou, 1987; Byrne, 2016).

Next, scale reliability was assessed by calculating the values of Cronbach's α and composite reliability (CR). As reported in Table 2, the coefficients of Cronbach's α all exceeded 0.70, ranging from 0.758 to 0.958 (Nunnally & Bernstein, 1994). As for CR values, all constructs were above the threshold value of 0.70 (Fornell & Larcker, 1981) except for the construct of career development. In particular, the CR value of career development was slightly lower than the criterion (0.689). Therefore, the overall measures generally indicated satisfactory reliability in this study.

Moreover, convergent validity was evaluated by measuring factor loadings and average variance extracted (AVE). It showed that factor loadings were all significant and higher than 0.50, and AVE values ranged from 0.489 to 0.913. Although the AVE value of the reflection construct

TABLE 2 Scale reliability and validity.

Constructs/items	Factor loading
<i>VM-Schedule flexibility (AVE = 0.858, CR = 0.923, $\alpha = 0.931$)</i>	
SF1: The organization's demands are so great that they take away from my other activities (e.g., family, work, outside interests)*	0.969
SF2: In my volunteer activities, I have so much to do that it takes away from my personal interests.	0.881
<i>VM-Orientation and training (AVE = 0.664, CR = 0.854, $\alpha = 0.845$)</i>	
OT1: Volunteers receive training prior to beginning work in this organization.	0.849
OT2: Training is part of this organization's volunteer management program.	0.887
OT3: The organization has an orientation program for all new volunteers.	0.698
<i>VM-Empowerment (AVE = 0.534, CR = 0.774, $\alpha = 0.767$)</i>	
EMP1: Volunteers are actively involved in the planning and development of activities.	0.672
EMP2: The organization provides leadership opportunities for volunteers.	0.768
EMP3: The organization modifies its processes in response to volunteer feedback.	0.749
<i>VM-Social interaction (AVE = 0.557, CR = 0.787, $\alpha = 0.758$)</i>	
SI1: Volunteers have the opportunity to interact with each other.	0.598
SI4: The organization makes sure that I get along well with my fellow volunteers.	0.827
SI5: The organization facilitates social interactions between volunteers.	0.795
<i>VM-Reflection (AVE = 0.489, CR = 0.869, $\alpha = 0.863$)</i>	
REF1: The organization provides information to volunteers about the mission of the organization.	0.746
REF2: The organization provides information to volunteers about policy issues related to the mission of the organization.	0.588
REF3: The organization provides opportunities for volunteers to reflect on their experiences.	0.631
REF4: The organization frequently reminds volunteers about the impact that they have on the people that we serve.	0.763
REF5: The organization makes sure that all new volunteers understand the positive impact they are having on the people it serves.	0.785
REF6: Volunteers receive feedback on the impact of their work.	0.716
REF7: Volunteers understand how much they matter in fulfilling the organization's mission.	0.609
<i>VM-Rewards (AVE = 0.736, CR = 0.917, $\alpha = 0.780$)</i>	
RWD1: The organization arranges parties or luncheons to thank volunteers.	0.951
RWD3: The organization has a volunteer reward program.	0.917
RWD4: Staff members constantly express their appreciation for our volunteer efforts.	0.834
RWD5: The organization recognizes outstanding volunteers.	0.743
<i>Motivation-Altruism (AVE = 0.594, CR = 0.854, $\alpha = 0.858$)</i>	
ALT1: I want to help others.	0.727
ALT2: I am concerned about those less fortunate than myself.	0.777

(Continues)

TABLE 2 (Continued)

Constructs/items	Factor loading
ALT3: I feel compassion toward people in need.	0.810
ALT4: I feel it is important to help others.	0.766
<i>Motivation-Career development (AVE = 0.528, CR = 0.689, α = 0.842)</i>	
CD1: I want to make new contacts that might help my business or career.	0.659
CD2: Volunteer experience will look good on my resume.	0.790
<i>Satisfaction (AVE = 0.840, CR = 0.955, α = 0.958)</i>	
SAT1: Overall, I am satisfied with my volunteer experience.	0.886
SAT2: I am satisfied with the people who manage the organization.	0.943
SAT3: I am satisfied with the organization's policies.	0.923
SAT4: I am satisfied with the support provided by the organization.	0.933
<i>Continuance intention (AVE = 0.913, CR = 0.955, α = 0.773)</i>	
CONT1: I intend to continue volunteering for this organization.	0.965
CONT2: I would like to remain a volunteer here.	0.946

*Reverse items.

was slightly lower than the suggested value (0.50), the overall measure revealed acceptable validity (Hair et al., 2010). Finally, discriminant validity was assessed by the Fornell-Larcker criterion, which compares the square root of the AVE values of each construct and inter-correlations (Fornell & Larcker, 1981). The inter-correlations between constructs were less than the square root of AVE values of each construct, indicating adequate discriminant validity (Table 3).

4.3 | Structural model

This study further examined the hypothesized relationships between volunteer management, motivation, satisfaction, and continuance intention. Given the multi-dimensional structures of volunteer management and motivation, this study employed item parceling to avoid the complexity and inadequate fit of the structural model (Hall et al., 1999; Little et al., 2002). Moreover, doing so can comply with the assumption of multivariate normality and examine the relationship between constructs (Hall et al., 1999; Little et al., 2002). According to the SEM analysis results, the structural model showed an adequate fit with $\chi^2 = 185.380$, $df = 70$, $\chi^2/df = 2.648$, CFI = 0.965, NNFI = 0.955, and RMSEA = 0.076.

As reported in Table 4 and Figure 3, volunteer management has a significant and positive effect on satisfaction ($\beta = 0.351$, t -value = 5.987, $p < 0.001$), supporting H1. However, volunteer management did not significantly affect continuance intention ($\beta = 0.076$, t -value = 1.457, $p = 0.145$), rejecting H2. Moreover, motivation has a significant and positive impact on both satisfaction ($\beta = 0.305$, t -value = 3.490, $p < 0.001$) and continuance intention ($\beta = 0.164$, t -value = 2.409, $p < 0.05$), supporting H3 and H4. Finally, satisfaction has a positive and significant influence on continuance intention ($\beta = 0.576$, t -value = 9.780, $p < 0.001$), supporting H5.

TABLE 3 Discriminant validity.

Constructs	1	2	3	4	5	6	7	8	9	10
1. Schedule and flexibility	0.926									
2. Orientation and training	-0.127	0.815								
3. Empowerment	-0.062	0.589	0.730							
4. Social interaction	0.037	0.515	0.529	0.746						
5. Rewards	0.043	0.572	0.591	0.403	0.858					
6. Reflection	-0.022	0.594	0.501	0.537	0.531	0.699				
7. Altruism	0.262	0.120	0.278	0.257	0.078	0.262	0.771			
8. Career development	0.176	-0.004	0.119	0.259	-0.083	0.120	0.661	0.726		
9. Satisfaction	0.295	0.189	0.353	0.366	0.351	0.400	0.305	0.307	0.917	
10. Continuance intention	0.317	0.175	0.267	0.262	0.293	0.333	0.268	0.319	0.659	0.956

Note: Bold diagonal elements are the square root of AVE; values below the diagonal are squared correlations.

TABLE 4 Results of path analysis.

Paths	Standardized coefficient (β)	t-value
Direct effects		
H1: VM \rightarrow SAT	0.351	5.987***
H2: VM \rightarrow INT	0.076	1.457
H3: MOT \rightarrow SAT	0.305	3.490***
H4: MOT \rightarrow INT	0.164	0.164*
H5: SAT \rightarrow INT	0.576	0.576***
Indirect effects		
VM \rightarrow SAT \rightarrow INT	0.202	4.122***
MOT \rightarrow SAT \rightarrow INT	0.175	3.365***
Moderating effects		
H6: VM*EXP \rightarrow SAT	0.370	14.628***
VM*EXP \rightarrow INT	0.247	9.336***
MOT*EXP \rightarrow SAT	-0.684	-25.978***
MOT*EXP \rightarrow INT	-0.316	-7.470***
SAT*EXP \rightarrow INT	-0.169	-10.804***

Abbreviations: EXP, Experience; INT, Continuance intention; MOT, Motivation; SAT, Satisfaction; VM, Volunteer management.

*** $p < 0.001$; * $p < 0.05$.

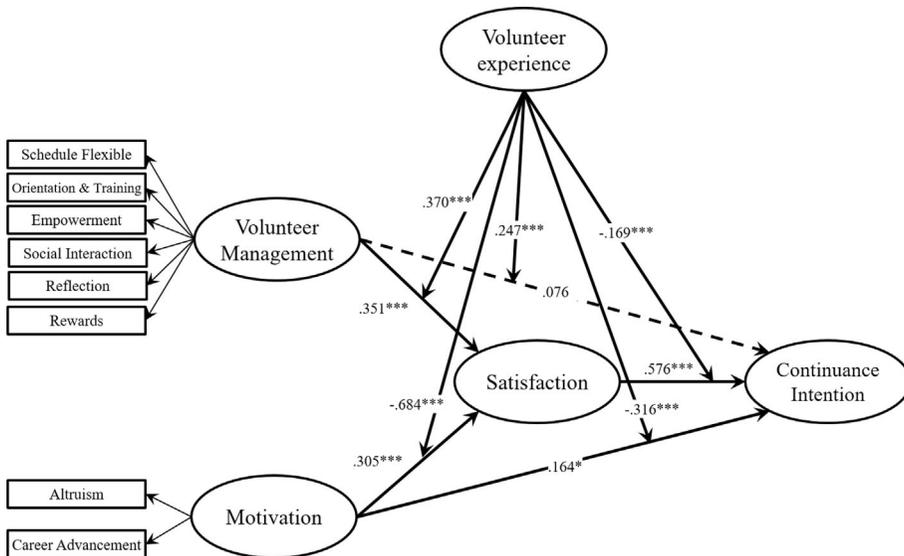


FIGURE 3 Standardized coefficients of the structural equation model.

4.4 | Mediating effects

According to Mehrabian and Russell's (1974) environmental psychology model, emotional responses mediate the impact of environmental stimuli and personal factors on behavioral

response. Therefore, additional mediation analyses were performed to investigate indirect effects in the research model. According to the guidelines of Zhao et al. (2010), the indirect effect should be carefully examined to identify the role of the mediator. The results of mediation analyses reported that volunteer management had an indirect effect on continuance intention ($\beta = 0.202$, t -value = 4.122, $p < 0.001$), and motivation had an indirect impact on continuance intention ($\beta = 0.175$, t -value = 3.365, $p < 0.001$). This indicates that volunteer satisfaction has a fully mediating effect (indirect-only mediation) on the relationship between volunteer management and continuance intention (Iacobucci et al., 2007; Zhao et al., 2010). In other words, volunteers show high levels of satisfaction and continuous intention to volunteer when they are managed well. Also, this study found a partially mediating effect (complementary mediation) on the relationship between motivation and continuance intention (Iacobucci et al., 2007; Zhao et al., 2010), indicating the important role of volunteer motivation in enhancing satisfaction and continuance intention.

4.5 | Moderating effects of volunteer experience

SEM analyses also found the moderating role of volunteer experience in the paths of the research model. As reported in Table 4, the results showed that volunteer experience positively moderated the influences of volunteer management on satisfaction and continuance intention ($\beta_{VM*EXP \rightarrow SAT}$: 0.370, t -value = 14.628, $p < 0.001$; $\beta_{VM*EXP \rightarrow INT}$: 0.247, t -value = 9.336, $p < 0.001$). Also, volunteer experience negatively moderated the influences of volunteer motivation on satisfaction and continuance intention ($\beta_{MOT*EXP \rightarrow SAT}$: -0.684, t -value = -25.978, $p < 0.001$; $\beta_{MOT*EXP \rightarrow INT}$: -0.316, t -value = -7.470, $p < 0.001$). In addition, volunteer experience negatively moderated the relationship between satisfaction and continuance intention ($\beta_{MOT*EXP \rightarrow INT}$: -0.169, t -value = -10.804, $p < 0.001$).

5 | DISCUSSION

The extant literature on sport event volunteerism rarely paid attention to exploring the antecedents of volunteer satisfaction and behavioral intention at multiple levels (organizational and individual levels). To address the gap in the literature, the primary purpose of this study was to explore the influences of volunteer management (organizational level) and motivation (individual level) on volunteers' satisfaction and continuance intention. Moreover, volunteers' satisfaction and continuance intention were examined based on Mehrabian and Russell's (1974) environmental psychology model, viewing volunteer management as the environmental stimuli and motivation as the personal factor. Our findings showed that volunteer management had an indirect impact on continuance intention via volunteer satisfaction. Moreover, motivation positively affected both satisfaction and continuance intention. In addition, the moderating effect of volunteer experience was identified in the research model. We found that the impact of volunteer management on volunteer satisfaction and continuance intention was stronger for more experienced volunteers. On the other hand, motivation has a stronger impact on volunteer satisfaction and continuance intention for less experienced volunteers. Volunteer satisfaction shows a stronger impact on continuance intention for less experienced volunteers.

First, we found that volunteer management has a positive influence on volunteers' satisfaction (H1), which in turn affects their continuance intention (H5). This finding was supported

by Mehrabian and Russell's (1974) environmental psychology model, which emphasizes the S-O-R mechanism (Mehrabian & Russell, 1974). That is, the volunteers' perceptions of volunteer management practices trigger individuals' positive emotional response (satisfaction), which further results in approach behavior with the environment (continuance intention). This suggests that Mehrabian and Russell's (1974) environmental psychology model can serve as an alternative way to explain volunteer retention (Cho, Li, & Wu, 2020). More specifically, the positive influence of volunteer management on volunteer satisfaction is consistent with previous studies (Cuskelly et al., 2006; Finkelstein, 2008; Valéau et al., 2013; Walk et al., 2019; Wisner et al., 2005). Previous studies argued that not all HR practices are applicable to the context of volunteerism; therefore, the organization's volunteer-specified management practices are required to create volunteer satisfaction (Alfes et al., 2017; Cuskelly et al., 2006; Hager & Brudney, 2015). This finding provides evidence for the importance and necessity of volunteer management practices due to the uniqueness of volunteers, and research should emphasize various aspects in the design of volunteer management practices, such as schedule, training, reward system, autonomy, and social interaction opportunities (Alfes et al., 2017; Wisner et al., 2005). Also, this study further offered empirical evidence on the link between satisfaction and continuance intention (H5). Satisfaction has been identified as the critical component for determining participation in future volunteer activities (Finkelstein, 2008; Galindo-Kuhn & Guzley, 2002). According to Mehrabian and Russell's (1974) environmental psychology model, an individual's positive emotional reactions (satisfaction) lead to approach behavior within the environment (Mehrabian & Russell, 1974). That is, satisfied volunteers are more likely to continue participating in future volunteer activities.

However, volunteer management indirectly affected continuance intention through volunteer satisfaction (H2). This finding concurs with the argument of Hoyer et al. (2008) that mediating factors may exist in the linkage between volunteer management practices and volunteer retention. This indicates the critical role of volunteers' satisfaction in facilitating the influence of volunteer management on their intention to continue volunteering. In other words, no matter how effective volunteer management is, volunteers could quit participating in volunteer activities if they are not satisfied. In a similar vein, Cho, Li, and Wu (2020) found that volunteers with a more positive attitude and less negative emotion are more likely to engage in future volunteer work.

Second, motivation had a positive impact on both satisfaction and continuance intention (H3 and H4). The findings align with Mehrabian and Russell's (1974) environmental psychology model, signifying the importance of personality in relation to individuals' emotional responses and behavior. Prior studies also supported that motivation is a critical determinant of individuals' emotional responses (Bang et al., 2019; Cho, Li, & Wu, 2020; Lee et al., 2013; Lee et al., 2014). Cho, Li, and Wu (2020) found that volunteers' intrinsic motivation can lead to a more positive attitude and reduce emotional exhaustion. Moreover, it must be noted that motivation also affects behavioral intention, indicating that more motivated volunteers tend to participate in future volunteer activities. Previous studies found that individuals' intention to continue volunteering is largely determined by the level of fulfillment of their motivational needs and goals (Bang & Lee, 2014; Lai et al., 2013; Lee et al., 2013). For example, individuals who believe that volunteering in a sport event would help their future career (career advancement) are more likely to volunteer to satisfy this motivation. Therefore, this study provides evidence that motivation can affect not only individuals' emotional responses but also their continuous intention to volunteer in future sport events.

In addition, this study further discovered the moderating effect of volunteer experience in the research model (H6). We found the volunteer experience positively moderated the influences of volunteer management on volunteer satisfaction and continuance intention. That is, for more experienced volunteers, we found that volunteer management had a stronger influence on volunteer satisfaction and continuance intention as compared to less experienced volunteers. This indicates that experienced volunteers' emotional responses and behavior are primarily influenced by the working environment shaped by various volunteer management practices. More specifically, as more experienced volunteers may participate in various volunteer management practices, they are more familiar with the working environment. According to expectation confirmation theory, individuals compare perceived performance with initial expectations formed by their existing knowledge and prior experience (Oliver, 1980). The congruence between perceived performance and initial expectation leads to satisfaction and continuance behavior (Oliver, 1980). In a similar vein, experienced volunteers may compare the current volunteer management practices with previous experiences, and the fulfillment of initial expectations significantly determines their satisfaction level and continuance intention. Therefore, environmental stimuli, which are shaped by volunteer management practices, play a stronger role for more experienced volunteers.

On the other hand, volunteer experience negatively moderated the influences of volunteer management on volunteer satisfaction and continuance intention. More specifically, motivation played a stronger role in affecting volunteer satisfaction and intention to continue volunteering for less experienced volunteers, implying the significance of volunteer experience in arousing positive emotion and engaging in volunteer activities. In addition, volunteer experience negatively moderated the relationship between satisfaction and continuance intention. It indicated that the positive relationship between satisfaction and continuance was weakened by volunteer experience. These findings might be attributed to the different levels of fulfillment of volunteers' needs (Bang et al., 2008). For more experienced volunteers, their needs, such as altruism or career development, for volunteer work may have been more fulfilled by previous involvement and participation in volunteer activities as compared with less experienced volunteers (Farrell et al., 1998; Hallmann & Harms, 2012), and therefore their satisfaction and behavior are less likely to be triggered by motivation. On the other hand, less experienced volunteers may have a lower level of fulfillment of needs (Farrell et al., 1998; Hallmann & Harms, 2012). As such, they could be more motivated to participate in volunteer activities in order to fulfill their needs for volunteer work. In addition, it could also be attributed to the different levels of familiarity with the volunteering environment (Ratten et al., 2009). More experienced volunteers may know their roles and responsibilities better and, are more responsive to volunteer management practices. The familiar environment could more easily influence their emotional response and behavior. According to the findings of this study, we concluded that more experienced volunteers' emotions and behavior are more likely to be influenced by volunteer management, whereas less experienced volunteers' emotions and behavior may be determined more by individual motivation.

5.1 | Theoretical implications

This study offers various theoretical implications in the context of sport event volunteerism. First, this study supported Mehrabian and Russell's (1974) environmental psychology model as an effective means of explaining volunteer satisfaction and continuance intention. Although

Mehrabian and Russell's (1974) environmental psychology model has been widely applied across diverse academic fields, such as consumer behavior, this model has rarely been applied in the context of volunteerism (Cho, Li, & Wu, 2020). Therefore, this study offers an alternative perspective on understanding the roles of volunteer management and motivation in volunteers' emotional responses and behaviors.

Second, the findings of this study further support the importance of volunteer management to positive volunteer outcomes in the context of sport event volunteerism. It should be noted that volunteer management practices need to be treated differently from universalistic HR practices due to the different nature of paid and unpaid work (Hager & Brudney, 2015). Although more scholars have begun to consider the aspect of non-profits and examined the influence of volunteer-focused management practices (Hager & Brudney, 2015), more empirical evidence is necessary (Einolf, 2018). The findings of this study contribute to a better understanding of the mechanism of how volunteer management practices affect sport volunteers' satisfaction and continuance intention. Moreover, this study provides empirical evidence on the impact of volunteer management practices on volunteers' affective and behavioral outcomes.

Third, the extant literature on sport event volunteerism primarily emphasizes personal motivation at the individual level. This study offers a better understanding of volunteer behavior from a more comprehensive perspective by combining the determinants at the organizational level (volunteer management) and the individual level (motivation). Thus, this study takes a multi-level perspective that gives indications about how the organizational and individual factors collaboratively affect volunteerism and volunteer management. The findings of this study provide a better understanding of the motivations behind sport event volunteerism and how organizations can leverage these motivations to improve their volunteer management practices. This study also contributes to the literature on sport event volunteerism by providing a more comprehensive view of the factors influencing sport volunteers' affective and behavioral outcomes.

Moreover, this study uncovers some hidden patterns between more experienced and less experienced volunteers that would not have been discovered if they were studied without considering the moderating effect of volunteer experience. Exploring moderators in volunteerism research has been known as a challenging task for researchers, and existing literature lacks empirical evidence on moderating effects on volunteers' perceptions and behaviors (Wicker, 2017). This study adds insightful value to the existing knowledge of volunteerism research by identifying the volunteer experience as the moderator in this study. Environmental stimuli are a stronger predictor of satisfaction and continuance for more experienced volunteers; the personal factor is a more significant determinant of satisfaction and continuance intention for less experienced volunteers. The findings of this study can be used to better understand how to increase satisfaction and continuance intentions among sport volunteers. More experienced volunteers may benefit from a more stimulating environment created by volunteer management, while less experienced volunteers may need stronger individual motivations in order to increase satisfaction and continuance intentions.

5.2 | Practical implications

This study also provides several managerial implications. First, event organizers should pay more attention to the working environment to sustain the volunteer workforce, especially for more experienced volunteers. Therefore, event organizers should develop and design

volunteer-oriented management practices that satisfy volunteers' goals and needs. Moreover, event organizers need to find a balance between management and flexibility. An overly rigid work environment and formalized procedures may counteract volunteers' need for autonomy and empowerment (Boezeman & Ellemers, 2009) and lead to exhaustion (Cho, Li, & Wu, 2020).

Moreover, individuals' motivations to participate in volunteer activities may vary. In order to encourage volunteers to stay engaged and motivated in their tasks, event organizers need to understand their motivational needs before the volunteer activities and assign tasks that can satisfy their needs. For example, for volunteers with strong motivation for career advancement, organizers can provide challenging tasks for them to learn the required skills and knowledge.

Finally, event organizers should also consider volunteers' demographic profiles. During the process of recruitment and selection, event organizers need to consider their past volunteer experience, as it is a crucial indicator affecting future volunteer management practices and strategies for motivation. At the same time, volunteers need to understand the event organization's expectations. When volunteers clearly understand their roles and duties, they perform better and feel more satisfied with their tasks. As such, event organizers need to provide clear and meaningful job descriptions for volunteers. Volunteers who perceived the sense of their contribution to the event had a higher level of intention to return as volunteers in the future.

5.3 | Limitations and future research direction

This study is not without limitations. First, convenience sampling was used in this study using online and on-site surveys. Although this study included volunteers in several sport events, such as the marathon, golf, triathlon, and tennis events, the findings could not be able to generalize to all volunteers in Singapore. Second, due to the sample solely from Singapore, cultural bias might exist. Therefore, future studies need to compare the findings of this study to other populations or cultures to examine whether the effects are consistent. Third, a cross-sectional design was conducted to measure volunteers' satisfaction and continuance intention at a specific time point. However, satisfaction and intention are not stable and can vary in different versions of sport events. Therefore, future research needs to consider a longitudinal design to understand the potential change in satisfaction and intention over time. Moreover, this study used continuance intention as the dependent variable. Examining other variables that can lead to sustainable volunteering, such as commitment, subjective well-being, happiness, or citizenship behavior, could contribute to the extant literature on volunteerism. Further, due to the unpaid nature of volunteer work, future studies may consider exploring the concept of psychological contract, addressing the mutual expectations of tangible and intangible exchanges between organizations and volunteers (Jones, 2010; Won et al., 2021). Finally, both volunteer management and motivation were treated as second-order constructs in the research model. Therefore, future studies may consider the impact of specific volunteer management practices and motivation on volunteers' emotional and behavioral responses.

6 | CONCLUSIONS

With the aim to better understand the sport volunteers' emotional responses and behaviors, this study examines the influences of volunteer management and motivation through the lens of Mehrabian and Russell's (1974) environmental psychology model. Moreover, this study provides

a multi-level perspective of combining the organizational level (volunteer management) and the individual level (motivation) and identifies how the interplay of the organizational and individual factors collaboratively affected sport volunteers' emotional responses and behaviors. The findings of this study show that volunteer management has an indirect influence on continuance intention to volunteer through volunteer satisfaction, and motivation has an influence on both satisfaction and continuance intention. Moreover, previous volunteer experience plays a moderating role in the relationships between the variables in the research model. Volunteer experience positively moderates the influence of volunteer management on satisfaction and continuance intention and negatively moderates the impact of motivation on satisfaction and continuance intention. In addition, volunteer experience negatively moderates the relationship between satisfaction and continuance intention. This study provides a new direction for future studies as well as event organizers who focus on volunteer management.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ORCID

Heetae Cho  <https://orcid.org/0000-0002-8927-9743>

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AUTHOR BIOGRAPHIES

Weisheng Chiu is an Associate Professor and Department Head of Management and Strategy in the Lee Shau Kee School of Business and Administration at the Hong Kong Metropolitan University. His research interests focus on the effective management and marketing of sport organizations.

Hyung-Kil Kang is an Assistant Professor in the Department of Physical Education at Kyungnam University, Korea. He specializes in quality-of-life research and sport psychology research, demonstrating expertise in quantitative methodologies and analyses.

Heetae Cho is an Associate Professor in the Department of Sport Science at Sungkyunkwan University, South Korea. The primary focus of his research is to understand sport participants' and consumers' behavior, and a large part of his research is related to the concept of nostalgia in the contexts of sport, leisure, and tourism.

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