

Volunteer selection at a major sport event: A strategic Human Resource Management approach

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Abstract

Volunteers have long been regarded as an essential part of the staging major sport events both to encourage community participation and to contain labour costs. Major sport events often attract a large pool of applicants which exceeds the number of volunteer positions available. Selecting the best qualified applicants for available positions requires volunteer selection processes which fair, effective and efficient from both the volunteer and event organising committee perspectives. Using a Strategic Human Resource Management (SHRM) approach our research investigated factors that predicted the selection of applicants interviewed for volunteer positions from the perspective of a major sport event organiser. Using deidentified data from all volunteer applications (n=53,234) for the 2018 Gold Coast Commonwealth Games we identified a number of factors that predicted the likelihood of an applicant being selected for an interview for a volunteer position. SHRM principles were applied to volunteer selection decisions but in a limited way. We found some evidence of links between volunteer selection decisions and the overarching strategies of the Games. However, these decisions prioritised the short-term goal of filling volunteer positions to stage a successful Games rather than longer-term strategic goals. Our research has contributed to better understanding links between major event HRM strategies and volunteer selection, identifying factors which predict volunteer selection and as well as possible limitations in the application of volunteer database management systems from a SHRM perspective.

Keywords	Strategic human resource management; selection; volunteers; major events; sport.
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Volunteer selection at a major sport event:

A strategic HRM approach

Highlights

- We analysed data from 53,234 cases in volunteer application data from the 2018 Gold Coast Commonwealth Games.
- From a Strategic HRM perspective several factors were found to predict volunteer selection.
- Event organisers prioritised short-term event delivery goals over longer-term strategic goals.

Volunteer selection at a major sport event:

A strategic HRM approach

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Abstract

Volunteers have long been regarded as an essential part of the staging major sport events both to encourage community participation and to contain labour costs. Major sport events often attract a large pool of applicants which exceeds the number of volunteer positions available. Selecting the best qualified applicants for available positions requires volunteer selection processes fair, effective, and efficient from both the volunteer and event organising committee perspectives. Using a Strategic Human Resource Management (SHRM) approach, the authors investigated factors that predicted the selection of applicants interviewed for volunteer positions from the perspective of a major sport event organiser. Using deidentified data from all volunteer applications ($n = 53,234$) for the 2018 Gold Coast Commonwealth Games, the authors identified a number of factors that predicted the likelihood of an applicant being selected for an interview for a volunteer position. SHRM principles were applied to volunteer selection decisions but in a limited way. The authors found some evidence of links between volunteer selection decisions and the overarching strategies of the Games. However, these decisions prioritised the short-term goal of filling volunteer positions to stage a successful Games rather than longer-term strategic goals. The research contributes to better understanding links between major event HRM strategies and volunteer selection, identifying factors which predict volunteer selection, and possible limitations in the application of volunteer database management systems from a SHRM perspective.

1 Introduction

Major sport events, particularly those on an international scale (e.g., the Olympic and Commonwealth Games or FIFA World Cup) require the services of thousands and in some cases tens of thousands of volunteers. Event volunteers are expected to work over a relatively short period of time and often at high intensity. Deployment of volunteers at major sport events dates back to the 1948 London Olympic Games (IOC, 2019a). Since that time, major sport event organisers have recruited volunteers both to engage with local communities and to defray potentially prohibitive labour demands and costs involved in staging events. A critical and time-consuming process for major sport event organisers is the selection of event volunteers from what are often very large pools of applicants well in excess of the required volunteer labour force. For example, the Gold Coast 2018 Commonwealth Games (GC2018) attracted more than 53,000 applicants of which more than 20,000 were selected to be interviewed for 15,000 generalist and specialist volunteer positions (A. Noble, personal communication, 27 April, 2017). The Tokyo 2020 Olympic Games (IOC, 2019b) attracted 204,000 applications for an estimated 80,000 volunteer positions. By comparison, in a for-profit context one of the world's largest corporations Alphabet, the parent company of Google, took about five years to increase its employee head count from almost 39,000 in 2013 to 85,000 in 2018 (Recode, 2019). While the context of major sport events and large corporations is different the magnitude of the volunteer selection effort is large by almost any measure and also occurs within a period of months rather than years.

In a review of volunteer management models, Safrit, Schmiesing, Gliem, and Gliem (2011) identified recruitment and selection as one of seven domain areas in contemporary volunteer administration. Earlier Wilson, and Pimm (1996) separated recruitment and

selection as two of seven personnel management functions when discussing management of the voluntary sector. Whether recruitment and selection are a singular or two separate functions, attracting a large pool of applicants is often viewed as advantageous because major event organisers are better able to select the best possible volunteers for available positions across a number of functional areas. Furthermore, the selection process can extend over several months and often occurs well in advance of the staging of an event, thus increasing the risk some selection processes will fill positions with volunteers who subsequently drop out prior to the staging of the event. This problem is likely to emerge in the case of the Tokyo 2020 Olympic Games. Volunteer applications for the Tokyo Games closed in December 2018, with applicants being selected from January to June 2019 and general training conducted in October 2019 (IOC, 2019b) for the staging of the Games in July 2020.

Volunteer selection presents a substantial strategic challenge in the successful staging and delivery of major sport events. As a consequence, event organisers usually adopt a Strategic Human Resource Management (SHRM) approach (Taylor, Doherty, & McGraw, 2015) which integrates HRM practices with the mission, goals and values of the event organisation. Mainstream HRM practices are increasingly being adapted and applied to the management of volunteers including selection. Alfes, Antuens, and Shantz (2017) argued that non-profit organisations “are beginning to acknowledge the importance of a more professional approach to the management of volunteers” in realising their vision and that “HR likely has a key role to play in facilitating their [volunteer] engagement, commitment and performance” (p. 62). However, according to Akingbola (2013) “much of the nonprofit management literature has paid limited attention to strategic nonprofit

human resource management” (p. 215), and research on SHRM has tended to focus on employees rather than volunteers.

A SHRM approach was the approach taken by GOLDOC. The volunteer strategy at the 2018 Commonwealth Games (GOLDOC, 2016) outlined a vision, program objectives, the operating environment and key program components. The vision for the volunteer program was to deliver “a highly immersive and positive experience for each volunteer whereby their participation contributes to an outstanding Games and is remembered as their proudest moment” (p. 5). The volunteer strategy identified five program objectives as well as links to the strategies and interdependencies with twelve other functional areas within the Games organisation, key learnings from previous Games and an outline of the delivery model for the volunteer program. This approach is not inconsistent with other major sport event volunteer strategies. For example, in terms of volunteer selection, the International Football Federation (FIFA) estimated that 15,000 volunteers were to be recruited for the 2018 World Cup. Candidates (applicants) would be “invited to participate in online tests (to get more information about their analytical skills, personal qualities, and command of English)” (FIFA, 2019, no page) after which successful applicants would proceed to an interview. It was further stated that all candidates would be “treated equally during the selection process,” but successful selection was more likely if a candidate had volunteer experience, education related to a specific function (e.g., medical services, doping control, media, IT or transport), or a good command of foreign languages. Furthermore, FIFA like many event organisers was clear that their support for volunteers would not extend to travel or accommodation costs.

The purpose of our research therefore, was to investigate factors that predicted the selection of applicants interviewed for volunteer positions. Our research was from the perspective of the volunteer strategy of the event organiser: the Gold Coast 2018

Commonwealth Games Corporation, a non-profit entity known as GOLDOC or the Local Organising Committee of the 2018 Commonwealth Games in Australia. The research was made possible through a partnership agreement between the lead author's University and GOLDOC which enabled negotiated access to a de-identified version of the volunteer applicant database for the Games. Working in partnership with GOLDOC, a member of the research team was consulted about design elements of the volunteer recruitment system which included, for example, volunteer motivation items which arguably had not previously been a feature of major sport event volunteer recruitment and selection systems. The contributions of our research are to better understand links between major event HRM strategies and volunteer selection, to identify factors which predict volunteer selection and to explore possible design limitations of volunteer application database management systems in the context of strategic HRM.

2 Literature review

In an event context, almost three decades ago Getz (1991) posited that volunteer management in events is different from the management of volunteers in continuing positions. Because of the short-term nature of events, volunteer management needs to focus on acquiring volunteers and creating a sense of community support. Alfes et al. (2017) argued that although volunteer "recruitment looks very much the same in non-profits as it does in for-profit firms, selection, on the other hand is quite different in the non-profit sector" (p. 66). Despite the enormity of the task in some major event settings there has been little published research on volunteer selection at major sport events. Wicker (2017) stated that "volunteerism and volunteer management in the context of sport organisations and sport events can be considered one of the most prominent research topics within sport management" (p. 326). However, Wicker's (2017) review found that both event volunteer

recruitment and selection have attracted less research attention than in sport clubs, and recruitment has been examined in combination with volunteer retention. This point is also made by Alfes et al. (2017, p. 73), who stated that “relative to recruitment practices, there is far less research on the *selection* [italics in original] of volunteers” and concluded “more studies are needed to develop and test propositions regarding HR’s impact in non-profit organizations via the professional management of their volunteers” (p. 89). There is a gap in the event volunteer management literature on volunteer *selection*.

2.1 Strategic HRM

It is becoming increasingly apparent that the selection of volunteers for major sport events needs to be situated within an HRM framework which is linked with the overall strategy of the event organising committee, which suggests a SHRM approach is required. The “essence of SHRM is to adopt a flexible but strategic perspective that accurately analyses both the internal and external environments of organisations to assure ‘fit’ between HR strategies and practices, and between these and business strategies.” (Nankervis, Baird, Coffey, & Shields, 2017, p. 29). SHRM aligns HRM to organisational goals and is focussed on the “pattern of planned human resource deployments and activities intended to enable the firm to achieve its goals” (Wright & McMahan 1992, p. 298). According to Akingbola (2013) “the basic premise of SHRM is anchored in the critical importance of human resources to strategy, organizational capability to adapt to change and the goals of the organization” (p. 216). It is acknowledged that SRHM is diverse in its theoretical perspectives, which can be categorised as either outside-in perspectives (e.g., competitive advantage; Porter, 1985) or inside-out perspectives dominated by the resource-based view (RBV; Barney, 1991). Our paper takes the latter approach on the basis that RBV is likely to assume that the crucial value and competitive advantage are offered by an

organisation having capabilities to obtain, advance, combine and effectively position its physical, human and organisational resources (Akingbola, 2013). Volunteers in major sport events are a critical source of human capital in terms of the skills, knowledge, and capabilities they bring to an organisation at very low cost in comparison to employees.

Strategic Non-profit HRM is a particular application of SHRM which takes into account the characteristics that differentiate non-profit from for profit organisations. Non-profits operate in an environment “that requires an organization to gain legitimacy with multiple stakeholders, manage the dependence on funders, and reconcile diverse performance expectations” (Akingbola, 2013, p. 221). These considerations are not unfamiliar to major sport event organising committees which have to achieve their strategic goals in complex environments and align their HR practices with their institutional characteristics, social missions, and the input of various stakeholders. A further layer of complexity and time pressure is evident in major events in that organising committees are often established for a finite period of time. This is particularly the case for events that are staged as one-off events at a particular location, where an event must be delivered on time knowing that the event organisation will be shut down usually within a period of months even after a large international major event is staged. Akingbola (2013, p. 222) stated that “empirical research, systematic framework and models of SHRM in nonprofits HRM is scarce,” which suggests that such research on this topic in a major event context is also lacking. Wicker (2017) made a similar point in her review of the sport volunteer management literature.

2.2 HRM selection practices

Included within HR recruitment are all of the actions and processes aimed at attracting a pool of qualified persons from which a successful candidate is chosen to fill a

position. Recruitment encompasses selection which is “a process that analyses and compares the applicants for a position against the selection criteria for the position” (Nankervis et al., 2017, p. 218). Selection is a strategic decision in that the mission, vision, and values of an organisation and the views of key stakeholders need to inform the process of selecting employees or volunteers. Selection practices typically involve application forms, interviewing, and reference checking against selection criteria. A number of other selection practices are available depending upon the type and level of a position to be filled. These may include background and resume checking, various types of tests, multiple rounds of interviews, psychological assessments, and medical examinations.

Alfes et al. (2017) asserted that “relative to recruitment practices, there is far less research on the selection of volunteers” (p. 73). Researching Swiss sports clubs Schlesinger, Klenk and Nagel (2015) developed a decision-making typology for volunteer recruitment decisions in which practices varied between situational/reactive and systematic/strategic on one dimension and between top-down and bottom-up on another. Though not in the context of major sport events, they found evidence that “top-down controlled and systematically strategic decision-making practices are more appropriate” (p. 203). However, there is some research which suggests that a strategic orientation to recruitment and selection may not be necessary in all situations. O’Toole and Grey (2016) investigated volunteering in the context of dense social relations in describing recruitment, selection, and training practices in the Royal National Lifeboat Institution. They found that these practices were highly rigorous yet informal and that in a setting where volunteer work can be dangerous, volunteers were considered probationary until they could prove their dedication and commitment to collective norms. Lynch and Smith (2009) also found evidence of a lack of formalisation in the selection of volunteers and “as a result managers

relied on their own judgement to assess the suitability of candidates for voluntary posts” (p. 88). The limited research on volunteer selection in non-profit organisations suggests that while informal practices seem to prevail there is some evidence that a strategic approach may be effective. Furthermore, Alfes et al. (2017) observed that “it appears that *selection* [italics in original] may be an important step in ensuring high performance and retention of volunteers” (p. 73).

2.3 Event volunteer management and selection

Event volunteer management is a rapidly emerging field of research and has “developed as a sub-specialization of volunteer management because there are significant differences between the management of volunteers in event settings compared to mainstream volunteer management” (Kim & Cuskelly, 2017, p. 83). In a systematic review of 71 original peer reviewed articles on event volunteer management research, Kim and Cuskelly (2017) reported almost two thirds (63.3%) of all reviewed papers were published in the six years from 2009 to 2014. The most frequently researched event volunteer management topics were motivation, retention, satisfaction, recruitment, and commitment. However, volunteer selection was not specifically identified amongst the concepts and constructs in the papers reviewed.

The International Labour Organization (2011) advanced the notion that volunteer work is most effective when properly managed. Hanlon and Stewart (2006) supported this view but asserted that because of the large influx of seasonal staff at different stages of an event cycle HRM practices in major sport events need to differ from mainstream management. Event managers may need to use HRM practices that are different to those used in managing volunteers involved long or short-term but on a continuous basis because event volunteers fit the definition of episodic volunteers (Macduff, 1999) in contrast to

long-term and short-term volunteers described by Connors (2012) and sometimes referred to as continuous volunteers (Macduff, 1999). Wilson and Pimm (1996) argued for a more formalised volunteer human resource structure “which is as effective as that used for paid workers” (p. 24). Nichols, Wicker, Cuskelly and Breuer (2013, p. 2) cautioned however that “volunteer management is underdeveloped and there is a danger that policies promoting formalization do not sufficiently understand the impact on volunteers’ experience and motivations. Herein lies the dilemma for major sport event organisers; there are conflicting views about the impact of more or less formalisation of volunteer HRM practices. We argue differences between continuous and episodic volunteers’ impact on volunteer management practices generally and the selection of event volunteers in particular, but we do not know how or why because of the lack of published research in this important aspect of volunteer management.

Research into major event volunteer selection is quite limited. Kodama, Doherty, and Popovic (2013) took an autoethnographic approach to the volunteer experience at the 2010 Vancouver Winter Olympics. Selection as a volunteer was not a prominent topic of the research. However, the first author reflected on the unexpected anxiety experienced during the selection process and how it was the beginning of the team building process for the Games. From a management perspective, a study of the Beijing Olympic Games volunteer program drew upon theories of social, human and political capital. Zhuang and Girginov (2012) found that while political background and status were criteria in the selection process at the Beijing Games, volunteers in possession of all three forms of capital had a “much better chance of being *selected* [italics mine] as volunteers while others in possession of one or two forms have fewer prospects” (p. 252). They proposed a model of sequential effects of capitals in selecting volunteers for the Beijing Olympic Games. At the

core of the model was political capital followed by individual human capital, social capital, and finally collective human capital.

One event which was examined at length in terms of its volunteer program was the London 2012 Olympics which has been the subject of a number of published studies. For example, Nichols and Ralston (2015) described the constraints which limited the success of the volunteer legacy aims of the London Organising Committee of the Olympic and Paralympic Games (LOCOG) and concluded that regulatory capitalism substantially inhibited the opportunities to transition GamesMakers into SportMakers (i.e., sport volunteers who would continued after the event). The same authors (Nichols & Ralston, 2012) examined the volunteer management processes of LOCOG and the impacts these had on volunteer motivations and satisfaction. Their analysis suggested that the London 2012 Olympics used a program-centred approach to volunteer management rather than a more personal membership-centred approach ,which caused irritation to volunteers and strained their commitment to the event. This theme was further explored in Holmes, Nichols, and Ralston (2018) through a qualitative study which interviewed volunteers about their experiences throughout the recruitment, training and delivery of the event.

While numerous studies have asked successful applicants to reflect on the recruitment and selection processes, there appears to be no published research which starts from the position of volunteer *applicants* for major events or the factors that predict their selection by event management organisations. The research participants in studies of volunteer selection, whether from mainstream voluntary organisations or major sport events, are individuals who have successfully navigated volunteer selection procedures and have been appointed to a position. This is a significant shortcoming in the volunteer management and selection literature in that it provides no insights into the factors that

major event organisers may use to differentiate applicants who are selected for volunteer positions from those who are not selected. Our research aims to address this gap in the research literature from a strategic HRM approach.

3 Methods

The research was designed to identify factors which predicted the likelihood of an applicant being selected for an interview for a volunteer role within GC2018. Access to selected data fields from the deidentified volunteer application database was negotiated by a member of the research team following ethics approval from the host university. As the primary purpose of the volunteer application database was recruitment of GC2018 volunteers our research involved a secondary analysis of data fields selected and provided by GOLDOC.

3.1 Study population

The population of interest in this study was all applicants ($n = 53,234$) who responded to the call for GC2018 volunteers and completed and submitted an application for a volunteer position. Applications were accepted by the GC2018 Organising Committee if they met all GOLDOC (2017) volunteer eligibility requirements:

- Aged 16 years or over at point of application.
- Spoke and read English or were an Australian Sign Language (AUSLAN) user.
- Available as a volunteer from 4th to 15th April 2018.
- The applicant agreed to a background security check and provided valid and acceptable personal identification documents.
- The applicant agreed to travel to a venue at the Gold Coast and meet all costs to attend:
 - a selection event and interview.

- up to 4 days of training from November 2017.
- an appointment at the Uniform and Accreditation Centre to collect uniforms and an accreditation pass from January 2018.

3.2 Instrument and procedures

The instrument in our research was a sub-set of the on-line volunteer application form designed by GOLDOC through a consultation process with multiple stakeholders including a contracted third-party service provider over many months. The detailed volunteer application form consisted of a number of closed (e.g., yes or no) and open response (e.g., free text) items arranged in five sections which sought responses to:

- Personal information (e.g., name, country and date of birth, details of identification documents, accessibility requirements).
- Contact information (e.g., address, phone numbers, email address).
- Skills and experience (e.g., volunteering and sport experience, first aid, medical and health skills, driving, language, and other skills).
- Availability and preferences (e.g., availability during operational trials, preparation, arrivals and games periods, service area and location preferences, uniform size).
- Other information (e.g., consent for background checks, reasons for wanting to volunteer for GC2018, interest in volunteering beyond the Games).

All applicant data including personal and contact information were submitted by applicants using an on-line form that was administered through a secure (encrypted) website and stored in a database system provided to GOLDOC by a third-party contractor. Many items were mandatory (e.g., contact information, identification documents) and an application could not proceed without a response. Responses to other items were optional (e.g., reasons for wanting to volunteer for GC2018). GOLDOC opened the application period

in February 2017 and at its discretion closed the call for applications and reactivated the application process as needed prior to the commencement of the Games (GC2018, 2019b).

Many of the items required applicants to provide information (e.g., contact information and some personal information) which may have directly or indirectly revealed their personal identity and would have breached ethics approval if used in our research. Further, many of these items were not relevant to volunteer selection. Some information which may have been relevant (e.g., date of birth) was deemed a personal identity risk and was not available for our research. Additionally, some details about skills and experience (e.g., health or medical qualifications) while relevant to the selection of volunteers in some specialist roles may also have breached data privacy and were therefore not available for our research.

Selected fields from the entire volunteer application database were provided in a de-identified form electronically (comma separated values) on a case-by-case basis by GOLDOC to the research team several months after the staging of the Games. A total of 53,234 cases were available for our analysis. The fields used in our research are listed in Table 1. Included in the database was a field we labelled dependent variable which identified whether an applicant had been selected for and attended an interview (yes or no). A total of 20,455 applicants were recorded as selected for an interview, and 32,779 applicants were recorded as not selected for an interview at the time the volunteer application database was closed. A number of the fields provided by GOLDOC were dropped from our research. These fields (variables) had large numbers of cases with missing values because they were either optional fields for individuals completing the volunteer application form or they were free text fields and not suitable for regression analysis.

[TABLE 1 HERE]

Reasons for wanting to volunteer (eight motivation statements) were included in the volunteer application form following a period of negotiation between GOLDOC and a member of the research team. Due to concerns about the length of time the application process was taking volunteers (more than 30 minutes), the motivation statements were included towards the end of the application form and the item was not a mandatory feature of the application protocol. Applicants were invited to select up to five of the statements that represented their reasons for wanting to volunteer for GC2018. Selected statements were not required to be prioritised by the applicants. The eight statements provided to GOLDOC by the researchers were treated individually and adapted from the Volunteer Motivations Scale for International Sporting Events (Bang, Alexandris & Ross, 2009), the Olympic Volunteer Motivation Scale (Giannoulakis, Wang & Gray, 2007), and the Special Event Volunteer Motivation Scale (Farrell, Johnston, & Twynam, 1998). The statements were designed to capture a wide cross-section of possible major sport event volunteer motivations.

3.3 Treatment and analysis of data

The deidentified data provided by GOLDOC were coded and analysed using SPSS version 25. Frequency analysis was used to identify missing values and correct any out of expected range cases. Frequency analysis was also used to describe the GC2018 volunteer applicants' demographics, skills, and experiences, availability for the Games and their main reasons (motives) for wanting to volunteer. A number of demographics variables were not provided by GOLDOC (e.g., date of birth) to eliminate any risk of an individual's identity being revealed by matching responses across a case. This prevented reporting or analysis of demographics such as age, country of birth and nationality as well as health and medical qualifications. The eight motivation items which respondents could optionally select up to

five of were recoded for each item on a case by case basis and reported as “yes” or “not selected”.

All 23 independent variables (personal information, skills and experience, availability, and motivation to volunteer) were tested using binary logistic regression analysis to analyse the relative importance of each of the predictor variables on volunteer selection. The Wald test was used to test the significance of each individual regression coefficient and Beta coefficients indicated whether the direction of the relationship was positive or negative. Odds ratios reported with 95% confidence intervals indicated “the change in odds of being in one of the categories of outcomes when the value of a predictor increases by one unit” (Tabachnick & Fidell, 2013, p. 461). A series of three binary logistic regression models (personal information, skills and experience; availability to volunteer; and volunteer motives) were conducted to identify significant predictor variables in volunteer selection in order to omit non-significant predictor variables. The remaining variables were entered into a final binary logistic regression model to identify the importance of each predictor variable on the likelihood of a volunteer being selected for an interview for a position with GC2018.

4 Results

Our research focussed on the question of which factors differentiated applicants selected to be interviewed for volunteer positions from those who were not selected to be interviewed, from the perspective of the event organiser. A descriptive analysis of the population of volunteer applicants is followed by the results of a logistic regression analyses with the dependent variable; selected and attended or not selected to be interviewed for a possible volunteer position with GC2018. A number of questions on the application form were not mandatory which has resulted in a high proportion of missing values on many

variables. It is not known whether the missing values indicate that a question was not applicable to an applicant or the data were actual missing values. In some fields (e.g., skills and experience) applicants were asked if they possessed a current qualification (e.g., first aid) which they were willing to use in their volunteer role for GC2018. If an applicant was not prepared to utilise a particular skill they could answer either 'no,' 'not applicable,' or choose not to respond. Where relevant, not applicable and no response were recoded as 'no' to retain such cases in the analysis. The logic for this approach was that GOLDOC used the skills and experience indicated by applicants in their selection decisions. Applicants who answered either no, not applicable or no response were not intending to answer 'yes.'

4.1 Descriptive analysis of applicants

The following statistics summarise the personal information, skills and experience and availability before and during the games of the 53,234 individuals who completed an application to volunteer for GC2018. Reported percentages have excluded missing values. The dependent variable in our research is whether an applicant was selected for and attended an interview for a volunteer position. Of the 53,234 applicants, 20,455 (38.4%) were selected and attended an interview but the majority (32,770 or 61.6%) were not selected and interviewed (table not shown). The volunteer applicant database did not record whether applicants who were interviewed were offered or accepted a position as a volunteer for GC2018.

4.1.1 Personal information, skills and experience

The majority of applicants were female (66%) outnumbering male applicants two to one. A small number (2.1%) of applicants declared that they had a disability. Substantial numbers of applicants reported English language skills (83.2%) which was a pre-requisite for volunteering at GC2018. Similar patterns were evident for other skills and experiences

including leadership skills (60.8%), volunteer experience (71.0%) and experience in sport (65.2%). Other skills and experiences were less frequently listed by the applicants and ranged from 48.0% for driving skills to 5.4% for lifeguarding, lifesaving or aquatic rescue skills. Some skills required current qualifications and applicants had to be prepared to declare they were willing to use those skills in their volunteer position if they were selected (e.g., first-aid, lifeguarding and driving skills).

4.1.2 Availability

GOLDOC used a strategic approach to matching volunteer availability to their operational requirements and were seeking to maximise flexibility across its volunteer workforce. As a consequence, applicants were encouraged to make themselves available for a number of periods by a statement on the application form which indicated there might be more opportunities to be involved in the Games for applicants with greater availability. Availability was broken down into four pre-Games periods leading into GC2018 (operational trails, preparation, arrivals, operational), as well as during the staging of the Games period (4th-15th April 2018) (tables not shown). Peak demand for volunteers was during the Games when 15,000 individuals were rostered across a number of functional areas at competition and other venues. Almost all applicants (94.4%) declared their availability during the Games period. Volunteers who indicated they were available for pre-Games periods ranged from 69.8% to 83.8%. Unavailability decreased substantially from 30.2% of applicants in the preparation period (January-March, 2018) to 5.6% for the Games period.

4.1.3 Motives

Gathering data about motives for volunteering is rarely a consideration of volunteer application protocols for major events. The application process usually focusses on gathering personal and contact information, identity confirmation, skills, qualifications and

experiences, availability and job preferences. For GC2018, applicants were provided with eight motivation statements from which they could choose up to five. A total of 161,856 responses were recorded out of a potential 266,170 maximum responses (53,234 applicants x 5 statements) for an overall response rate of 61.1%. The most frequently chosen motivation statements were: “to utilise my skills and experiences” (55.6% of applicants), and “to experience an international event” (52.5%). In contrast, few applicants indicated they were motivated by receiving a “reward or recognition” (3.1%) or “to support career aspirations” (13.8%).

4.2 Predicting applicant selection for interview

Binary logistic regression was used to predict the likelihood that applicants were selected for and attended an interview for at GC2018. Because there was a large number of independent variables ($n = 23$) available for analysis, the statistical modelling was conducted in two stages: (1) a series of preliminary multivariate models; and (2) a final multivariate model. A staged approach was used to reduce the dilution effect of including all variables and consequentially introducing possible large standard errors in the regression model. All independent variables and the dependent variable had binary values. In the first stage, each independent variable was tested in a series of three binary logistic regression models (tables not shown). The three models were (a) personal information, skills and experience (10 variables); (b) availability to volunteer (5 variables); and, (c) volunteer motives (8 variables). All three regression models were statistically significant ($p < .05$). Based on these preliminary models, five variables were dropped from further analysis. Experience in sport, availability during the Games period (4th -15th April 2018), and the motivation variables, to meet new people, and interest in sport were found to be non-significant ($p > .05$) predictors of volunteer selection in the preliminary logistic regression models. Availability for Games

period (4th -15th April 2018) was also dropped from the preliminary and the final multivariate analysis due to its skewed distribution. Being available for the Games period was one of a number of volunteer eligibility requirements and almost all applicants (94.4%) indicated they were available for the Games period. Of the 20,455 selected applicants for an interview only 43 indicated they were not available for the Games period.

The 18 remaining variables (8 personal information, skills and experience; 4 volunteer availability; and 6 motivation items) were entered into a multivariate binary logistic regression model to ascertain their effects on the likelihood of a applicants being selected for and attending an interview for a volunteer position with GC2018 (see Table 2). A total of 52,630 cases were included in the final multivariate model after excluding outliers ($n = 590$) and missing cases ($n = 14$). Outliers were cases with standardised residuals outside less than -2 or greater than +2 (Christensen, 1997). The logistic regression model was statistically significant: $\chi^2 (1) = 3,095.79, p < .001$. The model explained 16.1% (Nagelkerke R^2) of the variance in volunteer selection and correctly classified 65.4% of cases. The model correctly classified applicants who were not interviewed in 80.6% of cases but was less accurate in the classification of applicants who were interviewed (40.2% correctly classified). Goodness of fit statistics (Hosmer and Lemeshow test, $\chi^2 (8) = 588.58, p < .001$) revealed the model did not fit the data. Because the Hosmer and Lemeshow test is affected by large sample sizes (in this case more than 50,000 cases), the goodness of fit was tested using an alternate procedure (Paul, Pennell, & Lemeshow, 2013). The data were grouped into 10 approximately equal subgroups by case number and the goodness of fit recalculated for each of the 10 subgroups. The Hosmer and Lemeshow test statistic was not significant on any of the 10 subgroup tests confirming the overall model was a good fit for the data. Multicollinearity was evaluated in each of the preliminary and the final regression models

by checking correlations between the independent variables. The correlation coefficients ranged from 0.001 to 0.476 in the three preliminary regression models and between 0.000 and 0.469 in the final model indicating that multicollinearity was not evident.

Applicants who indicated availability during the operational trials period (2017-early 2018) and the preparation period (January-March 2018) were respectively 2.3 times and 1.5 times more likely to be selected for an interview than those who indicated that were not available for these pre-Games periods. Similarly, those who indicated that one of their motives was 'to represent/support the local community' were 1.8 times more likely to be selected as were those with volunteering skills (1.4 times more likely). Applicants indicating second language skills (odds ratio = 0.71) and the motive 'to receive reward and recognition' (odds ratio = 0.71) were significantly *less* likely to be selected for an interview. All but one other variable were significant predictors of being selected for an interview but had low beta weights (less than or equal to 0.30). Leadership skills was not a significant predictor of being selected for an interview (see Table 2).

[TABLE 2 HERE]

5 Discussion

We identified a gap in the major event volunteer management literature regarding the selection of volunteers which has not been addressed because research on non-profit SHRM has, according to Akingbola (2013) tended to focus on employees rather than volunteers. The purpose of this research, therefore, was to investigate factors that predicted the selection of applicants interviewed for volunteer positions from the perspective of GOLDOC from a SHRM approach (Nankervis et al., 2017).

Strategic priorities for GC2018 (2019c) included the delivery of a successful games and community participation which were reflected in the selection of volunteers for the

event. Applicants for volunteer positions were more likely to be selected if they had volunteer skills, indicated availability before and during the Games, and were motivated by representing and supporting their local community. The strongest negative predictors of volunteer selection were volunteering to receive rewards or recognition and interestingly second language skills. The GOLDOC volunteer strategy of creating jobs and a diverse economy appeared to be inconsistent with volunteer selection with our finding that being motivated by career aspirations was a negative predictor of being selected for an interview which suggests there were inconsistencies between HR strategies and business strategies (Nankervis et al., 2017). Consequently, GC2018 was unlikely to have achieved some of its strategic goals because the pattern of HR deployments, in this case volunteers, was misaligned (Wright & McMahan, 1992).

Volunteer selection is an important strategic decision that needs to be thoughtfully operationalised for major sport event organising committees. A highly functional volunteer workforce is a critical strategic consideration and a key factor in the success of major sport events (Kim & Cuskelly, 2017) which is set in motion with timely and appropriate volunteer selection decisions. Assuming an adequate pool of volunteer applicants has been attracted, the first major strategic decision to be made in the volunteer selection process, is which volunteers are selected for interview: the focus of this research. On the surface such a decision seems straightforward. Event organisers identify the most appropriately qualified and motivated applicants within the context of the event strategy and ultimately match and assign volunteers to available positions in the event workforce plan. This is essentially a process of reducing the pool of applicants to a manageable number of interviewees in a way that balances the time and financial costs to the event organisers against a sense of treating all applicants equitably. A cursory examination in the case of the 2018 Commonwealth

Games suggests that 20,000 interviews at 15 minutes per interview on a one-on-one basis (i.e., not an interview panel or group interviews) involved approximately 5,000 person hours for the interviewers. The total hours do not include the time required for pre- and post-interview processing, managing the interview venue, and rostering interviewer and interviewees, nor the time required to design, develop, coordinate, and manage the strategies, system design and development, or policies and processes associated with volunteer selection.

At a deeper level of SHRM there are often conflicting interests to be considered and resolved in the selection of event volunteers. Event organisers work to strike a balance between the short-term interests of staging a successful event with the long-term intent of creating a volunteer legacy for the host community. In the case of GC2018, volunteer skills were amongst the strongest predictors of being selected for a volunteer interview suggesting that the short-term interest of delivering a successful event was a priority. However, a number of more specialised skills were not strong predictors of selection (e.g., leadership, driving or English language skills) and several specialised skills (e.g., first-aid, second language) were negative predictors of selection perhaps because such skills were not in high demand for most volunteer positions. Depending upon the vision and values of a particular event there may be other goals set for the volunteer program such as addressing social and economic disadvantage to address social equality and inclusion or increasing levels of community engagement. The design of the volunteer application form and the database system used to collect, store, and analyse are important for both collecting appropriate information from applicants and importantly using these data in volunteer selection decisions. From an RBV perspective (Barney, 1991) volunteers are a critical source of human capital (Akingbola, 2013) but only to the extent that a major sport event

organising committee are capable of acquiring, developing and deploying them in ways that maximise value from the volunteer database.

GOLDOC (2017) like many major event organising committees was seeking volunteers with a wide variety of skills and experience to shape the Games for athletes, officials and spectators. Whereas volunteer availability is a necessary pre-condition for selection, various skills and experiences provided by volunteers through the application process were relatively unimportant factors in predicting whether an application was selected for an interview. The selection of volunteers is a process of matching skills and abilities to requirements, and work values to job activities (Saxon & Sawyer, 1984). However, volunteers with valuable and specialised skills are often selected to do manual tasks rather than roles that use their professional skills (Eisner, Grimm, Maynard, & Washburn, 2009). Our research focussed on volunteer selection and not the job assignments of those selected. However, it is possible that many volunteers' skills were likely to be under-utilised to the extent that the majority of volunteer roles (e.g., drivers, spectator services teams) were not particularly demanding in terms of volunteer skills. Alternatively, GC2018 volunteers' skills and experiences were not particularly important factors in selection decisions precisely because many of the volunteer roles were low-skilled. The researchers were not able to access the demand for particular skills (e.g., the total number of drivers required) from the organisational side of the GC2018 Games and this is acknowledged as a limitation. There is a need for more detailed and nuanced research in this area non-profit SHRM.

The GC2018 was the first major international sport event to include a reconciliation action plan designed to meaningfully promote "inclusion and participation of Aboriginal and Torres Strait Islander people across all aspects of the Games" (GC2018, 2019d). Diversity

and inclusion were part of the volunteer strategy which enabled applicants to voluntarily provide this information about themselves (including Aboriginal and Torres Strait Islander, disability, sexual orientation, and religion and belief). Of the diversity and inclusion data, only disability information was made available to the researchers. Of the 53,234 applicants only 1,110 (2.1%) indicated they had a disability. Of those applicants less than half (41.3%) were selected for an interview. Having diversity and inclusion as a strategic goal and as part of the application protocol one would expect that applicants from disadvantaged groups were at least equally if not more likely to be selected. However, we found evidence this was not the case for GC2018, possibly indicating that a SHRM approach was applied selectively. Because Aboriginal and Torres Strait Islander and other diversity and inclusion data were not made available to the researchers it is not possible to ascertain whether, for example, the volunteer program contributed to the GC2018 reconciliation action plan or selected volunteers from culturally or linguistically diverse groups. The finding that having a second language was a negative predictor suggests that linguistic diversity was not taken into account in volunteer selection.

There were several limitations in our research some of which were explained in the methods section and largely related to the lack of access to a number of data fields. Access to the data fields for analysis was beyond the control of the researchers and solely at the discretion of GOLDOC. As noted earlier this was to protect the privacy of information provided by the applicants and limited the extent to which volunteer selection could be predicted. Such fields included personal information (e.g., age, nationality, religion and beliefs, sexual orientation, and whether an applicant was Aboriginal or Torres Strait Islander). Being unable to access data from these fields limited analysis of whether diversity and inclusion were significant predictors of volunteer selection. Some data fields that were

made available to the research team were not included in the analysis primarily because they were optional questions and recorded very low response rates from applicants (< 20% in most cases). Responses to all questions were provided by applicants and some items such as volunteer skills, which was a significant predictor of being selected for an interview, could not be verified independently before selection for interview decisions were made. Finally, all data fields were binary thereby limiting our analysis to non-parametric regression.

6 Conclusion

SHRM aligns HRM with organisational goals (Nankervis et al., 2017) and is based on the premise that human resources, volunteers rather than employees in the case of our research, are of critical importance to the capability of an organisation to achieve its goals (Akingbola, 2013). Non-profit organisations such as major event organising committees need to gain legitimacy and balance the expectations of multiple stakeholders (Akingbola, 2013) in an environment where there is the added pressure of delivering a high-quality event on time and within budget. Perhaps it should not be unexpected that strategic goals are prioritised or adapted to assure there is a fit between business strategies and HR strategies and practices (Nankervis et al., 2017) as the time to opening of the event inevitably approaches. In the case of the GC2018 event there was evidence that the shorter-term strategic goals of community participation and having the volunteer workforce prepared for the games took priority over strategies aimed at addressing social equality, inclusion and the reconciliation action plan. Based on the evidence available, we conclude that SRHM principles were partially applied in the selection of volunteers.

Our research has contributed to a better understanding of links between major event HRM strategies and volunteer selection by identifying factors which predict volunteer selection. It has also uncovered possible design limitations of volunteer application database

management systems or the misapplication of data contained in the database in the context of SHRM. Despite limited access to volunteer applicant data we identified a number of factors which predicted volunteers who were more or less likely to be selected for an interview. In so doing we have addressed a weakness inherent in much of the previous research on volunteer selection and recruitment which has studied only those volunteers who had successfully navigated the most critical stages of being selected for an interview and had progressed beyond the application and selection stage before being researched. In terms of volunteer application database management systems, it is incumbent upon major event organisers to design their systems to match the vision and strategy of the event. Assuming systems are designed with strategic intent it is important that the volunteer strategy ensures that selection decisions are consistent with what the strategies major event organisers are aimed to deliver (Taylor et al. 2015). It was evident from our research that short-term goals of selecting individuals with general volunteer skills and with high levels of availability may have resulted in sub-optimal strategic outcomes in terms of diversity, inclusion and reconciliation action plans. It is recommended that future research on major event volunteer selection work more collaboratively with event organising committees to obtain access to more comprehensive volunteer data, without compromising privacy, as well as exploring how and why SHRM decisions are made in the context of changing event management strategic priorities. Because of the apparent prioritisation of short-term goals in selecting volunteers and strategic risks associated with the appointment of volunteers well in advance of the event, the application of artificial intelligence in volunteer selection and management could also be investigated in future major events research.

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Table1: Volunteer application database variables available for analysis

Applicant information (variables)	Response
Dependent variable (Volunteer selection)	
- Selected for and attended a volunteer interview	1 = No / 2 = Yes
Personal information	
- Gender	1 = Female / 2 = Male
- Disability	1 = No / 2 = Yes
Skills and experience	
- Volunteering experience	1 = No / 2 = Yes
- Leadership skills	1 = No / 2 = Yes
- English skills	1 = No / 2 = Yes
- Second language skills	1 = No / 2 = Yes
- Driving skills	1 = No / 2 = Yes
- First aid skills	1 = No / 2 = Yes
- Lifeguarding, lifesaving or aquatic rescue skills	1 = No / 2 = Yes
- Experience in sport	1 = No / 2 = Yes
Availability	
- For operational trials period (2017-early 2018)	1 = No / 2 = Yes
- For preparation period (January-March 2018)	1 = No / 2 = Yes
- For arrivals period (March 2018)	1 = No / 2 = Yes
- For operational period (April 2018)	1 = No / 2 = Yes
- For Games time period (4 th -15 th April 2018)	1 = No / 2 = Yes
Reasons (motivations) for wanting to volunteer for GC2018	
- Interest in sport	1 = Not selected / 2 = Yes
- To do something worthwhile	1 = Not selected / 2 = Yes
- To experience an international event	1 = Not selected / 2 = Yes
- To meet new people	1 = Not selected / 2 = Yes
- To receive reward and recognition	1 = Not selected / 2 = Yes
- To represent/support the local community	1 = Not selected / 2 = Yes
- To support career aspirations	1 = Not selected / 2 = Yes
- To utilise my skills & experiences	1 = Not selected / 2 = Yes

Table 2: Binary logistic regression predicting likelihood of applicants being selected for and attending an interview

Variables	Beta	S.E.	Wald	df	p	Odds Ratio (95% CI)
Personal information						
Gender	-0.06	0.02	9.18	1	<.01	0.94 (0.90 - 0.98)
Skills and experience						
Volunteering skills	0.36	0.02	262.19	1	<.001	1.44 (1.38 - 1.50)
Leadership skills	0.00	0.02	0.03	1	0.875	1.00 (0.96 - 1.04)
English skills	0.11	0.03	14.20	1	<.001	1.11 (1.05 - 1.17)
Second language skills	-0.34	0.02	204.07	1	<.001	0.71 (0.68 - 0.75)
Driving skills	0.29	0.02	215.73	1	<.001	1.34 (1.29 - 1.40)
First aid skills	-0.27	0.02	127.59	1	<.001	0.76 (0.73 - 0.80)
Lifeguarding, lifesaving or aquatic rescue skills	-0.15	0.04	12.05	1	<.01	0.86 (0.79 - 0.94)
Availability						
Operational trials period (2017-early 2018)	0.84	0.03	1027.20	1	<.001	2.32 (2.20 - 2.44)
Preparation period (January-March 2018)	0.39	0.03	165.12	1	<.001	1.48 (1.39 - 1.56)
Arrivals period (March 2018)	0.21	0.03	39.70	1	<.001	1.23 (1.16 - 1.32)
Operational period (April 2018)	0.15	0.04	15.05	1	<.001	1.16 (1.08 - 1.25)
Motives						
To do something worthwhile	0.13	0.02	41.39	1	<.001	1.13 (1.09 - 1.18)
To experience an international event	0.20	0.02	97.94	1	<.001	1.22 (1.17 - 1.26)
To receive reward and recognition	-0.34	0.06	35.25	1	<.001	0.71 (0.64 - 0.80)
To represent/support the local community	0.59	0.02	910.16	1	<.001	1.81 (1.74 - 1.88)
To support career aspirations	-0.27	0.03	85.86	1	<.001	0.76 (0.72 - 0.81)
To utilise my skills and experiences	0.09	0.02	20.84	1	<.001	1.10 (1.06 - 1.14)
Constant	-4.44	0.13	1224.27	1	<.001	0.012