

## Research Paper

# An Exploratory Study into the Motivations of Green Volunteers at the 29th Southeast Asian Games

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**Abstract:** The success of the 29th Southeast Asian Games, known also as KL2017, was attributed to the efforts of participating athletes as well as the substantial contributions of 13,000 volunteers behind the scene. Hosted by Malaysia in 2017, the multi-sports event was declared as a “Green Games” with the adoption of an environmental sustainability management programme. This study examines factors that influenced the green volunteers deployed, who were also required to be knowledgeable about environmental sustainability and committed to promote pro-environmental beliefs at the event. An Exploratory Factor Analysis (EFA) was conducted based on the four factors of Sports Event Volunteer Motivations Scale (SEVMS) — purposive, solidary, external traditions and commitment. The findings from 518 responses to an online questionnaire reveal that green volunteers at KL2017 were highly motivated by solidary (personal growth), followed by purposive reasons (do something worthwhile), whereas external traditions produced the least motivating factors.

**Keywords:** Green volunteers, motivation, mega-sports event, sustainable volunteer management, pro-environmental event

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## Introduction

Hosting a mega-sports event such as the 29th Southeast Asian (SEA) Games and 9th ASEAN Para Games, also known as KL2017, offers many benefits to the host country including a boost to its economy and image. Eleven member nations of

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the Southeast Asian Games Federation (SEAGF) competed between 19 – 30 August 2017 and 17 – 30 September 2017, respectively (Bernama, 2017b). The biennial event concluded with a climatic victory for the hosting country, Malaysia. Apart from the medal tally with a haul of 145 gold, 92 silver and 86 bronze medals (Bernama, 2017a), and the debut of three winter sports (Augustin, 2017; Naidu, 2017), the host country also fielded the biggest ever contingent of 874 athletes (Carvalho, 2017). Most significantly, KL2017 was declared as the first “Green Games” for the region (CNA, 2017). While the spotlight of the event was on the competing athletes, many others behind the scene – including the 13,000 volunteers, were also heralded as significant contributors to its success (Indramalar, 2017).

Mega-sports events, such as KL2017, could generate benefits ranging from economic and social development, the promotion of human rights and educational opportunities, to environmental protection (Dowse & Fletcher, 2018; Kim et al., 2017; Wallstam, Kronenberg, & Pettersson, 2019). While the realisation of sustainable development goals are also enabled through such events (Ban, 2016; Kim, Choe, Kim, & Kim, 2019), its success is often heavily dependent on volunteers (Allen & Bartle, 2014; Kim, Park, Kim, & Kim, 2019; Tomazos & Luke, 2015).

Apart from decreasing costs and easing budget pressures for sports events, volunteers are necessary for the delivery of diverse services and deployment of significant roles (Ahn, 2018; Chen et al., 2018; Pate et al., 2017). Furthermore, international volunteers also serve as ambassadors for specific sports and are potential tourists to hosting destinations (Doherty & Patil, 2019; Han, Meng, Chua, Ryu, & Kim, 2019; D. Kim et al., 2019). Evolving research on volunteerism is, therefore, necessary to cultivate a deeper understanding of psychological attributes (e.g. needs fulfilment, motivation, and involvement), as well as to improve organisational processes including training and assignment of roles (Hines, 2017; D. Kim et al., 2019; Kim & Cuskelly, 2017).

Despite being an indispensable labour resource, volunteerism in various sectors are deteriorating and retention has proven to be challenging (Cho, Li, & Wu, 2019; Konieczny, 2018; Lamb & Ogle, 2018). In comparison to the Americas and Oceania, where the volunteering population was reported to be 22% and 40%, respectively, volunteerism in Asia is the lowest among all societies at only 20% (Tan et al., 2020). Furthermore, the high turnover rate has resulted in burdensome recruitment and training costs (Ahn, 2018; Blackman, Benson, & Dickson, 2017; Lee & Won, 2018). Hence, it is imperative for studies on motivation and satisfaction of volunteers to be ongoing as well as to address the retention challenges with volunteer engagement and enhanced training, specifically in Malaysia.

Studies have suggested that it would be advantageous to inquire deeper into factors that influence volunteerism, which include the compulsion to seek out volunteer opportunities, the commitment to help others and the ability to sustain

this commitment over time (Ahn, 2018; E. Kim, 2018; E. Kim & Cuskelly, 2017; Lamb & Ogle, 2018). Furthermore, there continues to be concerns on fundamentals such as the processes, initiations and engagement of volunteers (Aisbett & Hoye, 2015; Hager & Brudney, 2004; Wicker, 2017). Such concerns are intensified for events with a green agenda such as KL2017, where added knowledge related to environmental sustainability and commitment to promote such pro-environmental beliefs are essential. This study attempts to uncover the motivations of the green volunteers at KL2017 through constructs such as the Sports Event Volunteer Motivations Scale (SEVMS).

## **Literature Review**

### **Volunteers**

In general, volunteers are also described as those who contribute work of their own free will for the benefit of helping others and do not receive monetary rewards in return (Febriani & Selamet, 2020; Hamzah et al., 2016; Mohamed Nor et al., 2018; Silva et al., 2018). To be more precise, volunteers are individuals who offer their time willingly without any financial gain for activities that serve the common good (Brayko et al., 2016; Liu et al., 2017; Volunteering Australia, 2015). Volunteers have also been described with characteristics such as ongoing helpfulness, charitable, voluntary and sustained or committed (Faletehan et al., 2020; Olivier-Mensah, 2019; Rabun et al., 2017; van Schie et al., 2019; Wymer & Akbar, 2019). An in-depth understanding of volunteer motivations as well as their perceptions and behaviours would help improve strategies for planning, recruitment and management of volunteers (Kim & Cuskelly, 2017; Lee & Won, 2018; Randle & Dolnicar, 2015; Walton et al., 2017).

In order to boost economic development and encourage growth agenda for cities, many governments continuously host and organise various types of sport events at national or regional levels (Dowse & Fletcher, 2018; Maennig, 2017; Meridan, 2019). The increase of these events, often stringent in financial resources, have created a demand for volunteers. However, the constraints of modern lifestyles have affected the availability of volunteers (Dunn et al., 2016; Konieczny, 2018; Marino & Schenkel, 2019). Increased competition has prompted higher productivity at workplaces contributing to a decline of volunteers as employees are not allowed to be away from work for lengthy periods of time (De Clerck et al., 2019; Kappelides et al., 2019; Mykletun & Himanen, 2016). Furthermore, the extension of retirement age in many countries has also shrunk the limited pool of volunteers (Birtch, 2017; J. Cho et al., 2018; Cousineau & Misener, 2019; Gil-Lacruz et al., 2019; Mykletun & Himanen, 2016; Phillipson, 2019; van Ingen & Wilson, 2017). Research also shows that the reduction of volunteers is also caused by the increased involvement

of women in the workforce and more women in dual income households returning to work (Gil-Lacruz et al., 2019; Y. J. Lee & Won, 2018; Park et al., 2019; Tiehen, 2000).

Therefore, to sustain a strong volunteer base, it is important to prioritise volunteer satisfaction as it is essentially the support required for successful events (Blackman et al., 2017; D. Kim et al., 2019; E. Kim et al., 2018; Pauline, 2011; Wicker, 2017). Regardless of whether such events are one-off or an ongoing series, it would be beneficial to have a conducive environment that would generate volunteer satisfaction (Dickson et al., 2015; Hyde et al., 2016; D. Kim et al., 2019; M. Kim et al., 2019).

Motivations have been linked to volunteers' overall experience, which would then lead to volunteer satisfaction (Bang et al., 2019; Güntert et al., 2016; Martin et al., 2019). It was suggested that volunteers will continue to offer their services if their overall experiences continue to be rewarding and satisfy certain needs (Blackman et al., 2017; H. Kim et al., 2019; Tan et al., 2020). This description of volunteer satisfaction is similar to the disconfirmation process in consumer behaviour, where repeat purchase is a result of consumers' perceived expectations and satisfying experience (Bhuiyan et al., 2018; Han et al., 2018). Alternatively, consumers will not repeat their purchases if they are not satisfied, which is also similar for volunteers who will discontinue their participation in activities if their experiences are not satisfying nor rewarding (Han et al., 2018; Hult et al., 2019; Pham et al., 2017). It is, therefore, crucial that volunteers' assigned tasks are matched appropriately to their interests and abilities in order to satisfy expectations and experiences (De Clerck et al., 2019; Kappelides et al., 2019; D. Kim et al., 2019; Tan et al., 2020). Ultimately, volunteers will be motivated to continuously participate at events when their overall experiences and needs are satisfied (Blackman et al., 2017; Hansen & Slagsvold, 2020; D. Kim et al., 2019; Zainuddin et al., 2020).

Volunteers have increasingly become an essential resource to sustain major events (Dickson et al., 2015; Hassan & Harding, 2018; Kim & Cuskelly, 2017; D. Kim et al., 2019; Marino & Schenkel, 2019). At mega-sports events, such as the Olympic Games and the Paralympic Games, volunteers cover a multitude of tasks including press and public relations, accreditation, technology and telecommunications, transport as well as food and beverage catering (Ahn, 2018).

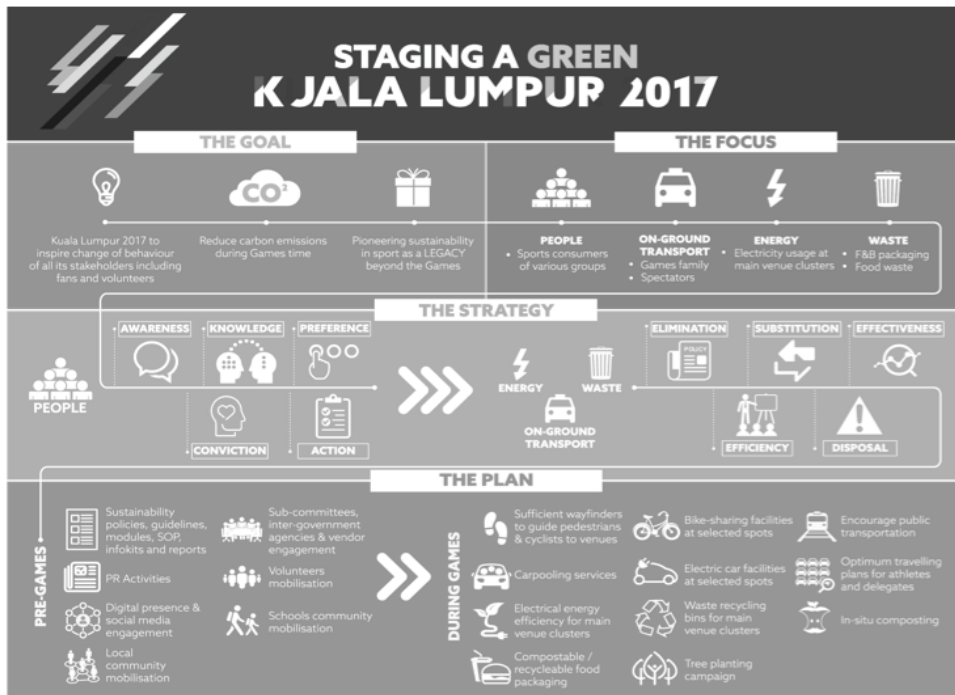
### **Green Volunteers at KL2017**

KL 2017 was not just a mega-sports event, but was also publicised as a "Green Games" through the adoption of an elaborate environmental sustainability management programme (Chu, 2017). The Malaysia Organising Committee (MASOC) recognised KL2017 as an opportunity to promote environmental awareness and sustainability practices through the "Kuala Lumpur 2017 Green Initiatives" as shown in Figure 1 (Lim, 2018; Wong, 2017). To kick-start KL2017's green legacy and

to illustrate its commitment to environmental responsibility, the green initiatives targeted five key areas — namely transport, energy and waste management, outreach and engagement, as well as tree planting (Chu, 2017; Wong, 2017). These key areas were inadvertently part of the green volunteers’ areas of responsibility too.

As part of the event’s green initiative, about 1,000 green volunteers were recruited and deployed to cover both the 29th Southeast Asian (SEA) Games and 9th ASEAN Para Games (Yusof, 2017). Volunteers were enlisted from five universities and had to undergo a 2-day compulsory general training session. Additionally, green volunteers also had to attend specific training sessions where they were further equipped with fundamental knowledge on climate change and environmental care (Indramalar, 2017).

In his address to green volunteers at the final specific training session, the then Minister of Youth and Sports, Khairy Jamaluddin, acknowledged green volunteers as key stakeholders of the green games and urged them to teach and inspire others on ways to be environmentally conscious (Wong, 2017; Yusof, 2017). Khairy further added that the green agenda was of high importance and had assigned a distinctive green uniform so that green volunteers would stand out from other volunteers (Yusof, 2017).



Source: Lim, 2018

Figure 1. Green initiatives of KL2017

At the main venues for KL2017, green volunteers were tasked with enforcing practices that would help achieve targets to improve energy efficiency by 15% and reduction of waste to landfills by 30% (Chu, 2017). Easily recognised by their signature green uniforms, green volunteers would put words into action by monitoring waste separation, ensuring no littering and proper use of recycling bins by visitors as part of their duties in educating and promoting awareness of environmentally sustainable practices (Yusof, 2017).

### **Volunteer Motivations**

Past studies have garnered a wide range of perspectives on volunteer motivations. Initially, studies suggested a unidimensional model of motivation where over 20 motives were grouped into just one category of volunteer motivation (Butt et al., 2017; Woosnam et al., 2019). Subsequently, studies revealed that motivational factors may comprise two-dimensional constructs. One example is the intrinsic and extrinsic motivations construct, which was adapted from Herzberg's (1966) intrinsic motives and extrinsic hygiene factors (Chadda & Rai, 2016; Hines, 2017; Kim & Cuskelly, 2017; Stukas, Hoyer, Nicholson, Brown, & Aisbett, 2016). Intrinsic motivations involve activities that volunteers find interesting, enjoyment or personal satisfaction, while extrinsic motivations refer to participation based on instrumental reasons, aimed at getting rewards or to avoid punishment (Allen & Bartle, 2014; Hamilton Skurak et al., 2019; Nencini et al., 2016; Nichols et al., 2019; Okun & Kim, 2016; Stukas, Snyder, et al., 2016).

Another two-dimensional construct consists of altruistic and egoistic motivational factors (Ahn, 2018; Chen et al., 2018; Mykletun & Himanen, 2016; Piatak & Holt, 2020; Veludo-de-Oliveira et al., 2015). Altruistic motivations often are contributions that are service-focused, related to concern for the wellbeing of others, with opportunities to foster emotional relationships, and derive from a need to participate in trendy societal activities (Dickson et al., 2015; Munar & Jacobsen, 2014; Silva et al., 2018). Other altruistic inclinations include wanting to be involved, showing support for certain values and fulfilling certain social obligations (Clary et al., 1998; Piercy & Kramer, 2017). Egoistic motivations, on the other hand, prioritise self-interests and include self-actualisation benefits such as learning to increase understanding and knowledge for personal enhancement as well as improving their career prospects or raising their status (Ahn, 2018; Butt et al., 2017).

However, additional studies have also discovered that volunteer motivations comprise of multi-dimensional constructs (Chadda & Rai, 2016; Hallmann et al., 2018; Tan et al., 2020). A study conducted on a recreation-related voluntary zoological association concluded with three categorisations of volunteer motivations, where the strongest was purposive, followed by solidary and lastly, material (Chamberlain, Yanus, & Pyeatt, 2019; Lee, Kim, & Koo, 2016; Lockstone-Binney, Holmes, Smith, Baum, & Storer, 2015).

Another psychological model on the assessment of individual motivations which was researched extensively is the functional theory (Butt et al., 2017; Güntert et al., 2016; Martin et al., 2019; Phillips & Phillips, 2010; Same et al., 2020). This extensively researched model suggests that people are inclined to behave or develop attitudes to fulfil specific psychological needs.

As summarised in Table 1, other studies have categorised various multi-dimensional constructs to include motivational factors such as external demands or requirements (Beehr et al., 2010; Ghose & Kassam, 2014; Nencini et al., 2016), desire for recognition and religious expressions (Ahn, 2018; Ghose & Kassam, 2014; Jongenelis et al., 2020; Oh, 2019; Peucker & Kayikci, 2020; Walton et al., 2017) and even protection of the ego (Clary et al., 1998; Skurak et al., 2019; Martens, 2017; Monaci, Scacchi, & Monteu, 2019).

**Table 1.** Studies on volunteer motivations

<b>Authors</b>	<b>Category</b>	<b>Volunteer motivation description</b>
Clary et al., 1998; Dickson et al., 2015; Hoffman & Bryant, 2018; Veludo-de-Oliveira et al., 2015	Values	Altruistic and humanitarian concerns for others
Arulrajah, 2016; Blackman et al., 2017; Chadda & Rai, 2016; Clary et al., 1998	Understanding	Opportunities to increase knowledge and perspective, as well as to apply and practice skills and abilities
Arulrajah, 2016; Chadda & Rai, 2016; Clary et al., 1998; Dunn et al., 2016	Social	To be in the company of friends and family, as well as to expand social circle by creating new relationships
Chadda & Rai, 2016; Clary et al., 1998; Hoffman & Bryant, 2018; Pate et al., 2017; Schlesinger & Gubler, 2016; Skurak et al., 2019	Career	Enhance professional skills to strengthen career opportunities
Alender, 2016; Butt et al., 2017; Clary et al., 1998; Erasmus & Morey, 2016; Nonnis et al., 2020	Protective	Escape from guilty or negative feelings for ego defensiveness
Anderson & Moore, 1978; Bang & Ross, 2009; Clary et al., 1998; Jongenelis et al., 2020; Khoo & Engelhorn, 2007; Koutrou, 2016; Schlesinger & Gubler, 2016	Enhancement	Personal development, personal growth and self-esteem satisfaction

**Table 1** (con't)

<b>Authors</b>	<b>Category</b>	<b>Volunteer motivation description</b>
Ahn, 2018; Beehr et al., 2010; Ghose & Kassam, 2014; Hoffman & Bryant, 2018; Ismail, Samat, Parnabas, Abdullah, & Abdul Hamid, 2014; Mykletun & Himanen, 2016	Requirement	External demands (e.g. scholarship criteria or to fulfil academic requisites)
Ahn, 2018; Chadda & Rai, 2016; Esmond & Dunlop, 2004; Oh, 2019	Recognition	Acknowledgement for contribution and talents
Erasmus & Morey, 2016; Esmond & Dunlop, 2004; Ghose & Kassam, 2014; Jongenelis et al., 2020; Phillips & Phillips, 2010; Walton et al., 2017	Religion	Expression of altruistic religious beliefs

### Measurement of Volunteer Motivations

Investigations into volunteer motivations have been conducted using various instruments (Dickson et al., 2015). Motivation of volunteers, more specifically at sports events, have been measured with a range of instruments. These instruments include:

- the Volunteer Satisfaction Index (Dal Corso et al., 2019; Hasan et al., 2017; Vetitnev et al., 2018)
- the Volunteer Functions Inventory (Clary et al., 1998; Dunn et al., 2016; Katz & Sasson, 2019; Niebuur, Liefbroer, Steverink, & Smidt, 2019; Stukas, Hoye, et al., 2016; Teye & Peaslee, 2020; Vecina & Marzana, 2019);
- the Volunteer Motivations Scale for International Sporting Events (Bang et al., 2019; Fİşne & Karagöz, 2016; D. Kim et al., 2019; Qi et al., 2018);
- and, last but not least, the Special Event Volunteer Motivation Scale (Farrell et al., 1998; Ho-Tang et al., 2016; Kao et al., 2019; Khoo & Engelhorn, 2011; Lockstone-Binney et al., 2015; Park et al., 2019; Schlesinger & Gubler, 2016).

#### *Volunteer Satisfaction Index (VSI)*

The Volunteer Satisfaction Index (VSI) was derived from a multi-faceted measurement scale on job satisfaction at organisations heavily reliant on volunteer workers (Galindo-Kuhn & Guzley, 2002; Giannoulakis, Wang, & Felper, 2015; Kim, Kim, Kim, & Zhang, 2019). Unfortunately, the high volunteer satisfaction level in a past study had raised doubts on its restricted ability to sufficiently test the VSI's capability to discriminate between satisfied and unsatisfied volunteers (Galindo-Kuhn & Guzley, 2002).



### *Volunteer Functions Inventory (VFI)*

Even though functional theory applications on volunteers existed in 1991, evidence of literature on volunteer motivation measurements was quite inconsistent and lacking (Clary & Snyder, 1991). Hence, the Volunteer Functions Inventory (VFI) was developed as a relevant measurement tool for the wide range of volunteers (Chacón et al., 2017; Ismail et al., 2014; Niebuur et al., 2019; Oh, 2019; Teye & Peaslee, 2020). VFI is a 30-item measurement tool using a functionalist approach to examine individuals' motives derived from various studies on volunteer motivation. VFI categorises volunteer motives into six factors such as:

- Social (spend time with friends, to develop and strengthen social connections);
- Career (improve career prospects, benefits for job enhancement);
- Understanding (learn skills, gain knowledge, improve abilities);
- Values (altruistic or humanitarian expressions);
- Enhancement (fulfilment from personal growth and development);
- Protective (shield ego from life difficulties, feel less guilty over fortunate circumstances).

Extensive psychometric trials were conducted using VFI across diverse populations that validated its application as a robust tool for numerous levels of volunteers (Dunn et al., 2016; Ismail et al., 2014; Niebuur et al., 2019; Oh, 2019; Park et al., 2019; Teye & Peaslee, 2020; Vecina & Marzana, 2019).

### *Volunteer Motivations Scale for International Sporting Events (VMS-ISE)*

The Volunteer Motivations Scale for International Sporting Events (VMS-ISE) was developed specifically for assessing volunteer motivation at international sporting events (Fışne & Karagöz, 2016; Schlesinger & Gubler, 2016; Vetitnev et al., 2018; Vinnicombe & Wu, 2020) and consists of 26 items categorised into 6 dimensions (Bang & Chelladurai, 2009). The six dimensions include:

- Expression of Values — related to concern for others, the success of the event, and society
- Patriotism — expressing pride and love of the country, and allegiance to the country
- Interpersonal Contacts — opportunities to meet and interact with people and forming friendships
- Personal Growth — acquiring new perspectives, feeling important and needed
- Career Orientation — to enhance experiences and career contacts
- Extrinsic Rewards – getting free uniforms, food and admission

The VMS-ISE was subsequently revised to include an additional “love of sport” dimension, which was identified as influencing motivational levels for sporting events (Bang et al., 2019; Fışne & Karagöz, 2016; Koutrou, 2014).

### *Sports Event Volunteer Motivations Scale (SEVMS)*

The Sports Event Volunteer Motivations Scale (SEVMS) was adapted from research on human services and event management literature (Cnaan & Goldberg-Glen, 1991; Farrell et al., 1998; E. Kim, 2018; Lockstone-Binney et al., 2015; Ma & Draper, 2017). Consisting of 28 items, SEVMS was one of the first instruments identified to assess event volunteerism and was easily adaptable for use across a range of sports events (Khoo & Engelhorn, 2007; E. Kim & Cuskelly, 2017; Lockstone-Binney et al., 2015; Park et al., 2019). The four factors that constitute SEVMS, as described by Khoo and Engelhorn (2007), are as follows:

- Purposive — altruistic incentives arising from useful contributions to society, or making the event a success
- Solidary — benefits from social interactions, working with others and personal growth
- External Traditions — following family traditions or making use of free time to alleviate boredom
- Commitments — external influences and expectations to participate

To evaluate the effectiveness of SEVMS, Farrell et al. (1998) proposed that it should be used to measure volunteer motivations at different sports and special recreational events. Hence, the application of SEVMS to green volunteers at KL2017 would serve to deepen the understanding of its four factors within the theoretical foundation of this construct, as well as provide further insights into the assessments of volunteer motivation theories.

## **Methodology**

### **Literature Review**

For the purpose of this study, literature review was conducted to identify gaps in studies and to elucidate the relationships between variables, in addition to establishing the conceptual study framework, developing constructs and items for the research. Hair (2016) argued that if literature has provided or established sufficient discussion on constructs or dimensions, they can be used for operationalisation through direct adoption. Nonetheless, the objective of this study is to review the items of each construct and dimension to see if SEVMS could be adapted to a different setting such as green volunteers at KL2017.

### **Exploratory Factor Analysis (EFA)**

An Exploratory Factor Analysis (EFA) is essential to the identification of underlying relationships, to assess whether the grouping of each item is consistent with the way

the questionnaire was developed. The factor analysis test is often used to understand the underlying structure in the data matrix, to identify the most parsimonious set of variables, and to establish to goodness of measure for testing the variables (Hair, 1998). In other words, this technique is applied to assess whether the items in the four functional areas identified earlier are grouped into logically consistent factors.

Varimax rotation was employed to identify the underlying structure of the items in the SEVMS motivation factors of the KL2017 green volunteers, which are purposive, solidary, external traditions and commitments. Two statistical criteria suggested by Hair (2006) were used to determine the number of factors to be extracted:

- absolute magnitude of eigenvalues of factors
- the relative magnitude of eigenvalues (scree test plot).

In interpreting the factors, only a loading value of 0.50, or greater, on one factor was considered. The ultimate objective was to minimise the number of significant loading and to ensure that each variable is associated with one factor.

## Participants

The respondents consisted mainly of green volunteers recruited from four public universities and one private university located in Selangor, Malaysia. From the estimated 1,000 green volunteers deployed (Naidu, 2017; Wong, 2017), a total of 528 green volunteers responded to the online survey. However, 10 responses were incomplete and were deemed invalid, which reduced total respondents to 518 and a response rate of 52%.

The main duties of green volunteers at KL2017 were to promote environmental sustainability and certain tasks related to waste management. Each respondent of this sample committed an average of 96 hours for the event itself. Additionally, the volunteers also had to commit to attending the compulsory training sessions of 36 hours each. In total, green volunteers contributed an average 132 hours each.

As presented in Table 2, the majority of respondents were aged from 18 to 24 years old (87.6%), single and without children (97.9%). They were also predominantly female (69.9%). Students/Interns (93.6%) formed the largest component of green volunteers, who were mainly degree holders (50.2%). While other nationalities from the 11 ASEAN countries could participate as volunteers of KL2017, the survey results showed that green volunteers were mainly Malaysians (96.7%) residing within Kuala Lumpur or Selangor (83.2%).

**Table 2.** Demographic characteristics of respondents

<b>Characteristics</b>	<b>Items</b>	<b>Frequency</b>	<b>Valid Percent</b>
<b>Age</b>	Below 18 years	26	5.0
	18-24 years	454	87.6
	25-34 years	27	5.2
	35-44 years	9	1.7
	Above 45 years	2	.4
	Total	518	100.0
<b>Gender</b>	Male	156	30.1
	Female	362	69.9
	Total	518	100.0
<b>Marital Status</b>	Single (no kids)	507	97.9
	Married (no kids)	3	.6
	Married with kid(s)	8	1.5
	Total	518	100.0
<b>Nationality</b>	Malaysian	501	96.7
	Indonesian	16	3.1
	Others	1	0.2
	Total	518	100.0
<b>Education</b>	Secondary	119	23.0
	Diploma	117	22.6
	Degree	260	50.2
	Masters	17	3.3
	Doctorate	5	1.0
	Total	518	100.0
<b>Current Residence</b>	Within KL / Selangor	431	83.2
	Peninsular - Outside KL/Selangor	86	16.6
	Sabah & Sarawak	1	.2
	Total	518	100.0
<b>JobTitle</b>	Not working / Retiree	3	.6
	Student / Intern	485	93.6
	Clerical / Junior Exec	7	1.4
	Executive / Supervisor / Asst Manager	15	2.9
	Manager / Sr Manager	5	1.0
	Self Employed / Entrepreneur / Professional	3	.6
	Total	518	100.0

## Instrument

The survey questionnaire items for KL2017 green volunteer participation was adapted from Farrell et al.'s (1998) Special Event Volunteer Motivation Scales (SEVMS). SEVMS is one of the first instrument to measure sport volunteerism and had been applied to various studies on sport volunteerism (Johnston et al., 1999; Khoo & Engelhorn, 2007; E. Kim & Cuskelly, 2017; Lockstone-Binney et al., 2015; Park et al., 2019; Strigas & Jackson, 2003). The SEVMs consists of four factors—namely purposive, solidary, external traditions and commitment. According to Farrell et al. (1998), the purposive factor relates to altruistic desires of doing something beneficial and contributing to the event and community, while the solidary factor includes motivation associated with social interaction, group identification, networking, and personal growth. The remaining factors are commitment and external traditions, which refer to incentives that combine external expectations and personal skills, and external influences arising from family tradition and use of free time, respectively.

In the questionnaire, factor 1 listed purposive motivation, which was measured using an 11-item scale adapted from Farrell et al. (1998). One item (i.e. I am involved in curling) was deleted as it was not relevant and was replaced with “I want to contribute to the country” as KL2017 potentially had volunteers from its 11 participating nations. Three items were also amended with a specific mention of KL2017 (replacing “the event”, “this community” or “the tournament”) to reflect the context of the event.

Factor 2 in the questionnaire listed solidary motivation comprising of a 7-item measurement scale, where one item was added to the original 6-item scale by Farrell et al. (1998). The additional item “I want to include KL2017 into my resume” further highlighted KL2017 for group identity.

The questionnaire listed external traditions as factor 3, with 6 items. One item from the original 6-item scale by Farrell et al. (1998) was not applicable and was deleted (i.e. “I have more free time than I used to have”) as many of the recruited volunteers had to take study leave from their university’s scheduled semester. Another item from the original 6-item scale (I wanted an opportunity to meet the players and see the games) was separated into two different items (i.e. “opportunity to meet KL2017 athletes” and “opportunity to watch the KL2017 games”) to be more distinctive. The word “curling” was also replaced with “KL2017” in one item to be more appropriate.

Commitment was listed as factor 4 in the questionnaire, which comprised of 5 items. Apart from “this tournament” in one item from the original scale, which was replaced with “KL2017”, there were no changes to the remaining items.

## Findings and Discussion

### Motivation

Table 3 shows the motivation scores of 29 items in SEVMS according to the factors. It was found that the most important motivation to the volunteer was “I want to gain some practical experience” with the mean score of 4.7143 while the second most important was “I want to do something worthwhile” with the mean score of 4.7066. The least important was “A friend/relative is competing in KL2017” with the mean score of 2.3687.

**Table 3.** Motivation scores for KL2017 green volunteers

Motivation Factors	Mean	Std. Deviation
<b>Purposive</b>		
I want to help make KL2017 a success	4.6622	.55956
I want to contribute to the local community	4.6216	.58319
I want to feel I am part of the KL2017 event	4.6950	.53469
I want to do something worthwhile	4.7066	.52665
Volunteering creates a better society	4.6834	.53878
Volunteering at KL2017 makes me feel better about myself	4.5174	.65432
I want to help out in any capacity	4.5367	.62322
I want to vary (change) my regular activities	4.4151	.69227
It was a chance of a lifetime	4.6757	.57261
If I did not volunteer, there would be no one to carry out this volunteer work	3.5232	1.15795
I want to contribute to the country	4.5676	.68011
<b>Solidary</b>		
I want to broaden my horizons	4.5618	.60865
I want to gain some practical experience	4.7143	.49702
I want to work with different people	4.6178	.60991
I could obtain educational experience	4.5811	.61900
I want to develop relationships (new friendship) with others	4.5927	.59828
I want to interact with others	4.5753	.63209
I want to include KL2017 into my resume	4.6525	.59243
<b>External tradition</b>		
My friends/family are also volunteering	3.6931	1.23786

**Table 3** (con't)

Motivation Factors	Mean	Std. Deviation
A friend/relative is competing in KL2017	2.3687	1.50985
I want to continue a family tradition of volunteering	3.2239	1.37399
I do not have anything else to do with my time	2.9981	1.34337
I want an opportunity to meet the KL2017 athletes	4.3436	.85375
I want an opportunity to watch the KL2017 games	4.5058	.76110
<b>Commitment</b>		
I have past experience providing similar volunteer services	3.3147	1.36104
My skills were needed	3.6969	1.00040
I am expected to volunteer	3.7143	1.13475
Most people in my community/campus are volunteering	3.7548	1.11597
Being a volunteer at KL2017 is considered prestigious	4.1718	.93472

**EFA on Purposive**

The first analysis was undertaken on 11 items used to measure the purposive factor as part of the motivation factor for KL2017 green volunteers. Using the principal components analysis, only one component was extracted unidimensional. In other words, the analysis resulted in single factor solution with the eigenvalue of 7.884, explaining 58.2% of the total variance in the data and factors loading for ten items ranging from 0.648 to 0.845. The result summary in Table 4 presents the KMO measure of sampling adequacy value for the item as 0.935 indicating the items as interrelated and creates a common factor. Bartlett’s test of Sphericity was found to be significant (chi-square = 3660.279, p<.001) indicating the significance of the correlation matrix. Therefore, the factor analysis undertaken was appropriate. One item was deleted (B10, “If I did not volunteer, there would be no one to carry out this volunteer work”) due to the lower factor loadings (<.50).

**Table 4.** Results of EFA on Purposive

Motivation Factors	Mean
<b>Purposive</b>	
I want to help make KL2017 a success	.834
I want to contribute to the local community	.845
I want to feel I am part of the KL2017 event	.815
I want to do something worthwhile	.835

**Table 4** (con't)

Motivation Factors	Mean
Volunteering creates a better society	.809
Volunteering at KL2017 makes me feel better about myself	.773
I want to help out in any capacity	.830
I want to vary (change) my regular activities	.690
It was a chance of a lifetime	.648
If I did not volunteer, there would be no one to carry out this volunteer work	.382
I want to contribute to the country	.805
Eigenvalues	7.884
Total variance explained	58.2
KMO	.935
Bartlett's test of Sphericity	3660.279***

Note.  $N=582$ ; \* $p<.05$ ; \*\* $p<.01$ ; \*\*\* $p<.001$

### EFA on Solidary

The second analysis was employed on the seven items used to measure the solidary factors on KL2017 green volunteers. As indicated in Table 5, a single factor solution comprising seven items produced eigenvalues of 5.437, explaining 60.783% of variance in the data and the factors loading for the seven items range from 0.632 to 0.834. The KMO measure of sampling adequacy value for the item was 0.896; suggesting that the items are interrelated and creates a common factor. Bartlett's test of Sphericity was found to be significant (chi-square = 1852.486,  $p<.001$ ) indicating the significance of the correlation matrix. Thus, the factor analysis undertaken was appropriate.

**Table 5.** Results of EFA on Solidary

Motivation Factors	Loading
<b>Solidary</b>	
I want to broaden my horizons	.752
I want to gain some practical experience	.825
I want to work with different people	.803
I could obtain educational experience	.765
I want to develop relationships (new friendship) with others	.826
I want to interact with others	.834
I want to include KL2017 into my resume	.632



**Table 5** (con't)

Motivation Factors	Loading
Eigenvalues	5.437
Total variance explained	60.783
KMO	.896
Bartlett's test of Sphericity	1852.486***

Note.  $N=582$ ; \* $p<.05$ ; \*\* $p<.01$ ; \*\*\* $p<.001$

### EFA on External Tradition

Similar to the preceding section, factor analysis was also applied on the six items used to measure the external tradition motivation factors. Looking at Table 6, four out of six items are clustered together to form one factor known as External Tradition factors. This factor produces eigenvalues of 2.7978, explaining of 40.773% of variance in the data and the factors loading for the seven items range from 0.608 to 0.872. As can be seen in the Table 6, the KMO measure of sampling adequacy value for the item was 0.657; indicating that the items are interrelated and creates a common factor. Bartlett's test of Sphericity was found to be significant (chi-square = 758.539,  $p<.001$ ) indicating the significance of the correlation matrix and thus the factor analysis undertaken was appropriate. Two items were deleted (C1; "My friends/family are also volunteering" and C4; "I do not have anything else to do with my time") due to the lower factor loadings ( $<.50$ ).

**Table 6.** Result of EFA on External Tradition

Motivation Factors	Loading
<b>External tradition</b>	
My friends/family are also volunteering	.311
A friend/relative is competing in KL2017	.629
I want to continue a family tradition of volunteering	.608
I do not have anything else to do with my time	.372
I want an opportunity to meet the KL2017 athletes	.869
I want an opportunity to watch the KL2017 Games	.872
Eigenvalues	2.7978
Total variance explained	40.773
KMO	.657
Bartlett's test of Sphericity	758.539***

Note.  $N=582$ ; \* $p<.05$ ; \*\* $p<.01$ ; \*\*\* $p<.001$

**EFA on Commitment**

The last analysis was employed on the five items used to measure the commitment factor for KL2017 green volunteers. Table 7 summarises the results. This factor produces eigenvalues of 2.7978, explaining of 54.952% of variance in the data while the factors loading for the seven items range from 0.60 to 0.840. The KMO measure of sampling adequacy value for the item was .778; indicating that the items are interrelated and creates a common factor. Bartlett’s test of Sphericity was found to be significant (chi-square = 784.469,  $p < .001$ ) indicating the significance of the correlation matrix and thus the factor analysis undertaken was appropriate.

**Table 7.** Results of EFA on Commitment

Motivation Factors	Loading
<b>Commitment</b>	
I have past experience providing similar volunteer services	.600
My skills were needed	.800
I am expected to volunteer	.840
Most people in my community/campus are volunteering	.758
Being a volunteer at KL2017 is considered prestigious	.684
Eigenvalues	3.682
Total variance explained	54.952
KMO	.778
Bartlett’s test of Sphericity	758.539***

*Note.*  $N=582$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Limitations and Recommendations**

**Cross-Sectional Data**

Data was collected when volunteers were undergoing training before the commencement of KL2017. Another subsequent survey was to be carried out after the green volunteers completed their allocated duties, which would allow a deeper understanding of the SEVMS factors. However, there was a change in the management of volunteers whereby access was restricted. Thus the cross-sectional data of this study may not be conclusive on the motivations of green volunteers over time (Yamashita, Keene, Lu & Carr, 2017). Future research could, therefore, incorporate data collection from volunteers before and after the event.

### **Segmentation of Volunteers at KL2017**

This study focused on a smaller segment of volunteers at KL2017, who were green volunteers tasked with predominantly “green” duties in waste management and promotion of environmental awareness to spectators (i.e. Reduce, Reuse, Recycle). Apart from the green volunteers, KL2017 was also supported by 12,000 other general volunteers who assisted in various technical duties (e.g. scorekeeping, crowd control, ticketing, promotions etc). While the interest on the green volunteers emerged from KL2017’s commitment to environmental sustainability, the results of this study could not be generalised to include the other segment of volunteers of KL2017. Perhaps the inclusion of other segments of KL2017 volunteers in future studies could reveal underlying differences in the motivations for volunteers handling specific tasks.

### **Location of Green Volunteers**

KL2017 was a mega-sports event that required 44 venues across 6 states within Peninsular Malaysia, with the majority of the events held at Bukit Jalil Sports City (Bernama, 2015). The deployment of green volunteers were mainly to venues located within the Klang Valley such as the Bukit Jalil Sports City, the Malaysian International Trade & Exhibition Centre (MITEC), the Kuala Lumpur Convention Centre (KLCC) and the Shah Alam Stadium. The survey respondents for this study were predominantly from those allocated at Bukit Jalil Sports City.

### **Conclusion**

Despite the limitations, this study had contributed significantly to research on volunteerism in Malaysia. Motivational factors identified would provide significant evidence to the recruitment and retention of volunteers for mega events such as KL2017. The findings of this study not only complement previous studies on motivational factors for Malaysian volunteers (Hamzah et al., 2016; Khoo & Engelhorn, 2007, 2011; Rabun et al., 2017; Zainuddin et al., 2020), but also revealed the differences in the characteristics of green volunteers that could support future events with environmental sustainability objectives.

This study acknowledges that the four factors of SEVMS had provided significant insights on the motivational aspects of green volunteers at KL2017. Simultaneously, the motivations identified for green volunteers of KL2017 were purposive factors such as “I want to contribute to the local community”, “I want to do something worthwhile” and “I want to make KL2017 a success” respectively. Even though the respondents for both KL2017 and the 13th Malaysian Paralympic held in June 2006 (Khoo & Engelhorn, 2007) were university students, the top motivations for green

volunteers were purposive factors while the Paralympic volunteers were motivated by solidary factors. Hence, more research is needed to determine if volunteer motivations for Malaysians at mega-sports events had evolved during the 10-year gap.

The above findings support SEVMS as a tool to influence volunteer motivations for mega-sports events and could be further developed to provide insights on differences between long-term and occasional volunteers. It could be used further to create communication strategies to promote volunteerism among youths in Malaysia as it could be construed that Malaysian volunteers comprise mainly of students and youths (Ismail et al., 2014; Hamzah et al., 2015; Zainuddin et al., 2020). An in-depth understanding on motivational factors to attract and manage prospective volunteers from this segment would contribute significantly to volunteer management for mega-sports events.

It is undeniable that volunteers provide immense societal and economic support. However, it is still challenging to define and to measure volunteerism across different cultures and regions. Expansion of research on the assessment of volunteers using tools such as SEVMS, could bridge the gap and offer insights into factors that motivate and attract volunteers. It is hoped that empirical data from continuous research would contribute to designing effective and sustainable programmes for the recruitment and retention of volunteers, as well as uncover evolving trends.

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