

**EVENTUAL VOLUNTARY MOTIVATION IN SPORTS: THE F1 CASE**

## MOTIVAÇÃO VOLUNTÁRIA EVENTUAL NO ESPORTE: O CASO F1

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ORCID: <https://orcid.org/0000-0002-5275-1207>**Abstract**

The present article goal is to identify the factors that influence the eventual voluntary motivation in sports. The locus of the empirical part of this article was the Formula 1 Grand Prix that took place at the Interlagos circuit, in São Paulo, in 2018. The research data was gathered through a survey based on Bang and Chelladurai theoretical model (2009). A quantitative research method was used, comprising the application of 200 surveys near the voluntaries that participated in the event. The research demonstrated, according to the following order, that the main motivational factors in sports, and in the Brazil Formula 1 Grand Prix, are related to the following variables: love of the sport, values expression, and people-to-people contacts.

**Keywords:** Voluntary motivation. Eventual. Sports. Formula 1**Resumo**

O presente artigo teve por objetivo identificar os fatores que influenciam a motivação voluntária eventual no esporte. A parte empírica desse artigo teve como lócus o grande prêmio de fórmula 1 realizado no circuito de interlagos no município de São Paulo no ano de 2018. Os dados da pesquisa foram coletados a partir de um questionário baseado no modelo teórico de Bang e Chelladurai (2009). Foi utilizado o método quantitativo de pesquisa, compreendendo à aplicação de 200 questionários junto aos voluntários envolvidos no evento. A pesquisa evidenciou, na seguinte ordem, que os principais fatores motivacionais no esporte, no grande prêmio de fórmula 1 no Brasil, estão relacionados às variáveis: amor ao esporte, expressão de valores e contatos interpessoais.

**Palavras-chave:** Motivação voluntária. Eventual. Esporte. Fórmula 1

## Introduction

Voluntary work in Brazil dates back to the 16<sup>th</sup> century, as a way of helping the population, influenced by the Portuguese model of the Holy House of Mercy (Santa Casa da Misericórdia). The main function of this organization was to provide medical assistance, food, and shelter for those who needed it the most (FALEIROS, 1995). As time went on, the voluntary work expanded to several areas of society, including voluntary work in sports events.

That kind of voluntary activity has been attracting an increasing number of supporters. According to the data of the International Olympic Committee – IOC (2016), the number of volunteers who operated during the past Olympic Games grew from 30 thousand in the Barcelona Olympics, in 1992, to 50 thousand volunteers in the Rio de Janeiro Olympics, in 2016. In the same way, the International Federation Of Association Football – FIFA (2014) – stated that the number of registered volunteers grew from 48 thousand during the World Cup in Germany, in 2006, to 130.917 during the World Cup in Brazil, in 2014.

There are good examples of research studies about eventual voluntary motivation in sports, which attempted to identify the main reasons behind volunteers dedicating their time to this voluntary activity, including the studies developed by Hallman and Harms (2012), in Germany, Dickson *et al.* (2014), Alexander *et al.* (2015), during the London Olympics, and Pereira e Cavalcante (2018), during the Rio de Janeiro Olympics. In accordance with these articles, the present study main objective was to identify the factors that influence the eventual voluntary motivation in sports, specifically in the Brazil Formula 1 Grand Prix.

The research developed by Pereira and Cavalcante (2018), performed during the Rio de Janeiro Olympics, using the same theoretical model used in this study, concluded that the volunteers' main motivational factors were related to the following variables: values expression, love of the sport and people-to-people contacts. Attempting to identify similarities between the volunteers' motivation who operated in the Rio de Janeiro Olympics and in the Formula 1 Grand Prix, two big sports events that took place in Brazil, provides a better comprehension of the phenomena and contributes to the theoretical development of the topic.

One of the biggest challenges of the organizations that work with volunteers is to find a balance in the management of human resources (HALLMANN and HARMS, 2012). In order to manage properly, it is necessary to have access to data that might contribute to improving decision-making processes focused on the management of voluntary work. In practice, this research might support the managers who organize sports events in Brazil, allowing them to understand the motivational aspects that make people volunteer, in order to developed actions focused on the recruiting and selection of volunteers for those events.

Formula 1 is included in the annual calendar of major sporting events since 1950. In Brazil, the first event took place in 1972. Since it is an event that takes place in Brazil, it is appropriate to develop this research, due to the magnitude of the event and the objective of this article. Besides being appropriate, this research has proved itself as feasible based on a literature that made it possible to collect and analyze the data that is pertinent to this study.

## THEORETICAL FRAMEWORK

### Motivation in volunteer work

Research studies about motivation are quite common in the organizational field. Latham and Pinder (2005) state that motivation is a psychological process that contributes to the interaction between

individuals and the environment in which they are inserted. Within that context, it is important to highlight the classical motivational theories, such as the ones developed by Maslow and Herzberg. According to Tamayo and Pascal (2005), motivational theories identify resources of pleasure that workers find in their workplace and this motivation can derive from the individual, the labor environment, or from both.

Although, according to Cavalcante (2012), the aspects that are shared between motivational theories and voluntary work end here. The same author argues that the theories that are used to understand motivation in the volunteering context are different, and the use of distinct theories is justified by the differences between a volunteer worker and a formal worker. The main differences were identified by Cnaan and Cascio (1998), who highlighted the monetary dimension, the time made available, the possibility of participating in several non-governmental organizations simultaneously, the recruiting, and the non-governmental organizations' reluctance to assess the volunteers' performance.

Volunteers offer their time and effort due to a wide range of reasons. Historical approaches to understanding the volunteer motivations are often based in altruism and abnegation theories (REHBERG, 2005). This argument is based on the presumption that the main motivation for volunteers is to help others. However, other reasons should not be excluded from the comprehension of voluntary motivation and its use for efficient practices of events management.

According to Salamon and Anheier (1996), there are three motivational factors that make people volunteer: altruistic, instrumental, and mandatory. The altruistic reasons include the notions of feelings and solidarity towards the poor, that describe the situations in which the volunteers identify with the people who suffer in society and, thus, try to give them hope and dignity through their voluntary work. Instrumental motives are defined as a desire to acquire new skills and live new experiences while making something valuable with free time, in order to help people but also to obtain personal satisfaction as a volunteer. Finally, the mandatory reasons include the moral and religious duty, and the desire to contribute to a local community, configured by a feeling of political duty related to the desire of producing changes in society.

Volunteers can be seen as an alternative to keep social order, in which volunteers act as an agent of collective transformation. It is also worth considering how the transforming potential of these activities can represent the internal growth of each individual and the social transformation. Thus, according to Mascarenhas *et al.* (2013), the comprehension of voluntary motivation becomes relevant to all aspects of voluntary activities.

According to Breuer and Wicker (2011), the motivations behind performing volunteering related activities include a high level of complexity. It is possible to conclude that a volunteer's motivation resides in the capacity of building a meaningful desire of promoting the social well-being, producing an internal satisfaction in the volunteering individual. Considering this perspective, Assis *et al.* (2012), stated that, in voluntary work, the passion for the cause comes from a personal interest that is stronger than financial reasons.

### **Voluntary motivation in sports events**

Volunteers have become a valuable set of human resources in many sectors of society. Particularly, the sports sector substantially depends on volunteers, especially because many events require a huge number of individuals to create and perform services in the sports area.

According to Hallmann and Harms (2016), a big portion of the researches about voluntary motivation in big sports events was performed using a theoretical base that was purposed by Bang and Chelladurai (2009), something that happens in many countries around the world. There are many authors whose

studies corroborate that argument, such as Koutrou (2014), Park and Kim (2013), Van de Roest (2015), Tamazo and Luck (2015), and Pereira and Cavalcante (2018).

Gravilov (2012) argued that the motivation to perform any activity consists in a set of initiatives that make an individual start a behavior that is work-related and that determines its strength, direction, intensity, and durability. In the same way, motivation is a competence that refers to the reasons behind an individual getting involved with a specific activity. For many people who participate in a volunteering program in sports events, the motivation relies on the opportunity of accessing the labor market, the possibility of discovering new professional skills and competencies, on developing the leadership spirit, and on differentiating their C.V. (WANG and WU, 2014).

According to Nichols *et al.* (2014), field researches suggest that those who volunteer in sports events are motivated by a variety of factors and the impact of such factors can vary considerably from one individual to another. Some volunteers might act altruistically, being motivated by the desire to contribute to their community and to sports, while other volunteers might be looking to acquire specific experiences or pleasures since volunteering can be beneficial to develop a career and a social network, and to have the opportunity of making new friends. Thus, it suggests that there is a need for a combination of factors to explain the behavior of someone who volunteers in sports.

Performing research studies about voluntary motivation focused on sports events is something relatively recent and that happens gradually more, in accordance with the growth of volunteer workforce demand. These studies show that those who volunteer in sports events are mainly motivated by the desire to help and contribute to the success of the event (SCHLESSINGER, *et al.* 2015). Thus, satisfaction with voluntary work tends to be a determinant factor when it comes to complying with the organizing entity of a given sports event.

### **Eventual volunteering in sports**

The literature about eventual voluntary work emerged at the beginning of the '90s when Macduff (1991) suggested that a change was happening in the way how people were volunteering, since volunteers were starting to prefer short-term volunteer opportunities, instead of the traditional long-term volunteering opportunities. According to Styers (2004), the eventual volunteer in sports is the volunteer who acts in short-term sports events.

The eventual work is the work performed in a transitory manner. In other words, the work that is done sporadically. Styers (2004) states that voluntary work is not an easy task, since the volunteer commits with his skills and knowledge in the organization of sports events, assuming many responsibilities that are attributed without any financial interest.

Besides the socialization between the participating teams and the local community, and the promotion of some kind of hospitality towards tourists who travel to this kind of events, the sports volunteer is also relevant to reduce the costs in the budget of the organization team, thus making the event possible. It is also important to highlight that sports are considered a social phenomenon with multiple possibilities and as a tool that is quite useful to create a base for other social works (TADINI, 2007).

The participation of volunteers in the development and execution of big sports events is fundamental. Volunteers perform diverse tasks: they guide the teams during their stay in the host city; they help the referees, judges, and the heads of delegation; finally, they help the social media, the special guests, and the tourists who look for more information about the location of the event. Furthermore, volunteers can perform other tasks that include granting the safety of the media and of the medical area in a sports complex, and can also help the organization with the food sector (AÑÓ, 2003).

## A theoretical model (Bang and Chelladurai, 2009).

The initial studies that constituted a base to perform this theoretical model, that approaches the motivational aspects of volunteers in big sports events, were initiated in the Athens Olympics (2004) and consolidated in the year of 2009. This model was chosen due to being the most adequate one to attend the goal of this research.

Bang and Chelladurai (2009) indicated 6 (six) motivational factors in their studies, classified as: “values expression”: motivations related with altruistic reasons; “people-to-people contacts”: motivations regarding the relationships established by people; “career guidance”: motivations related to obtaining experience and practical skills; “personal growth”: motivations that derive from the growth of self-esteem as one acquires experience; “extrinsic”: motivations related advantages while obtaining free tickets and uniforms; and, lastly, “love of the sports”: motivations related to the pleasure of participating in the sports event. A table gathering all variables is presented on methodology.

## Methodology

This research has a descriptive character, starting from the moment in which it exposes the motivational aspects of the volunteers who were involved in the Formula 1 Grand Prix, in Brazil. Considering the approach method, the research was marked by a quantitative character, as it assesses the motivations of the volunteers who operated in the event.

Since it was not possible to identify the universe of volunteers who participated in this sports event, the researchers used a non-probabilistic sampling model as a reference, using accessibility criteria. In order to identify the volunteers’ motivational factors, 200 surveys were applied near the research subjects.

Regarding the gathering of data, it is important to specify that a research survey was used, deriving from the theoretical model developed by Bang and Chelladurai (2009), which identifies the motivational aspects of the eventual volunteers associated with sports events. That process of gathering data was performed in the entry gates that give access to the Interlagos circuit, which was where the event took place, during the period between the 9<sup>th</sup> and the 11<sup>th</sup> of November, 2018. The data processing was performed using statistical analyzes based on measures related to the sample mean, standard deviation, variation coefficient, ANOVA and T-test. Bellow, it is possible to verify the variables and descriptions of the research instrument that was used in this study.

**Table 1:** Overview of the volunteers’ motivational variables in sports events

Variables	Description	Scale
Motivations (Likert Scale: from 1 = Completely disagrees to 10 = Totally agrees)		
Values 1	I want to help with anything	Numerical
Values 2	I want to make something worthwhile	Numerical
Values 3	I feel that it is important to help others	Numerical
Values 4	I want to help to make this event a success	Numerical
Values 5	Volunteering helps in creating a better society	Numerical
Interpersonal 1	I want to interact with other people	Numerical
Interpersonal 2	I want to work with different people	Numerical
Interpersonal 3	I want to meet new people	Numerical
Interpersonal 4	I want to develop relationships with other people	Numerical
Career 1	Volunteering causes a good impression on my C.V.	Numerical
Career 2	I want to acquire some practical experience	Numerical
Career 3	I want to establish new contacts that might help my career	Numerical
Career 4	I want to acquire work experiences	Numerical

Career 5	I want to acquire experiences that might become useful in any field	Numerical
Growth 1	Volunteering makes me feel necessary	Numerical
Growth 2	I can explore my own potentialities	Numerical
Growth 3	Volunteering makes me feel important	Numerical
Growth 4	Volunteering allows me to acquire new perspectives	Numerical
Extrinsic 1	I want to acquire licensed uniforms and products	Numerical
Extrinsic 2	I want to acquire free tickets and entries	Numerical
Sports 1	I like any event that is sports related	Numerical
Sports 2	I like any event that is related to these sports (handball or horseback riding)	Numerical
Sports 3	Sports is something I love	Numerical
Sports 4	I love being involved with sports activities	Numerical
<b>Future behaviors</b>		
Future Event	I will engage with another sports event in the future as a volunteer	Fictitious
Future Club	I will associate myself with a sports club in the future as a volunteer	Fictitious
<b>Sociodemographic variables</b>		
Gender	Gender of the participant (1 = feminine, 0 = masculine)	Fictitious
Age	Age (in years)	Metric
Education	1 = fundamental; 2 = secondary school; 3 = higher education; 4 = post-graduation)	Fictitious
Work hours	How many hours do your work per week as a volunteer in the event?	Metric
Income	Monthly Net Income (0 = no wage; 1 = up to one wage, 2 = between 1 and 3 wages, 3 = between 3 and 5 wages, 4 = more than 5 wages)	Numerical

**Source:** Adapted by the authors (2017), based on the theoretical model developed by Bang and Chelladurai (2009)

## Discussions and results analysis

Followingly, there will be presented the discussions and analysis of the research regarding motivation on eventual voluntary work focused on sports, specifically on the Formula 1 Grand Prix that happened between the 9<sup>th</sup> and the 11<sup>th</sup> of November, 2018. This study used the theoretical model developed by Bang and Chelladurai (2009) as a way of identifying the motivational aspects of the volunteers who operated on this sports activity.

The sociodemographic data of the volunteers will be presented, as well as the future behaviors regarding the participation and engagement of those volunteers in sports events, and, lastly, the motivational factors that make volunteers participate in these sports events. Followingly, the sociodemographic profile of the volunteers will be presented. The sociodemographic profile of the volunteers who participated in this research presented the following characteristics, as the following Table 2 shows:

**Table 2:** Sociodemographic syntheses

Variable	Class	Percentage
Average age	30 years	
Average income	6 minimum wage	
Gender	Masculine	85%
	Feminine	15%
Academic degree	Complete Secondary School	4%
	University	16%
	Complete High Education	35%
	Post-Graduation	45%
Weekly working days	More than 5 hours (per day)	80%

Source: Research data (2018)

Based on the presented data, it is possible to understand some important characteristics that must be highlighted, such as the significant difference between the participation of men and women as Formula 1 volunteers. Other studies that approached motivational aspects in sports, such as Doherty (2005), Bang (2008), and Hallmann and Harms (2012), presented results that are in accordance with the higher participation of men, when compared to women, in sports events.

Regarding the current research, the results above referred also lead to the conclusion that male volunteers tend to have a higher degree of affinity with participating in automobile sports events when compared to female volunteers. Thus, that result is important to understand the processes related to recruiting and selecting the volunteers for these events.

It is also important to highlight the high academic level of the volunteers who participated in this research, since 80% of the volunteers graduated in higher education or have a post-graduation, which is in accordance with the high wages of those who participated in this research, reaching an average of six minimum wages.

A study developed by Pereira and Cavalcante (2018) regarding eventual voluntary motivation in sports, which was done during the Rio de Janeiro Olympics, also emphasized a high academic level of the volunteers, since 70% of the volunteers had graduated in higher education or had a post-graduation, and had an average of four minimum wages as monthly income. The practical implication of this result for the current research is that people with a higher academic level tend to volunteer more than people with a lower academic level, which also contributes to a better perception of the managers regarding the selection of volunteers to act in this sports event.

### **Motivations in sports eventual voluntary work**

The analysis of the volunteer motivations in sports will be structured based on the statistical measures considering the sample mean, standard deviation, variation coefficient, correlation analysis, and the difference between groups of motivational variables referring to the theoretical model developed by Band and Chelladurai (2009), which are: “expression of values”, “people-to-people contacts”, career development”, “personal growth”, “extrinsic”, and “love of the sport”. Each one of these variables will

be related separately. The following table shows the statistical results referring to the construct “values expression”.

**Table 3:** Motivational variable “values expression”

Variable	Questions	Question Average	Question Standard Deviation	Question Variation Coefficient	Variable Average	Variable Standard Deviation	Variable Variation Coefficient
Values expression	1	7.50	1.10	14.67%	7.77	1.09	14.10%
	2	7.21	1.08	14.97%			
	3	8.10	1.15	14.19%			
	4	8.06	1.03	13.27%			
	5	7.98	1.07	13.40%			

**Source:** Data from the research (2018)

The motivational variable “values expression” has shown an average value of 7.77, a standard deviation of 1.09, and a variable coefficient of 14.10%, which characterizes a homogeneous sample, that is also quite accurate and close to the average, not showing signs of dispersion in the answers presented by the volunteers. The “values expression” is the most altruistic motivational variable of the theoretical model developed by Bang and Chelladurai (2009) since it is related to motivational aspects such as: feeling important while helping other people, helping to create a better society, and contributing to making the event successful. This variable has presented the second highest average (7.77) across all the variables analyzed, which leads to the conclusion that the altruistic factor has a strong impact when volunteers decide to volunteer in the Formula 1 Grand Prix, in Brazil.

The study developed by Hallmann and Harms (2012), which assessed the motivational aspects of the volunteers in the handball and horseback riding national games in Germany, has shown results that diverge from this research since the variable “values expression” was the main motivational factor of the volunteers in those sports events.

**Table 4:** Motivational variable “people-to-people contacts”

Variable	Questions	Question Average	Question Standard Deviation	Question Variation Coefficient	Variable Average	Variable Standard Deviation	Variable Variation Coefficient
People-to-people contacts	1	7.54	1.30	17.24%	7.30	1.20	16.35%
	2	7.22	1.21	16.75%			
	3	7.23	1.19	16.45%			
	4	7.21	1.08	14.97%			

**Source:** Data from the research (2018)

The data presented in Table 4 places the motivational variable “people-to-people contacts” as the third biggest average among the motivational aspects of the research. This variable is constituted by four constant questions in the research instrument and presented an average of 7.30, a standard deviation of 1.20, and a variation coefficient of 16.35%, which represents a result that is consistent with the sample, that has characteristics such as homogeneity, accuracy, and most of its answers were quite close to the variable average.

This variable is related to the motivational aspects that are related to the interaction of the volunteer with other people, the availability to work with different people, the opportunity of meeting new people, and the chance to develop relationships with other people. These results observe that the development of people-to-people relationships constitutes an important motivational factor for the volunteers who acted



in the Formula 1 event. The fact that the volunteers are willing to meet new people indicates that it can be an aspect to consider while selecting volunteers for this kind of events.

A study by Bang (2008), in the United States of America, has revealed similar results to the ones identified in this research. In the referred study, the volunteers' motivational aspects related to people-to-people relationships constituted the volunteers' third biggest motivational factor. The same happens in the present research.

**Table 5:** Motivational variable "Career development"

Variable	Questions	Question Average	Question Standard Deviation	Question Variation Coefficient	Variable Average	Variable Standard Deviation	Variable Variation Coefficient
Career development	1	5.45	1.80	33.02%	4.84	1.58	32.83%
	2	4.82	1.29	26.76%			
	3	4.40	1.95	44.31%			
	4	5.21	1.55	29.75%			
	5	4.35	1.32	30.34%			

**Source:** Data from the research (2018)

The motivational variable "career development" relates to the way how voluntary activities in sports might contribute to the development of the volunteer professional career. The results of this research place this motivational variable as the fifth minor average of the six variables considered. The variable is constituted by five constant questions in the research instrument and presented an average of 4.84, a standard deviation of 1.58, and a variation coefficient of 32.83%. The results of this variable show a consistent result, with characteristics such as homogeneity, good accuracy and high dispersion between the volunteers' answers.

Considering the results, it is observed that volunteers do not decide to volunteer due to the development of their professional career. This is a coherent argument since more than 80% of the volunteers graduated in high education or have a post-graduation, which leads to the conclusion that most of them are already inserted in the labor market. A study developed by Pereira and Cavalcante (2018) shows similar results while considering this variable, which is coherent with the high academic level of the volunteers who participated in the Rio de Janeiro Olympics: 70% of the volunteers had graduated in high education or had a post-graduation.

**Table 6:** Motivational variable "Personal growth"

Variable	Questions	Question Average	Question Standard Deviation	Question Variation Coefficient	Variable Average	Variable Standard Deviation	Variable Variation Coefficient
Personal growth	1	6.20	1.55	25 %	5.64	1.50	26.95%
	2	5.23	1.9	36.32%			
	3	5.01	1.25	24.95%			
	4	6.12	1.32	21.56%			

**Source:** Data from the research (2018)

The data exposed in Table 6 refers to the motivational variable "personal growth", which has an average of 5.64, a standard deviation of 1.5, and a variation coefficient of 26.95%. This result characterizes a homogeneous sample with good precision and that is quite close to the average. However, it also shows dispersion in the volunteers' answers.

The motivational variable “personal growth” is related to the following aspects: feeling good while volunteering, developing self-potential, and feeling important while volunteering. This motivational variable constitutes the fourth biggest motivational factor of those who volunteer in Formula 1. Thus, the data confirms that personal growth is not considered a leading factor that makes volunteers participate in these sports events.

A study by Park and Kim (2013) presented similar results to this research, concluding that the volunteers of both studies did not decide to volunteer motivated by the will of developing their potential.

**Table 7:** Motivational variable “Extrinsic”

Variable	Questions	Question Average	Question Standard Deviation	Question Variation Coefficient	Variable Average	Variable Standard Deviation	Variable Variation Coefficient
Extrinsic	1	4.05	1.42	35.06%	3.92	1.36	34.63%
	2	3.80	1.30	34.21%			

**Source:** Data from the research (2018)

The motivational variable “extrinsic” represented the smallest motivational aspect for volunteers who participated in the Formula 1 Grand Prix. This variable is constituted by two questions of the research survey and is related to the acquisition of licensed material and products, as well as free tickets to events. According to the perspective of the theoretical model developed by Bang and Chelladurai (2009), this variable is the most egotistical among the six identified variables.

This variable presented an average of 3.92, a standard deviation of 1.36, and a variation coefficient of 34.63%. Thus, it is possible to conclude that those who volunteered in the Olympics did not have egotistical motivations. The fact that the volunteers had a high-income average might indicate that receiving sports material or tickets is not relevant for their participation in the event.

A study by Hallmann and Harms (2012) in sports events in Germany has shown similar results to this research since the motivational variable “extrinsic” represented the aspect that was less referred by the volunteers.

**Table 8:** Motivational variable “Love of the sport”

Variable	Questions	Question Average	Question Standard Deviation	Question Variation Coefficient	Variable Average	Variable Standard Deviation	Variable Variation Coefficient
Love of the sport	1	8.30	1.38	16.62%	8.13	1.30	15.99%
	2	7.95	1.25	15.72%			
	3	7.83	1.18	15.07%			
	4	8.45	1.40	16.56%			

**Source:** Data from the research (2018)

The data presented in Table 8 shows that this variable represented the biggest motivational factor for the volunteers who worked in the Formula 1 event. This motivational variable shows an average of 8.13, a standard deviation of 1.30, and a variation coefficient of 15.99%. Thus, it is considered that the sample has a good average, low data dispersion and high reliability, characterizing the motivational variable “love of the sport” as the most relevant for the volunteers of Brazil Formula 1 Grand Prix, which diverges from several studies, such as: Doherty (2005), Koutrou (2014), Van de Roest (2015), Tamazo and Luck (2015), and Pereira e Cavalcante (2018). These studies indicated the motivational variable “values expression”, which has an altruistic character, as the main motivating factor for those who volunteer in sports events.

It is perceptible that Formula 1 represents a sports event that mainly involves men, which can be demonstrated by the sociodemographic profile of the research. Automobile events attract many adepts who tend to perform volunteer activities due to identifying with the sport, instead of doing it due to altruistic reasons.

### **Analysis of the sociodemographic data and the difference between statistically significant groups.**

In this item, there will be an approach to the aspects related to the difference between statistically significant groups and the sociodemographic data presented in the research instrument that is validated by the theoretical model developed by Bang and Chelladurai (2009). Followingly, the difference between gender and the variable “I love being involved in sports activities (sport 4)” will be explored”.

**Table 9:** Difference between groups of the gender x “sport 4”

Difference between groups	Women average	Men average
Gender x Sport 4	7.2	9.3

**Source:** Data from the research (2018)

The data presented in Table 9 and the aspects related to the variable “sport 4” lead to the conclusion that, on average, men are more propense than women to volunteer in Formula 1 events, due to their love to being involved in that competition. The data is coherent with the Formula 1 volunteers’ profile since 85% were male and 15% were female. A study by Nichols *et al.* (2014) states that men are more propense than women to participate as volunteers in automobile sorts.

Considering the presented data, it is possible to subsidize the automobile events managers to focus a bigger portion of their effort in recruiting men for those events or in trying to understand why the adhesion of women is so low for events with characteristics similar to Formula 1.

**Table 10:** Difference between groups of the variable age x “interpersonal 1”

Difference between groups	18–28 years	29-39 years	above 50 years
Age x “Interpersonal 1”	6.2	7.0	8.3

**Source:** Data from the research (2018)

The results presented in Table 10 establish a relation between the volunteers’ age and the variable “interpersonal 1”. Older volunteers tend to have a higher disposition to interact with people during the development of their voluntary activity in Formula 1.

According to Van Der Roest (2015), older volunteers substantially contribute to the interaction processes and planning activities in sports events. In this sense, older volunteers would better serve performing strategic actions, instead of operational actions.

**Table 11:** Difference between groups of the variable age x “values 5”

Difference between groups	18–28 years	29-39 years	above 50 years
Age x “values 5”	4.5	5.5	7.0

**Source:** Data from the research (2018)

The variable “values 5” refers to the help that volunteers offer to create a better society. In this sense, the results presented in Table 11 show that older volunteers are more likely to volunteer in order to help to make the event a success.

According to Schlessinger *et al.* (2015), due to their life experience, older volunteers offer an important contribution to the development of volunteer activities in sports.

**Table 12:** Difference between groups of the variable academic level x “sport 1”

Difference between groups	Secondary education	Post-graduation
Academic level x “sport 1”	7.8	6.0

**Source:** Data from the research (2018)

The variable “sport 1” shows aspects related to liking any sports event. It is possible to conclude, considering the results above presented, that the volunteers with an average academic level (secondary education) are more propense to like any sport than post-graduate volunteers. Since post-graduate volunteers represent 45% of the total volunteers, while secondary education volunteers are only 4% of the total, it is possible to conclude that post-graduate volunteers have a higher correlation with the Formula 1 event than the volunteers who had an average academic level. This result might influence the fact that the main motivational factor that was identified in this research is the construct “love of the sport”.

A study by Wang and Wu (2014) noticed that there is a strong relation between volunteers who have concluded a post-graduation and a specific sports event that took place in Shanghai. In that sense, it is possible to observe that the volunteers who have a post-graduation are motivated due to having a higher affinity with a specific sports event. With such information in mind, the recruit and selection of volunteers for sports events should prioritize volunteers with the above-mentioned characteristics.

**Table 13:** Difference between groups of the variable income x “values expression 5”

Difference between groups	3–6 wages	7-10 wages
Income x values 5	8.0	6.8

**Source:** Data from the research (2018)

Considering the presented data and taking the variable “values expression 5” as a reference, it is possible to conclude that, on average, those who volunteer in sports and have a lower income are more likely to state that voluntary work helps to create a better society.

Besides contributing to a fairer society, volunteers use voluntary work as a way to improve their curriculum, in order to get better jobs (REVISTA BRASIL, 2015). This result shows that it would be more advantageous for sports events managers to recruit volunteers who have a lower income since they see the voluntary work as a way to help to create a better society, which is not as truthful while considering the volunteers whose income is between 7 and 10 minimum wages.

## Final considerations

This research study attempted to identify the motivational factors of eventual volunteers who operated in the Formula 1 Grand Prix, in Brazil. Knowledge about voluntary motivation is essential in the processes of recruiting and selecting volunteers for sports events. The managers who are responsible for planning and executing those events should try to identify a match between the interests and skills of the volunteers and activities that are assigned to them.

The results, even if they are impacted by the limitations inherent to quantitative research, when it relates to the generalization of the results for other types of sporting events, are encouraging. And here will be discussed considering the empirical and academic context.

In the empirical context, some findings based on the results achieved can assist the managers of car racing events. The first finding indicates that men are more likely to act as volunteers in this sporting event than women. Another is that most volunteers have high income and high level of education. One more is that volunteers with lower education levels tend to volunteer in any sports events. Ultimately, those with lower incomes are more likely to affirm that voluntary work contributes to a better society. So recruiting men, with higher levels of education and income can have better results than other groups with different characteristics. It is acknowledged that this managerial suggestion may not apply to other kind of sporting events.

State-of-the-art in the motivations of sporting events volunteers indicates that there is a mix of motivations. Doherty (2005), Koutrou (2014), Van de Roest (2015), Tamazo and Luck (2015) and Pereira and Cavalcante (2018) indicated that the motivations are fragmented in career-related issues, altruistic values and the construction of interpersonal relationships.

However, in this article, authors believe they have obtained a higher level of clarity, when they consider sporting events of automobile racing. The main motivational aspect observed in the responses of the volunteers who worked in the Brazilian Grand Prix was the variable "love for Sport", which demonstrates a strong identification with this kind of sports event.

Also considering the theoretical context, this study clarified a question related to genres. Several studies assume that this is an essentially masculine field (Hallman and Harms, 2012; Tamazo and Luck, 2015; Bang, 2008) However, there are no specific data for car racing sporting events. Thus, the results obtained in this study contribute to the perception of a higher predominance of men.

The main limitation of this research is related to the difficulty to identify the universe of volunteers who performed activities in Formula 1 during the year 2018. Although this study applied two hundred surveys, the representativity of the research universe is unknown. Another limitation is related to the weather and the distances between the entry gates that were used by volunteers in the Interlagos circuit. Between the 9<sup>th</sup> and the 11<sup>th</sup> of November, 2018, which was when the research took place, it rained heavily in the local of the event, which made it harder to have access to more volunteers and to apply the surveys.

It is worth noting that, on theoretical perspective, was evidenced in that the volunteers who work in events that have only one sport modality, such as Formula 1, tend to contract greater bond with the event than those who work in sports events with more than one modality, like the Olympic Games. In this context emerges a suggestion for future studies.

It is recommended that other researches reach volunteers from events with only one specific modality, such as the Brazilian football Championship, Brazilian volleyball Championship and Brazilian Judo Championship, in order to understand the hypothesis that, the more specific the sporting event, the greater will be the bond of the volunteer with the respective sport.

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