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## research

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# Towards an Olympic volunteering legacy: motivating volunteers to serve and remain – a case study of London 2012 Olympic Games volunteers

Niki Koutrou, N.Koutrou@kent.ac.uk and  
Athanasios (Sakis) Pappous, a.pappous@kent.ac.uk  
University of Kent at Medway, Chatham, UK

Volunteers are often seen as 'soft infrastructure' following the legacy plans of host nations aiming to stage the Olympic Games. This refers to social mobility and the potential of further utilising such volunteer resources for other future events and activities that would benefit the community. The purpose of this study is to examine the determinants of a volunteer legacy following volunteers' involvement with the London 2012 Olympic Games. A total of 163 volunteers involved with the transport department of London 2012 completed a web-based survey. Factor analysis was employed to summarise volunteers' motivations. The analysis yielded five reliable dimensions of their motivations. Regression analysis was then applied to identify which motivations, sociodemographic characteristics and sport engagement variables had an impact on future intentions for volunteering. The implications of the findings for a potential social legacy of volunteering are explored.

**Key words** Olympic Games • volunteers • social legacy • mega events

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## Introduction

A significant area of volunteering in the UK is sports since 26% of individuals volunteer in organisations and events where the promotion of sport activity is the focus (Taylor et al, 2012). Mega sport events comprise only 1% of sport volunteering and 0.6% of the total hours spent in sports in the UK; however, this is unsurprising given their episodic nature (Taylor et al, 2012; Koutrou and Downward, 2015). Despite the episodic occurrence of mega events such as the Olympic Games, they are increasingly becoming more complex and attract a larger pool of participants, spectators and volunteers. It is also argued that by promoting elite-level competition within a given sport or across a variety of sports, they inspire an increase in grassroots sport participation (Grix and Carmichael, 2012; Bauman et al, 2014; Pappous and Hayday,

2015). The Conservative-led coalition government in the UK was actively engaged in such rhetoric, prior to hosting the London 2012 Olympics, by arguing that the Games would inspire an increase in sport participation and an enhanced volunteering culture (DCMS, 2013). Indeed, the effective staging of the Games influenced the social legacy objectives of the coalition government to increase sport participation rates and physical activity and improve the health of the nation, by seeking to employ the voluntary sector as a key agent in this direction (Cabinet Office, 2010). The role of the voluntary sector was further enhanced by the coalition government in 2010 with the introduction of the so-called 'Big Society' agenda, which sought to increase the capacity of the third sector in promoting active community engagement through volunteering (Taylor et al, 2012). This was to be realised by empowering communities and individuals to take a more active volunteer role in the provision of sports or other community activities, and in the process enabling them to increase their confidence, self-esteem and leadership skills – that is, human capital (Paylor, 2011). Despite such policy discourses focusing on the legacy potential of hosting the Olympic Games and the potential trickle-down effects for grassroots sport organisations associated with raising interest in sport and participation, the evidence of such legacies in practice is limited (Bauman et al, 2014; Pappous and Hayday, 2015). Only a few research efforts exist that indicate positive effects in terms of sport participation following spectators' attendance at events (Ramchandani and Coleman, 2012). In addition, the 'Big Society' is criticised as nothing more than just a mere façade and a vague concept (Paylor, 2011; Taylor et al, 2012). Despite the criticisms, the national government in the UK invests heavily in the voluntary sector to achieve its objectives, and recognises that volunteer efforts are important for the viability of both sport events and community sport clubs, as otherwise the cost of running such activities with paid employees would be unbearable (Nichols and Ralston, 2012; Taylor et al, 2012).

Specifically, the Olympic Games is a mega sport event that relies on a large number of volunteers due to the plethora of competing athletes and the inherent complexity in scheduling events and managing crowds (Bang et al, 2008). Volunteers provide the important link between the community and the event itself; thus creating social capital, which emerges through people forming social networks and collaborating towards a common goal (Nichols and Ralston, 2012). Developing social capital through volunteering suggests that the entire community can benefit from the activities and services made available by the Olympic Games and reflects the need for better planning for social legacies of sporting commitment and community spirit (Nichols and Ralston, 2011, 2012). Indeed, the challenge for event organisers is how to maximise the potential benefits from hosting mega sport events by retaining the interest of their volunteers and transferring their skills and experiences to other community events and organisations in the future (Dickson et al, 2013, 2015). Contrary to other more regular sport volunteering pursuits, for example in sport clubs or local sport events, mega sport event volunteering is unique in the sense that it constitutes a relatively intense but episodic experience for the volunteers involved (Giannoulakis et al, 2008; Dickson et al, 2013). It is still not well understood whether volunteers at mega sport events are involved due to a general interest in sport, a sport-specific interest or an interest towards volunteering in general (Dickson et al, 2015). It follows that an understanding of mega-event volunteers' characteristics and motivations can enable event organisers to provide them with an experience that meets their initial reasons for

involvement, inspiring a greater intention to continue volunteering in the future, and in the process create a strong volunteer base and social capital (Dickson et al, 2015).

Extensive research on volunteer motivations in diverse sporting contexts has been conducted previously (Bang et al, 2008; Giannoulakis et al, 2008; Doherty, 2009; Dickson et al, 2013, 2015; Alexander et al, 2015). However, the multidimensionality of volunteer motivations, the inconsistency in the instrumentation used to measure them, the differences in event settings and the variations in sample sizes suggest that motivations may not be stable over time, across different events (Dickson et al, 2015). For example, volunteering at the Olympic Games may attract volunteers for reasons associated with the event itself, rather than an interest in volunteering per se (Giannoulakis et al, 2008; Dickson et al, 2013, 2015). Furthermore, despite the significance of volunteers for the delivery of the Olympic Games and the wide interest in the area of legacies, research on the potential social legacy associated with mega-event volunteering has provided limited empirical evidence for its realisation to date (Dickson et al, 2015).

The purpose of this study is to offer new insights by investigating the factors affecting individuals' decisions to volunteer for the London 2012 Olympic Games. Moreover, it aims to identify whether these factors, along with volunteers' sociodemographic characteristics and sport participation experiences, affect intentions for future voluntary engagement at a community level, following an Olympic Games volunteer experience. A case study of volunteers who offered their services as drivers for Olympic Family assistants at the Fleet transport department during the London 2012 Olympic Games is examined. The underlying objective of this study was to answer the following research questions (denoted as RQ1, RQ2 and RQ3):

RQ1: What are the factors that influence the motivation of the participants of this study who volunteered for the London 2012 Olympic Games?

RQ2: What are the sociodemographic characteristics and previous engagement to sport and volunteering experiences of this particular sample of London 2012 Olympic Games volunteers?

RQ3: What is the relationship between motivational factors, sociodemographic characteristics and previous engagement to sport and volunteering and how does this impact on the intentions of the London 2012 Olympic Games volunteers to remain as volunteers in other local events, sport clubs or community settings?

## Literature review

The term 'mega events' applies to events like the Olympic Games that:

- are global in their orientation;
- generate significant revenue, financial investment and media attention;
- attract a significant number of participants and spectators
- have seen their applicant cities go through a compulsory competitive bidding process to be able to host them (Getz, 2008).

Previous research has argued that volunteers are essential for hosting mega events (Bang et al, 2008; Dickson et al, 2013); however, until recently, not many studies were dedicated to volunteer research in mega sport events (Bang et al, 2008; Giannoulakis

et al, 2008; Alexander et al, 2015; Dickson et al, 2015). There is a range of studies that explored motivations and experiences of volunteers in diverse sporting contexts including the Olympics (eg, Bang et al, 2008; Giannoulakis et al, 2008; Hallman and Harms, 2012; Dickson et al, 2015). However, it is widely acknowledged that the episodic nature of mega sport events attracts volunteers for different reasons and with different backgrounds compared with regular sport volunteering situations (Giannoulakis et al, 2008; Dickson et al, 2013, 2015; Alexander et al, 2015; Koutrou and Downward, 2015). For instance, Ralston et al (2004) explored the motivations of volunteers at the Manchester 2002 Commonwealth Games and found that volunteers were primarily motivated by the opportunity to contribute to something positive, help the community and be part of a unique event. In contrast, Giannoulakis et al (2008) noted that reasons related to the uniqueness of the Olympic Games and its associated values formed the most important motivation for a sample of volunteers who were involved in the Athens 2004 Olympic Games. Indeed, the Olympic and Paralympic Games may only occur in one city once in a person's lifetime and can require a substantial number of volunteers (Giannoulakis et al, 2008). For instance, 70,000 volunteers assisted with the London 2012 Olympic Games (Alexander et al, 2015; Dickson et al, 2015).

Thus, evidence from previous research suggests that there is no straightforward answer in determining volunteer motivation. The multidimensionality of the concept suggests that volunteering in sport depends on the nature of the voluntary activity, the context where the volunteering takes place, the demographic characteristics of the volunteers and their past experiences in sport and volunteering (Downward and Ralston, 2006; Bang et al, 2008; Doherty, 2009; Dickson et al, 2013). Consequently, to generate the research questions to be investigated in the present study and to provide a rationale for the factors to be included in this empirical research, the literature on volunteer motivation is now examined. Volunteer motivations along with the possibility that certain sociodemographic characteristics and previous sport and volunteering engagement may impact on the individual's decisions to transfer volunteer efforts after the event, or to raise sport participation – thus creating a social legacy – are now discussed.

### *Volunteer motivations*

The sport volunteering literature generally supports the idea that the motivation to volunteer is multidimensional, arising out of the divide between altruism and self-interest (albeit expressed in different forms) (Clark and Wilson, 1961; Cnaan and Goldberg-Glen, 1991). Other theories on motivations have largely focused on the divide between intrinsic and extrinsic factors. Intrinsic motivation entails activity based on inherent satisfaction, either as enjoyment through activity or facing a challenge for personal gain (Ryan and Deci, 2002). Conversely, extrinsic motives are outside the volunteer's immediate control and reflect a degree of self-interest. For instance, this may be through threat of punishment or the temptation of rewards, a need for approval from others, seeking fame or achieving other outcomes that are considered beneficial in some regard (Antoni, 2009). In a broad sense, intrinsic motivation can be considered altruistic, where there is no desired outcome from the activity apart from enjoyment or the desire to contribute to a worthwhile cause. However, it is often the case that extrinsic factors and intrinsic motivation co-exist in a volunteer

(Antoni, 2009). Both altruistic and self-interest motivations for volunteering have been formalised into research instruments such as the Motivation to Volunteer (MTV) scale (Cnaan and Goldberg-Glen, 1991).

Other authors have argued that the extrinsic/intrinsic divide is not sufficiently detailed to describe volunteer motivation (Clary et al, 1998; Snyder et al, 2000). For instance, Clary et al (1998) developed the Volunteer Function Inventory (VFI) and identified six distinct reasons for volunteering, ranging from skills development, altruism, social interaction, enhancement of understanding, development of self-esteem and personal development. The functional approach is an alternative framework of volunteers' motivation, providing an emphasis on its multidimensional nature. This suggests that different individuals may volunteer for a variety of reasons even when they are engaged in similar activities, in an attempt to fulfil and satisfy different psychological functions (Snyder et al, 2000). For instance, a volunteer may be involved at a sport event because of the love of the sport, while someone else might seek an opportunity for social networking. This approach also suggests that organisations should adopt a 'matching principle' in order to match volunteers' motives with specific activities and consequently recruit, manage and retain their volunteers effectively within their operations (Snyder et al, 2000).

Within the context of sporting events, measurement of volunteer motivation has also been attempted in a quantitative fashion by a number of authors. Wang (2001) explored the relationship between volunteer motivations and intentions to volunteer for the Sydney 2000 Olympic Games. The findings of the study revealed that intentions for future volunteering are promoted by factors related to the desire for personal development, ego enhancement, social interaction and other variables, including sociodemographic characteristics and time constraints. Meanwhile, Bang and Chelladurai (2003) proposed the Volunteer Motivation Scale for International Sporting Events (VMS-ISE) and suggested the significance of:

- expressing values;
- patriotism;
- interpersonal contacts through social interaction;
- personal growth through self-actualisation and feeling needed;
- career orientation through skills development and forming networks;
- extrinsic benefits associated with access to licensed apparel or tickets to the event.

Subsequently, Bang et al (2008) explored the validity of the VMS-ISE at the context of the Athens 2004 Olympic Games and claimed that love of sport is also a significant motivation among mega-event volunteers.

One of the few studies that explored volunteer motivations in an Olympic Games context is offered by Giannoulakis et al (2008). Their sample comprised of 146 individuals who volunteered for the Athens 2004 Olympic Games. The survey instrument – the Olympic Volunteer Motivation Scale (OVMS) – comprised 18 items and after principal component analysis, three factors that were relevant among the Athens sample were extracted:

- the Olympic-related factor, with items specific to the nature of the Games;
- the egoistic factor, which reflected volunteers' desire for personal development and other tangible and intangible rewards;

- the purposive factor, which described volunteers' commitment to the event's success.

Interestingly, the Olympic-related factor was the most significant motivation that emerged from this study (Giannoulakis et al, 2008).

Hallman and Harms (2012) investigated the determinants of volunteer motivations and future voluntary engagement in a study of two different major sporting events as well as the differences in the motivations based on the type of event. They concluded that significant differences in volunteer motivations exist based on the type of event and that intrinsic motivations were deemed more important than extrinsic factors among their volunteer sample. Dickson et al (2013) found that volunteers at the Vancouver 2010 Winter Olympic Games were primarily motivated by the experience of being part of a unique sport event, followed by transactional reasons such as to gain skills that might lead to employment. Accordingly, in relation to the London 2012 Olympic Games volunteers, the greatest motivations have focused on the centrality of the Games (Dickson and Benson, 2013). Most recently, Alexander et al (2015) identified different motivations for three distinct segments of volunteers in the London 2012 Olympic Games (ie, the obligated, the enthusiastic and the semi-enthusiastic). They also noted that the volunteers belonging to the enthusiastic group showed higher motivation levels in all motivation categories compared with the other groups (Alexander et al, 2015).

The above discussion indicates that there is no widely accepted approach to explain volunteer motivations, which reflects the fact that the context and nature of volunteering work determine volunteers' participation, despite the overlapping domains featuring in the volunteer motivation research (Bang et al 2008; Giannoulakis et al, 2008; Hallman and Harms, 2012; Dickson et al, 2013; Alexander et al, 2015). The following subsections explore how the context of volunteering, along with sociodemographic characteristics and engagement in sport, affect future volunteering decisions.

### *Sociodemographic characteristics and engagement in sport*

It is argued that sociodemographic factors determine attitudes in volunteering and the promotion of future volunteering (Burgham and Downward, 2005; Downward and Ralston, 2006; Doherty, 2009; Taylor et al, 2012; Koutrou and Downward, 2015). Research has shown that a number of these characteristics may be more prevalent among volunteers, suggesting a potential contributory role depending on the volunteering context (Taylor et al, 2012; Koutrou and Downward, 2015). For instance, level of education is found to be a stable predictor of volunteering behaviour in all settings (Bang et al, 2008; Taylor et al, 2012; Koutrou and Downward, 2015). In general, those without employment, those with long-term illnesses and those at risk of exclusion are under-represented in the volunteer community, reflecting a level of social and financial stability inherent in many volunteers (Taylor et al, 2012). For example, London 2012 Olympic Games volunteers were more likely to be employed either full or part time than unemployed (Dickson and Benson, 2013; Alexander et al, 2015). Age may also be an important factor. For instance, individuals aged 35 to 54 are most likely to volunteer overall for large events, but those aged 65 or over commit the most hours to voluntary activities, contrary to younger age groups, who



tend not to commit so much time (Burgham and Downward, 2005; Taylor et al, 2012; DCMS, 2013). Empirical evidence from the London 2012 Olympic Games shows that the majority of volunteers were 45 years or older (Dickson and Benson, 2013; Alexander et al, 2015). Other factors, such as marital status and gender, may also play a role in determining volunteer activity, and while females are more likely than males to volunteer in community settings, for mega sporting events the skew seems in favour of male volunteers, reinforcing the stereotypical male interest in sports (Bang et al, 2008; Taylor et al, 2012). However, recent research has found that the majority of all London 2012 volunteers were female (Dickson and Benson, 2013; Alexander et al, 2015). Furthermore, volunteers involved at sport events tend to reflect the demographic profile of the participants in the specific sport upon which the event is focused. However, the larger and more unique the event, for instance the Olympics, the broader the demographic profile of the volunteers involved, which includes those who may have little or no connection with sport (Downward and Ralston, 2006). The influence of sociodemographic characteristics on volunteers' future intentions has been noted by Doherty (2009), who identified that experiences at the 2001 Canada Summer Games encouraged volunteers' intentions to help in future major events or the local community.

To a similar extent, research supports the view that prior sport engagement, for example through being a former athlete, underpins the transition to become a volunteer (Burgham and Downward, 2005; Cuskelly and O'Brien, 2012). For instance, Burgham and Downward (2005) identified that volunteers' previous participation in swimming and their children's current involvement with the sport influenced their decisions to volunteer and the duration of the activity. In addition, Bang et al (2008) discussed the importance of the love of sport in determining volunteer motivations at mega events. Cuskelly and O'Brien (2012) conducted a small-scale qualitative study and concluded that former athletes had a greater psychological, social and emotional attachment to the sport and the club that underpinned their decisions to engage in volunteering after ending their playing career. Finally, Dickson and Benson (2013) noted that the majority of the 11,451 London 2012 Olympic Games volunteers who completed an online survey had another volunteering experience prior to the Games. Similarly, Alexander et al (2015) found that 80.37% of their sample had also volunteered prior to the London 2012 Olympic Games.

### *Determinants of a volunteer legacy*

The above discussion suggests that future volunteering is determined by volunteers' motivations and their related underpinnings, for example, the volunteers' socioeconomic background, their level of engagement with sport and volunteering as well as the extent to which their volunteer experience has been positive (Doherty, 2009; Taylor et al, 2012; Koutrou and Downward, 2015). However, only a few studies have examined the extent to which these factors impact on the transfer of volunteer efforts to other contexts following their initial experience at an event. For instance, Burgham and Downward (2005) identified the impact of individual, social, economic and sport engagement characteristics on future volunteering. Downward and Ralston (2006) showed that volunteering at mega events such as the Commonwealth Games raises interest, sport participation and volunteering in general. In addition, Hallman and Harms (2012) identified a strong positive relationship between motivations to

volunteer at a handball or equestrian event and future voluntary engagement. Similarly, Dickson et al (2015) acknowledged that following experiences and motivations at the Sydney 2009 World Master Games, volunteers reported greater intentions to continue volunteering and this supports claims for a social legacy. This is important, as it is argued that understanding volunteer motivations and characteristics and providing an experience that meets their expectations for involvement lead to satisfaction and contribute to higher retention rates of volunteers (Burgham and Downward, 2005; Doherty, 2009; Koutrou and Downward, 2015).

It is also argued that volunteering in sport contributes to social capital development (Nichols and Ralston, 2011; Koutrou and Downward, 2015) and facilitates social mobility through both bonding and bridging mechanisms (Putnam, 2000). Bonding refers to the strengthening of social bonds between members of homogeneous groups, for example members of sport clubs. Bridging applies to linking rather disparate groups of people through, say, mega sport event volunteering (Putnam, 2000; Koutrou and Downward, 2015). In this regard, governments that wish to host a mega event refer to the potential of mobilising human resources, through encouraging bridging processes with volunteering, and describe volunteers as the targeted 'soft infrastructure' in their legacy pledges (Solberg and Preuss, 2007). For instance, one of the five legacy promises that were made by the UK government was to inspire a generation to become more active through sport and local volunteering (Pappous and Hayday, 2015). However, the relationship between sport participation and volunteering is not straightforward (Downward and Ralston, 2006). Indeed, demand for sport and the decision to volunteer are often determined by macroeconomic factors, socioeconomic circumstances or the level of pre-existing social and relational networks that an individual has formed or is exposed to, through, say, sport participation or volunteering, instead of the demonstration effect following mega events (Downward and Ralston, 2006; Taylor et al, 2012; Koutrou and Downward, 2015). In addition, the episodic nature of mega sport events suggests that the motivations and the legacy potential for the volunteers involved may be very different from other volunteering situations (Dickson et al, 2015). However, Nichols and Ralston (2011) provide evidence from Manchester Event Volunteers, a volunteer legacy organisation that was established after the 2002 Commonwealth Games, which suggests that there is the potential to convert the episodic enthusiasm of mega-event volunteers to a long-term commitment to volunteering and, in the process, to provide opportunities to the volunteers for social inclusion through the development of collective identities, skills and social interaction. This is further supported by Wilks (2014) who, through the use of reflective diaries of 20 London 2012 Olympic Games volunteers, identified the formation of longlasting memories, the sense of belonging to a unique social world and the desire of volunteers to repeat their volunteering experiences in the future, provided they are given the chance to do so. Accordingly, local government's role is integral in planning and generating a volunteer legacy. Therefore, local organisations need support, funding and legacy planning in order to supply volunteers with a range of high-quality opportunities and maintain the enthusiasm and momentum generated by a mega event (Nichols and Ralston, 2011; DCMS, 2013).

Thus, the dynamics of inspiring a volunteering legacy appear to be complex and the evidence that host communities will benefit from a volunteering or sport participation legacy after a mega event is scant (Dickson et al, 2015; Pappous and Hayday, 2015). It is with these issues in mind, therefore, that the current research has been designed. A



mega event of the magnitude of the Olympics offers the opportunity to explore the potential for sport events to raise interest, participation and volunteering in sport and contribute to a legacy of community involvement. The current study, in an attempt to facilitate the empirical analysis to materialise and recognise the multidimensionality of volunteer motivations, does not prioritise any specific motivation theory. Rather, similar to previous studies (Doherty, 2009; Dickson and Benson, 2013; Dickson et al, 2015; Koutrou and Downward, 2015), it aims to explore whether a mega sporting event context along with motivations to volunteer, sociodemographic characteristics and prior engagement to volunteering or sport participation affect future intentions and support the creation of a volunteering legacy for a specific sample of London 2012 Olympic Games volunteers.

## Methodology

### *Participants*

This study involves a convenience sample of 163 volunteers who offered their services in the 2012 Olympic Games in London, England. These individuals were volunteer drivers based at the Park Lane Fleet Depot. They were assisting the Olympic Family clients such as the International Olympic Committee working groups. The total population of volunteers who served the Olympic Family clients during Games time at the Park Lane Fleet Depot was 200. The study sample thus represents an 81.5% response rate.

### *Research instrument*

The research instrument was a survey questionnaire designed to elicit the participants' sociodemographic information and their current sports engagement, including their volunteering experience in other contexts, as well as to measure their motivation for volunteering at the London 2012 Olympic Games. The questionnaire also elicited the intentions of volunteers to continue volunteering in other sport events or general contexts. The items asking about intentions for future volunteering explored the potential for further sport event volunteering, for sport club volunteering, for general volunteering or for sport participation following the London 2012 Olympic Games. Items were measured on a seven-point Likert scale indicating level of agreement ranging from 1 (strongly disagree) to 7 (strongly agree). The motivation scale used in this study was a modified version of the VMS-ISE developed by Bang et al (2008), which includes most of the dimensions reviewed in the existing sport volunteering literature. The VMS-ISE was applied in the context of the Athens 2004 Olympic Games and includes six dimensions that were validated through confirmatory factor analysis:

- expression of values (5 items);
- patriotism (5 items);
- interpersonal contacts (4 items);
- love of sport (4 items);
- career orientation (5 items);
- extrinsic rewards (2 items).

Seven items were also adapted from Giannoulakis et al's (2008) Olympic Volunteer Motivation Scale (OVMS). This was deemed necessary, as the items reflected the uniqueness of the Olympic Games, as a mega event that promotes sport, education and cultural values. The motivation scale used in the current study comprised 36 items in total.

## *Procedure*

Data collection took place during the London 2012 Games time (July and August 2012). The principal researcher, as a member of the Park Lane Fleet Depot functional area, requested official permission from the venue team for survey distribution to the volunteers. The representatives of the organising committee approved the research and official permission was granted to the research team to conduct the study. An online-administered survey was developed and an email invitation including a hyperlink to the survey was distributed by the volunteer coordinator to the volunteers who were based at the Fleet Depot. The research instrument was examined prior to distribution by a panel of experts, including academics, the ethics committee of the host university and the volunteer coordinators of the Fleet Depot functional area, to ensure content validity and avoid any ethical concerns. A participant information sheet was also included to inform the potential respondents about the nature of the study, their right to withdraw at any time and that their personal information would be treated as confidential. Following the recommendations of Dillman (2007), the researcher distributed reminder emails one week and two weeks following the initial contact. The data collection was completed in late August 2012.

## *Results*

This section contains the results of the quantitative data analysis performed in this study. The information includes descriptive and inferential statistics exploring participants' characteristics, motivations and future behavioural intentions reflecting the research objectives of the study. Specifically, the results of the exploratory factor and regression analysis are reported in this section.

### *Sociodemographic and sport engagement variables*

Table 1 provides a detailed presentation of the sociodemographic and sport engagement variables that were used in the analysis.

There was an approximate balance in terms of the gender of the participants, with 50.9% of the respondents being male and 49.1% female. This contradicts past research that showed that women were more likely to have volunteered for the London 2012 Olympic Games (Dickson and Benson, 2013; Alexander et al, 2015). The respondents were more likely to be white British (79.1%). Of the respondents, 28.8% were aged between 45 and 59, followed by 26.4% in the 60-69 age group and 19% in the 18-24 age group. The employment status revealed that 49.1% of the respondents were in full-time employment, and the next biggest group were retired volunteers (24.5%). Of the respondents, 59.5% were highly educated, holding a university degree. Sixty-two per cent of the sample indicated that they currently volunteer for other organisations. Finally, the respondents demonstrated a high engagement to sport, as 66.9% stated

that they currently participate in sports, while 33.7% of them indicated that they take up more than one sport. Previous studies have also identified that the majority of London 2012 volunteers were aged 45 years or older, were more likely to be in employment and had volunteering experiences prior to the Games (DCMS, 2013; Dickson and Benson, 2013; Alexander et al, 2015).

**Table 1: Sociodemographic/sport engagement variables**

	Classification	Frequency (N = 163)	Percentage
Gender	Male	83	50.9
	Female	80	49.1
Ethnicity	White British	129	79.1
	White Other	18	11
	Other	16	9.7
Age	18-24	31	19
	25-34	26	16
	35-44	14	8.6
	45-59	47	28.8
	60-69	43	26.4
	70+	2	1.2
Employment	Full-time	80	49.1
	Part-Time	16	9.8
	Student	20	12.3
	Retired	40	24.5
	Unemployed	7	4.3
Education	Postgraduate	27	16.6
	Degree-level	70	42.9
	Below degree-level	61	37.5
	No qualifications	5	3.1
Other volunteering	Yes	101	62
	No	62	38
Sport participation	Yes	109	66.9
	No	54	33.1

## Factor analysis

Table 2 presents the results from an exploratory factor analysis that was undertaken to summarise the items measuring motivations to volunteer at the London 2012 Olympic Games.

Factors were extracted by making use of a principal component analysis with Varimax rotation. An examination of the Kaiser-Meyer Olkin measure of sampling adequacy suggested that the data matrix was ideal ( $KMO=.869$ ) for factor analysis and the Bartlett test for sphericity indicated that the dataset was significant at the .001 level. Decisions on the number of factors to extract were based on item loadings that were higher than 0.45, in keeping with the literature (Stevens, 1996). Initially, seven factors were extracted by considering their eigenvalues being greater than 1.0, as well

Table 2: Factor analysis of volunteers' motivations

Items	1	2	3	4	5
<b>Patriotism and community</b>					
I wanted to help make the event a success	.702				
Volunteering creates a better society	.707				
Because of my allegiance/devotion to my country	.847				
I wanted to help my country gain international prestige	.837				
My love for my country makes me want to help it host the Games	.859				
I am proud of my country hosting the Games	.776				
<b>Career orientation and other rewards</b>					
Volunteer experience will look good on my CV		.800			
I wanted to gain some practical experience		.770			
I could make new contacts that might help my career		.864			
I wanted to gain work-related experience		.846			
I wanted to gain experience that would be beneficial in any job		.824			
I wanted to gain event-licenced apparel		.714			
I wanted to get tickets/free admission		.644			
<b>Love of sport and the Olympics</b>					
Sport is something I love			.782		
I enjoy being involved in sport activities			.822		
I enjoy being involved in Olympic-related activities			.796		
I have passion for the Olympics			.724		
I want to become associated with the Olympics			.636		
<b>Interpersonal contacts</b>					
I wanted to interact with others				.817	
I wanted to work with different people				.831	
I wanted to meet people				.771	
I wanted to develop relationships with others				.672	
<b>Personal growth</b>					
Volunteering makes me feel needed					.616
I can explore my own strength					.564
Volunteering makes me feel important					.551
Volunteering allows me to gain a new perspective on things					.570
Cronbach's alpha	.930	.900	.860	.910	.770
Eigenvalues after rotation	5.442	5.334	4.091	3.806	1.944
Total variance after rotation (%)	17.55	17.27	13.195	12.278	6.272

as the percentage of the total variance explained by each factor. However, as the other factors had low reliability or comprised only two items, they were eliminated from further analysis (Stevens, 1996). The subsequent factor analysis produced five factors accounting for 67% of the total variance. The five extracted factors were labelled:

- patriotism and community values;
- career orientation and other contingent rewards;
- love of sport and the Olympic Games;
- interpersonal contacts;
- personal growth.

The Cronbach alpha reliabilities for each of the extracted factors ranged from 0.77 to 0.93. The reliability of each factor satisfied the criterion of considering a factor as reliable if Cronbach's alpha is higher than 0.70 (Nunnally, 1978). Convergent validity was also achieved as each of the items loaded significantly on its specified factor (Anderson and Gerbing, 1998).

Each motivation factor was labelled based on the content items identified within the sport event motivation literature (ie, Bang et al, 2008; Giannoulakis et al, 2008; Alexander et al, 2015; Dickson et al, 2015). The patriotism and community values factor included items that reflected volunteers' desire to contribute to society, their pride in their country and wanting to help in making the event a success. The second factor – career orientation and other contingent rewards – provided a number of items that demonstrated volunteers' desire to benefit extrinsically from their involvement at the Olympic Games, for example by:

- gaining skills and experience and developing a social network, which may then be beneficial for a future career;
- obtaining extrinsic rewards, such as tickets to attend Olympic events or memorabilia and the official uniform of the Games.

The third factor – love of sport and the Olympic Games – emphasised volunteers' interest in sports activities and their desire to be part of a once-in-a-lifetime opportunity such as to be involved with the Olympic Games, to meet with the Olympic athletes and to promote the values associated with sports and the Games. The fourth factor – interpersonal contacts – suggests that volunteers are motivated by a desire to build social networks, to meet people and to make friendships from their involvement at the Olympic Games. Finally, the personal growth factor reflects the desire of individuals to volunteer for an event in order to increase their self-esteem and self-development from the interaction with others, cooperation and teamwork that are experienced in a sporting event. Factor mean scores were also calculated and both the factors love of sport and the Olympic Games and interpersonal contacts emerged as the most important among this volunteer sample ( $M = 5.82$ ). Similarly, past research suggests that the centrality of the Olympic Games and the desire for meeting new people are the main motivators among volunteers at the Games (Giannoulakis et al, 2008; Dickson and Benson, 2013; Dickson et al, 2013, 2015). The least important motivation factor was the career orientation ( $M = 4.22$ ).

### *Predictors of future volunteering*

This subsection provides a presentation of the results of the regression analysis. Standard multiple regression analysis was performed to examine the impact of motivations for volunteering, sport engagement and sociodemographics on volunteers' intentions to:

- participate more in sports;
- volunteer further for other community and mega sport events or for other sport organisations;
- gain a wider interest in volunteering than before;
- enhance their awareness about volunteering opportunities;
- gain qualifications;
- volunteer more in sport clubs;
- stop volunteering in general.

Table 3 provides the regression results for each case. The dependent variables are given at the top of the relevant column. Ordinary least squares (OLS) was employed, as all dependent variables are cases of Likert scales. For each model, the table presents estimated coefficients. The corresponding  $F$  statistic for the OLS are also presented. For ease of interpretation, significant variables at the 1%, 5% and 10% levels are reported and are indicated by '\*\*\*', '\*\*' and '\*' respectively. In the regression analysis, the available sample was 161 responses, which comprised the maximum set of observations across all of the variables analysed. This is a small sample for regression analysis, in absolute terms. However, rules of thumb suggest that a ratio of five observations to one variable is required (Cohen, 1988; Hair et al, 2006). In the current study, 26 covariates were used to measure motivations, sociodemographic characteristics and sports engagement, which require a minimum sample size of 130. It can also be shown that, for a multiple regression based on a widely accepted level of the power of a test of 0.8, a significance level of 5%, the 26 covariates to be employed in the study and a conventionally 'large' effect size of 0.35, a minimum sample size is 88 (Cohen, 1988). VIF values ( $<5$ ) indicated that multicollinearity among the independent variables was not a problem (Hair et al, 2006). Based on these considerations, the sample was deemed appropriate for empirical analysis.

The results of the regression analysis are illustrated by examining each equation in turn. For 'more sport participation', the analysis suggests that for the motivation to volunteer variables, *love of sport and the Olympic Games* raises the likelihood that the volunteers will participate more in sports after the experience at the London 2012 Olympic Games. However, this is not the case for those who are students. This perhaps indicates that both time and income due to study commitments might constrain opportunities to participate more in sports, and perhaps is indicative of the prior sport participation experiences the current sample seems to have. Thus, despite the Games being a once-in-a lifetime opportunity to be part of as a volunteer, this does not necessarily mean that this will influence sport participation levels afterwards, for the social groups that are constrained by other commitments and the lack of resources. Bauman et al (2014) also concluded that despite the fact that people's intention to exercise increased after the Sydney Games, this did not result in a behavioural change six weeks after the Olympics.



Table 3: Regression analysis

	More sport participation		Other major sport events		Wider volunteering		More aware of volunteering		Interested in qualifications		More sport club volunteering		Quit volunteering	
	B	Beta	B	Beta	B	Beta	B	Beta	B	Beta	B	Beta	B	Beta
(Constant)	5.14 ***		5.95 ***		5.06 ***		4.95 ***		4.53 ***		7.65 ***		1.21	
Age 18-24 (versus 60 <sup>+</sup> )	0.91	0.21	0.75	0.20	1.86 **	0.50	0.90	0.26	2.18 **	0.43	-0.34	-0.08	-0.24	-0.06
Age 25-44 (versus 60 <sup>+</sup> )	0.24	0.06	-0.01	0.00	0.56	0.16	0.35	0.11	-0.04	-0.01	-0.80	-0.21	0.02	0.00
Age 45-59 (versus 60 <sup>+</sup> )	-0.31	-0.08	-0.01	0.00	-0.12	-0.04	0.06	0.02	-0.01	0.00	-1.02 *	-0.29	-0.11	-0.03
Male (versus female)	0.12	0.04	-0.48 *	-0.16	-0.41	-0.14	0.03	0.01	-0.03	-0.01	0.08	0.02	0.50	0.16
Single (versus other)	-0.33	-0.10	-0.60 *	-0.20	-0.57 *	-0.19	-0.31	-0.11	-0.36	-0.09	-0.02	-0.01	0.20	0.06
Student (versus full-time work)	-1.21 *	-0.23	-0.40	-0.09	-1.44 **	-0.32	-1.10 *	-0.26	-1.46 **	-0.24	-0.91	-0.19	-0.11	-0.02
Retired (versus full-time work)	-0.73	-0.19	0.48	0.14	0.19	0.05	0.65	0.21	-0.12	-0.03	-0.48	-0.13	-0.18	-0.05
Other (versus full-time work)	-0.15	-0.03	0.12	0.03	0.15	0.04	-0.07	-0.02	-0.04	-0.01	-0.08	-0.02	0.74	0.16
Academic (versus other)	-0.28	-0.08	-0.24	-0.08	-0.47 *	-0.16	-0.34	-0.12	0.04	0.01	-0.65 *	-0.20	-0.41	-0.13
White British (versus other)	-0.03	-0.01	-0.72 *	-0.20	-0.81 **	-0.22	-0.10	-0.03	-1.37 ***	-0.28	-0.38	-0.10	-0.08	-0.02
Patriotism and community	-0.22	-0.13	0.14	0.09	-0.17	-0.11	-0.05	-0.03	-0.46 **	-0.23	-0.25	-0.15	0.01	0.01
Career orientation and other rewards	0.05	0.03	0.04	0.03	0.13	0.09	0.25	0.18	0.04	0.02	0.16	0.10	-0.04	-0.03
Love of sport and the Olympics	0.50 *	0.29	-0.23	-0.15	-0.27	-0.18	0.33 *	0.24	0.60 **	0.30	-0.06	-0.04	0.40 *	0.25
Interpersonal contacts	0.30	0.18	0.28 *	0.19	0.24	0.17	0.06	0.04	0.10	0.05	0.41 **	0.26	-0.36 *	-0.23
Personal growth	0.12	0.07	0.08	0.06	0.27	0.18	0.11	0.08	-0.07	-0.03	0.06	0.04	-0.29	-0.18
Sport engagement	0.30	0.08	0.19	0.06	0.18	0.06	0.27	0.09	-0.27	-0.06	-0.24	-0.07	0.24	0.07
Other volunteering	-0.09	-0.10	0.00	0.00	0.03	0.03	-0.04	-0.06	0.01	0.01	-0.20 **	-0.24	0.10	0.13
R	0.52		0.45		0.49		0.49		0.68		0.46		0.44	
R <sup>2</sup>	0.27		0.20		0.24		0.24		0.46		0.21		0.19	
Adjusted R <sup>2</sup>	0.18		0.11		0.15		0.15		0.40		0.12		0.09	

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

The OLS results for 'other major sport event' show that for the motivation variables, and consistent with the literature, there was evidence of self-interest, as significant determinants were connected with the desire to develop *interpersonal contacts* and the personal objectives of seeking to make friends (Bang et al, 2008). Similarly, the seeking of social benefits such as friendship is noted in sport club volunteers in England (Taylor et al, 2012). None of the sport engagement variables were significant. Being male, of white-British ethnicity and single were the main sociodemographic variables decreasing the stated intention to volunteer at another major sport event. Interestingly, being male and white British are the sociodemographic characteristics that are most strongly associated with volunteer involvement in sports clubs in England (Taylor et al, 2012). This suggests that volunteering at the London 2012 Olympic Games, compared with other contexts, had a degree of greater uniqueness associated with it, which explains the involvement of individuals who may not be interested in volunteering per se, and it may reflect their reluctance to move across contexts. This contradicts past research (DCMS, 2013; Dickson and Benson, 2013), which noted that 84% of London 2012 volunteers expected to increase their volunteering levels at other events following the Games. However, as this study suggests, policy may target women, individuals from other ethnic backgrounds and those with a family for future event recruits. Accordingly, individuals who are male, single and of white-British ethnic background could be targeted to volunteer on a regular community basis.

The regression results for 'wider volunteering' that examined whether the participants intend to volunteer for a wider range of activities than before the Games showed that, for sport engagement and motivation, no significant variables emerged. Being 18–24 years of age increased the likelihood to volunteer in a wider range of activities, following the London 2012 Games. This perhaps reflects volunteering being seen as a leisure pursuit by young people (DCMS, 2013), and as an opportunity for youngsters to develop skills by identifying other volunteering activities that would look good on their CV. This further exemplifies the relevance of the career motivation of volunteering (Bang et al, 2008; Dickson and Benson, 2013; Alexander et al, 2015; Dickson et al, 2015). However, being single, of a white-British ethnicity, a student or having a high educational attainment reduces the probability of volunteering in a wider range of activities. This is perhaps due either to these groups being more active in other volunteering, or to time and income constraints as explained above. For example, Taylor et al (2012) suggest that high income is positively associated with sports volunteering and that individuals with a higher degree are more likely to volunteer in sports. As also noted in previous studies, the majority of London 2012 volunteers were volunteering elsewhere prior to the Games (DCMS, 2013; Dickson and Benson, 2013; Alexander et al, 2015). Thus, other volunteering commitments might constrain further involvement in a wider range of volunteering activities for the current sample.

The regression results examining increased awareness of volunteering opportunities after the London 2012 Olympic Games showed that being a student reduced the probability of becoming more aware of volunteering pathways after the Games. This is perhaps associated with the time constraints this social group faces, which limit their capacity to look for more opportunities, or the way they identify information, for example through social media (Moos, 2011). *Love of sport and the Olympics* is the motivation factor that increases this probability. This suggests that satisfaction in meeting motivations to volunteer at one event stemming from the love of sport

could be the basis for seeking alternative opportunities to volunteer in sport in the future. It also validates the motivations for volunteering at the Olympics related to the love of sport and the Olympic Games (Bang et al, 2008; Giannoulakis et al, 2008; Dickson and Benson, 2013; Alexander et al, 2015).

The OLS regression results for 'interested in qualifications' showed that *love of sport and the Olympic Games* was significant for the motivation variables, increasing the stated intention to gain more sport-related qualifications. However, being motivated by *patriotism and community values* reduced the probability of gaining sport-related qualifications in the future. This is perhaps associated with the uniqueness of the event and the desire of individuals to help their country to successfully host such a global-scale event, which can have much less connection to sport (Downward and Ralston, 2006). None of the sport engagement variables was significant. For the sociodemographic variables, being of 18 to 24 years of age increased the likelihood of gaining sport-related qualifications. This may be due to the physical demands associated with following a sport career, which one would expect younger individuals to be more likely to consider at the beginning of their career. It also supports past research suggesting that young volunteers perceive volunteering as a pathway for developing their future career prospects, and further validates the career dimension of volunteering (Bang et al, 2008; Taylor et al, 2012; DCMS, 2013; Alexander et al, 2015; Dickson et al, 2015). However, being a student or white British reduced the probability of aiming to gain sport-related qualifications after the Games. This is again associated with the study commitments that those who are already students might have elsewhere, and with the uniqueness of the event, as volunteering at the Games attracts individuals from diverse backgrounds with perhaps less connection to sport (Downward and Ralston, 2006; Dickson and Benson, 2013).

The regression results that examined future intentions to continue volunteering in a sports club, denoted as 'sport club volunteering', showed that for the motivation variables, there was evidence of self-interest in that being motivated to develop interpersonal contacts increased the stated intention. This shows that if event volunteering meets the needs of volunteers for developing interpersonal contacts, they are more likely to transfer their volunteering efforts to a sports club in the future, where the possibility for affiliation through *bonding* is also evident (Putnam, 2000; Nichols and Ralston, 2011; Dickson et al, 2015; Koutrou and Downward, 2015). For the sport engagement variables, currently volunteering in other organisations reduced the intention of further volunteering in a sports club, which perhaps is a result of time constraints due to being committed elsewhere. Being between 45 and 59 years of age reduced the probability of seeking to volunteer further in a sports club. This suggests that transferring volunteer activity to other sports volunteering contexts could be age limited. It could also be linked to the time constraints that older volunteers are facing due to family and work commitments. It is also consistent with previous research, which suggests that older volunteers are primarily motivated by the desire to develop interpersonal relationships with others, through their volunteering involvement in sport clubs, if there is time at their disposal to be able to volunteer (Taylor et al, 2012; Dickson et al, 2015). Interestingly, being educated to a degree level or higher reduced the stated intention to volunteer further for sport clubs. This contradicts previous research suggesting that individuals with high educational levels are more interested in sport club volunteering and that volunteers in sports clubs have high educational attainment generally (Taylor et al, 2012). However, this

may also be associated with the participants volunteering elsewhere, and with the uniqueness of the event, as volunteering for the Olympic Games attracts volunteers with motivations less associated with sports compared with other sport volunteering contexts (Downward and Ralston, 2006).

The final regression results examined the intention to quit volunteering in general, measured as 'quit volunteering'. None of the sport engagement and sociodemographic variables emerged as significant. For the motivation variables, however, having a motivation related to the *love of sport and the Olympic Games* was shown to increase the stated intention. This reflects the fact that volunteers may decide not to engage in volunteering further, if their reasons for involvement, in this case the love of sport and the Olympics, cannot be met in other contexts (Burgham and Downward, 2005; Cuskelly and O'Brien, 2012). It is also associated with the uniqueness of the event and a degree of self-interest in seeking to be part of the Games for the love of sport and the opportunity to engage with elite athletes. Significantly, having a motivation to develop interpersonal contacts reduced the probability of quitting volunteering. This is in support of past research suggesting that the desire for affiliation and developing social bonds is a significant reason in explaining volunteers' involvement (Bang et al, 2008; Nichols and Ralston, 2011; Taylor et al, 2012; DCMS, 2013).

## Conclusions

The aim of this study was to identify drivers for volunteering motivation in an Olympic Games context, their impact on future voluntary engagement and the potential for social legacy creation through volunteering. The impact of volunteers' sociodemographic characteristics, sport engagement and prior volunteering on their future intentions was also accounted for to determine the factors that may contribute to an enhanced volunteer culture after the London 2012 Olympic Games. Results of this study have confirmed the multidimensionality of volunteers' motivations. In particular, five motivation factors with satisfactory validity and reliability emerged as determinants of future voluntary engagement. *Love of sport and the Olympics* and *interpersonal contacts* seemed to be the most important motivators among this volunteer sample. This is in line with previous research, which supports the idea that the event itself and the opportunity to develop social networks are important motivators among volunteers at the Olympics (ie, Bang et al, 2008; Giannoulakis et al, 2008; Dickson and Benson, 2013; Dickson et al, 2013; Alexander et al, 2015). The results indicate that the current sample, which was drawn from a non-competition venue of the London 2012 Olympic Games, comprised mainly of older volunteers of white-British ethnicity, highly educated, working full time and with previous volunteering and sport participation experiences. This is consistent with the findings of large-scale studies on London 2012 volunteers (ie, Dickson and Benson, 2013; Alexander et al, 2015).

There are several practical and theoretical implications that can be attributed to this research. First, this study offered insights into volunteer motivations at mega events and specifically into the motivations to volunteer at the Olympic Games. Second, the study sheds some light on the determinants of a volunteer legacy, following experiences with volunteering at the Games. Third, the study offers some future directions to policy makers and practitioners on how to maximise the social benefits of volunteers' involvement with the Games.

When considering the legacy potential and who may increase their volunteering after the event, the regression analysis presented some variations in the emphasis of the results. Overall, people who were motivated by the desire for interpersonal contacts showed an increased awareness of volunteering opportunities and were more likely to continue volunteering in different contexts, and less likely to quit volunteering. Event organisers should therefore ensure that future volunteering pursuits provide appropriate opportunities for social interaction to the volunteers, through forming formal volunteer communities and networks. To this end, links with local sports clubs should be facilitated and coordination support should be offered by national governing bodies to promote opportunities for involvement. Interestingly, people whose motivations were linked to the love of sports were more likely to increase their sport participation but also to quit volunteering after the Games. Thus, non-governing bodies and sports clubs should communicate appropriately the links between the two activities to their participants, by emphasising the benefits from their involvement in local events or activities, for the promotion and expansion of the sport. Finally, those with a motivation to support the community and the country to host an event were less likely to seek to gain sport-related qualifications after the Games, which is to be expected since their motivation was more altruistic in nature. Thus, it appears that activities and leisure pursuits that are more altruistic should be communicated to such volunteers in the future, in order to sustain their volunteering levels. Similar to previous studies (Dickson et al, 2013, 2015), previous volunteering engagement had a significant negative influence on further volunteering at a sports club, reflecting the significance of being a current volunteer and the lack of time associated with this in reducing the probability of seeking to volunteer in other contexts. Given this, event organisers perhaps need to direct their recruitment efforts to those with no previous volunteering experiences if a legacy aim is to be capitalised (Dickson et al, 2015). Finally, certain sociodemographic characteristics seemed to determine future volunteer decisions. For example, being a student seemed to be a constraint both for more sport participation and for enhancing a volunteering culture. Thus, in order to attract more students as volunteers, event organisers or club committees should seek to improve links with local universities and use these links in facilitating the volunteer recruitment process, promoting to the students the benefits of volunteering both for developing human capital and for securing a future job. Some incentives should also be provided such as covering travel expenses.

Consistent with Alexander et al (2015), who noted that younger volunteers were more likely to continue volunteering after their Games experience, this study also identified significant age effects for those aged between 18 and 24, who showed a wider interest in volunteering generally and an interest in gaining sport qualifications. This could be further facilitated by improving communication of volunteering opportunities and the potential for skills development associated with these activities, through social media, designated webpages, blogs or email communications, or by offering courses that relate to the volunteer position. This is important since the main focus of the London 2012 Olympic Games was to 'galvanise young people to get involved in volunteering using the inspiration of the 2012 Games' (Cabinet Office, 2009). It is also apparent that intentions to volunteer for other major sport events are most likely for social groups that are underrepresented in sports club volunteering in general (ie, females) (Taylor et al, 2012; Koutrou and Downward, 2015). Generally, females were more likely to have volunteered at the London 2012 Olympic Games

(Dickson and Benson, 2013; Alexander et al, 2015). Alexander et al (2015) also suggest that female volunteers were more enthusiastic and displayed the highest level of behavioural intention with regard to the Olympics. This reflects a reluctance of certain social groups to transfer volunteering activity to other event contexts. This could be addressed by targeting the sociodemographic groups who may be more interested in event volunteering, or by ensuring that the motivations and interests of other social groups can be accommodated through major sport event volunteering.

Therefore, event organisers should pay more attention to understanding volunteer characteristics and driving forces in order to harness their skills and experiences at future community events and increase the potential of capitalising on a volunteer legacy after the event. Thus, despite the 'Big Society' policy discourse and its aim for an enhanced volunteering culture, the evidence presented here, although of a small scale, suggests that organising committees should be more strategic during recruitment. For example, targeted approaches in reaching individuals who may be keen to volunteer more and in different contexts after the Games should be adopted and facilitated (Dickson et al, 2013). The challenge for event organisers is to develop *bridging* into *bonding* social capital after a mega event to harness volunteer skills further, since this seems to be determined by the predisposition of volunteers in forming social and relational networks, their sociodemographic characteristics as well as motivations to volunteer (Downard and Ralston, 2006; Nichols and Ralston, 2011; Taylor et al, 2012; Koutrou and Downard, 2015). Thus, if the aims for a mega sport event volunteer legacy are to be realised, a better understanding of the determinants of volunteer decisions needs to be reached (Taylor et al, 2012; Dickson et al, 2015; Koutrou and Downard, 2015). Further, legacy planning is apparent and local government and community sport organisations need to be key agents in generating a volunteer legacy and capitalising on the impacts of a mega sport event (Nichols and Ralston, 2012).

There are limitations with the research, which are suggestive of future research activity. First, the sample was selected only from the non-competition venue of the Park Lane Fleet Depot. For future work, a greater sample size and systematic sampling techniques would improve the robustness of the findings, despite the general difficulties in obtaining official access to conduct research with volunteers at mega sport events, as also noted in past research (Giannoulakis et al, 2008; Dickson et al, 2013, 2015). Perhaps attempts to liaise with the organising committees as well as the International Olympic or Paralympic Committee to gain official access to conduct research with the volunteers would address these issues. Second, volunteers could be segmented in order to explore how sociodemographic differences impact on volunteers' motivations and future intentions. Lastly, the volunteering legacy of the event was measured by examining the impacts of the experiences on volunteers' future intentions. However, intentions are anticipated outcomes and not actual behaviour (Sheeran, 2002). Longitudinal data would therefore be better in monitoring the levels of volunteering activity over time and track the long-term effects on legacy. Nonetheless, the main general findings of the research are in support of previous studies suggesting the relevance of motivations, sociodemographic factors and engagement to sport and volunteering in determining future volunteering after a mega sport event experience.



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