

## **A MOTIVATION-BASED TYPOLOGY OF TRIATHLETES**

Esmarie MYBURGH, Martinette KRUGER & Melville SAAYMAN  
*TREES (Tourism Research in Economic, Environs and Society), North West University,  
Potchefstroom, Republic of South Africa*

### **ABSTRACT**

*Ironman South Africa is the only Ironman on the African continent which takes place every April in Nelson Mandela Bay (Eastern Cape Province), with nearly 2 000 athletes participating. The purpose of this research was to use reasons for participation (motivation) to identify different market segments of triathletes participating in Ironman South Africa. A survey was conducted during registration of the event in 2013 and a total of 425 questionnaires were administered. A factor analysis found that triathletes were motivated by seven motivational factors including: challenge; inner vie; health and fitness; intrinsic achievement and control; event novelty; group affiliation and socialisation; and, lastly, respect and risk. Based on these motives, three distinct clusters of triathlon participants were identified: Devotees; Enthusiasts; and Aspirationalists. Although these participants have different motives, there are only significant differences in age and no other socio-demographic characteristics. This research narrowed the gap in current research related to triathlons and triathletes in the country, which is currently non-existent. The results show distinct segments of different athletes that can aid organisers and destinations to create products and services that complement the participants' motives. This can ultimately lead to a more competitive and sustainable event.*

**Key words:** Triathlons; Market segmentation; Factor analysis; Clustering; Motivation; Sport tourism; Ironman South Africa.

### **INTRODUCTION**

An Ironman triathlon is the longest form of triathlon and is a three-discipline event that consists of a 3.8km swim, a 180km cycle race followed by a 42.2km marathon run that triathletes need to complete in less than 17 hours (Grand'Maison, 2004). Annually, a large number of triathletes compete in 28 Ironman Triathlon races (WTC accredited), throughout the world to qualify for the Ironman world championship held in Kona, Hawaii (Ironman, 2013). Ironman South Africa is the only Ironman triathlon on the African continent and is held each year in Nelson Mandela Bay, Port Elizabeth, where it attracts approximately 2 000 triathletes and thousands of spectators (Ironman South Africa, 2013). The problem is that a limited number of studies have been done that looks specifically at the profile and motives of these triathletes (Bell & Howe, 1988; Croft *et al.*, 2007). Hawkins *et al.* (2007) emphasise that the multifaceted mind set of triathlon participants leads to a need for closer examination of triathlete motives as this is significant to better understand triathlon participants as a customer market segment. Therefore, there are a number of justifications for studying the motives of triathlon participants, which include developing and increasing adherence to

training programs, promoting similar events and increasing physical activity in general (Ogles & Masters, 2003; LaChausse, 2006; Markland & Ingledew, 2007; Brown *et al.*, 2009). Better understanding of the motives of participants would also lead to more effective marketing communications, thus, enhancing the event experience and knowing on what participant's base their decisions (Crompton & McKay, 1997; Kastenholz, 2005; Casper & Stellino, 2008).

A motive, according to Hawkins *et al.* (2007:130) is the "unobserved inner force that stimulates, compels and directs a certain behaviour response". Iso-Ahola (1982:230) defines a motive as: "an internal factor that arouse, directs and integrates a person's behaviour". Hudson (1999:7) states that "the concept of needs is central to most theories of motivation". Park *et al.* (2008) affirm that a person's desire to meet needs triggers a decision to engage in certain tourism behaviour that will meet these needs. When it comes to sport, there is a set of motivational factors established in anticipation of the fulfilment of the desired needs (Cassidy & Pegg, 2008). A distinction commonly made in sport is between intrinsic and extrinsic motives (Kruger & Saayman, 2013). Motives purely driven by the enjoyment of the task, for example for fun, for experiencing competence, achievement or self-determination, are referred to as intrinsic motives (Ryan & Deci, 2007). Extrinsic motives explain behaviour where external awards or contingencies are present, for example tangible benefits like trophies or social rewards like prestige (Vallerand & Losier, 1999; Deci & Ryan, 2000). These theories laid the foundation for other advanced motivation theories, particularly the self-determination theory (Deci & Ryan, 1985). The self-determination theory suggests that people are pushed to achieve goals through intrinsic and extrinsic pressure, and that self-determined (intrinsically motivated) behaviours will generally lead to more positive experiences (Vallerand & Losier, 1999).

Research on the motive for participation will not only benefit the event, but will also help participants adapt their training programmes, promote other triathlon events and increase physical activity by inspiring the general public and especially the youth (Ogles & Masters, 2003; Filo *et al.*, 2009). This type of study can also be beneficial for the shareholders that operate within the triathlon industry (Tribe Group, 2009). Firstly, it will help to deepen the understanding of the triathlete as a customer, because when the event organisers focus their attention on the triathletes' needs, they will be able to increase the demand for their triathlon products/services (Hawkins *et al.*, 2007). In addition, companies that manufacture triathlete equipment can increase their efficiency by incorporating the motives of participants into their advertising and promotional activities (Lovett, 2011). Streicher and Saayman (2010) remarked that research done in endurance sport, such as Ironman South Africa, will also help South African event organisers to secure more participants in the event; increase media coverage; boost the number of spectators watching the event live or via print and electronic media; gain more corporate sponsorships; ensure government support; create more jobs for private vendors at the event; and encourage an active lifestyle.

Currently, sport research consists of a few studies that examined triathletes from the perspective of what motivates them to compete (Case & Branch, 2001; Grand'Maison, 2004; Tribe Group, 2009; Smith, 2010; Lovett, 2011; Lamont & Kennelly, 2012; Wicker *et al.*, 2012). Case and Branch (2001:118-127) conducted a study on participants in an off-road triathlon and found that "to test one's skills against nature, others and myself" was the main

motive to participate for these triathletes. Grand'Maison (2004) identified the following motives for triathletes: push limits; improve physical fitness; mental conditions; challenge; goals and improvement; and sense of accomplishment. Tribe Group (2009) conducted an intensive study on triathletes and found personal challenge, a way to get or stay in shape, improve on previous results and to inspire others as their motives to participate. In a study conducted on elite female triathletes, Smith (2010) found challenge, love of the sport and togetherness as the main motives, while Lovett (2011) found that triathletes participating in sprint distance triathlons were motivated by affiliation, life meaning, personal goals, achievement, competition and self-esteem. Wicker *et al.* (2012) revealed socialisation, competition, well-being and love of the sport as the main motives of triathlon participants.

It is evident from the afore-mentioned results that each triathlon participant is motivated for different reasons and although there are corresponding motives within the sport, each event has a unique blend of participants. The results also show that there are variations of motives within the different distances of triathlons (sprint, Olympic, half-ironman and ironman). Distinctions can also be made between gender and level of competition (amateur vs. elite). Collectively, the results (Grand'Maison, 2004; Smith, 2010; Lovett, 2011; Lamont & Kennelly, 2012; Wicker *et al.*, 2012) show that: (1) there are differences between male and female motives for participation of triathletes; (2) there are distinctions in different age categories; (3) differences in level of experience; (4) motives for participation have a tendency to shift the longer the athlete has been participating (Smith, 2010); and (5) socio-demographic variables of triathlon participants could be considered as the foundation to segment the motives of participants (Wicker *et al.*, 2012).

Participant segmentation has been researched in triathlons in a few previous studies. In a market research study conducted in the USA, triathletes were segmented based on their attitudes towards triathlons, resulting in seven clusters, namely: *Enthusiastics* (triathletes who enjoy everything about a triathlon and who get personal benefit from participating more than any other segment); *Dedicated triathletes* (they garner immense value for their participation and see it as the core to their lifestyle, they compete because that is what they do); *Aspirationalists* (they are focused on their own races and personal performance and improving past performances, their focus is mostly on accomplishment of finishing a triathlon); *Competitives* (these triathletes are concerned with their standings in the race and they want to finish ahead of others); *Power Trainers* (they are not focused on their past history, are inspired by others and see training as just as important as racing); *Emotionals* (they appreciate being part of the triathlon community and value the social aspects of participating in a triathlon, but triathlons are not the central part of their lives); and *Dabblers* (they are committed to the personal challenge of triathlons and their ability to keep them or get them into shape, their engagement in the sport is not all encompassing). Each of these clusters has specific characteristics and motives for participating in a triathlon (Tribe Group, 2009:14-16). Triathletes, therefore, seem more or less homogeneous demographically; however, they are not a monolithic group as their motives to participate (as seen from the seven clusters) are broad and vary from one another.

In Japan, triathlon participants were clustered based on their motives (intrinsic motivations like understanding and growth, accomplishment, stimulation and experience, victory and extrinsic motives, such as exogenous control and assimilation, tourism and Aesthetics), to

participate (Harada *et al.*, 2010). The four clusters included the *maniacal triathletes*, *triathletes with hidden potential*, *experienced triathletes* and lastly *triathletes with unclear motivation*. In a study done in Australia, Chang and Johnson (1995), moved away from using motives to segment triathletes and segmented triathlon association members based on financial aspects and specifics of the membership. The researchers identified four segments including the *mainstream members*, *frequent racers*, *true believers* and *value seekers*. The unique finding in this study was the fact that the value seekers were seen as the most price sensitive segment. Wicker *et al.* (2012) conducted a study based on lifestyle segmentation to segment 786 triathletes in Germany, who were labelled *serious pursuiterers*, *sport lovers* and *socialisers* depending on their interests and the activities they form part of in their leisure time. Significant differences revealed that there were differences between these clusters in terms of age, gender, years of participation, time of practise, as well as expenditure. These different clusters show that triathletes can form different market segments based on different variables. Therefore, triathletes cannot be seen as a homogenous market.

## RESEARCH PROBLEM

To date, no research has focused on identifying the profile and motives of triathletes competing in a South African triathlon event. Previous research in the country has mainly focused on other types of endurance events including cycling (Streicher & Saayman, 2010), marathons (Kruger *et al.*, 2012; Kruger & Saayman, 2013), and swimming (Kruger *et al.*, 2011). The following observations can be made from previous research in endurance sport events, specifically in a South African context: (1) Sport participants travel to destinations to compete in different sport events for different reasons; (2) The reasons are mostly influenced by the type of event, distance, level of fitness required, duration and terrain where the event is held (Kruger & Saayman, 2013); and (3) Sport participants are not a homogenous group when taking their profiles and motives to participate into account.

The goal of this research was to segment triathletes competing in Ironman South Africa, based on their motives for participation, to identify and profile different markets/segments at the race. This study will, therefore, add to the body of existing literature on sport motivation of the endurance athlete, specifically that of South African triathletes, that has not previously been researched.

## METHODOLOGY

This was a quantitative research study where a structured questionnaire was used to collect the data. The following section describes the sampling method and survey, the questionnaire, as well as the statistical analysis conducted.

### Sampling method and survey

A destination-based survey was undertaken where questionnaires were handed out on-site at the Boardwalk Convention Centre and Spa during the registration period of Ironman South Africa (11 to 13 April 2013). Ethical approval was obtained from the Ethics Committee of the North-West University (Potchefstroom Campus: NWU-00115-12-A4). The main purpose of research ethics is to protect the welfare of the research participants (Wassenaar, 2006).

Therefore, ethical considerations were taken into account by respecting the rights, needs values and desires of the participants (Creswell, 1994). Consent was obtained from the organisers, as well as from all participants, before the survey was administered. Seven fieldworkers were instructed on how to approach participants and on the aim of the study and questionnaire. The fieldworkers were grouped in pairs and each group had to work a 2-hour shift each of the 3 days where they had to hand out as many questionnaires as possible. The fieldworkers were instructed to approach different types of participants including different genders, age-categories and nationalities to ensure a representative sample.

Participants were approached after they had completed their registration and informed about the purpose of the research to ensure that they participated willingly and responded honestly. The population size was approximately 1 744 triathletes when looking at 2012 participation records (Ironman South Africa, 2013). If this number of triathletes is used to calculate the sample size, the appropriate sample size is calculated at 313 respondents. However, when one takes into account the importance of accuracy and completeness, the sample size was increased to 450 questionnaires. Fieldworkers collected a total of 425 completed questionnaires and thus the number of questionnaires encompasses more than the 313 questionnaires calculated by using the Krejcie and Morgan (1970) sample size formula.

### **Questionnaire**

The questionnaire was based on the work of McCarville (2007), Smith (2010), Streicher and Saayman (2010), Kruger *et al.* (2011), Lovett (2011), Lamont and Kennelly (2012), and Wicker *et al.* (2012). The questionnaire was divided into 2 sections: Section A, demographic information of triathletes; and Section B, motivational factors that contribute to participation. Section A captured demographic details (gender, home language, age, gross annual income, home province, country of origin, level of education, marital status, mode of transport), and spending behaviour (number of people in travelling group, number of participants/spectators paid for and expenditure). Section B captured motivational factors, measuring 24 items on a 5-point Likert scale (from 1 = not at all important to 5 = extremely important). Section B also captured information specific to the behaviour of participants during and before the event (entry details, previous participation in Ironman South Africa or internationally, number of sport events per year, primary category, age exposed, person who exposed you to the sport, other sporting events previously competed in, upcoming sport events in 2013, initiator of participation and sources of information about the event).

### **Statistical analysis**

The data was captured using Microsoft Excel and analysed using SPSS (SPSS Inc, 2013). The analysis was done in 4 different stages: a factor analysis; a cluster analysis; an analysis of the significant differences; and effect sizes between motivational clusters of participants at Ironman South Africa.

Firstly, a principal axis factor analysis, using an Oblimin rotation with Kaiser Normalisation, was performed on the 24 motivation items, to explain the variance-covariance structure of a set of variables through a few linear combinations of these variables. The Kaiser-Meyer-Olkin measure of sampling adequacy was used to determine whether the covariance matrix was suitable for factor analysis. Kaiser's criteria for the extraction of all factors with

eigenvalues larger than unity were used because they were considered to explain a significant amount of variation in the data. All items with a factor loading greater than 0.3 were considered as contributing to a factor, and all items with loadings less than 0.3 as not correlating significantly with a factor (Steyn, 2000). Any item that cross-loaded on 2 factors, with factor loadings greater than 0.3, was categorised in the factor where interpretability was best. A reliability coefficient (Cronbach's alpha) was computed for each factor to estimate its internal consistency. All factors with a reliability coefficient above 0.6 were considered as acceptable in this study. The average inter-item correlations were also computed as another measure of reliability. These, according to Clark and Watson (1995), should lie between 0.15 and 0.55.

Secondly, a cluster analysis, using Ward's method with Euclidean distances, was performed on the scores of the motives for participating in Ironman South Africa. A cluster analysis is a multivariate interdependence technique, where the primary objective is to classify objects into relatively homogeneous groups based on the set of variables considered, and it is mostly an exploratory technique (Hair *et al.*, 2000). Hierarchical clustering makes no assumptions concerning the number of groups or group structure. Instead, the members are grouped together based on their natural similarity (Johnson & Wichern, 2007). This research did not take an *a priori* view of which data points should fall into which segment. Rather, a hierarchical cluster analysis was used to explore the natural structure of the data, by means of Ward's method with Euclidean distances.

Thirdly, ANOVA's, 2-way frequency tables and chi-square tests were used to investigate any significant differences ( $p \leq 0.05$ ) between the participant clusters. The study used demographic variables (gender, home language, country of origin, age and province of origin), and behavioural variables (length of stay, transport, times participated, expenditure, other events participating in, initiator of participations, and when were the participants exposed to triathlons), to examine whether there were statistically significant differences between the groups. Lastly, effect sizes were used to further identify any significant differences between the clusters. The purpose of effect size is to establish whether any differences exist between clusters, in this case in which combination of clusters the averages of the socio-demographic and behavioural variables had the smallest or largest effect. Cohen (1988), as well as Ellis and Steyn (2003), offer the following guidelines for the interpretation of the effect sizes: small effect  $d = 0.2$ ; medium effect  $d = 0.5$ ; and large effect:  $d = 0.8$ .

## RESULTS

This section will discuss the results of the factor analysis (motives to compete), results of the cluster analysis and the ANOVAs and effect sizes.

### Factor analysis

The pattern matrix of the principal axis factor analyses using an Oblimin rotation with Kaiser Normalisation identified 7 factors (motives) for participation (Table 1). These factors accounted for respectively 67% of the total variance.

**TABLE 1. FACTOR ANALYSIS: MOTIVES FOR COMPETING IN IRONMAN SOUTH AFRICA**

<b>Motivational factors and items</b>	<b>Factor loading</b>	<b>Mean value</b>	<b>Reliability coefficient</b>	<b>Average inter-item correlation</b>
<b>Factor 1: <i>Event novelty</i></b>		3.57	0.75	0.38
I do it annually	0.60			
It is an international event	0.56			
Because the event is well organised	0.53			
Ironman tests my level of fitness and endurance	0.37			
For the adventure of it	0.32			
<b>Factor 2: <i>Respect and risk</i></b>		2.71	0.75	0.43
To earn respect from peers	0.61			
Because of the risk involved	0.62			
To make friends & family proud of me	0.54			
To escape	0.42			
<b>Factor 3: <i>Inner vie</i> (compete, contend)</b>		3.80	0.71	0.39
To push myself	0.75			
To improve my time and speed	0.62			
To compete with myself	0.54			
To compete with others	0.42			
<b>Factor 4: <i>Intrinsic achievement &amp; control</i></b>		3.63	0.76	0.52
To feel proud of myself and have a sense of achievement	0.65			
To improve my self-esteem	0.60			
To mentally control my body	0.54			
<b>Factor 5: <i>Group affiliation and socialisation</i></b>		3.02	0.84	0.72
To share group identity with other triathletes	0.80			
To socialise with others	0.76			
<b>Factor 6: <i>Health and fitness</i></b>		3.77	0.89	0.80
To improve my health	0.87			
To improve my level of fitness	0.84			
<b>Factor 7: <i>Challenge</i></b>		4.10	0.68	0.35
Competing in Ironman is a personal challenge	0.63			
To test my skills against nature, others and myself	0.50			
It is a major challenge	0.46			
Because it is stimulating and exciting	0.32			

All the factors had high reliability coefficients, ranging from 0.68 (the lowest) to 0.89 (the highest), while the average inter-item correlation coefficients with values between 0.35 and 0.80 also implied internal consistency for all factors. Moreover, all items loaded on a factor with a loading greater than 0.3 and the relatively high factor loadings indicated a reasonably high correlation between the factors and their component items. The Kaiser-Meyer-Olkin measures of sampling adequacy of 0.87 also indicated that patterns of correlation were relatively compact and yield distinct and reliable factors (Field, 2005). Bartlett's test of sphericity also reached statistical significance ( $p < 0.001$ ) supporting the factorability of the correlation matrix (Pallant, 2007).

Factor scores were calculated as the average of all items contributing to a specific factor in order to interpret them on the original 5-point Likert scale of measurement. As Table 1 shows, the following motives for Ironman participants were identified: *event novelty* (Factor 1); *respect and risk* (Factor 2); *inner vie* (Factor 3); *intrinsic achievement and control* (Factor 4); *group affiliation and socialisation* (Factor 5); *health and fitness* (Factor 6); and *challenge* (Factor 7). *Challenge* obtained the highest mean value (4.10) and is seen as the most important motive for participating in the triathlon, with a reliability coefficient of 0.68 and an average inter-item correlation of 0.35. *Competition* had the second highest mean value (3.80), followed by *health and fitness* (3.77), *intrinsic achievement and control* (3.63), *event novelty* (3.57) and *group affiliation and socialisation* (3.02). *Respect and risk* had the lowest mean value (2.71) and is rated as the least important motive for participating in Ironman South Africa.

### Cluster analysis

An exploratory cluster analysis based on all cases in the data was performed on the motivational factors.

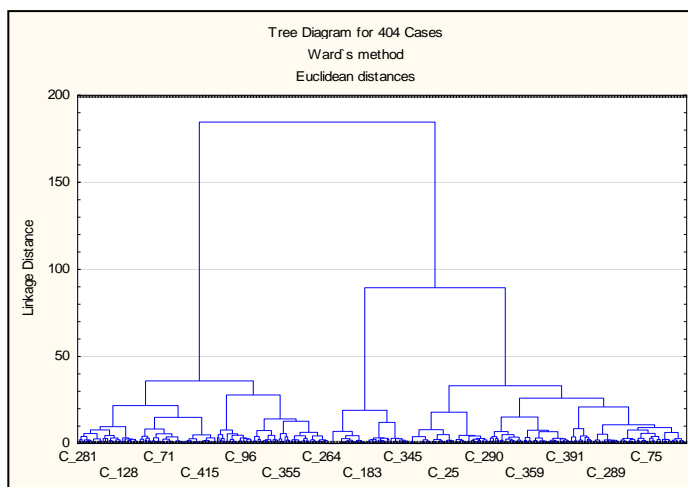


FIGURE 1. THREE CLUSTER SOLUTION: WARD'S METHOD WITH SQUARED EUCLIDEAN DISTANCE MEASURES



A hierarchical cluster analysis, using Ward's method of Euclidean distances, was used to determine the structures of the clusters on the basis of the motivation factors. A 3-cluster solution was selected as the most discriminatory (Figure 1). The results of the multivariate analyses were used to identify the 3 clusters and to discover whether significant differences existed between them ( $p < 0.05$ ).

### Identification of segmented clusters

As shown in Table 2, ANOVAs indicate that all 7 motivational factors contributed to differentiating the 3 motivational clusters ( $p < 0.05$ ). Corresponding with the results of the factor analysis, *Challenge*, was regarded as the most important motive to participate in Ironman South Africa for all 3 clusters.

TABLE 2. COMPARISONS BETWEEN MOTIVATIONAL FACTORS IN THREE CLUSTERS OF IRONMAN SOUTH AFRICA PARTICIPANTS

Motives to compete	Devotees (n=155)	Enthusiasts (n=54)	Aspirationals (n=195)	F-Ratio	Significance Level
Event novelty	3.89 <sup>a</sup>	4.64 <sup>b</sup>	2.99 <sup>c</sup>	158.049	<0.05
Respect and risk	2.84 <sup>a</sup>	4.26 <sup>b</sup>	2.18 <sup>c</sup>	175.177	<0.05
Inner vie	4.00 <sup>a</sup>	4.58 <sup>b</sup>	3.42 <sup>c</sup>	75.571	<0.05
Intrinsic achievement and control	4.00 <sup>a</sup>	4.79 <sup>b</sup>	2.98 <sup>c</sup>	197.943	<0.05
Group affiliation and socialisation	3.19 <sup>a</sup>	4.24 <sup>b</sup>	2.54 <sup>c</sup>	74.607	<0.05
Health and fitness	4.14 <sup>a</sup>	4.66 <sup>b</sup>	3.23 <sup>c</sup>	97.584	<0.05
Challenge	4.25 <sup>a</sup>	4.83 <sup>b</sup>	3.76 <sup>c</sup>	81.101	<0.05

\* Statistically significant difference:  $p \leq 0.05$

<sup>a</sup> Group differs significantly from type (in row) where <sup>b</sup> and <sup>c</sup> are indicated.

Statistics: ANOVA and Tukey's Post Hoc Multiple Comparisons

Cluster 1 included the second largest number of respondents ( $n=155$ ), as well as the second largest mean values across all 7 motivational factors. This cluster rated the following motives as important: *intrinsic achievement and control*; and *health and fitness*. These triathletes thus participate mostly for personal benefit. When looking at their socio-demographic characteristics (Table 3), it is clear that they enjoy every part of an Ironman triathlon as these triathletes spend the most money on the sport and participate in the most Ironman South Africa and international Ironman competitions. These characteristics show that this cluster is devoted to the Ironman event and, therefore, was labelled the *Devotees*.

TABLE 3. ANOVA RESULTS: DIFFERENCES BETWEEN MOTIVATIONAL CLUSTERS

Characteristics	Devotees (n=155)	Enthusiasts (n=54)	Aspirationalists (n=195)	F- Ratio	Sign. level
Age	38.25 <sup>a</sup>	36.96 <sup>a</sup>	40.45 <sup>b</sup>	4.716	0.090*
Group size	2.98	2.89	2.52	2.028	0.133
Number of people paid for (participants)	1.31	1.35	1.16	1.779	0.170
Number of people paid for (spectators)	1.70	1.63	1.52	0.427	0.653
Nights in area	4.85	5.30	5.52	2.973	0.950
Total spending	R22463.23	R18600.19	R23004.40	0.184	0.832
Spending per person (paid for participants) #	R19595.69	R13266.04	R18450.07	1.456	0.234
Spending per person (paid for spectators)	R17315.57	R12951.55	R14591.29	0.674	0.511
Times participated	2.06	1.93	1.75	0.716	0.490
Times finished	1.86	1.65	1.48	1.036	0.356
Times internationally finished	1.49	1.24	1.36	0.741	0.478
Triathlon events per year	4.43	6.22	4.72	0.936	0.393
Cycling events per year	3.68	3.81	2.95	1.228	0.294
Running events per year	6.04	6.69	5.74	0.253	0.777
Swimming events per year	1.16	1.56	0.99	1.644	0.195
Age first exposed to triathlons	30.68	28.16	31.29	2.149	0.118

\* Significant difference:  $p \leq 0.05$

<sup>a</sup> Group differs significantly from type (in row) where <sup>b</sup> is indicated.

Cluster 2 covered the smallest number of respondents (N=54) and had the highest mean values across all 7 motivational factors. This cluster regards *challenge, intrinsic achievement and control, health and fitness* and also *event novelty* as the most important motives (Table 2). This shows that these triathletes are motivated by an array of motives seeing that they have the need to improve themselves to become better triathletes. Their demographic characteristics also correspond with their motives when considering the fact that they are the youngest, were exposed to triathlons at a young age and compete in the most individual endurance sport events including swimming, running and cycling to improve their triathlon

skills across all 3 sport disciplines (Table 3). Therefore, this cluster was labelled the *Enthusiasts*.

Cluster 3 contained the largest sample of respondents (N=195) and had the lowest mean scores across the 7 motivation factors. The cluster saw *Inner vie* and *health and fitness* as the most important motives for participation (Table 2). These triathletes participate to feel a sense of personal accomplishment, to be part of the Ironman event and just to say: “I have finished another Ironman event”. Their demographic characteristics show that they are the oldest participants, spend more nights in the event destination, have the highest total spending and compete in the least number of Ironman events (Table 3). This cluster compete with themselves and care about their personal performance, consequently they were categorised the *Aspirationalists*.

### Multiple comparisons and effect sizes

TABLE 4. DIFFERENCES BETWEEN MOTIVATIONAL CLUSTERS

Characteristics	Cluster 1 and 2	Cluster 1 and 3	Cluster 2 and 3
Age	0.15	0.25**	0.39**
Group size	0.04	0.19	0.15
Number of people paid for (participants)	0.04	0.15	0.23**
Number of people paid for (spectators)	0.05	0.12	0.07
Nights in area	0.17	0.24	0.08
Total spending	0.15	0.01	0.07
Spending per person (paid for participants)	0.25**	0.05	0.22**
Spending per person (paid for spectators)	0.17	0.11	0.10
Times participated	0.06	0.13	0.08
Times finished	0.10	0.17	0.08
Times internationally finished	0.08	0.11	0.17
Triathlon events per year	0.13	0.05	0.11
Cycling events per year	0.02	0.14	0.22
Running events per year	0.10	0.04	0.12
Swimming events per year	0.19	0.09	0.26
Age first exposed to triathlons	0.26**	0.06	0.33**

Effect sizes: (a) Small effect: \*\* $d=0.2$ ; (b) Medium effect: \*\*\* $d=0.5$  (c) Large effect: \*\*\*

As Table 4 shows, there were significant differences between the 3 clusters of Ironman participants based on age ( $p=0.09$ ). The *Aspirationalists* were the oldest (40.45 years), whereas the *Enthusiasts* were the youngest of the 3 clusters (36.96 years). When looking at the effect sizes, there were only small differences between the clusters based on age, number of participants paid for, average spending and age first exposed to triathlons. The *Aspirationalists* paid for the fewest number of participants (average 1.16 people), while the *Enthusiasts* paid for the most participants (average of 1.35 people).

When looking at average spending, the *Aspirationalists* had the highest average total spending (an average of R23 004); however, all 3 clusters had a high average spending during the event: *Devotees* had an average of R22 463 and the *Enthusiasts* an average of R18 000. The *Enthusiasts* were exposed to triathlons at a younger stage (an average of 28.16 years) than the other 2 clusters and thus have been participating in triathlons for longer. Although there are no statistical differences based on other characteristics it is important to note that the *Enthusiasts* participated in more triathlon events (on average 6.22 events), cycling events (on average 3.81 events), running events (on average 6.69 events) and swimming events (on average 1.56) per year, than the other 2 clusters (Table 4).

When considering the group size, it is clear that *Devotees* travel in larger groups (an average of 2.89 people), and they also pay for more spectators (on average 1.70 people) during the event. On average, all 3 clusters stay at least 5 nights in the event area, although the *Aspirationalists* stayed the longest in the event area (an average of 5.52 nights). The *Devotees* had the highest average spending for participants (R19 595 per person), and spectators (R17 315 per person), while *Enthusiasts* spent the least money paying for spectators and participants. When observing the frequency of participation both in South Africa and internationally, it is clear that *Devotees* have participated in the most Ironman South Africa triathlons (an average of 2.06), the most international Ironman races (an average of 1.49), and have finished the most Ironman South Africa triathlons (an average of 1.86).

## DISCUSSION

Firstly, it is imperative to note that, although previous studies show similar motives, the combination and importance of each motive found in this study is unique and differs from other literature. The results from this study showed that participants in Ironman South Africa were motivated by seven motives: *challenge*, *inner vie*, *health and fitness*, *intrinsic achievement and control*, *event novelty*, *group affiliation and socialisation*, as well as *respect and risk*. *Challenge* and *inner vie* were the most important motives for competing in the event. When these findings are compared with previous research, the following parallels can be made, especially in terms of *challenge* found in studies done by Grand'Maison (2004), Tribe Group (2009) and Smith (2010). The motive, *Intrinsic achievement and control*, corresponds with the findings by Grand'Maison (2004) and Lovett (2011). Only Smith (2010) found *respect and risk* as motives to participate in a triathlon. *Socialisation* was found by Lamont and Kennelly (2012) and Wicker *et al.* (2012), although the combination of *group affiliation and socialisation* was not found in any previous studies. *Inner vie* was found in almost all of the previous studies including Case and Branch (2001), Grand'Maison (2004), Tribe Group (2009), Lovett (2011) and Lamont and Kennelly (2012). These motives confirm the notion that triathlon participants are not motivated by 1 single motive, but rather a combination of different motives (Grand'Maison, 2004; Shilbury *et al.*, 2009; Lovett, 2011).

Secondly, *health and fitness* as a motive is not only unique to this study but is also the first time that *health and fitness* was found as a motive for participation in endurance sport literature (Streicher & Saayman, 2010; Kruger *et al.*, 2011; Kruger & Saayman, 2013). Previous research (Grand'Maison, 2004; Lamont & Kennelly, 2012; Wicker *et al.*, 2012), only focused on one or the other. *Event novelty* (extrinsic motive) was also found for the first time as a unique motive for participation in a triathlon. These findings support the notion that

the motives of endurance sport participants are influenced by the type of sport and event (Kruger & Saayman, 2013).

Thirdly, the study found that *challenge* was the main motive for participation in Ironman South Africa and, as a result, Ironman triathletes are motivated more by intrinsic motives than extrinsic motives. This corresponds with research done by Ryan and Deci (2007), who observed a general trend that endurance sport participants are more intrinsically than extrinsically motivated. This shows that the driving force behind the participation of most triathletes is the challenge against oneself, others and nature. Thus, triathletes feel the urge to push their bodies and minds to extremes. This finding is also consistent with the self-determination theory which suggests that people are pushed to achieve goals through intrinsic pressures which leads to more positive experiences (Vallerand & Lossier, 1999). Hosch (1994), Ogles and Masters (2003) and Tribe Group (2009) also support this finding and state that triathletes are a unique kind of participant as they get personal satisfaction when they challenge themselves both physically and mentally and will adapt their lifestyle in order to be a triathlete.

Fourthly, the Ironman South Africa market was divided into 3 different distinct segments using a cluster analysis based on the identified motives: *Devotee*; *Enthusiasts*; and *Aspirational*s. Confirming the results of the factor analysis, all 3 clusters regarded *challenge* and *inner vie* as the most important motives to participate in the event. Most differences can be found at a behavioural level rather than socio-demographics. There are clear parallels with the research done by the Tribe Group (2009) and Harada *et al.* (2010). Not only does each of the segments share similar characteristics, but also the motives to compete in a triathlon are similar. It was, however, difficult to compare clusters with previous studies, such as Chang and Johnson (1995) and Wicker *et al.* (2012), as these studies used financial variables and lifestyle variables to segment the triathletes. Each cluster has specific motives that push them to participate in a triathlon or return to participate in an Ironman event. If one does an analysis based on the age of the competitors, it becomes clear that these competitors are much older than one would find in individual sport, like swimming, running and cycling (Streicher & Saayman, 2010; Kruger *et al.*, 2011; Saayman & Saayman, 2011; Kruger *et al.*, 2012; Kruger & Saayman, 2013). This is an important finding since it implies that a swimmer, cyclist or runner could easily extend their competitive age if they want to do so by competing in Ironman competitions.

## PRACTICAL IMPLICATIONS

Based on these findings, this research envisages the following marketing implications:

- (1) It is crucial that marketers target each of the three clusters separately, as each cluster is a viable and sustainable market, but this can only be done by focusing on the specific needs and motives of each market.
- (2) The *Devotees* are loyal to the Ironman event and have participated in most of the Ironman South Africa and International races. Consequently, marketers must emphasise how unique the Ironman competition is and that only a small number of people can say they have finished the competition. Marketers and event managers can also assist the *Devotees* by putting together loyalty programs where these participants get discount and special prices if they compete in a certain number of Ironman races. Organisers can also consider

introducing special numbers or colours for participants to wear that distinguish them from others in the field. Marketing messages need to be distributed at other Ironman events as well as manufacturers, retail shops and nutrition stores seeing that these triathletes spend the most money on equipment and other triathlon necessities.

- (3) Implications for the *Enthusiasts* segment include developing strategies in targeting these participants considering that they are the up-coming triathletes and can become devotees if their needs are met correctly. Marketers must develop messages that highlight the different benefits of participating in an Ironman event not only the intrinsic benefits, but also the extrinsic benefits, for example, highlighting the fact that the event is well organised and that it is one of the Ironman events that can help them qualify for the Ironman world championships. These marketing messages should mostly be distributed at other endurance sport events that can help these athletes train for the Ironman event.
- (4) Marketers must reach the *Aspirationals*, seeing that the majority of triathletes that participated in Ironman South Africa fell in this cluster. This can be done by making it worthwhile to return each year, thus, changing and improving the event each year. Marketing messages should highlight the fact that age cannot keep a true triathlete down and that the personal accomplishment will justify their participation. These messages can be distributed at clubs and gymnasiums.
- (5) Knowing that triathletes seek a *challenge*, marketers must adapt their marketing messages by notifying potential participants that Ironman South Africa is the ultimate endurance event on the African continent. The event will challenge them physically and mentally and, at the end of the event, participants will feel that they have overcome a major challenge and feel a sense of self-worth and personal gratification. Marketers should also highlight that Ironman is the toughest, longest and one of the biggest personal challenges a person can face and also has added benefits of improving one's self-esteem, as well as health and fitness. These marketing messages can be distributed at other endurance events especially swimming, running and cycling events, but also other Ironman triathlons around the world. Marketers can also market Ironman at other triathlon events including half-Ironman, sprint distance and Olympic distance triathlon events. These marketing efforts will attract all three clusters, as well as new participants to the event.
- (6) Since competing in a triathlon is expensive, travel packages that include accommodation, transport and catering could be considered to help make these events more affordable for the general public, thus giving more people the chance to participate.
- (7) Results revealed that participant's motives to compete and sport behaviour are influenced by early exposure to triathlons (exposure at a young age greatly influence participation in later life, such as the *Enthusiasts*). Participation in sport should be encouraged from a young age to ensure the growth and love for sport and triathlons. IronKids (an Ironman event especially for children), should be promoted more intensively at schools around the country.

## CONCLUSIONS

This study determined the motives of triathletes participating in Ironman South Africa (the ultimate endurance sport on the African continent), and clustered the participants according to

these motives. This type of research was conducted for the first time at a triathlete event in South Africa and the profile and motives of these participants have been identified. These motives are unique to this study in comparison with previous research and were used to make certain recommendations to event organisers. With these results, gaps in the existing literature have been filled, since this research contributes to the literature not only of sport events but also of triathlete participants in South Africa.

The study corroborates the argument that motives for participating differ according to the sporting event, and supports the view that marketers and sports event organisers must understand that participants have different motives which lead to different needs and therefore should not be regarded as a homogeneous group. In fact, this study shows not only that motives for participating in triathlons differ from those for participating in other types of endurance events, but also that the combination of motives differs. This study also highlighted the fact that the competitors are much older than competitors in individual sporting events, for example swimming, cycling or running.

This type of research is valuable to sport event organisers, as it assists in making informed and cost-effective marketing and product development decisions. It is, thus, recommended that similar research (comparing the motives of participants and whether they are primarily intrinsic, extrinsic or a combination), be undertaken for other endurance events and other South African sporting events. Looking particularly at the economic value of this event, it is important that research continues at Ironman South Africa and other similar events, so as to sustain these types of endurance events.

### **Acknowledgement**

The authors acknowledge the National Research Foundation (NRF) for financial support. They are also thankful to the organisers of Ironman South Africa for allowing the research to be conducted. Gratitude is also expressed to all the participants for their willingness to participate in the survey, as well as to all the fieldworkers for their hard work.

### **REFERENCES**

- BELL, G.J. & HOWE, B.L. (1988). Mood state profiles and motivations of triathletes. *Journal of Sport Behaviour*, 40(2): 66-77.
- BROWN, T.; O'CONNOR, J. & BARKATSAS, A. (2009). Instrumentation and motivations for organised cycling: The development of the Cyclists Motivation Instrument (CMI). *Journal of Sports Science and Medicine*, 8(1): 211-218.
- CASE, R. & BRANCH, J.D. (2001). Event marketing: An examination of selected demographic and psychographic data of participants competing in the world's foremost off-road triathlon event. *International Sports Journal*, 5(1): 118-127.
- CASPER, J.M. & STELLINO, M.B. (2008). Demographic predictors of recreation tennis participants' sport commitment. *Journal of Park and Recreation Administration*, 26(3): 93-115.
- CASSIDY, F. & PEGG, S. (2008). "Exploring the motivations for engagement in sport tourism." Eprints. Hyperlink: [[http://eprints.usq.edu.au/4211/1/Cassidy\\_Pegg.pdf](http://eprints.usq.edu.au/4211/1/Cassidy_Pegg.pdf)]. Retrieved on 6 May 2013.

- CHANG, M.G.S.J. & JOHNSON, L.W. (1995). Segmenting the triathlon association membership market: An Australian example. *Sport Marketing Quarterly*, 4(4): 25-28.
- CLARK, L.A. & WATSON, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, 7(3): 309-319.
- COHEN, J. (1988). *Statistical power analysis for the behavioural sciences* (2<sup>nd</sup> ed.). Hillsdale, NJ: Lawrence Erlbaum.
- CRESWELL, J.W. (1994). *Research design: Qualitative and quantitative approaches*. Thousand Oaks, CA: Sage.
- CROFT, S.J.; GRAY, C.C. & DUNCAN, J.F. (2007). "Motives for participating in triathlon: An investigation between elite and non-elite competitors in an Australian setting." *Geocities*. Hyperlink: [<http://www.geocities.com/CollegePark/5686/su99p12.htm>]. Retrieved on 20 May 2013.
- CROMPTON, J.L. & MCKAY, S.L. (1997). Motives of visitors attending festival events. *Annals of Tourism Research*, 24(2): 425-439.
- DECI, E. & RYAN, R. (1985). *Intrinsic motivation and self-determination in human behaviour*. New York, NY: Plenum Press.
- DECI, E. & RYAN, R. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behaviour. *Psychological Inquiry*, 11(4): 227-268.
- ELLIS, S.M. & STEYN, H.S. (2003). Practical significance (effect sizes) versus or in combination with statistical significance (p-values). *Management Dynamics*, 12(4): 51-53.
- FIELD, A. (2005). *Discovering statistics using SPSS* (2<sup>nd</sup> ed.). Thousand Oaks, CA: Sage.
- FILO, K.R.; FUNK, D.C. & HORNBY, G. (2009). The role of web site content on motive and attitude change for sport events. *Journal of Sport Management*, 23(23): 21-40.
- GRAND'MAISON, K. (2004). What mental skills Ironman triathletes need and want. *Journal of Excellence*, 10(1): 86-94.
- HAIR, J.F.; BUSH, R.P. & ORTINAU, D.J. (2000). *Marketing research: A practical approach to the new millennium*. Boston, MA: Irwin/McGraw-Hill.
- HARADA, M.; ONISHI, T.; KOIJIMA, Y. & ISHII, J. (Eds.) (2010). Motivation and profile of participants in the new endurance sports: The triathlon. Proceedings of the 18th EASM Conference, Prague, Czech Republic, 15-18 September 2010.
- HAWKINS, D.I.; MOTHERSBAUGH, D.L. & BEST, R.J. (2007). *Consumer behaviour: Building marketing strategy* (10<sup>th</sup> ed.). New York, NY: McGraw-Hill.
- HOSCH, B.J. (1994). Committed to tri: An empirical investigation of triathletes and commitment. Unpublished Master's thesis. Dallas, TX: University of Texas.
- HUDSON, S. (1999). Consumer behaviour related to tourism. In A. Pizam & Y. Manfeld (Eds.), *Consumer behaviour in travel and tourism* (7-32). New York, NY: Haworth Hospitality Press.
- IRONMAN (2013). "The official Ironman website." *Ironman*. Hyperlink: [<http://www.ironman.com/coverage/past.aspx#axzz2TSP9Awmi>]. Retrieved on 20 May 2013.
- IRONMAN SOUTH AFRICA (2013). "Excitement overload for Ironman weekend in Nelson Mandela Bay." *Ironman South Africa*. Hyperlink: [<http://www.ironmansouthafrica.com/news/excitement-overload-for-ironman-weekend-in-nelson-mandela-bay>]. Retrieved on 16 April 2013.
- ISO-AHOLA, S.E. (1982). Toward a social psychological theory of tourism motivation: Rejoinder. *Annals of Tourism Research*, 12(1): 256-262.
- JOHNSON, R.A. & WICHERN, D.W. (2007). *Applied multivariate statistical analysis* (6<sup>th</sup> ed.). New York, NY: Prentice-Hall.



- KASTENHOLZ, E. (2005). Analysing determinants of visitor spending for the rural tourist market in North Portugal. *Tourism Economics*, 11(4): 555-569.
- KREJCIE, R.V. & MORGAN, D.W. (1970). Determining the sample size for research activities. *Educational and Psychological Measurement*, 30(3): 607-610.
- KRUGER, M. & SAAYMAN, M. (2013). Who are the comrades of the Comrades Marathon? *South African Journal for Research in Sports, Physical Education and Recreation*, 35(1): 71-92.
- KRUGER, M.; BOTHA, K. & SAAYMAN, M. (2012). The relationship between visitor spending and repeat visits: An analysis of spectators at the Old Mutual Two Oceans marathon. *Acta Commercii*, 12(1): 108-122.
- KRUGER, M.; SAAYMAN, M. & ELLIS, S. (2011). A motivation based typology of open-water swimmers. *South African Journal for Research in Sport, Physical Education and Recreation*, 33(2): 59-79.
- LACHAUSSE, R.G. (2006). Motives of competitive and non-competitive cyclists. *Journal of Sport Behaviour*, 29(4): 304-314.
- LAMONT, M. & KENNELLY, M. (2012). A qualitative exploration of participants' motives among committed amateur triathletes. *Leisure Sciences*, 34(1): 236-255.
- LOVETT, D.M. (2011). An examination of the motives to participate in sprint distance triathlon. Unpublished PhD. dissertation. Albuquerque, NM: University of New Mexico.
- MARKLAND, D. & INGLEDEW, D. (2007). Exercise participation motives. In M. Hagger & N. Chatzisarantis (Eds.), *Intrinsic motivation and self-determination in exercise and sport* (23-34). Champaign, IL: Human Kinetics.
- McCARVILLE, R. (2007). From a fall in the mall to a run in the sun: One journey to Ironman triathlon. *Leisure Sciences*, 29(2): 159-173.
- OGLES, B. & MASTERS, K. (2003). A typology of marathon runners based on cluster analysis of motivations. *Journal of Sport Behaviour*, 26(11): 69-85.
- PALLANT, J. (2007). *SPSS Survival manual: A step-by-step guide to data analysis using SPSS version 15* (3<sup>rd</sup> ed.). New York, NY: McGraw-Hill.
- PARK, K.; REISINGER, Y. & KANG, H. (2008). Visitors' motivation for attending the South Beach Wine and Food Festival, Miami Beach, Florida. *Journal of Travel and Tourism Marketing*, 25(1): 161-181.
- RYAN, R. & DECI, E. (2007). Active human nature: Self-determination of theory and the promotion and maintenance of sport, exercise, and health. In M. Hagger & N. Chatzisarantis (Eds.), *Intrinsic motivation and self-determination in exercise and sport* (1-19). Champaign, IL: Human Kinetics.
- SAAYMAN, M. & SAAYMAN, A. (2011). Determinants of spending: An evaluation of three major sporting events. *International Journal of Tourism Research*, 14(2): 124-138.
- SHILBURY, D.; WESTERBEEK, H.; QUICK, S. & FUNK, D.C. (2009). *Strategic sport marketing*. Crows Nest, NSW: Allen & Unwin.
- SMITH, A. (2010). A qualitative analysis of motivation of elite female triathletes. Unpublished Master's thesis. San Jose, WA: San Jose State University.
- SPSS INC. (2013). "SPSS® 21 for Windows, Release 21.0.0." Copyright© by SPSS Inc., Chicago, IL. Hyperlink: [www.spss.com]. Retrieved on 16 Apr 2013.
- STEYN, H.S. (2000). Practical significance of the difference in means. *South African Journal of Industrial Psychology*, 26(3): 1-3.
- STREICHER, H. & SAAYMAN, M. (2010). Travel motives of participants in the Cape Argus Pick n Pay Cycle Tour. *South African Journal for Research in Sport, Physical Education and Recreation*, 32(1): 121-131.

- TRIBE GROUP (2009). "The mind of the triathlete: Market research report." *USA Triathlon*.  
Hyperlink: [<http://www.usatriathlon.org/about-multisport/demographics.aspx>]. Retrieved on 17 April 2013.
- VALLERAND, R.J. & LOSIER, G.F. (1999). An integrative analysis of intrinsic and extrinsic motivation in sport. *Journal of Applied Sport Psychology*, 11(1): 142-169.
- WASSENAAR, D.R. (2006). Ethical issues in social science research. In M. Terre Blanche, K. Durrheim & D. Painter (Eds.), *Research in practice: Applied methods for social sciences* (2<sup>nd</sup> ed.) (33-54). Cape Town: University of Cape Town Press.
- WICKER, P.; HALLMANN, K.; PRINZ, J. & WEIMER, D. (2012). Who takes part in a triathlon? An application of lifestyle segmentation to triathlon participants. *Journal of Sport Management and Marketing*, 12(1/2): 1-24.

---

Prof Martinette KRUGER: TREES (Tourism Research in Economic, Environs and Society), North-West University, Private Bag X6001, Potchefstroom, 2520, Republic of South Africa. Tel.: +27 (0)18 2991980, Fax.: +27 (0)18 2994140, E-mail: Martinette.Kruger@nwu.ac.za

(Subject Editor: Dr Theron Weilbach)