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Relationship between volunteer motivation and the achievement of the volunteer concept at the Tokyo 2020 Olympic Games during the COVID-19 pandemic

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ABSTRACT

Despite volunteers being essential to the success of the Olympic Games, research on Olympic volunteers' motivations remains limited. The aim of this study was to investigate this phenomenon with volunteers at the Tokyo 2020 Olympic Games during the COVID-19 pandemic. The results of a questionnaire survey of 546 volunteers identified three dimensional motivations (i.e., relationship with others, love of the Olympics and sports, and esteem needs) that drove them to become Olympic volunteers. These findings clearly differ from Western society, as illuminated by the previous studies which revealed that resume material and networking were key factors in volunteerism at Olympic Games held in Sydney in 2000 Athens in 2004, Vancouver in 2010, and London in 2012. It became clear that the greatest influence on the achievement of the Tokyo 2020 volunteer concept of 'I will shine' were love of Olympics and sports, and esteem needs. The volunteers' endorsement of holding the Olympic Games during the COVID-19 pandemic was supported by relationship with others and affection of the Olympics and sports. The findings and recommendations have ramifications for the future organizing committees of the Olympic and Paralympic Games in terms of volunteer participants by considering cultural background.

KEYWORDS

COVID-19; Mega-Event; Motivation; Olympic Games; Volunteer

1. INTRODUCTION

Volunteers at the Olympic Games donate extensive time and effort to help organizers achieve their goals; thus, they are important to the human-resource calculus in Olympics planning (Koutrou, 2014). According to former International Olympic Committee (IOC) President Jacques Rogge, 'Volunteers are true Olympians. They transmit the true spirit of the Olympic Games.' This underscores the role and impact of those whom he praised as unsung heroes behind the successful organization of every Olympic Games (International Olympic Committee, 2011). Despite the critical role of volunteers, their legacy is currently not included in the Olympic bidding criteria or in the impact evaluations of the games (OGI-UBC Research Team, 2013). Notably, research on volunteers' perceived values and motivations is limited.

In October 2019, during a volunteer training workshop, the Tokyo Organizing Committee of the Olympic and Paralympic Games (TOCOG) announced the Field Cast (the nickname of the Tokyo 2020 Olympic Games volunteers) concept of 'enjoy, change, and transform the world. That is why I will shine,' as explained in their Field Cast Handbook (TOCOG, 2019). Subsequently, COVID-19 seemed to stop the world, and games were postponed for 1 year, and negative opinions about hosting the Olympics became common in Japan. In June 2021, one month prior to the actual games, TOCOG announced that 10,000 of the 80,000 volunteers had resigned owing to the COVID-19 pandemic. As Al-Mutawa & Ali (2021) pointed out, retention is a major problem.

From the rise of social volunteering and the growing prominence of sports, the concept of Olympics volunteering has evolved. Volunteers freely choose to act toward the benefit of society without expectations of financial benefits or awards (Moreno et al., 1999). The concept being applied to the Olympics is relatively new, and the Lake Placid 1980 Olympic Games are considered its starting point (Karlis, 2003).

Owing to the large number of athletes and the inherent complexity of arranging events and controlling crowds, the Olympic Games rely on a significant number of volunteers (Bang, Alexandris, & Ross, 2009). Over the years, the Olympics volunteer movement has changed greatly, and their number has grown significantly. The Los Angeles 1984 Olympic Games drew 29,000 volunteers (Giannoulakis et al., 2008). At the London 2012 Olympic Games, 70,000 volunteers served (Koutrou et al., 2016). Hence, organizing committees and host countries have begun to recognize the substantial importance of volunteers in the success of the Olympic Games. The IOC

has recognized the increasing relevance of volunteers to the Olympics movement, and it understands that community ownership is critical to success (Giannoulakis et al., 2008).

Volunteers serve as a vital link between communities and events, resulting in the creation of social capital, which is formed when people build social networks and work together to achieve a common purpose (Nichols & Ralston, 2012). Indeed, event organizers are challenged with maximizing the benefits of hosting mega-sports events while maintaining volunteer enthusiasm and transferring those skills and experiences to other social events and organizations. Unlike other types of sports volunteering (e.g., local clubs and events), mega-sports volunteering is distinct in that it provides volunteers with a generally intense episodic experience (Dickson et al., 2013). It is clear that the Olympic Games' status as a mega-sporting event necessitates novel approaches to recruiting, motivating, and retaining volunteers during the games (Giannoulakis et al., 2008).

Only a few studies have examined the special aspects, experiences, and motivations that lead people to volunteer for mega-sports events. Farrell et al. (1998) developed the 28-item Special Event Volunteer Motivation Scale (SEVMS) approach to examining volunteer motivation at the Canadian Women's Curling Championships. Information collected from 137 respondents was analyzed, resulting in the identification of four empirically supported motivational factors: purpose, solidarity, external tradition (desire to do something useful and contribute to the community and the event), and commitment (social interaction. Group identification, and networking). With SEVMS, the satisfaction of volunteer experiences with administrative and managerial agents can also be assessed.

Using previous research and new interviews, Wang (2004) identified five constructs that apply to volunteers at the Sydney 2000 Olympics: altruistic value, personal development, community concern, ego enhancement, and social adjustment. In contrast to SEVMS, no items focused on the importance (centrality) of the event as an important motivator for volunteers.

Based on a study conducted at the Athens 2004 Olympic Games, Giannoulakis et al. (2008) proposed the Olympics Volunteers' Motivation Scale (OVMS), which contains 18 items coded according to Olympics-related, egoistic, and purposive factors. Among the findings, the reasons for volunteering of 'the desire of volunteers to be linked with the Olympic movement, be active in the Olympics, or interact with Olympic athletes' and 'social interaction, interpersonal relationships, and networking' were classified as egoistic. 'Purposive' was used to describe the volunteers' readiness to benefit from their efforts in support of TOGOC's stated goals. These findings are comparable to those of Farrell et al. (1998). Giannoulakis et al. (2008) found that the two main reasons people

volunteered at the Athens 2004 Olympic Games were "to help others and the community" and "to become associated with the Olympics."

Bang et al. (2009) validated the revised Volunteer Motivations Scale for International Sporting Events (VMS-ISE) and identified subgroup differences in volunteer motives using 206 samples from the Athens 2004 Olympic Games. A total of 26 items were coded with seven factors: expression of values, patriotism, interpersonal contacts, career orientation, personal growth, extrinsic rewards, and love of sport. Furthermore, Koutrou & Pappous (2016) argued that when compared with other sport volunteer situations, the Olympic Games attracts volunteers with different sets of motivations. Using survey data from Olympics volunteers during the London 2012 Olympic Games, they coded 26 items with five factors: patriotism and community, career orientation and other rewards, love of sport and the Olympics, interpersonal contacts, and personal growth. According to Dickson & Benson (2013), "a chance of a lifetime" and "to help make the Games a success" were the two main motivations for volunteering during the London 2012 Olympic Games.

Dickson et al. (2013) added nine items to the SEVMS scale (36 total) and applied it to data collected from the 2010 Vancouver Olympic and Paralympic Winter Games. A principal component analysis identified six key factors: all about the games, transactional, varietal, application, availability, and altruistic. The factors identified in the abovementioned scales were used to support our research method. However, Cnaan & Goldberg-Glen (1991) pointed out that some volunteers also have egoistic motivations. Despite the apparent significance of Olympic-related volunteering and the fact that event volunteers are frequently featured in the pre-event legacy discourse, enthusiasm in helping tends to wane rather quickly after the event (Auld, Cuskelly, & Maureen, 2009).

"The contribution of volunteers does therefore not stop at the provision of services and the performance of tasks; it extends to the creation of cultural and social conditions that are essential today for the celebration of the Games," was the conclusion reached at the International Symposium on Volunteers, Global Society, and the Olympic Movement in 1999 (International Olympic Committee, 1999). Several aspects of the social behavior of Olympic volunteers were studied as well.

Wang (2022)' s study on volunteers who had been involved with the Beijing 2008 Olympic Games, Singapore 2010 Youth Olympic Games, or Nanjing 2014 Youth Olympic Games revealed that a critical relationship between the development of volunteers' role identity and volunteering

afterwards. Wang (2022) pointed out that the key to volunteer identification and ongoing involvement is the perception of advantages from Olympic volunteering.

The first aim of this study is to identify the motivational factors of the Tokyo 2020 Olympics volunteers. The second aim of this study is to clarify the variables that are most relevant to the achievement of the Olympics volunteer concept of Tokyo 2020 games. The third aim of this study is to measure whether volunteer motivations were related to their endorsement of holding the games during the COVID-19 pandemic. Furthermore, the researcher developed three null hypotheses for this study.

- H_{0_1}: In the context of Japanese culture and under the COVID-19 pandemic situation, the current dimensions of Olympic Volunteer Motivation have not changed.
- H_{0_2}: Motivations for Olympic volunteer participation do not impact on engagement with the volunteer concept.
- H_{0_3}: Motivations for Olympic volunteer participation are not related to their endorsement of holding the games during the COVID-19 pandemic.

2. METHODS

2.1. Design and Participants

The researchers employed a quantitative research method and conducted a questionnaire survey among Japanese volunteers from the Tokyo 2020 Olympic Games.

The target population of this study comprised 70,966 volunteers participated in the Tokyo 2020 Olympic Games (Nikkan Sports Newspaper, 2021). The equation for calculating sample size is shown below (Calcuiator.net, 2008):

$$n = \lambda^2 \frac{p(1-p)}{d^2}$$

d (margin of error) = 0.05

p (population proportion) = 0.5

λ (z score) = 1.96 (Confidence Level = 95%)

$$n = 1.96^2 \frac{0.5(1-0.5)}{0.05^2}$$

$$n = 384.16$$

From the above formula, the sample size required for this study was determined to be 385. A total of 546 individuals responded (41.3% of 1,321 distributed). All participants signed an agreement

indicating that their involvement in this study was voluntary and that their information would remain confidential. No incentives were offered or provided, and no personal information was retained. This sample consisted with 59.3% female and 40.7% male. This percentage closely aligns with the 58.2% (41,289) female and 41.8% (29,677) male volunteers accounted for by the Games Organizing Committee (Nikkan Sports Newspaper, 2021). Of the respondents, 36.8% were between 40 and 54 years of age. Among them, 34.6% worked full-time outside of volunteering, and 22.7% worked part-time. Overall, the respondents demonstrated high sports interest, 36.3% stated that they had a strong interest, and 28.8% stated that they have some interest.

2.2. Instrument

The researchers created a questionnaire consisting of three parts. The first part gathered and provided general information, the second asked questions about Olympic volunteers' motivation, and the third asked questions about their achievement of the Field Cast concept and their endorsement of the Olympic Games being held during the COVID-19 pandemic.

In the second part, aspects of the OVMS (Koutrou & Pappous, 2016) and VMS-ISE (Bang et al., 2009) were applied. The following dimensions were validated by Koutrou and Pappous (2016) using a confirmatory factor analysis: *patriotism and community* (6 items), *career orientation and other rewards* (7 items), *love of sport and the Olympics* (5 items), *interpersonal contacts* (4 items), and *personal growth* (4 items). A seven-point Likert scale was applied to these 26 items, with '1' meaning 'Strongly disagree' and '7' meaning 'Strongly agree.'

In the third part, two questions were prepared to help understand volunteers' sense of achievement. The first question addressed the four Field Cast concept: 'enjoy, change, and transform the world. That is why I will shine' (TOCOG, 2019). The respondents cited their agreement with the conceptual items using the same Likert scale as above. The second question in the third part was about their endorsement of the Olympic Games being held during the COVID-19 pandemic. The same seven-point scale was again applied, and the volunteers' endorsements were categorized using Simmons & Becker-Olsen's (2006) three semantic differentials, 'negative vs. positive,' 'unfavorable vs. favorable,' and 'bad vs. good'.

The reliability of the results was ensured by minimizing sources of measurement error and data collector bias. The physical and psychological data collection environment was made comfortable for the respondents while ensuring privacy and confidentiality (Polit & Hungler, 1997). Personal smartphones, tablets, and computers were authorized for respondents to avoid discomfort

and intimidation caused by unfamiliarity. Content validity was ensured via the consistent administration of the questionnaires (Susan et al., 2016), all of which were distributed to subjects by the researcher online, and the respondents were required to respond online. Two native bilingual Japanese speakers performed back-and-forth translations to ensure that the meanings of the original English items were accurately captured. The items related Olympic volunteer motivation items were formulated using a simple narrative for clarity and ease of understanding in Japanese.

The research instrument was examined prior to distribution by a panel of experts, including academicians and the ethics committee of Kasetsart University, to ensure content validity and to avoid or mitigate any ethical concerns, respectively. It was confirmed there were no ethical concerns (COA No. COA64/048).

2.3. Data Analysis

Kaiser's measure of sampling adequacy and Bartlett's test of sphericity were performed on the data (Tabachnick & Fidell, 2013). Specifically, varimax rotation was used if the underlying factors were uncorrelated, and promax rotation was used if the underlying factors were correlated. Examined on the factors and items were based on the following criteria:

- Factors with eigenvalues greater than 1.0
- Factor-loading equal to or greater than 0.40 without multiple loadings on two or more factors
- Factors that were interpretable in terms of loaded items
- Factors with at least three items

A *t*-test was also conducted to clarify the gender gap. Then, exploratory factor analysis (EFA) and internal consistency analysis were applied. EFA was used to examine the construct validity of the OVMS.

The volunteer-concept achievement scores from part three were assigned identifying factors, and structural equation modeling (SEM) was conducted to determine their validity.

Based on SEM, the researchers set the independent variables to match the factors of volunteers' motivation listed above. The dependent variables were set to *achievement of Field Cast concept* and *endorsement of holding the Games during the COVID-19 pandemic*, upon which multiple regression analyses were conducted, and the differences were compared using the standard

regression coefficient (β) between females and males. SPSS 28.0 and AMOS 28.0 for Windows were used.

3. RESULTS

In this study, all scale items were measured by means of a single questionnaire survey. Given that that there was a possibility of the tested relationships among constructs being distorted by the effects of common-method variance, the researchers employed Harman's single-factor test, in which five different factors with eigenvalues of 1.000 or greater were extracted. The contribution rate of the first factor was 41.506% compared with the overall contribution rate of 70.026%. Therefore, the explanatory power of the first factor was not the majority (< 50.000%). The measurement model shows good results ($\chi 2$ = 10,731.697, df = 325, p < 0.001), confirming that the common method variance bias was not a significant influencer.

3.1. Factor Analysis

Kaiser's measure of sampling adequacy was 0.923, indicating that the sample was adequate for factor analysis. Bartlett's test of sphericity was significant ($\chi 2$ = 6,897.518, p < 0.001), indicating that the hypothesis of the variance and covariance matrix of the scale items being an identity matrix was rejected; therefore, a factor analysis was determined to be appropriate. Rotation methods were used to improve the interpretability of the factor solution.

The researchers excluded nine items (V03, V04, V05, V07, V09, V10, V11, V12, and V16) that showed bias in the distribution of scores. The researchers then conducted an EFA using maximum likelihood estimation on 17 items. The analysis indicated a potential three-factor structure based on eigenvalues greater than one. One factor was highly predominant, as it explained 49.2% of the variance in the participant ratings (eigenvalue = 8.365). The second factor had an eigenvalue of 1.596, and the third had an eigenvalue of 1.297. Therefore, the researchers concluded that a three-factor structure existed and performed an EFA again using maximum likelihood estimation with promax rotation on 17 items.

The researchers then eliminated broadly defined or ambiguous items with low loadings on a single factor or multiple factors. EFA with three-factor identification and the promax rotation revealed three factors and 13 items with 75.016% explained variance. The factorial structure, factor loading, and percentage of variance and intercorrelations among the identified OVMS factors are illustrated in Table 1. Thirteen items that loaded onto three factors remained after this procedure.

Based on the content of the loaded items, the predominant factor was ‘relationship with others,’ which was operationally defined as ‘want to work with new people.’ The second factor was ‘love of Olympics and sports,’ which was operationally defined as ‘interest and passion for Olympics and sports.’ The third factor was ‘esteem needs,’ which was operationally defined as ‘want others to recognize myself.’

The scale of volunteer motivation was named ‘OVMS-TOKYO2020.’ Similarly, the three dimensions were named ‘OVMS-1’ (relationship with others), ‘OVMS-2’ (love of Olympic and sports), and ‘OVMS-3’ (esteem needs).

Table 1. Results of factor analysis

Factors **Corresponding items**	**Factor**			**Cronbach's Alpha**
	1	**2**	**3**	
Relationship with others				**0.958**
V21. I wanted to meet people	**1.013**	-0.075	-0.007	
V20. I wanted to work with different people	**0.911**	-0.001	0.008	
V19. I wanted to interact with others	**0.896**	0.107	-0.037	
V22. I wanted to develop relationship with others	**0.848**	-0.026	0.079	
Love of Olympics and sports				**0.864**
V14. Sport is something I love	0.000	**0.808**	-0.113	
V17. I have passion for the Olympics	0.046	**0.756**	0.037	
V15. I enjoy being involved in sports activities	-0.098	**0.746**	-0.021	
V18. I want to become associated with the Olympics	0.203	**0.685**	-0.038	
V06. I am proud of my country hosting the games	-0.110	**0.630**	0.189	
V01. I wanted to help make the event a success	0.223	**0.458**	0.092	
Esteem needs				**0.877**
V23. Volunteering makes me feel needed	0.007	0.014	**0.896**	
V25. Volunteering makes me feel important	-0.082	0.050	**0.864**	
V24. I can explore my own strengths	0.205	-0.079	**0.700**	
Factor Intercorrelations				
1. Relationship with others	–	0.629	0.610	
2. Love of Olympics and sports		–	0.542	
3. Esteem needs			–	

Note. *Extraction method was maximum likelihood; rotation method included Promax with Kaiser normalization; rotation converged in six iterations; loading > 0.040 are shown in* ***bold.***

3.2. Internal Consistency Analysis

The internal consistency of each OVMS-TOKYO2020 factor was assessed by estimating Cronbach's reliability alpha. Correlations between an item and the sum of all other items in each identified OVMS-TOKYO2020 factor were above 0.40. Additionally, no deletion of any item improved the Cronbach's alpha value. As a result, the remaining 13 items from the principal component analyses were retained, and the alpha coefficients for the OVMS-TOKYO2020 factors were determined. In accordance with the alpha ≥ 0.70 criterion (George & Mallery, 2006), the internal consistency was acceptable for all OVMS factors, with Cronbach's alphas of 0.958 (relationship with others), 0.864 (love of Olympics and sports), and 0.877 (esteem needs). The final OVMS-TOKYO2020 comprised three factors, with a total of 13 items. Notably, the reliability alphas of 'relationship with others' and 'love of Olympics and sports' factors were approximately equal to the alphas of the corresponding factors, even after two items per factor were eliminated. These results suggest that the OVMS-TOKYO2020 factors consisted of fewer items while maintaining satisfactory levels of internal consistency, making the instrument easier to administer and less intimidating to respondents.

3.3. Gender Differences

The mean of items showing high loadings on each factor was calculated, and the OVMS-1 scores (M = 5.325, SD = 1.311), OVMS-2 scores (M = 5.548, SD = 1.432), and OVMS-3 scores (M = 4.637, SD = 1.509) were determined.

The researchers conducted a *t*-test on the OVMS subscale scores to examine gender differences. The results (Table 2) indicated that there was no significant difference in 'relationship with others' between females and males (t (469) = 0.268, p = 0.789). Thus, the average performance score of females (M = 5.562, SD = 1.423) was not significantly different from that of males (M = 5.528, SD = 1.448). There was no significant difference in 'love of Olympics and sports' between females and males (t (544) = -0.602, p = 0.548). That is, the average performance score of females (M = 5.214, SD = 1.280) was not significantly different from that of males (M = 5.284, SD = 1.425). 'Esteem needs' scores of males were significantly higher (M = 4.842 SD = 1.498) than those of females (M = 4.496, SD = 1.502; t (544) = -2.65, p = 0.008).

Table 2. Results by gender differences

	Females		Males		
	M	***SD***	***M***	***SD***	***t***
Relationship with others	5.562	1.423	5.528	1.448	0.268
Love of Olympics and sports	5.214	1.280	5.284	1.425	-0.602
Esteem needs	4.496	1.502	4.842	1.498	-2.650**

***Note*:** ** p < 0.01.

3.4. Impact on Volunteer-Concept Achievement

To examine the impact of the three Olympic volunteer subscale scores on the achievement of the volunteer concept, the means of three items were calculated: 'Interested in sport' (*M* = 5.840, *SD* = 1.165), 'achievement to Field Cast Concept' (*M* = 4.943, *SD* = 1.330), and 'agreement to the hosting Olympic Games during the COVID-19 pandemic' (*M* = 4.609, *SD* = 1.507). Next, SEM was conducted using AMOS 28.0. Multiple models were set for determination, and the model with the best fit is shown in Figure 1 ($\chi 2$ =3.457, *df* = 4, *p* = 0.484, goodness-of-fit index (GFI) = 0.998, adjusted GFI = 0.978, and root mean-square error of approximation = 0.000, AIC = 179.567). A simultaneous analysis of gender differences was performed across the multi-population to examine the effects.

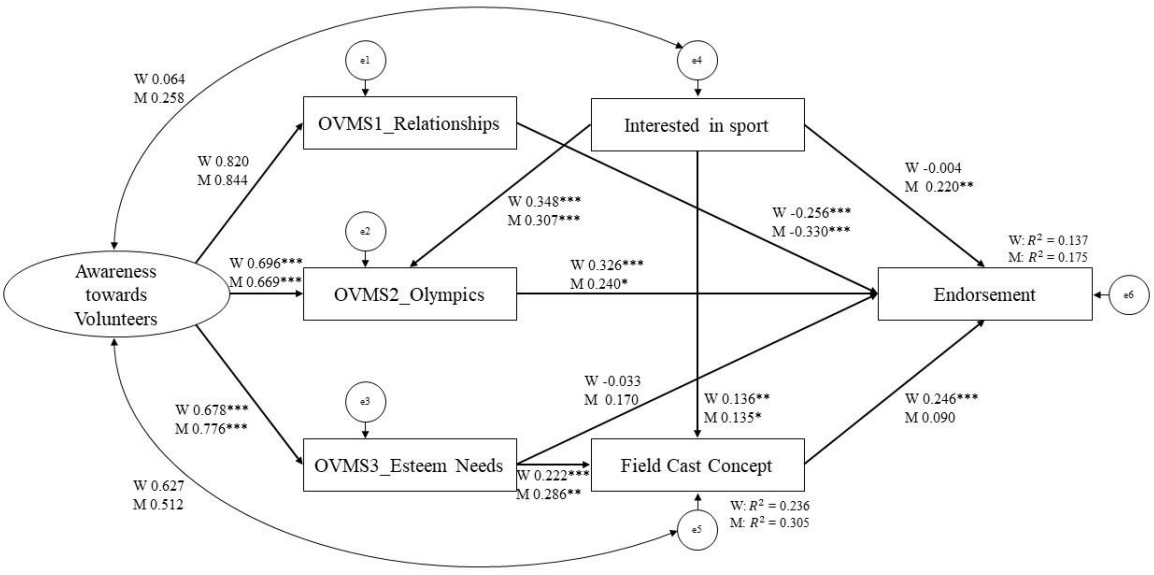

Figure 1. Causal relationship of standardized regression weights

Note: **** p < 0.001, ** p < 0.01, * p < 0.5*

The results illustrated in Figure 1 show that the paths from OVMS-1 to 'endorsement,' from OVSM-2 to 'endorsement,' from OVMS-3 to 'Field Cast concept,' from 'interested in sport' to OVMS-2, and from 'interested in sport' to 'Field Cast concept' are significant for both genders. The paths from OVMS-2 to 'endorsement' and from 'Field Cast concept' to 'endorsement' were significant only for females. The path from 'Interested in sport' to 'agreement' was significant only for males. The path from OVMS-3 to 'endorsement' was not significant both either gender. A difference test between the parameters showed that the path coefficients of genders were significantly different for the path from 'interested in sport' to 'endorsement' ($p < 0.001$).

3.5. Multiple Regression Analysis Results

Multiple regression analysis was conducted for all genders to examine the impact of the three OVMS-TOKYO2020 subscale scores and the 'interested in sport' score on the achievement of the volunteer concept and endorsement of hosting the Olympic Games during the COVID-19 pandemic. The results are shown in Table 3. Females had significant standard partial regression coefficients for the paths from OVMS-1 to 'Field Cast Concept' and from 'Field Cast concept' to 'endorsement,' whereas males had significant standard partial regression coefficients for the path from 'interested in sport' to 'endorsement.'

Table 3. Results of multiple regression analysis by gender

	Female			**Male**		
	B	***SE B***	***β***	***B***	***SE B***	***β***
Dependent variable: Achievement to the Field Cast concept						
Interested in sport	0.042	0.049	0.039	-0.044	0.074	-0.033
OVMS-1	0.249	0.051	0.267***	0.124	0.067	0.134
OVMS-2	0.203	0.060	0.196**	0.219	0.069	0.233**
OVMS-3	0.313	0.044	0.355***	0.384	0.061	0.430***
Dependent variable: Endorsement of hosting Olympic Games during the COVID-19 pandemic						
Interested in sport	-0.005	0.069	-0.004	0.340	0.110	0.221**
OVMS-1	-0.260	0.075	-0.256**	-0.360	0.100	-0.331***
OVMS-2	0.368	0.086	0.326***	0.266	0.104	0.241*
OVMS-3	-0.032	0.067	-0.033	0.179	0.098	0.171
Field Cast Concept	0.268	0.079	0.246**	0.107	0.100	0.091

Note: **** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.*

4. DISCUSSION

Sports events largely rely on volunteering (Doherty & Carron (2003); thus, understanding the motivation of volunteers is critical to effective organizational management. This study examined the motivations of volunteers at the Tokyo 2020 Olympic Games and their achievement of the volunteer concept.

This study was conducted with a sample of Japanese volunteers, so it is necessary to consider the background of volunteerism in Japan. The entry of foreign volunteers was prohibited due to COVID-19.

4.1. Motivation for Olympic Volunteers in Tokyo 2020

The first aim of this study was to identify the motivational factors of the Tokyo 2020 Olympics volunteers. As a result of the analysis, null hypothesis H_{0_1} was rejected. The EFA results revealed three dimensions (i.e., 'relationship with others,' 'love of Olympics and sports,' and 'esteem needs').

Ranjan et al. (2021) concluded that most volunteers focus on satisfying their personal goals through sports volunteerism. Similarly, Oguri (2000) argued that Japanese people are motivated to participate in volunteer activities because they want to realize their desires. The first factor, 'relationship with others,' suggests that Olympics volunteers are motivated by a desire to build social networks, to meet people, and to make friendships from their involvement. This factor aligns with the Olympic Pillar Values ('Excellence, Friendship, and Respect') provided by the IOC (IOC, 2017). The second factor, 'love of Olympics and sports' emphasizes volunteer interest in the Olympics, the opportunity to support elite sports activities, the attainment of prestige from Olympic involvement, the chance to meet Olympians, and to promote associated values. The Olympic Games are more than just a sporting event. As described in the Olympic Charter, Olympism is an unchanging philosophy of life from the beginning of the modern Olympics until now (IOC, 2021). The love of Olympics and sports can be understood as people's recognition of the exclusivity and philosophical splendor of the Olympics, which, in this case, was expressed as motivation for volunteer participation. Finally, the third factor, 'esteem needs,' reflects the desire of individuals to volunteer for an event to increase their self-esteem and explore self-strengths. This desire was also identified as significantly stronger in males than in females.

Based on the White Paper on the National Lifestyle (Cabinet Office of Japan, 2008), it can be said that modern Japanese society faces a key problem. Prior to the Tokyo 1964 Olympic Games,

most Japanese people lived with large families. However, owing to the present cultural shift to nuclear families, declining birth rates, and increasing numbers of dual-earner households, a family's ability to expand their support of welfare, education, and other support functions to the greater society is shrinking and weakening. This reflects the decline of one aspect of Japanese culture, 'WA' (和), which translates into English as 'solidarity,' embedded with the Buddhist connotation of 'compassion.' With the ablation of the larger social interconnectivity, there is a growing tendency for individuals to compensate for this inherent need with mindfulness and compassion exercises, and in many cases, to seek active engagement in larger social activities, such as the Olympics.

Ranjan et al. (2021) accurately noted that volunteers seek to satisfy their personal goals through sports volunteerism, and from our analysis, it is clarified that the specific dimensions of 'relationship with others' and 'esteem needs' were the most important motivational factors that compelled Japanese people to volunteer at the Tokyo 2020 Olympic Games. These factors also reflect the direction of contemporary Japanese society with its decrease of WA.

4.2. Variables Most Related to the Achievement of the Volunteer Concept

The second aim of this study was to clarify the variables that are most relevant to the achievement of the Olympics volunteer concept. As a result of the analysis, null hypothesis H_{0_2} was rejected. The results of SEM and multiple regression analysis showed that 'love of the Olympics and sports' and 'esteem needs' had a significant impact on volunteers achieving the Field Cast concept. An examination of the gender gap reveals that 'relationship with others' also significantly affected females' sense of achievement with regards to the Field Cast concept.

This is consistent with the finding of Ranjan et al. (2021), who pointed out that most volunteers focus on satisfying their personal goals through sports volunteerism. This suggests that the organizing committee of the Olympic Games should examine the motivation of volunteer applicants when implementing the selection process while considering gender differences.

4.3. Variables Affecting the Agreement to Hosting Olympic Games During COVID-19

The third aim of this study was to measure whether volunteer motivations were related to their endorsement of holding the games during the COVID-19 pandemic. Assuming that volunteer motivation has a significant impact on this endorsement, the researchers may presume that the 10,000 volunteers who resigned were not as highly motivated as the ones who remained. Conversely, when assuming that volunteer motivation has no significant impact, it may be presumed that factors apart

from motivation led to their decisions.

As a result of the analysis, the null hypothesis H_{0_3} was partially rejected, and an influencing factor was identified. As shown in Figure 1, the R^2 indicators in this model were W = 0.137 and M = 0.175, indicating that our model had a weak level of explainability, as it pertains to the third aim (< 0.19; (Chin & Marcoulides, 1998). The findings suggests that the volunteer motivation did not have a strong impact on their endorsement of hosting the Olympic Games during the COVID-19 pandemic. However, regression analysis revealed two correlated dimensions: 'relationship with others' and 'love of Olympics and sports.' Therefore, there are likely other reasons for volunteer endorsement (e.g., confidence in the science and safety measures). Hence, there is a need for future investigation in this area.

5. LIMITATIONS

There are several limitations that hint of future research needs. First, the survey was conducted in Japan among Japanese volunteers; hence, the results may have been strongly influenced by Japanese culture.

Second, the Tokyo 2020 Olympic Games was the first Games to be held during the COVID-19 pandemic, imposing huge constraints. Notably, 10,000 of the 80,000 registered volunteers resigned immediately prior to the Games. However, the features of this population were not analyzed in this study. Although implied, it cannot yet be concluded that COVID-19 was the cause of the resignations.

Third, despite the typical difficulty in accessing and gaining valid responses from a narrow population (Giannoulakis et al., 2008; Dickson et al., 2015), a larger sample size and systematic sampling approaches would improve the robustness of the findings.

6. CONCLUSIONS

In this study, out of a set of five OVMS motivational factors, three (i.e., 'relationship with others,' 'love of Olympics and sports,' and 'esteem needs') were found to have had the strongest influence on Japanese people's desire to volunteer at the Tokyo 2020 Olympic Games, as ascertained from the analysis of questionnaire results from real volunteers. Validity and reliability tests successfully answered one of two research questions about volunteers' sense of achievement. Specifically, their attainment of the Field Cast concept was answered in the positive, as supported by 'love of Olympics and sports' and 'esteem needs.' However, the question of volunteers' endorsement

of holding the Olympic Games during the COVID-19 pandemic was not answered. Based on motivation, a considerable gender differences were discovered. These results exhibited high internal consistency and will enable future Olympic Games host cities to develop effective volunteer recruitment strategies.

It is noteworthy that these results do not include OVMS items related career orientation and rewards (e.g., resume fodder, networking, and experience), and patriotism and community, as volunteerism does not play a major factor in Japanese hiring considerations.

7. RECOMMENDATIONS

Coubertin envisioned the modern Olympic Games having the same hallowed overtones as the ancient version. In other words, it should bear an element of religiosity, as was the case in ancient times. According to Sullivan (2018), many Christians agree that sports create sensations tantamount to religious experiences, few Christians identify sports with Christianity. Hence, Japan's very low Christian population may influence citizens' motivation to volunteer, and the results may differ in Western countries. In future research, it is desirable to consider the attributes of cultural background and faith. Hence, future studies should more closely consider additional attributes (e.g., race, cultural background, and religiosity).

Understanding volunteer motivations and their achievement of the volunteer concept at the games will assist event managers in recruiting, training, task allocation, and retaining volunteers. It will enable new strategies for future volunteer scenarios that aim to achieve larger social legacies after the event. This knowledge can also be leveraged to develop effective human resource and event-management techniques geared toward allowing volunteers to leave a lasting impact. Furthermore, by accounting for the motivations of volunteers and the influence of cultural backgrounds and faith, significant advances in volunteer recruitment and retention can be afforded to future Olympic Games planners.

8. REFERENCES

1. Al-Mutawa, O., & Ali, M. (2021). *Impact of volunteer management practice on volunteer motivation and satisfaction to enhance volunteer retention* [Doctoral Dissertation, Brunel University, London].
2. Auld, C., Cuskelly, G., & Harrington, M. (2009). Managing volunteers to enhance the legacy potential of major events. In *The Routledge Handbook of Volunteering in Events, Sport and Tourism* (pp. 13–16). Routledge.

3. Bang, H., Alexandris, K., & Ross, S. (2009). Validation of the revised volunteer motivations scale for international sporting events (VMS-ISE) at the Athens 2004 Olympic Games. *Event Management, 12*, 119–131.
4. Cabinet Office of Japan. (2008). *White paper on the national lifestyle: Prospects for consumer citizenship toward a comfortable and mature society*. Tokyo: Cabinet Office of Japan. https://warp.da.ndl.go.jp/info:ndljp/pid/9990748/www5.cao.go.jp/seikatsu/whitepaper/h20/06_eng/index.html
5. Calculator.net. (2008). *Sample size calculator*. https://www.calculator.net/sample-size-calculator.html
6. Chin, W. W. (1998). The partial least squares approach for structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295–336). Lawrence Erlbaum Associates Publishers.
7. Cnaan, R., & Goldberg-Glen, R. (1991). Measuring motivation to volunteer in human services. *The Journal of Applied Behavioral Science, 27*(3), 269–284. https://doi.org/10.1177/0021886391273003
8. Dickson, T. J., & Benson, A. M. (2013). London 2012 Games Makers: Towards redefining legacy. In Department for Culture, Media & Sport (Ed.), *Meta-evaluation of the impacts and legacy of the London 2012 Olympic Games and Paralympic Games: Related research* (pp. n.p.). Department for Culture, Media & Sport.
9. Dickson, T., Benson, A., Blackman, D., & Terwiel, F. (2013). It's all about the Games! 2010 Vancouver Olympic and Paralympic Winter Games volunteers. *Event Management, 17*, 77–92.
10. Doherty, A., & Carron, A. (2003). Cohesion in volunteer sport executive committees. *Journal of Sport Management, 17*(2), 116–141. https://doi.org/10.1123/jsm.17.2.116
11. Farrell, J., Johnston, M., & Twynam, G. (1998). Volunteer motivation, satisfaction, and management at an elite sporting competition. *Journal of Sport Management, 12*(4), 288–300. https://doi.org/10.1123/jsm.12.4.288
12. George, D., & Mallery, P. (2006). *SPSS for Windows step by step: A simple guide and reference* (14.0 update, 7th ed.). Allyn & Bacon.
13. Giannoulakis, C., Wang, C. H., & Gray, D. (2008). Measuring volunteer motivation in mega-sporting events. *Event Management, 11*(4), 191–200.
14. Grove, S. K., Burns, N., & Gray, J. R. (2016). *The practice of nursing research* (7th ed.). Philadelphia, PA: W.B. Saunders.
15. International Olympic Committee. (1999). *Conclusion and recommendations: International symposium on volunteers.* Autonomous University of Barcelona.
16. International Olympic Committee. (2011). *Volunteerism: A core value of the Olympic movement.* https://olympics.com/ioc/news/volunteerism-a-core-value-of-the-olympic-movement
17. International Olympic Committee. (2017). *The fundamentals of Olympic values education.* Lausanne, Switzerland: International Olympic Committee.
18. International Olympic Committee. (2021). *Olympic charter* (2020 ver.). International Olympic Committee.
19. Koutrou, N., & Pappous, A. (2016). Towards an Olympic volunteering legacy: Motivating volunteers to serve and remain – A case study of London 2012 Olympic Games volunteers. *Voluntary Sector Review, 7*(3), 269–291. https://doi.org/10.1332/096278916X14767760874050
20. Koutrou, N., Pappous, A., & Johnson, A. (2016). Post-event volunteering legacy: Did the London 2012 Games induce a sustainable volunteer engagement? *Sustainability, 8*(12), 1–12. https://doi.org/10.3390/su8121221
21. Moreno, A., Moragas, M., & Panigua, R. (1999). The evolution of volunteers at the Olympic Games. In *Proceedings of the Symposium on Volunteers, Global Society and the Olympic Movement* (pp. 1–18). Lausanne, Switzerland.

22. Nichols, G., & Ralston, R. (2012). Lessons from the volunteering legacy of the 2002 Commonwealth Games. *Urban Studies*, *49*(1), 169–184. https://doi.org/10.1177/0042098010397400
23. Nikkan Sports Newspaper. (2021). Olympic volunteers receive awards. https://www.nikkansports.com/olympic/tokyo2020/news/202108080001260.html
24. OGI-UBC Research Team. (2013). *Olympic Games Impact (OGI) Study for the 2010 Olympic and Paralympic Winter Games: Post-Games Report.* https://open.library.ubc.ca/soa/cIRcle/collections/facultyresearchandpublications/52383/items/1.0132645
25. Oguri, T. (2000). The motivation theory of volunteer's action. *Journal of Bunkyo Women's University*, *2*(1), 79–100.
26. Polit, D., & Hungler, B. (1997). *Essentials of nursing research: Methods, appraisal, and utilization* (4th ed.). Pennsylvania, USA: J.B. Lippincott Company.
27. Ranjan, W., Abeysinghe, C., & Vitharane, S. (2021). Sport voluntarism: Indicators of sport volunteers' satisfaction and motivation. European Journal of Business and Management, *13*(6), 195–216.
28. Simmons, C., & Becker-Olsen, K. (2006). Achieving marketing objectives through social sponsorships. *Journal of Marketing*, *70*(4), 154–169.
29. Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Pearson Education.
30. Wang, Y. (2022). Leveraging the Olympic volunteer legacy: From perceived benefits to sustained volunteer behavior. *Social Behavior and Personality*, *50*(8), 1–12.

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CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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