

# FROM MOTIVATION TO PROFILE: AN INCLUSIVE APPROACH TO RUNNERS OF THE SALAMANCA HALF MARATHON

## DE LA MOTIVACIÓN AL PERFIL: UNA APROXIMACIÓN INCLUSIVA A LOS CORREDORES DE LA MEDIA MARATÓN DE SALAMANCA

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### Abstract

Participation in long-distance sporting events has experienced sustained growth over recent decades, attracting a diverse range of runner profiles. Existing literature identifies both intrinsic motivations, such as well-being and self-efficacy, and extrinsic motivations, including social interaction and recognition. This study pursues two primary objectives: first, to identify a motivational structure based on four key dimensions: sport-related hedonism, socialization, competition, and inclusion; and second, to segment participants according to this structure. A quantitative methodology was used, based on a self-completed questionnaire with 646 valid responses and a subsequent exploratory factor analysis and cluster analysis. The findings reveal a consistent four-factor motivational structure, of which three dimensions were significant for segmentation. This enabled the identification of three distinct runner profiles: Inclusive and Recreational Runners, Hedonistic and Social runners, and Emotionally Independent Runners. The discussion highlights that emotional, social, and inclusive motivations exert a greater influence than competitive motives. The study concludes that understanding these motivational drivers can inform the design of more inclusive, satisfying, and personalized events. Practical implications are discussed for event organizers, sports clubs, and public administrators.

**Keywords:** Half marathon, motivation, participation, segmentation.

### Resumen

La participación en eventos deportivos de larga distancia ha crecido de forma sostenida en las últimas décadas, atrayendo a perfiles diversos de corredores. La literatura identifica tanto motivaciones intrínsecas, como el bienestar y la autoeficacia, como motivaciones extrínsecas, como la socialización o el reconocimiento. Este estudio se plantea dos objetivos: identificar una estructura motivacional basada en cuatro dimensiones principales: hedonismo deportivo, socialización, competición e inclusión; y segmentar a los participantes en función de dicha estructura. Se utilizó una metodología cuantitativa basada en cuestionario autoadministrado recogido a 646 casos válidos, análisis factorial exploratorio y análisis clúster. Los resultados muestran una estructura consistente de cuatro factores motivacionales, de los cuales tres fueron significativos para la segmentación, permitiendo identificar tres perfiles diferenciados de corredores: Corredores inclusivos y recreativos, Corredores hedonistas y socializadores, y Corredores emocionales independientes. La discusión evidencia que las motivaciones emocionales, sociales e inclusivas son más determinantes que las competitivas. Se concluye que comprender estas motivaciones permite diseñar eventos más inclusivos, satisfactorios y personalizados, y se proponen implicaciones prácticas para organizadores, clubes y administraciones.

**Palabras clave:** Media maratón, motivación, participación, segmentación.

## Introduction

Participation in long-distance sporting events, such as half marathons, has experienced sustained growth in recent decades, attracting a wide variety of runner profiles and generating increasing interest within the fields of social sciences and sport studies. This phenomenon can be attributed to a multiplicity of factors that motivate individuals to engage in such events. Research in this area has sought to identify and classify these motivational drivers, acknowledging that runners do not conform to a single behavioral pattern but rather exhibit a range of motivations, spanning personal or emotional reasons to social or institutional influences.

Several studies have proposed multidimensional frameworks to explain motivation in mass participation races. The literature highlights both intrinsic motivations, such as self-efficacy and psychological well-being, and extrinsic motivations, including social recognition or affiliation with a club (Pereira et al., 2021; Lamont & Kennelly, 2012). These motivations may be mediated by individual variables (age, gender, prior experience) as well as by the type of event or the sociocultural context in which it takes place (León-Guereño et al., 2021; Barrios-Duarte & Cardoso-Pérez, 2002). In this regard, progress has been made in the development of measurement instruments and the identification of motivational typologies, some of which incorporate dimensions such as sport-related hedonism, socialization, competition, and inclusivity (Ramos-Ruiz et al., 2024).

Despite these advances, significant challenges remain. On the one hand, there is a continuing need to validate motivational models across diverse geographical and cultural contexts, given that much of the existing evidence originates from urban environments or predominantly English-speaking countries. On the other hand, further exploration is required regarding the practical utility of these motivational dimensions for segmenting participants into meaningful and operational groups. Motivational segmentation enables organizers to tailor management, communication, and engagement strategies to specific runner profiles, thereby optimizing resource allocation and enhancing participant experience (Parra-Camacho et al., 2019; Silva & Sobreiro, 2022).

In this context, the present study examines the motivational structure underlying participation in half marathon events and analyses how these dimensions can serve as a basis for identifying distinct runner profiles. This research aligns with the growing academic interest in understanding participant behavior from a multidimensional perspective, with the aim of providing empirical evidence that is relevant both in academic research and in organizational practice

## Literature Review

### Motivation to Participate in Running Events

There has been an increasing interest in exploring the motivations underlying participation in running events (Ramos-Ruiz et al., 2024). This has given rise to a substantial body of scientific literature, as well as the development of instruments aimed at measuring such motivations. For instance, Zhou et al. (2024) identify six dimensions: self-perception, personal determination, physical condition, emotion, skills, and capacity. Another notable contribution is provided by Parra-Camacho et al. (2019), who, beyond personal factors, incorporate social and material elements. Their study identifies the following motivational dimensions: physical-psychological motives, social interest in participating in running events, time occupation and social recognition, competitive motives, and material reasons linked to prizes or race kits. Lastly, the study by Yağmur and Demirel (2024) departs from the traditional approach by adding environmental motivation and spiritual regeneration.

Although there is no consensus on the exact number of motivational dimensions, it is possible to classify them into intrinsic motivations (Pereira et al., 2021) and extrinsic motivations (Lamont & Kennelly, 2012). Examples of intrinsic motivations include self-esteem, self-efficacy, health, and well-being (Zhou et al., 2024; Koper et al., 2024; Partyka & Waśkiewicz, 2024). In the case of extrinsic motivations, socialization predominates, followed by factors such as prizes, participation in sports clubs, tourism, among others (Hrušová et al., 2024; An & Yamashita, 2024; Starzak & Sas-Nowosielski, 2019; Parra-Camacho et al., 2019). In this context, the Self-Determination Theory (SDT), proposed by Ryan and Deci (2017), posits that individuals' motivations exist along a continuum ranging from amotivation to intrinsic motivation. That is, a process of assimilation occurs whereby extrinsic motivations can be progressively internalized by the individual. Another significant contribution is offered by Ramos-Ruiz et al. (2024), who, through Exploratory Factor Analysis (EFA), identified five

principal motivational factors: inclusion, virtual interaction, socialization, sport-related hedonism, and competitiveness. This structure accounts for over 62 % of the total variance in participants' motivations, suggesting that these factors accurately capture the reasons for participation in sporting events such as the Córdoba Half Marathon in Spain.

### Sport-Related Hedonism

Sport-related hedonism is understood as the pursuit of pleasure and personal satisfaction through physical activity, where motivation arises from the inherent enjoyment of the practice itself (Ramos-Ruiz et al., 2024). Enjoyment is a key factor in promoting continued engagement in physical activity (Crofts et al., 2012; Crossman et al., 2024), as it is associated with significant improvements in mood and psychological well-being (Pereira et al., 2021), as well as aiding in the prevention of burnout (Krippel & Ziemainz, 2010).

### Competition

Competition constitutes a primary source of motivation for many runners, although its significance varies considerably depending on the athlete's profile. In this regard, the study by León-Guereño et al. (2021) is particularly noteworthy, as it highlights that with increasing age, the importance attributed to competition and external recognition diminishes, while health, self-esteem, and overall well-being emerge as the predominant motivational factors for running. In addition to age-related variations, motivational differences also arise in relation to gender. In this context, the findings of Malchrowicz-Moško et al. (2020) are especially relevant, indicating that female runners are primarily driven by motives related to self-esteem, psychological coping, and a sense of life purpose. Conversely, male runners tend to be more strongly motivated by competition and personal achievement (Nikolaidis et al., 2019; Malchrowicz-Moško et al., 2020; León-Guereño et al., 2021). However, this divergence in motivational orientation tends to diminish in longer distance events, such as ultramarathons, where performance differences between genders are substantially reduced. Indeed, Waśkiewicz et al. (2019) emphasize that ultramarathon runners often orient their motivations towards a sense of personal purpose and social affiliation, progressively relegating competition to a secondary role as their experience increases and their emotional connection to the sport deepens. In a similar vein, the study by Akbaş & Waśkiewicz (2025) underscores that participants' motivation is closely linked to their level of experience: less experienced runners are primarily motivated by external recognition, whereas more experienced athletes are driven by self-fulfillment.

However, such commitment to sport may also yield negative consequences, particularly when it manifests as a form of exercise addiction. In this regard, the analysis conducted by Ruiz-Juan et al. (2019) is especially pertinent, as it warns that negative exercise addiction tends to intensify when athletes set highly demanding personal goals without possessing adequate emotional regulation. This tendency is especially evident among individuals whose extreme dedication is primarily focused on health and achievement (Zarauz & Ruiz-Juan, 2016). Along similar lines, Nogueira et al. (2018) emphasize that this form of dependence, in addition to being fuelled by high levels of commitment and a continuous pursuit of emotional well-being, is further reinforced by a persistent orientation towards self-fulfillment. Such a dynamic may ultimately transform an initially healthy practice into a source of psychological stress and dependency. This perspective is further supported by the study of Gapin & Petruzzello (2011), who document that runners exhibiting a strong compulsion to train may experience heightened levels of distress and anxiety when forced to miss training sessions.

In the context of mass participation running events, recent studies suggest that competitive motives often play a secondary role compared to social, emotional, and community related drivers. Research has shown that many recreational runners deliberately distance themselves from performance-oriented norms, emphasizing enjoyment, belonging, and autonomy instead (King & Morgan, 2025). Similarly, event attachment has been found to arise primarily from collective and social experiences rather than from competitive achievement (van Vuuren, 2025), while large-scale community events are increasingly valued for their inclusive and accessible character over performance outcomes (Robertson-Wilson et al., 2024). Other evidence highlights that runners derive pride and motivation from emotional support provided by the crowd, underscoring the primacy of affective experiences over competitive goals (Gibbs-Nicholls et al., 2022). Ethnographic work in ultra-endurance contexts further confirms that participation is often guided by intimate and existential motives, with competition progressively relegated to a secondary role (Fernández & Cachán-Cruz, 2023). In addition, longitudinal analyses indicate that competitive drive may be more salient in the early stages of a runner's career but tends to give way over time to

health-related, social, and identity-based motives, reflecting both individual trajectories and broader cultural shifts toward mass participation (Liu et al., 2025).

### Socialization

Socialization emerges as the third most frequently addressed dimension in current research on athletic motivation. One illustrative example is the study conducted by Crossman et al. (2024), which highlights how adult participation in sport is strongly influenced by social factors, such as support from family and friends. In a similar vein, Brown et al. (2018) underscore the significance of camaraderie and a sense of tribe as essential elements for sustaining long-term athletic engagement. As inherently social beings, humans find in large-scale sporting events an ideal context for fulfilling this fundamental need (Chen et al., 2021). This social dimension is particularly salient among women, who often prioritize psychological benefits, such as self-esteem and a sense of purpose, over purely competitive achievements (Starzak & Sas-Nowosielski, 2019). Likewise, ultramarathon runners are known to cultivate their social identity through shared, authentic experiences, thereby reinforcing group cohesion and a sense of belonging (Kazimierczak et al., 2020).

The impact of this social dimension is significantly amplified when participants are affiliated with a sports club, which generates positive effects both in terms of performance and overall satisfaction with the sporting experience. A clear example is provided by Burke (2024), who reports that membership in a running club can lead to substantial improvements in marathon performance, with reductions of up to 40 minutes in finishing times among younger runners. Similarly, Tian et al. (2020) note that belonging to a running group significantly enhances leisure satisfaction. For many novice runners, joining a group or club represents a pivotal step towards establishing a regular exercise routine (Malchrowicz-Moško et al., 2020). In the same direction, Wegner et al. (2019) demonstrate how initiatives such as Black Girls Run! facilitate the transition from non-runner to runner by offering organizational support and fostering a strong sense of belonging.

The effects of club membership extend across various life stages and types of personal relationships. For instance, runners who share their practice with their partners tend to exhibit higher levels of social affiliation, as reported by Malchrowicz-Moško and Waśkiewicz (2020). Even single individuals over the age of 35 have found ultramarathon events to be crucial spaces for building social connections and nurturing a sense of belonging (Malchrowicz-Moško & Waśkiewicz, 2020). In this context, belonging to communities such as ultramarathon clubs not only enhances runners' commitment but also strengthens their athletic identity, transforming them into active and engaged members of the sporting community (Partyka & Waśkiewicz, 2024).

### Inclusivity

Inclusivity in sporting events, traditionally associated with charitable initiatives (Filo et al., 2011), has evolved into a broader and more diverse model. At present, inclusion encompasses a wide range of categories, including individuals with disabilities (Koper et al., 2024), different age groups (Crossman et al., 2024), specific sociocultural contexts (Barrios-Duarte & Cardoso-Pérez, 2002), and gender-related issues (Larumbe-Zabala et al., 2019), among others. The increasing prevalence of such events has led to a corresponding growth in academic research on the topic. A notable example is the study by Koper et al. (2024), which identifies self-esteem, psychological coping, and health as the principal motivational factors for runners with disabilities, thereby highlighting the need to design sporting environments that are responsive to their specific needs (Qiu et al., 2020). Age has also emerged as a critical axis of inclusion, with evidence that interventions targeting age stereotypes can improve both physical activity levels and self-perceptions of ageing (Knight et al., 2022). More broadly, social inclusion has been conceptualized as a multidimensional construct in leisure-time physical activity, with recent work proposing validated scales to measure its underlying factors among older adults (Gholipoor et al., 2025). In parallel, inclusion has been framed as a fundamental motivational drive in itself, beyond specific sociodemographic variables (Kanterman et al., 2022). Recent studies on community-based sport have also emphasized the role of inclusivity in ensuring participation opportunities for people with long-term health conditions (Quirk & Haake, 2019). Taken together, these contributions indicate that inclusivity is an organizational principle, as well as a core motivational factor, whose empirical validation in the context of half marathons represents an original contribution of the present study.

## Participant Segmentation in Sporting Events

Far from constituting a homogeneous group, participants in sporting events display highly diverse motivations, behaviors, and characteristics, even within the same event. This diversity has prompted numerous studies that propose classifications based on sociodemographic, economic, and psychological variables, among others. An example is the study by Parra-Camacho et al. (2019), who used cluster analysis to segment urban runners into three motivational profiles: enthusiasts, individual hedonists, and social hedonists, drawing upon both psychological and sociodemographic variables. Similarly, Silva and Sobreiro (2022) underscore that cluster analysis not only enables more accurate segmentation but also facilitates the design of targeted public policies. From an economic perspective, Rejón-Guardia et al. (2023) proposed a segmentation based on participation frequency and expenditure level, identifying more profitable and loyal participant groups. In relation to demographic variables such as age and gender, Partyka and Waśkiewicz (2024) found that both factors significantly influence the motivational orientation of endurance runners. These findings are reinforced by the work of Pereira et al. (2021), who report that experience, age, and gender meaningfully shape participation motives. The evolution of motivations over the runner's lifespan has also been explored in the literature. For instance, Gerasimuk et al. (2021) demonstrate that age plays a significant role in modulating participation motives, while factors such as parenthood tend to reduce competitive motivation among veteran runners (León-Guereño et al., 2021). These results align with those of Yan and Ayatullah (2021), who observe a discernible shift towards more intrinsic and personally meaningful motivations as runners gain experience.

Beyond sociodemographic and psychological factors, some theoretical frameworks interpret participation in running events as part of a broader leisure trajectory. Stebbins' (1982) concept of serious leisure highlights how leisure activities can evolve into enduring, identity-shaping practices. Building on this perspective, Getz & Andersson (2010; 2020) propose the notion of an event-tourist career trajectory, whereby runners progress through stages of involvement that transform their motivations, event preferences, and patterns of participation. More recently, Andersson & Getz (2020) introduced the dimension of specialization versus diversification, suggesting that amateur athletes may either focus on a single discipline or expand their engagement across multiple sports.

## Objectives

This study addresses the following research questions:

Research Question 1. Is it possible to identify a motivational structure for participation in half marathon events based on four dimensions: sport-related hedonism, socialization, competition, and the inclusive nature of the event?

Research Question 2. If such a four-dimensional motivational structure is identified, what participant profiles can be distinguished within the event?

## Methodology

### The Ciudad de Salamanca Half Marathon as a Case Study

Salamanca, declared a UNESCO World Heritage City in 1988, stands out for the richness of its historical and artistic heritage, as well as for its university, one of the oldest and most prestigious in Europe, whose influence has profoundly shaped the intellectual and cultural development of the city (García Malagón, 2024). Despite these credentials, Salamanca remains underrepresented in the academic literature regarding its positioning as a tourist destination and, more specifically, as a host city for sporting events.

Since 2012, the city has hosted the Ciudad de Salamanca Half Marathon, an event that has established itself as one of the most prominent in the regional sporting calendar. In its thirteenth edition, held on 2 March 2025, a total of 2,495 runners participated, of whom 1,625 came from outside the city. This reflects the growing interest in the event both locally and nationally, with a direct estimated economic impact exceeding 1.3 million euros (Ramos-Ruiz & Ferreira-Gomes, 2025). Regarding organizational design, the event also incorporates inclusive measures, as established in its official regulations. In addition to the standard male and female age categories (which extend to participants over 70 years of age), special categories are recognized for runners with auditory, visual, and intellectual disabilities, as well as for wheelchair participants

(Media Maratón de Salamanca, 2025). This organizational framework reinforces the relevance of analyzing participants' motivations in relation to the inclusive character of the event.

### Questionnaire Design

The data collection instrument underwent a preliminary validation phase through a pre-test, involving experts in sport management and exercise psychology, with the aim of ensuring item clarity and linguistic appropriateness. The questionnaire was structured into two main sections. The first section consisted of 18 items measured on a 7-point Likert scale, where 1 indicated "strongly disagree", 4 "neither agree nor disagree", and 7 "strongly agree". This section was designed to capture participants' motivations for taking part in the event.

The second section included categorical questions intended to gather information about the respondents' sociodemographic and sporting profiles (e.g. age, gender, educational level, income level, club affiliation, among others). The questionnaire used is presented in Table 1.

**Table 1**  
*Questionnaire*

| Code  | Item                                                                                           |
|-------|------------------------------------------------------------------------------------------------|
| MOT01 | To feel the pleasure of practising this sport.                                                 |
| MOT02 | To maintain or improve my physical condition.                                                  |
| MOT03 | Feeling proud to finish the race.                                                              |
| MOT04 | The emotions it gives me.                                                                      |
| MOT05 | To escape from my daily routine.                                                               |
| MOT06 | I am motivated by the fact that it is an inclusive event.                                      |
| MOT07 | I am motivated by the fact that it is an event accessible to people with functional diversity. |
| MOT08 | I am motivated by the fact that it promotes gender equality.                                   |
| MOT09 | I am motivated by the fact that runners of all ages participate.                               |
| MOT10 | For the prestige of this competition.                                                          |
| MOT11 | I want to improve my personal best.                                                            |
| MOT12 | I want to be better than other participants.                                                   |
| MOT13 | I want to compete with colleagues from my athletics club.                                      |
| MOT14 | To obtain an optimal result based on my preparation for the event.                             |
| MOT15 | To win the competition.                                                                        |
| MOT16 | To meet people with similar sporting interests.                                                |
| MOT17 | Socialise before, during or after the event.                                                   |
| MOT18 | To be able to talk to my friends or family about this event over time.                         |
| MOT19 | To make others proud of me.                                                                    |

### Sample Collection

Data were collected through a self-administered questionnaire distributed electronically via the email addresses provided by participants at the time of registration. Dissemination was managed directly by the organizing entity of the Ciudad de Salamanca Half Marathon, thereby ensuring access to the entire pool of registrants. The questionnaire remained active for ten days following the event, allowing participants to respond within a time frame closely aligned with their experience. A total of 646 fully completed and valid responses were obtained, representing a response rate exceeding 25%, which ensures the representativeness of the sample.

### Data Processing

Data analysis was conducted using SPSS statistical software, version 28.0. In the initial phase, a general description of the sample was performed, considering variables such as gender, age, educational attainment, and sporting affiliation,

among others. Subsequently, the distribution of items on the Likert-type scale was examined using the Kolmogorov-Smirnov test (Kolmogorov, 1933; Smirnov, 1948) to assess the normality of the data. To evaluate the internal consistency of the questionnaire, Cronbach's alpha coefficient was calculated (Cronbach, 1951), with values equal to or above 0.70 deemed acceptable, following the criteria of Nunnally and Bernstein (1994).

To address Research Question 1 (RQ1), an Exploratory Factor Analysis (EFA) was conducted. This procedure is employed to identify underlying structures (Kahn, 2006; Pérez & Medrano, 2010) and has previously been applied in studies examining motivations for participating in half marathons (Ramos-Ruiz et al., 2024). To ensure sample adequacy, the criterion proposed by Nunnally and Bernstein (1994) was followed, recommending a minimum of 10 valid cases per item. Sampling adequacy was verified using the Kaiser-Meyer-Olkin (KMO) index, requiring a minimum value of 0.70 (Hair et al., 2020), and a significance level below 0.05 in Bartlett's test of sphericity (Everitt & Wykes, 2011). Only factors with eigenvalues greater than 1 were retained (Kaiser, 1960; Kahn, 2006), and a minimum factor loading of 0.40 was required for each item (Glutting, 2002). Additionally, a total variance explained above 50% was established as a quality criterion (Merenda, 1997).

To address Research Question 2 (RQ2), a non-hierarchical cluster analysis (k-means) was performed, an analytical technique frequently employed to segment populations (MacQueen, 1967) and previously used effectively in research involving participants in sporting events (Funk & Brurun, 2007; Kruger & Saayman, 2013; Getz & Andersson, 2010). This method enables the grouping of participants based on the similarity of their motivational scores, minimizing the internal variance within each group. Euclidean distance was used as the proximity measure, which is standard in cluster analysis involving numerical variables (Tan et al., 2019). The determination of the optimal number of clusters was informed by both theoretical and empirical criteria. Although techniques such as the elbow method (Kodinariya & Makwana, 2013) and the silhouette coefficient (Rousseeuw, 1987) are available, in this study the number of clusters was set at  $K = 3$  based on: (1) the stability of cluster centroids after multiple iterations, thereby avoiding bias from random initialization (Lloyd, 1982); and (2) the interpretability and practical utility of the resulting groups for subsequent analyses (Hair et al., 2020).

## Results

The sample collected was predominantly male (77.6 %), with a high educational level (65.5 % holding university degrees) and a predominant age range between 31 and 45 years (42.9 %). A total of 51.5 % reside outside Salamanca. The majority are employed in occupations unrelated to physical activity (70.7 %) and report a medium or upper-middle income level (53.3 % and 24.1 %, respectively). Table 2 provides a detailed overview of the sample.

**Table 2**

*Sociodemographic Profile of the Sample*

| Gender                       |       | Resident in Salamanca |       |
|------------------------------|-------|-----------------------|-------|
| Male                         | 77.6% | Yes                   | 48.5% |
| Female                       | 22.4% | No                    | 51.5% |
| Level of Education           |       | Age                   |       |
| University graduate          | 65.5% | 18-30 years old       | 15.8% |
| University student           | 4.6%  | 31-45 years old       | 42.9% |
| Other status                 | 29.9% | Over 45 years old     | 41.3% |
| Occupation                   |       | Income Level          |       |
| Requires fitness             | 18.2% | Very high income      | 0.3%  |
| Does not require             | 70.7% | High income           | 3.6%  |
| Student                      | 6.2%  | Upper-middle income   | 24.1% |
| Neither studying nor working | 2.3%  | Middle income         | 53.3% |
| Retired                      | 2.6%  | Lower-middle income   | 13.6% |
|                              |       | Low income            | 3.9%  |
|                              |       | Very low income       | 1.2%  |

The items with the highest mean scores were MOT01, "To experience the pleasure of practising this sport," with a score of 6.64; MOT03, "To feel proud of finishing the race," with 6.63; and MOT04, "The emotions it evokes in me," with 6.57. This reflects a predominantly emotional, hedonistic, and social motivation. Conversely, the lowest scores were recorded for

MOT12, “I want to be better than other participants,” with 3.44, and MOT13, “To compete with members of my athletics club,” with 3.47, indicating a limited influence of competitive motivations. The mean and standard deviation for each item is presented in Table 3.

**Table 3**  
*Descriptive Statistics of the Sample*

| Items                    | Mean | S.D.  | Item                 | Mean | D.T.  |
|--------------------------|------|-------|----------------------|------|-------|
| <b>Sporting hedonism</b> |      |       | <b>Inclusion</b>     |      |       |
| MOT01                    | 6.64 | 0.733 | MOT06                | 5.83 | 1.564 |
| MOT02                    | 6.53 | 0.786 | MOT07                | 6.00 | 1.451 |
| MOT03                    | 6.63 | 0.851 | MOT08                | 5.84 | 1.671 |
| MOT04                    | 6.57 | 0.809 | MOT09                | 6.44 | 1.116 |
|                          |      |       | MOT10                | 5.71 | 1.415 |
| <b>Competition</b>       |      |       | <b>Socialization</b> |      |       |
| MOT11                    | 5.23 | 1.865 | MOT16                | 4.75 | 2.01  |
| MOT12                    | 3.44 | 2.041 | MOT17                | 5.17 | 1.912 |
| MOT13                    | 3.47 | 2.356 | MOT18                | 5.58 | 1.625 |
| MOT14                    | 5.81 | 1.545 | MOT19                | 4.78 | 2.026 |

The results of the Exploratory Factor Analysis (EFA) enabled the identification of a four-dimensional motivational structure for participation in half marathon events, consistent with prior literature. Items MOT05 and MOT15 were excluded from the analysis due to failure to meet validation criteria. The Kaiser-Meyer-Olkin (KMO) measure was 0.868, with a Chi-square value of 5369.923, 136 degrees of freedom, and a p-value of 0.000. The model demonstrated adequate internal consistency (overall  $\alpha = 0.883$ ) and explained 64.72 % of the total variance. Each factor represents a distinct theoretical dimension.

Factor 1 corresponds to the inclusive nature of the event. It encompasses items related to accessibility, equality, inclusion, and participant diversity (MOT06 to MOT10). This dimension reflects the value runners place on open, integrative participation with institutional recognition.

Factor 2 relates to socialization. It groups items associated with social interaction and the relational dimension of the event (MOT16 to MOT19). This includes aspects such as meeting like-minded individuals, sharing the experience, socializing during the event, and feeling appreciated by one's surroundings. This dimension highlights the collective and belonging components that motivate many runners.

Factor 3 pertains to sporting hedonism. It integrates items linked to emotional enjoyment, positive personal experience, and pride in participation (MOT01 to MOT04). It represents an intrinsic motivation centered on the pleasure of running, the emotions it evokes, and personal satisfaction upon completing the challenge.

Factor 4 corresponds to competition. It comprises items related to performance improvement and comparison with other runners (MOT11 to MOT14). This includes motives such as surpassing personal records, standing out among other participants, or competing alongside club teammates. This dimension reflects a motivation oriented towards achievement and sporting performance.

Therefore, Research Question 1 (RQ1) is answered affirmatively, confirming that it is possible to identify a motivational structure for participation in half marathon events based on four distinct dimensions: inclusion, socialization, sporting hedonism, and competition. This structure has demonstrated internal coherence, statistical validity, and consistency with previous theoretical frameworks, enabling the use of these factors as a foundation for subsequent segmentation analyses and the design of tailored strategies for different runner profiles.

Table 4 summarizes the EFA results and the ANOVA table from the cluster analysis.

It is evident that three of the four factors identified through the EFA exhibit statistically significant differences among participant groups, thereby confirming their utility for segmentation purposes. Specifically, the factors related to the inclusive nature of the event (F1), socialization (F2), and sporting hedonism (F3) yielded p-values below 0.001, indicating a significant contribution to the differentiation of motivational profiles. In contrast, Factor 4, associated with competitive motivations,

did not reach statistical significance ( $p = 0.616$ ), suggesting that this dimension is not a determining factor when segmenting runners based on their motivational patterns. These findings reinforce the relevance of emotional, social, and inclusive motivations as the main explanatory axes of participant behavior in this type of event.

**Table 4**

*Rotated Component Matrix and Cluster Analysis ANOVA*

| Factors | Items | EFA  |      |       |      | Cluster Analysis |       |         |        |
|---------|-------|------|------|-------|------|------------------|-------|---------|--------|
|         |       | (E1) | (E2) | (E3)  | (E4) | (C1)             | (C2)  | (C3)    | (C4)   |
| F1      | MOT07 | .880 | 6.23 | 20.32 | .88  | 204.712          | 0.366 | 558.759 | < .001 |
|         | MOT06 | .851 |      |       |      |                  |       |         |        |
|         | MOT08 | .822 |      |       |      |                  |       |         |        |
|         | MOT09 | .757 |      |       |      |                  |       |         |        |
|         | MOT10 | .549 |      |       |      |                  |       |         |        |
| F2      | MOT17 | .816 | 1.95 | 15.91 | .82  | 24.413           | 0.927 | 26.33   | < .001 |
|         | MOT16 | .763 |      |       |      |                  |       |         |        |
|         | MOT18 | .732 |      |       |      |                  |       |         |        |
|         | MOT19 | .602 |      |       |      |                  |       |         |        |
| F3      | MOT04 | .803 | 1.69 | 15.03 | .78  | 181.107          | 0.440 | 411.8   | < .001 |
|         | MOT03 | .765 |      |       |      |                  |       |         |        |
|         | MOT01 | .732 |      |       |      |                  |       |         |        |
|         | MOT02 | .620 |      |       |      |                  |       |         |        |
| F4      | MOT11 | .774 | 1.14 | 13.47 | .71  | 0.485            | 1.002 | 0.484   | .616   |
|         | MOT12 | .757 |      |       |      |                  |       |         |        |
|         | MOT14 | .657 |      |       |      |                  |       |         |        |
|         | MOT13 | .546 |      |       |      |                  |       |         |        |

Note. (E1) Factor loading; (E2) Initial eigenvalue; (E3) Explained variance (%); (E4) Cronbach's alpha; (C1) Cluster mean squared; (C2) Mean squared error; (C3)  $F$  value; (C4)  $p$ -value

Finally, Table 5 presents the distribution of the sample across the different clusters identified, including the mean scores and standard deviations attributed to each motivational dimension, as well as the composition of each cluster in terms of sporting profile and gender, thereby addressing Research Question 2 (RQ2).

**Table 5**

*Participant Segmentation Based on the Motivational Structure*

| Elements for defining clusters |               |        | Group 1 (13.63%) |        | Group 2 (67.03%) |        | Group 3 (19.34%) |        |
|--------------------------------|---------------|--------|------------------|--------|------------------|--------|------------------|--------|
|                                |               |        | Mean             | SD     | Mean             | SD     | Mean             | SD     |
| Factors                        | Inclusion     |        | 5.43             | 0.735  | 6.82             | 0.286  | 6.61             | 0.436  |
|                                | Socialization |        | 3.82             | 1.464  | 5.57             | 1.295  | 4.20             | 1.410  |
|                                | Hedonism      |        | 5.19             | 1.213  | 6.53             | 0.576  | 3.95             | 0.985  |
|                                | Competition   |        | 3.96             | 1.368  | 4.73             | 1.421  | 4.02             | 1.339  |
| Profile<br>Socio-sporting      | Gender        | Male   |                  | 80.68% |                  | 74.44% |                  | 86.40% |
|                                |               | Female |                  | 19.32% |                  | 25.56% |                  | 13.60% |
|                                | Club          | Yes    |                  | 45.45% |                  | 42.26% |                  | 33.60% |
|                                |               | No     |                  | 54.55% |                  | 57.74% |                  | 66.40% |
|                                | Federate      | Yes    |                  | 15.91% |                  | 12.24% |                  | 9.60%  |
|                                |               | No     |                  | 84.09% |                  | 87.76% |                  | 90.40% |

Cluster 1 has been labelled Inclusive and Recreational Runners. This is the smallest group (13.63 %). These runners exhibit moderate levels of hedonism (5.19) and inclusiveness (5.43), but the lowest scores in socialization (3.82) and competition (3.96). The profile is predominantly male (80.68%), with an average level of sporting affiliation (45.45 % belong to clubs). These runners value open participation and personal enjoyment, with little interest in competition or social interaction. The average profile of this cluster thus prioritizes inclusivity and a calm enjoyment of the event, without a strong competitive or social focus.

Cluster 2 has been labelled Hedonistic and Social Runners. This is the largest group (67.03 %). These runners report the highest scores in hedonism (6.53), socialization (5.57), and inclusiveness (6.82), along with moderate competitive motivation (4.73). The profile is also predominantly male (74.44%), with a moderate level of sporting affiliation (42.26 % belong to clubs), although this cluster contains the highest proportion of federated runners (12.24 %). These participants are strongly motivated by emotional enjoyment, social interaction, and the inclusive nature of the event. The average profile of this cluster therefore combines a relational and inclusive orientation with a clearly marked recreational-emotional component.

Cluster 3 has been labelled Independent Emotional Runners. This group represents an intermediate size (19.34 %). These runners show high scores in hedonism (5.95) and inclusiveness (6.61), but lower scores in socialization (4.20) and competition (4.02). It is the group with the highest proportion of men (86.40 %) and the lowest levels of sporting affiliation, with 66.40 % not belonging to a club and 90.40 % not federated. These runners are primarily motivated by individual enjoyment and the inclusive values of the event, but participate in a more autonomous manner, with limited social or competitive orientation. The average profile of this cluster thus represents a runner who experiences the event as a personal emotional journey, from an independent and non-institutional perspective.

## Discussion

The results obtained allow us to affirmatively answer the first research question, as a motivational structure based on four distinct dimensions was identified: sport-related hedonism, socialization, competition, and the inclusive nature of the event. This structure aligns with previous studies that point to the existence of multiple motivational dimensions in running events (Parra-Camacho et al., 2019; Ramos-Ruiz et al., 2024; Zhou et al., 2024). The factorial model explained 64.7 % of the variance, which is comparable to that reported by Ramos-Ruiz et al. (2024), whose model accounted for 62 % of the variance. This suggests that the four identified dimensions adequately capture the motivations of runners in half-marathon events.

Regarding the specific dimensions, sport-related hedonism corresponds with what has been identified in the literature as an intrinsic motivation centered on the pleasure of physical activity (Pereira et al., 2021; Ramos-Ruiz et al., 2024). It has also been linked to benefits in well-being and long-term participation (Crofts et al., 2012; Crossman et al., 2024). The socialization dimension is consistent with studies highlighting the value of social relationships, the sense of belonging, and affiliation with sports groups as important motivational elements (Brown et al., 2018; Burke, 2024; Starzak & Sas-Nowosielski, 2019). The literature also suggests that this dimension is especially significant for women and less experienced runners (Malchrowicz-Moško & Waśkiewicz, 2020). The inclusive character of the event, identified as a clear motivational dimension, aligns with recent research emphasizing accessibility, participant diversity, and equality in sport (Koper et al., 2024; Crossman et al., 2024; Barrios-Duarte & Cardoso-Pérez, 2002). This dimension is in line with the inclusive motivation model proposed by Ramos-Ruiz et al. (2024).

In contrast, the competition dimension did not show significant differences in segmentation, suggesting a lower relevance for distinguishing motivational profiles. This finding is consistent with studies indicating that as age or experience increases, competitive motivation becomes less important compared to other motives (León-Guereño et al., 2021; Waśkiewicz et al., 2019; Akbaş & Waśkiewicz, 2025). It also aligns with research showing that women tend to prioritize other types of motivation (Malchrowicz-Moško et al., 2020).

The absence of competition as a significant factor in cluster differentiation also reflects broader trends in mass participation running events. Recent studies show that many recreational runners deliberately distance themselves from performance-oriented norms, prioritizing enjoyment, belonging, and autonomy instead (King & Morgan, 2025). Similarly, evidence indicates that attachment to running events is increasingly rooted in collective and social experiences rather than in competitive achievement (van Vuuren, 2025; Robertson-Wilson et al., 2024). Other research highlights the centrality of affective experiences, such as the motivational impact of crowd support, which often outweigh competitive goals (Gibbs-Nicholls et al., 2022). Ethnographic and longitudinal studies further confirm that while competitive drive may be salient in early stages of a runner's career, it tends to diminish over time, giving way to health-related, social, and identity-based motives (Fernández & Cachán-Cruz, 2023; Liu et al., 2025). Taken together, these findings suggest that the declining discriminant power of competition is consistent with the cultural shift of running toward inclusivity, emotional fulfilment, and community orientation.

With respect to the second research question, the cluster analysis results made it possible to identify three distinct runner profiles, confirming the validity of segmentation based on motivational dimensions. This segmentation strategy is consistent with other studies that apply clustering to classify participants according to their motives and sociodemographic characteristics (Parra-Camacho et al., 2019; Silva & Sobreiro, 2022; Rejón-Guardia et al., 2023).

The first group, Inclusive and Recreational Runners, includes participants who highly value the integrative nature of the event but do not display strong social or competitive components. This profile reflects the importance of inclusion and accessibility for certain groups of runners, as indicated by Koper et al. (2024) and Qiu et al. (2020). The second group, Hedonistic and Social Runners, comprises the majority of the sample and presents high levels of emotional enjoyment, inclusiveness, and social relationships. This profile is consistent with descriptions by Crossman et al. (2024), Burke (2024), and Tian et al. (2020), who highlight socialization and enjoyment as key aspects of participation. Lastly, the third group, Independent Emotional Runners, is characterized by emotional and inclusive motivation, but with low institutional affiliation and limited social or competitive orientation. This pattern can be linked to findings by Waśkiewicz et al. (2019) and Partyka & Waśkiewicz (2024), which show a shift towards personal and intrinsic motivations as individual practice becomes more established.

Taken together, these findings reinforce the usefulness of segmentation for understanding the diversity of profiles within the same event (Pereira et al., 2021; Yan & Ayatullah, 2021; Gerasimuk et al., 2021). They also support the notion that motivations evolve with experience, age, and personal context (León-Guereño et al., 2021; Akbaş & Waśkiewicz, 2025).

## Conclusions

### Theoretical Conclusion

This study confirms the existence of a motivational structure composed of four distinct dimensions: sport-related hedonism, socialization, competition, and the inclusive nature of the event. This typology aligns with previous models of motivation in long-distance runners and provides empirical evidence of its validity in the context of half-marathon events. Furthermore, the segmentation into three distinct motivational clusters reinforces the usefulness of a multidimensional approach to understanding the heterogeneity of participants. The findings support theories linking motivation to personal, social, and contextual factors, and highlight the importance of considering these elements in the analysis of sporting behavior. A key theoretical contribution of this research is the empirical validation of inclusivity as a core motivational dimension. While previous studies have often treated inclusion as an ancillary outcome or policy objective, this study demonstrates its structural role in shaping participation motives in half-marathon events, thereby advancing the theoretical development of this construct.

### Practical Implications

The study's results offer clear practical recommendations for various stakeholders. Event organizers should reinforce the inclusive character of races through actions that promote diversity and accessibility, incorporate elements that enhance emotional enjoyment, and facilitate social interaction spaces to address the main motivations identified. Additionally, communication and event design should be tailored according to the three motivational profiles identified. Sports clubs and associations can adapt their recruitment and retention strategies by prioritizing support for non-affiliated runners and fostering group identity. Public authorities and sponsoring entities should direct their support towards events with social and emotional impact, promote programmes that encourage participation from non-institutionalized runners, and employ segmented messaging based on dominant motivations. Finally, researchers and sports policy makers may apply the four-factor structure as an analytical framework in other contexts and investigate the evolution of motivations throughout the participants' sporting lifecycle.

### Limitations

This study presents limitations related to its cross-sectional design, which prevents the establishment of causal relationships, and its representativeness, as it focuses on a single event. Voluntary participation may have introduced self-selection bias, and the use of a self-administered questionnaire carries the risk of social desirability bias. Moreover, the cross-

sectional approach also limits the possibility of examining how motivational profiles might evolve over time, as suggested by frameworks such as the event-tourist career trajectory.

Another limitation is that the study focuses exclusively on participants' subjective perceptions of inclusion, as reported through the questionnaire. It does not, therefore, constitute a systematic assessment of the event's organizational features or the actual implementation of inclusive measures, which would require complementary analyses.

### Future Lines of Research

Future studies could apply this motivational model across different sporting and cultural contexts to test its external validity. It would be useful to employ partial least squares structural equation modelling (PLS-SEM) to analyze causal relationships between motivations and key variables such as satisfaction, event loyalty, or intention to recommend. Moreover, the use of advanced techniques such as artificial neural networks (ANN) could help identify non-linear patterns and enhance the predictive capacity of models. Researchers are also encouraged to explore the moderating effects of variables such as gender, age, race experience, or club membership, as well as to conduct longitudinal studies that analyze how motivations evolve over time. Integrating qualitative methods would further contribute to a deeper understanding of the subjective meaning's runners attach to their participation. In addition, longitudinal designs are recommended to examine whether runners transition between motivational profiles over time, in line with dynamic frameworks. Finally, qualitative approaches could trace runners' event-participation trajectories and illuminate the mechanisms underlying these transitions.

### Ethics Committee Statement

Ethical review and approval were waived for this study due to Ethics Committee of the University of Cordoba ([https://www.uco.es/investigacion/portal/images/documentos/comite-integridad/Reglamento\\_funcionamiento\\_comite.pdf](https://www.uco.es/investigacion/portal/images/documentos/comite-integridad/Reglamento_funcionamiento_comite.pdf), accessed on 26 July 2026).

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### Authors' Contribution

Conceptualization, J.E.R.-R. and T.L.-G.; Methodology, J.E.R.-R. and P.C.F.-G.; Software, J.E.R.-R. and D.A.-N.; Validation, J.E.R.-R., T.L.-G., P.C.F.-G. and D.A.-N.; Formal Analysis, J.E.R.-R. and D.A.-N.; Investigation, J.E.R.-R., P.C.F.-G. and D.A.-N.; Resources, T.L.-G. and P.C.F.-G.; Data Curation, J.E.R.-R. and D.A.-N.; Writing – Original Draft, J.E.R.-R.; Writing – Review & Editing, J.E.R.-R., T.L.-G., P.C.F.-G. and D.A.-N.; Visualization, J.E.R.-R. and D.A.-N.; Supervision, T.L.-G. and P.C.F.-G.; Project Administration, T.L.-G. All authors have read and agreed to the published version of the manuscript.

### Data Availability Statement

The original contributions presented in the study are included in the article, further inquiries can be directed to the corresponding author.

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