

Motivational profiles of university volunteers in sport events: a segmentation approach

Perfil motivacional del voluntario universitario en eventos deportivos: un enfoque de segmentación

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Abstract

University volunteering is a recurring resource for many sports organizations that contribute altruistically to the success of small-scale sports events and enhance sustainable development in society. This study aimed to evaluate the motivation of sport volunteers in small sport events, identifying the different profiles of volunteers according to their degree of motivation. Participants in this study included 216 university students. The instrument used was an adaptation of the SEVMS scale formed by 22 items divided into four factors (Solidary, Purposeful, Commitments/External Traditions, and Spare Time). An exploratory factor analysis (EFA) and a cluster analysis were carried out to identify possible groups of participants according to the motivational factors. Three factors were identified: Solidarity, Purpose, and Commitment/External Traditions. The cluster analysis identified three motivational profiles: "Altruist" with high scores on all three factors; "Career and social seekers" with high scores on solidarity and purpose and very low scores on the factor commitment/external traditions; and the group "Community Supporters" with moderate scores on all items. This study allows us to have a better understanding of the motivational profile of the university student's volunteers according to their characteristics. These findings will help to develop strategies for the promotion and recruitment of volunteers across different university sports programs.

Key words: motivational profile, sport, university volunteering, educational program, segmentation research.

Resumen

El voluntariado universitario es un recurso recurrente para muchas organizaciones deportivas, contribuyendo de forma altruista al éxito en eventos deportivos de pequeña escala y potenciando su desarrollo sostenible en la sociedad. El objetivo de este estudio fue evaluar la motivación del voluntariado deportivo en pequeños eventos deportivos, identificando los diferentes perfiles de voluntarios según su grado de motivación. La muestra estuvo compuesta por 216 estudiantes universitarios. El instrumento utilizado fue una adaptación de la escala SEVMS formada por 22 ítems divididos en cuatro factores (Solidario, Intencionalidad, Compromiso/Tradiciones Externas y Tiempo Libre). Se realizó un Análisis Factorial Exploratorio (AFE) y un análisis cluster para identificar posibles grupos de participantes según los factores de motivación. Se identificaron tres factores: Solidaridad, Propósito y Compromiso/Tradiciones externas. El análisis cluster identificó tres perfiles motivacionales: "Altruistas", con altas puntuaciones en los tres factores; "Buscadores sociales y profesionales", con altas puntuaciones en Solidario y Intencionalidad y muy bajas en el factor Compromiso/Tradiciones Externas; y el grupo "Apoyo a la comunidad", con valoraciones moderadas en todos los ítems. Este estudio permite conocer mejor el perfil motivacional de los voluntarios universitarios en función de sus características, ayudando a elaborar estrategias de promoción y captación de voluntarios para diferentes programas deportivos universitarios.

Palabras clave: motivación, deporte, voluntariado universitario, programa educativo, investigación de segmentación.

Introduction

Sport volunteering is a global phenomenon that attracts thousands of people every year to contribute their time and enthusiasm to help set up, organize and lead different types of activities in sport clubs and sports events (Zhuang & Girginov, 2012). Similarly, volunteering among university students keeps increasing every year, with universities incorporating a multitude of programs for the participation of their students (Hayton, 2015; Holmes et al., 2020). For example, in 2013 more than 725,000 university students volunteered in the United Kingdom (Ellison & Kerr, 2014), while in Spain during the academic year 2018 to 2019 more than 2,000 volunteer programs were carried out in Spanish universities showing an increment of 5% for the previous year in which more than 19,000 students participated (Fundación Mutua Madrileña, 2019).

Pierce et al. (2014) reported that providing volunteer opportunities is becoming very common within the curriculum of many higher education institutions. Holmes et al. (2020) noted that because it is believed that the act of volunteering brings many benefits to society, it is an activity that is highly promoted by governments, educational institutions, and other non-profit organizations. In Spain, 94% of non-profit organizations collaborate with university volunteers (Ballesteros et al., 2019). Universities develop volunteer programs based on the rationale that students will benefit by gaining a more holistic education that will help them prepare for their future (McFadden, 2017; Whitley & Yoder, 2015). In this context, the organization of inter-university sporting events or sporting competitions on campus turns as the perfect setting to provide students with this educational experience (Johnson et al., 2017).

Sports volunteering has always been a fundamental pillar in the sports sector, particularly for sports events. Historically, all types of sporting events, from the small social and charitable nature to sport mega-events of professional and international characteristics have been structured based on volunteer labor (Hoye et al., 2019). Sports volunteers not only provide important support for the sporting event but in some instances, they are a critical element that contributes to successfully achieve the goals of that event (Koutrou, 2018). Thus, the realization of a small-scale event despite not needing such a high number of volunteers still plays a fundamental role in the organization of the event since economic viability is not possible without the altruistic contribution of volunteers (Nichols & Ralston, 2014). In the end, the number of volunteers

needed will depend on the type of event, which has a wide range of size, focus, and style, resulting in different organizational and resource requirements (Koutrou, 2018).

The United Nations (UN) recognizes that volunteering can be an important facilitator of sustainable development (UN; 2015). Similarly, sport has also been recognized as playing a critical role in contributing to advance the Sustainable Development Goals (SDG) proposed by the UN as it promotes respect and tolerance, supports the empowerment of women and youth, and contributes to health, education, and social inclusion. The United Nations have stated that major sports events can be a tool for sustainable development contributing to progress and growth not only in social, economic, environmental, or educational opportunities but also by promoting peace and human rights (Ki-Moon, 2016). Although in small-scale sport events, economic development is not so evident, impacts in other domains (e.g., social, educational, etc.) can be even greater. The repetitive nature of many small-scale sporting events allows these ventures to establish a connection with the communities that host them. In turn, the SDG provides an opportunity to seek synergies from volunteering (Howard & Burns, 2015), as volunteering helps build relationships, skills, trust, and resilience between volunteers and the context in which they work (Devereux et al., 2017). Volunteers also contribute to the reduction of inequalities, the improvement of health and well-being, the enhancement of public policy, and the creation of strong partnerships between institutions (Devereux et al., 2017), all aspects that are relevant in the context of sports events.

Motivation research is a widely studied construct in the context of sports volunteering (Clary et al., 1998), particularly in sport events where previous studies have indicated that volunteers show a complex system of motives. Motivation is a subjective concept and therefore difficult to evaluate (Strigas & Jackson, 2003). But despite this challenge, several studies have focused on understanding the motivation of sports volunteers and how different factors affect their behavior to improve the efficiency of sport events (Allen & Bartle, 2014). This line of research has sparked the interest of several researchers in recent years (Kim & Cuskelly, 2017).

Over the years, numerous models have been developed to evaluate the motivational profile of volunteers. One of the first models was developed by Knoke and Prensky (1984) and it was based on the incentive approach (normative, affective, and utilitarian). This model proposed the Motivation To

Volunteer (MTV) scale applied to sports volunteering. Similarly, Farrell, Johnston, and Twynam (1998) developed the Special Event Volunteer Motivation Scale (SEVMS) which later Strigas and Jackson (2003) developed an adaptation for general events which they called the Sport Volunteer Motivation Scale (SVMS). Clary et al. (1998) developed the Volunteer Function Inventory (VFI), which is based on the Functional Theory and has been applied in many contexts including sports (Alexander et al., 2015; Johnson et al., 2017; Kim et al., 2019). Kim et al. (2010) adapted the VFI into a reduced version applied to sports events which they titled the Modified Volunteer Functions Inventory for Sports (MVFIS). Bang and Chelladurai (2009) developed the Volunteer Motivation Scale for International Sporting Events (VMS-ISE), which later was adapted to evaluate volunteers' motivation in smaller-scale events (Bang & Ross, 2009). This scale is one of the most widely used in the sports context (Bang et al., 2019).

Previous studies that have evaluated the motivation of students volunteers at sport events have found that American students were motivated toward the love to sport and career (Johnson et al., 2016, 2017; Pierce et al., 2014), or networking, and gaining professional experience (Bae et al., 2011). Khoo and Engelhorn (2007) found that students in Malaysia had a motivational profile focused on Solidary and Purposive. Mirsafian and Mohamadinejad (2012) found that Iranian students showed an altruistic and progress-oriented motivation. Finally, students in Australia were motivated to acquire new skills and help others, while South African students were motivated to gain experience and acquire new skills (Van der Berg et al., 2015).

The previous models and scales to evaluate volunteers' motivation have led some scholars to propose distinct motivation-based volunteer profiles based on common characteristics and traits. Although this line of research is more recent and less frequent, previous studies have suggested clusters of volunteers ranging from three to six categories. Some of these clusters include categories such as Altruists, Indifferent, and Socials (Lockstone-Binney et al., 2015); Obligated Volunteers, Enthusiasts, Semi-Enthusiast (Alexander et al., 2015); Material Benefits Seeker, Sport, and Community Enthusiasts, Altruists, and Career and Social Relationship Seekers (Kim et al., 2018); Community Supporters, Material Incentive Seekers, Social Networkers, and Career and Personal Growth (Schlesinger & Gubler, 2016). Finally, Treuren (2014) found six groups based on the motivations of volunteers and observed that the groups varied from

instrumentalists, motivated by external rewards, to very enthusiastic volunteers

But despite the whole range of studies that have examined the motivation of volunteers in sporting events and the increasing involvement of university students in volunteering, studies that have evaluated the motivation of university students to volunteer at sporting events are still in their infancy. A review of the literature shows only a handful of studies for this group (e.g., Johnson et al., 2016; 2017; Mirsafian & Mohamadinejad, 2012; Pierce et al., 2014). These studies have shown that the main motivation of students to volunteer has been on aspects related to improving their employment opportunities, developing skills, increasing social contacts, and the desire to support their community (Hayton, 2015; Van den Berg et al., 2015). Handy et al. (2010) reported that students' motivations for participating in volunteer programs are multiple, complex, and disperse. Because of the increased involvement of students in volunteering at sporting events, it seems critical not only to know more about what drives university students to volunteer but also to examine possible common characteristics and traits within this group of volunteers. Therefore, applying segmentation research to examine the different motivation profiles among students' volunteers seems the appropriate approach to fill the void in this area. Consequently, to advance the body of knowledge of volunteers' motivation research at sporting events, this study aimed to evaluate the motivation of university students' volunteers participating in sports events, identifying the different profiles of volunteers according to their degree of motivation.

Method

Sample

The sample in this study included 216 university students who were enrolled at a mid-size University in Southern Spain (Table 1). Of these group 80.1% ($n = 173$) were female and 19.9% ($n = 43$) were male with an average age of 21.45 ± 3.9 years. Most of these students were students in the Social Sciences programs (45.4%; $n = 98$), followed by Health Sciences (39.8%; $n = 86$), Sciences (7.9%; 17), and Arts and Humanities (6.9%; 15). Regarding their class standing 30.6% ($n = 66$) were first-year students, 29.6% ($n = 64$) were second-year, 25.5% ($n = 55$) were third-year students, and 14.4% ($n = 31$) were fourth-year students. In terms of their volunteering experience, 60.6% ($n = 131$) indicated it was their first sports volunteering.

Instrument

The instrument used was the SEVMS scale adaptation developed by Lockstone-Binney et al. (2015) of the original 28-item scale proposed by Farrell et al. (1998). This adaptation consisted of 22 items divided into four categories: (a) *Solidarity*, referring to social exchanges and acquiring practical or educational experiences (seven items); (b) *Purposive*, derived from the desire to contribute to the event and the community (six items); (c) *Commitments/External Traditions*, evaluates aspects involving satisfaction, external pressures and prestige factors and related to family traditions (seven items); and (d) *Spare Time*, measures the use of free time towards volunteering (two items). The scale used a 7-point Likert scale (1 = not at all important to me, to 7 = extremely important to me). The reliability of the scale showed a Cronbach index of 0.892. The questionnaire included four questions related to socio-demographic characteristics (gender, age, studies area, course standing) and one question regarding previous sport volunteering experience.

Procedure

Students who participated in this study volunteered in a sport program that included three sports events held in the city in Southern Spain. The first event was an 8km road race, the second event was a canoeing regatta, and the third event was a multisport event. All students' 'volunteers were registered through the Office of Diversity and Volunteering of the University that sponsored this study. Students who volunteered in these events were provided with a link to the survey for its completion. The survey was anonymous, and the sampling was non-probabilistic for convenience. The study had the approval of the Bioethics Committee of the same University (ID:2056/2018).

Data analysis

Data analysis was performed using SPSS v.24.0 (IBM, Armonk, USA). Descriptive statistics and correlation analysis of the different items and Cronbach-alpha index (C- α) were calculated. Exploratory Factor Analysis (EFA) was used to verify the latent factors of the set of items using the maximum likelihood method with varimax rotation. The cut-off point for communities was set at a value of 0.3 (Kline, 2000). A cluster analysis was carried out to identify possible volunteer groups with similar motivation taking as dependent variables the motivation factors resulted from EFA. To obtain the cluster solutions, two methods

were combined, hierarchical and non-hierarchical, to optimize the results. First, a hierarchical cluster was analyzed taking Ward's Method as a reference for the grouping process while for the similarity measures the Euclidean distance squared was used. Then, a non-hierarchical cluster was made through the K-means method taking as reference the centroids of the cluster solutions of the hierarchical method for each period. The ideal cluster solution was determined according to the criteria set out by Hair et al. (2014). To compare the results through the performance of the ANOVA test for the continuous variables and the qualitative variables Chi-square tests, calculating the value of the Contingency Coefficient (C^2) to verify the size of the effect and the intensity of the association between the qualitative variables. For the continuous variables, Omega-square (ω^2) was calculated according to the indications of Dominguez (2018). According to this author, values between 0.1 and 0.6 have a slight effect, values between 0.6 and 1.4 have a moderate effect, and values above 1.4 have a large effect. The significance level was established at a value of $p \leq 0.05$.

Results

Exploratory Factor Analysis

The EFA results (Table 1) showed that the KMO index had an acceptable value of 0.904, while Bartlett's Sphericity test was significant ($\chi^2=2511,325(190)$; $p \leq 0.001$). Regarding the explained variance it was observed that the items of the scale explained 61.17% with a solution of three factors, 40.20% belonged to *Solidary*, 14.85% to *Purposive*, and 6.02% to *Commitments/External Traditions*. The internal structure of the items in the scale showed high factorial weights, ranging from a minimum of 0.432 in item "My skills are needed" to a maximum of 0.824 in item "I want to feel part of this community", with values above 0.30 considered representative (Child, 2006). Two items, "I am involved with the sport" and "I do not have anything else to do with my time", were removed from the original instrument because of low communalities. According to the criterion of Cronbach's alpha, the internal consistency was acceptable for all factors in this scale (>0.7).

Descriptive and correlation analysis

The descriptive results (see Table 1) showed that both the *Solidary* and *Purposive* factors had a high score while the *Commitment/External Traditions* factor had a neutral

Table 1. Descriptive of factors and results of EFA.

Ítems	M(SD)	Factor loading	Communalities
Solidary (<i>eigenvalue:8.04; %variance:40.20; C- α:0.877</i>)	6.03(0.8)		
I want to broaden my horizons.	6.07(1.1)	0.702	0.531
I want to gain some practical experience.	6.34(1.0)	0.711	0.574
I can obtain an educational experience.	6.20(1.0)	0.725	0.581
I want to work with different people.	6.13(1.1)	0.664	0.527
I want to develop relationships with others.	6.17(1.0)	0.637	0.528
It is a chance of a lifetime.	5.26(1.4)	0.513	0.525
I want to vary my regular activities.	6.05(1.0)	0.578	0.529
Purposive (<i>eigenvalue:2.97; %variance:14.85; C- α:0.894</i>)	6.03(0.8)		
I want to put something back into the community.	5.70(1.1)	0.501	0.561
I want to do something worthwhile.	6.11(1.0)	0.530	0.532
Volunteering creates a better society.	6.30(1.0)	0.660	0.586
I wanted to help make the event a success.	6.38(0.9)	0.784	0.719
I want to feel part of this community.	6.08(1.0)	0.824	0.824
I want to help out in any capacity.	6.29(1.0)	0.688	0.667
My skills are needed.	5.36(1.2)	0.432	0.340
Commitment/External Traditions (<i>eigenvalue:1.20; %variance:6.02; C- α:0.835</i>)	3.96(1.4)		
I am expected to volunteer.	5.31(1.8)	0.466	0.340
A relative/friend is involved in the sport.	4.84(2.0)	0.608	0.308
I want to continue a family tradition of volunteering.	3.01(2.0)	0.821	0.377
Most people in my community volunteer.	3.55(1.8)	0.796	0.693
My friends/family are also volunteering.	3.60(2.0)	0.717	0.525
I have more free time than I used to have.	3.44(1.9)	0.585	0.344

score. The motives most valued by the volunteers were helping the success of the event, gaining practical experience, and creating a better society. In contrast, motives related to family or community tradition and the availability of free time were not as relevant. Correlation analysis showed that the three factors were significantly related ($p \leq 0.001$), with the minimum relationship between Solidary and Commitment/External Traditions ($r=0.252$) and the best relationship between Solidary and Purposive ($r=0.764$).

Identification and Description of the Clusters

The cluster analysis was carried out to identify the participants of the study according to motivation factors, using the methodology proposed by Hair et al (2014). Table 2 shows the centroids of each group of different sociodemographic, volunteering experience, and motivation items. Cluster 1 called “Altruist” was composed of 44.4% of the volunteers. It was so named because it scored high on all three factors, especially on *Commitment/External Traditions* ($M=5.20 \pm 0.8$) compared to the other two groups. The profile of this group was female with an average age of 21.53 ± 3.3 years, almost half of whom were studying Social Sciences (47.9%), 31.3% were in their 3rd year and 62.3% had not previously volunteered in sports.

Cluster 2 was called “*Career and Social Seekers*” due to the high scores the volunteers obtained in the

items related to professional aspects and socialization, while the *Commitment/External Traditions* factor was low (2.68 ± 0.8). This group represented 31.9%, most of them were female with an age of 21.24 ± 4.4 years, 43.5% were studying Health Sciences, and were in the 2nd year (39.1%). The large majority of student volunteers had no previous experience in sports volunteering (60.9%).

Cluster 3 “*Community Supporters*” represented the smallest number of students’ volunteer (23.6%). They were named “Community Supporters” because they showed moderate-high scores on items related to the purposive factor which relates to aspects of the community and the event. This group was composed of 74.5% of females aged 21.56 ± 4.3 years who were studying in the fields of Social Sciences, were in their 1st year of study (31.4%), and 56.9% of them had no previous experience in sports volunteering.

Finally, no sociodemographic variables showed significant differences between the groups of volunteers, while in motivational factors there were differences between all groups in *Purposive* and *Solidary*, while in *Commitment/External Traditions* there were differences between all groups except between “*Career and Social Seekers*” and “*Community Supporter*” ($p \leq 0.05$). The effect size showed almost moderate interactions, close to 0.6, in the *Solidary* and *Purposive* variables, while the effect was moderate in *Commitment/External Traditions* (>0.6).

Table 2. Sociodemographic profile of clusters.

	Altruist (n=96)	Social and Career Seekers (n=69)	Community Supporter (n=51)
	M(SD)	M(SD)	M(SD)
Age ($F=0.141(211)$; $p=0.869$)	21.53(3.3)	21.24(4.4)	21.56(4.3)
	N(%)	N(%)	N(%)
Gender ($\chi^2(2)=3.27$; $p=0.195$; $C^2=0.122$)			
Male	21(21.9)	9(13.0)	13(25.5)
Female	75(78.1)	60(87.0)	38(74.5)
Studies Area ($\chi^2(6)=4.23$; $p=0.645$; $C^2=0.139$)			
Arts & Humanities	5(5.2)	7(10.1)	3(5.9)
Sciences	10(10.4)	3(4.3)	4(7.8)
Health Sciences	35(36.5)	30(43.5)	21(41.2)
Social Sciences	46(47.9)	29(42.0)	23(45.1)
Course ($\chi^2(6)=7.21$; $p=0.302$; $C^2=0.180$)			
1 st Year	28(29.2)	22(31.9)	16(31.4)
2 nd Year	23(24.0)	27(39.1)	14(27.5)
3 rd Year	30(31.3)	13(18.8)	12(23.5)
4 th Year	15(15.6)	7(10.1)	9(17.6)
Previous sport volunteering ($\chi^2(2)=0.45$; $p=0.800$; $C^2=0.045$)			
No	60(62.5)	42(60.9)	29(56.9)
Yes	36(37.5)	27(39.1)	22(43.1)
	M(SD)	M(SD)	M(SD)
Solidary* ($F=127.38(215)$; $p\leq 0.001$; $\omega^2=0.539$)	6.41(0.6)	6.31(0.5)	4.94(0.6)
Purposive* ($F=123.82(215)$; $p\leq 0.001$; $\omega^2=0.532$)	6.42(0.5)	6.28(0.5)	4.98(0.7)
Commitment/External Traditions* ($F=208.99(215)$; $p\leq 0.001$; $\omega^2=0.659$)	5.20(0.8)	2.68(0.8)	3.35(0.9)

Note: * $p\leq 0.05$; #Differences between all groups except entre Cluster 2 y Cluster 3.

Discussion

This study aimed to evaluate the motivation of university students' volunteers participating in sports events, identifying different profiles of volunteers according to their degree of motivation. The SEVMS questionnaire and its adaptations have been applied in sport events of different sizes and levels such as international mega sport events (Dickson et al., 2013, 2014, 2017); international sport events (Dickson, et al., 2015; Lockstone-Binney et al., 2015; Pauline & Pauline, 2009); and national sport events (Farrell et al., 1998; Khoo & Engelhorn, 2007, 2011; Khoo et al., 2011; Strigas & Jackson, 2003). In a previous analysis of the type and size of the event to which the SEVMS scale has been applied Dickson et al. (2017) did not find evidence of the existence of studies focused on local and small-scale sport events such as the events examined in this study.

The EFA results showed that the KMO index obtained a high value, above 0.90 (Visauta et al., 2005). Regarding the extracted variance it was observed that the three factors extracted allowed an explanation of 61.17% of the variance, results that are similar to those obtained in previous studies that have used this scale (Dickson et al., 2013, 2014, 2015, 2017; Khoo & Engerholm, 2007, 2011; Lockstone-Binney et al.,

2015) and higher than the results obtained by Farrell et al. (1998). The reliability values using Cronbach's alpha index were higher than the minimum of 0.7 established by Nunnally and Bernstein (1994). The factor that explained the greatest variance was *Solidary* (40.20%), followed by *Purposive* (14.85%), and *Commitment/External Traditions* (6.02%). Factor loads were all representative with weights above 0.4, with a minimum of 0.432 related to skills to a maximum of 0.824 related to feeling part of the community. Values in the load factors greater than 0.30 are indicative that a high percentage of the sample variance is explained by the given factor (Child, 2006). Contrary to this study, previous research showed that the *Purposive* factor was the most representative (Dickson et al., 2017; Farrell et al., 1998; Khoo & Engelhorn, 2007; 2011). The *Commitment/External Traditions* showed similar load factors as reported in previous studies (Johnston et al., 1999; Lockstone-Binney et al., 2015).

The factor distribution showed in this study could be explained by the fact that university students who decide to participate in voluntary work usually do so for motivations related to professional development or because they want to establish new social relationships (Hayton, 2015), all aspects that were part of the *Solidary* category. However, results in this study also showed that students had a high interest

in experiencing other educational opportunities. This may suggest that a sporting event could be a way to achieve these experiences, particularly when a sporting event involves a festive atmosphere and active work. When considering these aspects, it is reasonable to explain why the third factor (Commitment and External Traditions) showed less relevance in this study. Along the same line, the descriptive results showed that *Solidary* and *Purposive* factors had the same overall high score (above six points) while the *Commitments/External Traditions* factor had a neutral response. In addition to what was mentioned in the previous point, these results could be due because these experiences were part of an educational context. Therefore, the contribution to the community is an aspect that students value, and that their love of sports makes them want to be participants in the development of the event, contributing to its success with all their efforts according to their abilities. Another aspect to be considered is that students receive credits for their participation in the program, as it happens in more than 80% of the university volunteer programs in Spain (Fundación Mutua Madrileña, 2019).

Regarding the socio-demographic profile, this study showed a large majority of female volunteers. This result is consistent with the Van den Berg et al. (2015) study with Australian volunteers participating in sport events. However, the rest of the studies found that the vast majority of university volunteers were male (Johnson et al., 2016, 2017; Mirsafian & Mohamadinejad, 2012; Pierce et al., 2014). This can be explained based on the demographics showed in the annual report on university volunteering in Spain, where 83% of the students who volunteered during the 2018/2019 academic year were female (Fundación Mutua Madrileña, 2019). In terms of the average age of participants, it was close to 21 years, which is similar to the age of volunteers in other studies that reported university population. The majority of students were studying Social Sciences and Health Sciences, results similar to those obtained in the report on university volunteers in Spain (Fundación Mutua Madrileña, 2019), while Mirsafian and Mohamadinejad (2012) had a majority of students studying Natural Sciences. Finally, regarding the course standing of participants, results showed that they were mostly in the first and second years. A result that is similar to what was reported by Johnson et al. (2016, 2017).

In terms of the cluster analysis, results showed the existence of three different groups of university students' volunteers at sports events. The most representative group was the "Altruist", which was made of almost half of the volunteers who took part

in this study. This group obtained high scores in all three factors. The second group with the highest score was the "Social and Career Seekers". This group showed high scores in *Solidary* and *Purposive* but low scores in *Commitment/External Traditions*. Finally, the least represented group was the "Community Supporters" who showed a moderate or neutral score on all three factors. These three groups showed a similar trend in terms of the proportion of males and females and the average age of the volunteers. However, and although there were no significant differences it was possible to observe some differences in the area of studies students were enrolled. *Altruists* and *Community Supporters* had a greater proportion of students of Social Sciences, which include a program of studies in Education, Pedagogy, Social Service, and Sports Sciences. Therefore, this group could be oriented towards helping others in the community and helping with the success of the sport event. Meanwhile, the cluster "Career and Social Seekers" were mostly represented by students from Health Sciences, which include programs in Nursing or Medicine. For this group, this could suggest that students perform volunteer work because it could have a positive impact when it comes to getting a job.

In terms of the course standing, the *Altruistic* volunteers were found in greater proportion in the 3rd year of studies, while the other two groups were found to a great extent in lower courses, especially the *Community Supporters* who showed that a greater percentage were in their 1st year of university studies, and therefore were able to show a more neutral motivational profile.

Limitations and Future Research

The study of volunteers' motivation is a complex task that imposes several challenges for researchers. This study was no exception. Some of the limitations of this study included the sample population as it is not possible to generalize the results to the entire university community because of the use of convenience sampling. Another limitation of this study was not having evaluated a more sport-oriented motivational factor that would allow for better segmentation of the volunteer according to the sport of interest, or having evaluated the external reward factor since in many instances students received credits as compensation for the volunteer work, an aspect that is common in Spain. Finally, other limitations in this study were the lack of analysis that examined the relationship between motivation with other factors such as commitment, satisfaction, or future intentions. Future studies in the context of university sports volunteering should

examine not only the effects of these relationships but also should measure the motivational profile before and after the duration of the event or conduct longitudinal studies to follow first-year students throughout their university life.

Conclusions

The main findings of this study were that the adapted SEVMS scale identified three motivational factors for university sports volunteers, called *Solidary*, *Purposive*, and *Commitment/External Traditions*. The first two factors showed high scores, while the third factor is neutral. The Cluster analysis identified three different motivational profiles. First, it was the “*Altruist*” group which showed the largest numbers of participants and it was made up of young females, who studying Social Sciences, most of whom were in 3rd year, had no previous experience in sport volunteering, and showed high scores on all three factors. On the other hand, the second group “*Social and Career Seekers*” was made of young females, studying Health Sciences in their 2nd year, most of them without previous experience in sport volunteering, and showing high scores in the *Solidary* and *Purposive* motivational factors and low scores in the *Commitment/External Traditions* factor. Finally, the third group “*Community Supporters*”, was the least representative. This group was also made by young females, studying Social Sciences who were in their 1st year as university students. Besides, this group showed no experience and presented moderate-neutral scores on the three motivational factors. Although there were no significant differences in terms of the socio-demographic variables of the student volunteers, results of this study revealed differences in the motivational profiles

Implications

Examining volunteers’ motivation is critical to understand an individual’s decision to volunteer. Knowing volunteer’s motivation and their characteristics allow event managers to make more informed decisions regarding the selection of volunteers and the role volunteers will have in the sport event (Kim et al., 2018). The results of this study contribute not only to provide new insights on the motivation of university students’ volunteers but also allows university and sport administrators in the public and private sector

to know the motivational profile of university students towards sport volunteering. Considering that most Spanish students who volunteer in sports do it because they have a family member or a close friend who volunteers, then we can argue that in Spain motivation to volunteer might be driven by family tradition. In that case, it is necessary to examine what factors can lead to a more permanent intention to volunteering, particularly with those students who are not driven by family tradition. Similarly, it is necessary to explore what strategies are needed to recruit volunteers who do not have family or friends in the volunteer force.

This study shows that it is necessary to continue researching sports volunteering in the context of university students. When examining the motivation of university students’ volunteers, scholars must also include other variables than those addressed in this study. For example, future studies could explore students’ motivation for the love of sport. Also, it will be important to examine the motivation towards extrinsic rewards within the university volunteer population. In Spain, and other countries as well, many universities exchange students’ volunteer hours for credit hours, or in some cases, volunteers’ hours can be exchanged by elective courses. In many countries, volunteer work is considered a way of enhancing personal and professional skills as well as access to certain jobs. Universities are a great source of recruitment of volunteers. Also, students often have more free time than adults. Having fewer family or work obligations makes students a high-interest group to recruit as volunteers.

The promotion of volunteer programs through universities not only contributes to providing better and enriched experiences to university students but also contributes to advance the development of the Sustainable Developmental Goal contemplated in the 2030 agenda of the United Nations. Amate et al. (2020) highlight the irreplaceable value of sports volunteering in raising awareness to counter climate change and the effects of environmental degradation as identified in the SDG goals related to the environment. University students’ volunteers who participated in this study contributed to advance sustainability by becoming educated for the care for the environment. In the canoeing event, volunteering tasks included checking green points, helping athletes in the water using kayaks instead of motorized boats, and limiting access to the aquatic environment by staff from outside the organization or athletes.

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